



ADAPTATION FUND

**REQUEST FOR PROJECT/PROGRAMME
FUNDING FROM THE ADAPTATION FUND**

*Enhancing the resilience inclusive and sustainable eco-human settlement development
through small scale infrastructure interventions in the coastal regions of the Mekong Delta*



UN HABITAT
FOR A BETTER URBAN FUTURE

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PROJECT/PROGRAMME PROPOSAL TO THE ADAPTATION FUND

PART I: PROJECT/PROGRAMME INFORMATION

Project/Programme Category:	Regular
Country/ies:	Vietnam
Title of Project/Programme:	Enhancing the resilience inclusive and sustainable eco-human settlement development through small scale infrastructure interventions in the coastal regions of the Mekong Delta
Type of Implementing Entity:	Multilateral
Implementing Entity:	United Nations Human Settlements Programme (UN-Habitat),
Executing Entity:	
Amount of Financing Requested:	\$ 5,754,840

Project Summary

The main objective of the proposed project is “**to enhance the resilience, inclusive and sustainable eco-human settlement development through small scale infrastructure interventions in the coastal regions of the Mekong Delta in Vietnam.**” To align with a government request to promote sustainable eco-human settlement in Vietnam, this project aims to improve the poor and vulnerable communes that climate change impacts have affected the most. It is structured around the following components:

Component 1: Institutional and community capacity building toward eco-human settlement development to support enhancement of local climate response actions (USD 800,000 / **16.7%**)

Component 2: Integrated planning with respects of eco system-based climate change adaptation, building climate resilient capacity and an action plan at local level (USD 700,000 / **14.6%**)

Component 3: Sustainability built through small-scale protective and basic service infrastructure (USD 3,100,000 / **64.5%**)

Component 4: Awareness Raising and Knowledge Management (USD 200,000 / **4.2%**)

A. Project Background and Context:

Socio-Economic Context

Vietnam has gone through rapid demographic and social change over the past decade. From about 60 million in 1986, Vietnam's population grown to 94 million by 2016 and is expected to expand to 120 million before tailing off around 2050. Currently, 70 percent of the population is under 35 years of age, with a life expectancy of close to 73 years, though the population is rapidly aging, with the share of the population aged 65 years and older projected to more than double by 2035 (from 7 to 15 percent). Some 85% of the population is from the Kinh ethnic majority group; 53 ethnic minority groups make up the remaining 15%. There is an emerging middle class, currently accounting for around 10% of the population, which is expected to increase to 26% by 2026. Vietnam is urbanizing, with estimates that the urban population will reach 50 percent by 2025. Administratively, the country has 63 provinces, each governed by a People's Council and a People's Committee.

Despite a challenging global environment, Vietnam's economy has shown resilience in recent years. After an increase in GDP of 6.7% in 2015, preliminary data has shown that in 2016 it has continued to grow by a further 6.2% (Table 1), it has been primarily driven by export-oriented manufacturing and robust domestic demand. Headline inflation has also accelerated to 4.7% in 2016, this was driven by increases in administered prices—while core inflation remained subdued. Due to sustained exports, which also expanded by 9% on the previous year, and also due to moderate import growth, Vietnam's external position has remained in balance, underpinned by strong export growth, robust remittance inflows, and a capital account surplus owing to consistent foreign direct investment inflows (FDI). These developments have helped ease foreign exchange pressures and supported the State Bank of Vietnam (SBV) in building up international reserves, from 2.1 months of import cover at the end of 2015 to 2.8 months a year later. However, international reserves are still below a prudent level for an economy as open as Vietnam's

Table 1. Vietnam - key economic indicators, 2014–22 (The World Bank, 2016)

	2014	2015	2016	2017f	2018f	2019f	2020f	2021f	2022f
Real economy									
Real GDP (% change)	6.0	6.7	6.2	6.3	6.4	6.4	6.5	6.5	6.5
Unemployment rate (% of total labor force)	2.1	2.3	2.3	2.4	2.4	2.4	2.4	2.4	2.4
Prices									
Consumer price index (% change, annual average)	4.1	0.6	2.7	4.0	4.0	4.0	4.0	4.0	4.0
GDP deflator (% change)	3.7	-0.2	1.1	4.2	3.9	3.8	4.0	4.0	4.0
Fiscal									
Total revenue and grants (% GDP)	22.2	23.3	22.9	22.9	23.1	23.3	23.4	23.4	23.4
Total expenditure (% GDP)	28.5	29.5	29.5	29.1	29.0	28.6	28.3	28.3	28.3
Fiscal balance (% GDP)	-6.3	-6.2	-6.5	-6.2	-5.9	-5.3	-4.9	-4.9	-4.8
Public debt (GFS definition, % GDP)	55.1	58.3	62.1	63.6	64.0	65.3	66.6	66.9	67.0
External									
Exports of goods (% change)	13.8	7.9	9.0	9.0	9.5	9.9	10.1	10.3	10.3
Imports of goods (% change)	12.0	12.0	5.2	9.6	10.2	10.5	10.8	11.1	11.4
Current account balance (% GDP)	5.1	0.5	3.0	1.2	0.8	0.5	0.5	0.4	0.3
Reserves (in months of imports)	2.8	2.1	2.8	3.1	3.2	3.2	3.2	3.2	3.1
Memo:									
GDP (nominal, trillion dong)	3,938	4,193	4,503	4,987	5,517	6,095	6,747	7,472	8,279

Access to household infrastructure has improved dramatically. In 2016, 99% of the population used electricity as their main source of lighting, up from 14 percent in 1993. In 2016 in rural areas, 77% of the population had access to sanitation facilities—compared to only 36% in 1993. Rural access to clean water has also improved, up from 17% in 1993 to 70% in 2016. Access to these services in urban areas is currently above 95%. While access to clean water in urban areas has been

improved, water security in the Mekong Delta is still an urgent issue, especially in rural areas such as the small islands along the coast and especially in dry season.

Despite its rapid growth on both economic and social context, Vietnam is one of the world's most vulnerable countries to climate change impact, including but not limited to; sea level rise, longer and more severe droughts, flooding and tropical cyclones; as is typical with climate change in this region the poorest are the most exposed. By 2050, a 1–3% loss in real GDP is predicted from climate change impacts. Natural disasters have caused average annual economic losses estimated to be at 1–1.5% of GDP over the last two decades, while more than 70% of the population is already exposed to significant natural hazard risk. Ongoing climate disaster events and climate change effects can also set back development gains, particularly as safety net programs have not yet been adapted to support the poor and vulnerable in response to natural hazard shocks.

This is particularly evident on poverty reduction, according to the aggregate data of MPI (2015), the poverty rate declined from 58.1% in 1993 to 19.5% in 2004, raising 20 million people out of poverty. Similarly, in the period from 2011 to 2015, the poverty rate again dropped significantly, from 14.2% in 2010 to 9.8% in 2013. In the Mekong Delta, however, the speed of poverty reduction has slowed compared to national levels while the poverty rate in mountainous and remote areas also remains high. This multidimensional poverty has been more pronounced by urbanization and migration.

Mekong Delta is however, the largest producer of agricultural and aquaculture product in Vietnam and is suffering the most in economic loss due to Climate Change Impact. The Labor force found in Mekong delta is around 10.3 million (out of a total national labour force of 54.5 million). It is also responsible for more than 13% of national GDP solely for the fishery industry (Vietnam net, 2016). The Mekong Delta currently has an increasing economic rate of around 11% of GDP annually. In this economic context, climate change issues have a major effect on economic activities in the region, while local residents are exposed to climate change threats it has also presented new opportunities, especially in the coastal region of the Mekong delta.

Environmental Context

River and ground water:

In the Mekong Delta, river water and ground water levels are decreasing, while sea levels, flood tides and salt intrusion are on the rise, the demand for water has also increased in production and daily activities due to industrialisation, urbanisation and population growth.

Assessments made in the Greater Mekong Subregion over the last 30 years have revealed the great potential of the groundwater resources in the region, including trans-boundary aquifers. However, groundwater resource usage, emerging environmental problems and the priorities for water resource management differ for each country, this is partly due to variations in levels of development and populations. A growing number of countries in the Mekong River Basin are experiencing depleted and degraded freshwater supplies because of population growth and climate change.

The extraction of groundwater has increased rapidly over the past decades and forms one of the main causes of saline water intrusion into the coastal aquifers. This intrusion has been accelerated by the on-going sea level rise. Saline intrusion of groundwater in the Vietnamese Mekong Delta is a highly complex issue as it heavily depends on varying factors, including changes in water supplies

and rising water demands (e.g. the amount of fresh groundwater extracted for different purposes like domestic, agriculture and aquaculture use).

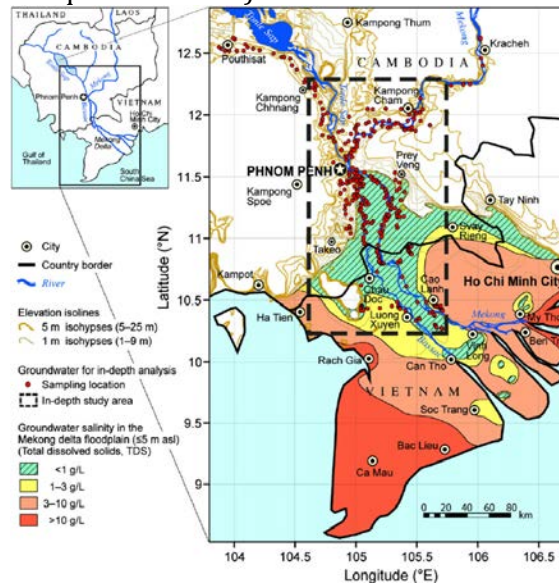


Figure 1. Mekong Delta depicting groundwater and salinity level (Buschmann et al, 2008)

Land erosion and degradation:

It is estimated that the Mekong Delta may lose up to half of its land to erosion due to current rampant levels of sand exploitation.

562 erosion locations have been identified with a total length of 786 kilometers in the Mekong Delta. This includes 55 critically endangered locations that are 173 kilometers in length, 140 endangered locations at 97 kilometers in length, and 367 normal erosion spots 516 kilometers long. Especially, the erosion rate at Ca Mau Peninsula is 12.2 metres per year. 70% of the coastal area is currently being threatened by erosion. Moreover, the large socio-economic and environmental changes have led to environmental problems. Saline intrusion and soil acidification have increased (NEDECO, 1993), storm and flood damage have also been very severe since 1996 (Voice of Vietnam, 1998), and natural ecosystem functions, including biodiversity have been lost. During the onset of the rainy season, drain-off from reclaimed acid surface soils areas pollute a large part of the Mekong Delta.



Figure 2. The images of land erosion in the Mekong Delta

The Mekong Delta is generally used for agriculture and aquaculture along with its preservation areas (forest area). The total superficies is around 40,755 km² (12% of Vietnam) with 13 provinces,

8 of which are coastal provinces that are directly exposed to climate change risks and natural hazards.

Due to rising sea levels, provinces in the coastal zone are highly affected by salinity intrusion and flooding. Salinity intrusion varies according to micro-climate conditions such as water flow intensity. The provinces affected with a maximum salinity concentration of 10g/L are all provinces situated in the coastal zone: LongAn, TienGiang, BenTre, TraVinh, KienGiang, SocTrang, BacLieu, CaMau (source: The World Bank, 2016). Moreover, flooding issues continually change the quality and quantity of water sources, leading to changes in ecosystem and increases in the overall number of migrating people. Severe drought occurrences in the Mekong Delta region exacerbates unsustainable settlement in the concerned region (Saigoneer, 2016).

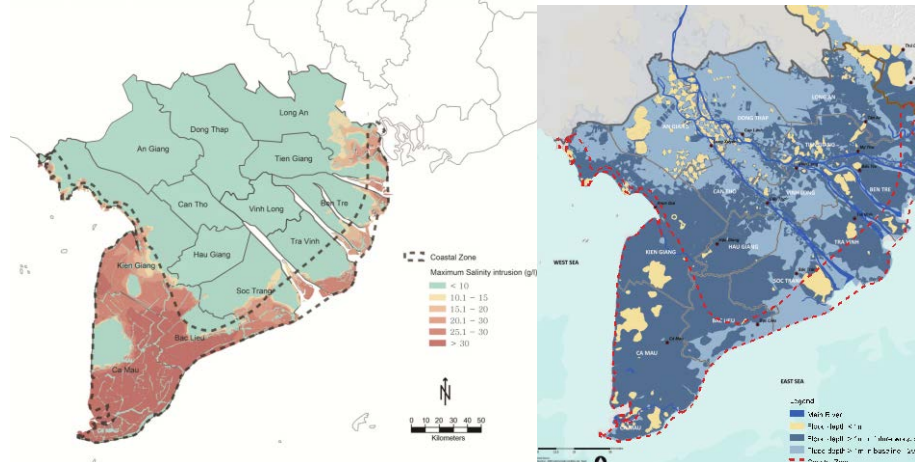


Figure 3. Salinity intrusion and flooding maps

Due to temperature increases and changing dry season patterns, severe drought has impacted all provinces in the Mekong Delta, Southern Central and Central highland regions since the end of 2015. Out of Vietnam's 39 provinces, 63 have requested support from the central government to cope with the most severe El Nino/drought in 90 years. Currently 10 provinces have declared drought emergencies: Bình Thuận, Bến Tre, Vĩnh Long, Sóc Trăng, Cà Mau, Trà Vinh, Tiền Giang, Long An, Bà Rịa-Vũng Tàu and Gia Lai.

Drought:

In 2016 and 2017 dry season, a record drought in the Mekong Delta region, followed by saltwater intrusion, cost Vietnam VND 15 trillion (\$669 million) due to the heavy toll on agricultural production. It also caused dire humanitarian and other economic impacts: almost half a million households lacked fresh drinking water and experienced food shortages and thousands of affected people had to migrate to urban areas in search of jobs.

Most of the affected provinces of the Delta have begun to secure freshwater by all measures available to them. In many vulnerable communes in Hau Giang, Ben Tre, and Tien Giang provinces, farmers have used water tanks to collect rain-water and drilled wells to extract groundwater. They also have reduced the annual rice crop and switched to cash crops that require less water.

Vietnam's 2015–2016 drought and associated saltwater intrusion (SWI) offer a preview of what could become the new norm, and demonstrate the need to take action in order to ensure the country's economic and societal well-being. According to the Ministry of Agriculture and Rural Development (MARD), in this period 18 provinces were severely affected by drought and SWI

(figure 0.1, table 0.1), resulting in direct economic losses of VND 15,032 billion (about US\$674 million), representing 0.35 percent of national GDP and resulting in negative agricultural growth for the first time in decades.

The drought and SWI may make it harder for Vietnam to meet its targets under the Socio-economic Development Plan (SEDP) 2016–2020. These targets include a gross domestic product (GDP) growth rate of 6.5–7.0% a year, and a reduction in the share of poor households by an average of 1.0–1.5% a year. The impact of adverse climate conditions on the economy is already evident: in the first half of 2016, GDP growth was recorded at 5.5%, much lower than the 6.5% average growth in 2015. The World Bank accordingly lowered its 2016 growth projections from 6.5% down to 6.2 percent. The average GDP growth was recorded at 6.2% for 2016, below the government’s 6.7% target.

Like past floods and typhoons, the prolonged drought and SWI of 2015–2016 have hurt people’s livelihoods and assets, making it difficult for affected households to bounce back and recover. Although disasters do not discriminate, poor and near-poor households are often more exposed to and disproportionately affected by the impacts of disasters. Other disproportionately affected groups include women and girls, who are typically responsible for household water gathering, and ethnic minorities located in the drought-stricken provinces of the Central Highlands. Such impacts underscore the importance of efforts that target the most vulnerable and that promote inclusive planning and implementation at the local level.

The serious socioeconomic and environmental effects of the 2015–2016 drought and SWI in Vietnam are due to both adverse climate conditions associated with El Niño and gaps in the capacity of the government and communities to manage the impact of those conditions. Although many good practices have been initiated in programs and policies across the country, the current situation shows that more investment is needed to meet the growing challenges arising from climate change and from increasing disaster risks.

Table 2. Overview of Damage Impact of 2015-2016 Drought and SWI in Vietnam

Region	Number of Severely affected Provinces	Production area affected (ha)			Number of Household lacking access to water for consumption and daily use	# of livestock lost	Total Economic loss (billion VND)
		Rice	Crop	Aquaculture			
National	18	243,762	168,064	69,008	457,796	-	15,023
South Central Coast	3	10,776	15,000	-	43,482	5,126	1,457
Central Highlands	5	17,541	141,756		72,060	494	6,004
Mekong Delta	10 out of 13 (Long An, Tien Giang, Ben Tre, Tra Vinh, Vinh Long, Soc Trang, Hau Giang, Bac Lieu, Ca Mau, and Kien Giang)	215,445	-	68,916	342,254	933	7,517

Source: MARD 2016

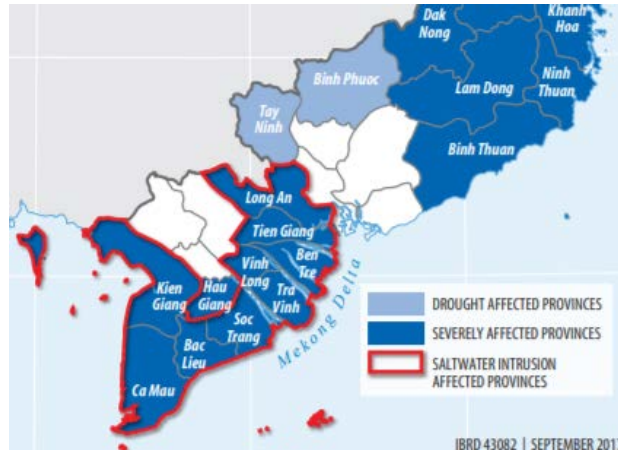


Figure 4. Drought- and SWI -affected provinces

Climate Change Projections and Expected Impacts

Climate Change Projections:

According to IPCC (2013), climate change projections for Vietnam include:

- ❑ Annual mean temperatures will continue to rise by 0.1-0.3°C per decade, and the number of days with temperatures above 33°C will increase;
- ❑ The number of cooler days with temperatures below 15°C will drop by two to three per year;
- ❑ The dry season will get longer;
- ❑ There will be more intense rainfall events, and more frequent and severe droughts and floods; and,
- ❑ Maximum monthly flows in the Mekong Basin will increase by 35-41%, while minimum monthly flows will drop by 17-24% by 2100, further exacerbating flood and drought risks.

Climate change projections for Vietnam from IPCC report (2013) show that the southernmost provinces, especially the Mekong Delta Region in particular, will experience increases in temperature resulting in more droughts in the dry season and a slight increase in rain during the wet season. On the other hand, rainfall from the central or northern provinces will lead to increased flood risk in the southern provinces.

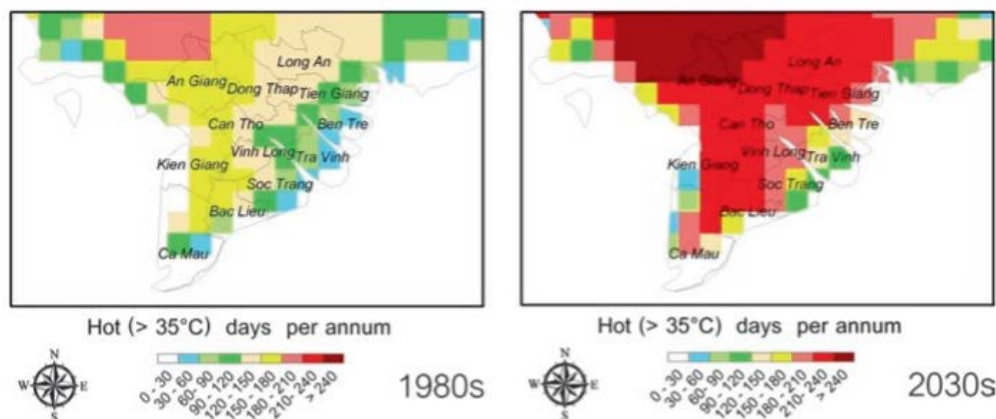


Figure 5. Hot period (number of hot days in a year) in the Mekong River Delta in the 1980s and 2030s (simulated)

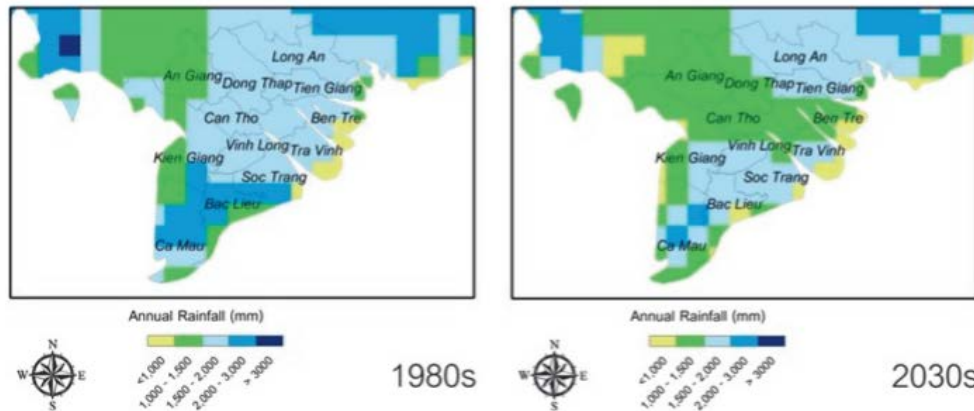


Figure 6. Annual precipitation in the Mekong River Delta in the 1980s and 2030s (simulated)

From figure's 5 and 6, it can be observed that the changes in the average temperature and annual rainfall in Mekong Delta vary from province to province, however, the Mekong Delta as a whole is still an area highly affected by Climate Change impact in the national context. The coastal areas where the land averages 5m above sea level or less are especially vulnerable to sea level rise. Climate change in the Mekong Delta will bring strong fluctuations in rainfall, will increase the frequency of extreme weather events such as floods and droughts and will result in rising sea levels with the potential to inundate land or increase salinity. All these impacts of climate change in the Mekong Delta could be significant threats to the region's agricultural and fisheries productivity, as well as coastal ecosystems. Along with the general climate change projections in overall Vietnam, the Mekong Delta has had its own region-specific climate change projections as follows:

- ❑ According to the RCP4.5 scenario, the average annual temperature will likely increase by 1.3 to 1.4°C in the mid-21st century and by 1.7 to 1.9°C at the end of the 21st century;
- ❑ According to the RCP8.5 scenario, the average annual temperature will likely increase by 1.8 to 2.0°C in the mid-21st century and 3.4 to 3.6 at the end of the 21st century;
- ❑ The average maximum temperature increases higher than the average minimum temperature and the increasing trend gradually reduces from northern to southern regions of the Mekong Delta;
- ❑ Annual precipitation is likely to decrease by 10–20% in the future throughout the Delta area;

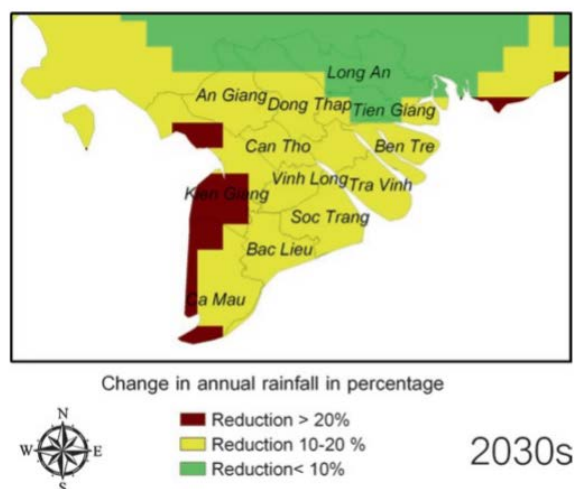


Figure 7. Comparison of change in annual precipitation in the Mekong River Delta between the 1980 and 2030 (simulated)

Table 3. Climate Change Projections in Bac Lieu and Tra Vinh

Province	Climate Change	RCP 4.5 scenario			RCP 8.5 scenario		
		2016-2035	2046-2065	2080-2099	2016-2035	2046-2065	2080-2099
Bac Lieu	Change in average annual Temperature	0.7 (0.4-1.3)	1.4 (1.0-2.0)	1.8 (1.2-2.5)	0.8 (0.6-1.2)	1.8 (1.4-2.5)	3.3 (2.7-4.2)
	Change in annual rainfall (%)	9.6 (5.0-13.9)	11.0 (2.3-20.5)	13.6 (4.3-22.8)	11.8 (6.4-18.0)	16.5 (10.1-23.3)	18.0 (8.5-29.0)
	Change in spring rainfall (%)	8.4 (-3.3+19.9)	-5.8 (-16.8+4.7)	9.9 (-7.9+25.7)	-0.5 (-10.2+8.6)	-0.1 (-6.8+6.4)	2.0 (-10.8+15.5)
	Change in winter rainfall (%)	2.2 (-2.8+6.7)	3.8 (-4.2+12.4)	7.8 (-0.1+15.1)	5.7 (1.3+10.7)	9.6 (2.2+16.8)	12.7 (2.6+22.5)
Tra Vinh	Change in average annual Temperature	0.7 (0.4-1.2)	1.4 (1.0-2.0)	1.8 (1.2-2.6)	0.8 (0.6-1.2)	1.9 (1.4-2.6)	3.4 (2.7-4.5)
	Change in annual rainfall (%)	10.9 (4.9-16.3)	15.7 (5.7-26.8)	17.7 (4.1-30.0)	11.4 (5.6-17.5)	14.6 (8.4-21.5)	18.2 (9.0-28.2)
	Change in spring rainfall (%)	10.9 (-0.5+21.8)	0.9 (-14.4+15.5)	7.9 (-5.0+19.5)	4.9 (-5.2+14.7)	1.6 (-6.7+9.9)	2.0 (-9.2+13.7)
	Change in winter rainfall (%)	4.2 (0.4+8.2)	3.6 (-4.5+11.6)	5.2 (-0.2+10.6)	6.8 (2.5+11.4)	8.5 (2.8+13.9)	11.2 (3.5+18.8)

Table 2 shows the climate change projections for change in average temperature and change in annual rainfall trends in Bac Lieu and Tra Vinh in Mekong Delta Region. As Bac Lieu and Tra Vinh show similar levels of change for average annual temperature, the proposed project has focused on the tendency of the change in rainfall, one of the main causes of drought and flood. Figure 7 also shows that the change in annual precipitation in the Mekong Delta will decrease by 10-20% in average. Ben Tre province is predicted to be highly affected by drought in the future, the data on table 2 shows since the transit of rainfall trends is most various in Ben Tre.

Table 4. Land Erosion map and data for Bac Lieu and Tra Vinh

Bac Lieu Province

District	Area (ha)	Inundation Percentage (% area) corresponding to rising sea level						
		50cm	60cm	70cm	80cm	90cm	100cm	200cm
Gia Rai Town	35506	1.43	3.01	7.54	15.48	31.27	48.71	98.88
Hoa Binh	36735	2.28	4.78	6.97	11.74	18.87	33.96	96.15
Hong Dan	44050	10.70	22.48	41.24	59.51	72.66	90.78	95.79
Phuoc Long	42346	4.32	9.07	20.95	37.25	54.56	73.45	99.40
Bac Lieu City	15920	0.67	1.40	2.64	4.99	8.81	14.80	84.63
Vinh Loi	25267	1.54	3.23	6.58	12.71	23.88	43.83	97.87
Dong Hai	56111	1.68	3.54	5.09	7.12	10.45	17.98	90.81
Province	252600	3.65	7.65	14.54	23.37	33.78	48.60	95.29

Tra Vinh Province

District	Area (ha)	Inundation Percentage (% area) corresponding to rising sea level						
		50cm	60cm	70cm	80cm	90cm	100cm	200cm
Chau Thanh	34552	11.99	12.09	12.29	12.36	16.04	21.23	94.15
Cang Long	29438	9.12	10.87	13.66	18.69	32.95	50.02	90.29
Cau Ke	24635	0.55	1.04	2.13	4.46	8.98	14.05	96.29
Cau Ngang	32494	11.36	12.63	13.42	15.07	19.07	20.30	93.07
Duyen Hai Town	51268	5.39	5.48	5.56	5.64	5.69	3.41	78.96
Tra Vinh City	6755	7.61	7.82	7.91	8.08	8.87	10.66	72.48
Tieu Can	22776	0.53	1.47	4.71	9.73	25.40	59.30	91.34
Tra Cu	37667	1.64	2.67	4.56	7.09	11.60	18.31	98.35
Province	234120	6.20	6.97	8.16	10.34	16.20	23.30	94.03

According to table 4, the figures and tables from Tra Vinh and Bac Lieu province show the risk of land erosion as sea-level rises by different levels in each province.

Expected Impacts:

Due to extreme natural hazards from the impact of climate change, human settlement and ecosystem in Vietnam are becoming devastated, securing access to clean water is also becoming an urgent priority. Climate change impacts such as rising temperature, changing rainfall patterns and sea level rise are posing new and bigger risks to human settlement and the environment in this region. The result is that human settlement will be increasingly vulnerable to climate change and extreme natural hazards as they are generally located in high risk areas, typically along riverbanks and in costal lands.

The issues of climate change caused the further degradation of several environmental problems; floods; drought; rainfall pattern change; and salinity intrusion. These environmental problems result in malignant changes in ecosystem, forced migration and also disturb livelihood strategies and resources management.

Table 5. Impact of Climate Change on Human Settlement and Ecosystem

Climate Change Impact	Human Settlement	Eco-system (Environment)
High Temperature	<ul style="list-style-type: none"> - Health issue - Reduce the productivity on agriculture 	<ul style="list-style-type: none"> - Intensify disaster - Drought
Drought	<ul style="list-style-type: none"> - Lack of water for drinking and agriculture - Transit of main source of income 	<ul style="list-style-type: none"> - Salinity Intrusion

Sea Level Rise	<ul style="list-style-type: none"> - Migration due to lack of human settlement - Transit of main source of income 	<ul style="list-style-type: none"> - Threat to bio diversity - Floods
Salinity Intrusion	<ul style="list-style-type: none"> - Lack of Fresh and safe water for drinking and agriculture - Transit of main source of income 	<ul style="list-style-type: none"> - Threat to biodiversity
Rainfall Pattern Change	<ul style="list-style-type: none"> - Unexpected flood and storm - Reduce the productivity on agriculture 	<ul style="list-style-type: none"> - Threat to bio diversity - Intensify disaster; flood, drought

Focus of the Proposal

This proposal has mainly focused on ***‘enhancing the resilience, inclusive and sustainable eco-human settlement development through small scale infrastructure interventions in the coastal regions of the Mekong Delta in Vietnam.’*** Based on the vulnerability assessment frame work and analysis on relevant projects in the province, Bac Lieu and Tra Vinh are selected as the most vulnerable provinces in the Mekong Delta. In these provinces, a number of communes have been identified as our project site due to the reasons as follows:

The project will focus its actions on highly vulnerable human settlements in Bac Lieu and Tra Vinh province of the Mekong Delta in order to achieve its above objective. The selected communes are a combination of the most vulnerable human settlements to climate change impact in the selected regions and are also the communes where UN-Habitat could make best synergy with other international donors who are currently active or have done relevant projects in the province. In Bac Lieu and Tran Vinh, the targeted project site will be 4 communes – Huu Nghi, Commune 14, Hoa Minh, and Long Hoa (with the total number of 26,099 beneficiaries). Further details can be described in *Appendix 1 – Vulnerability and Risk Assessment Report*

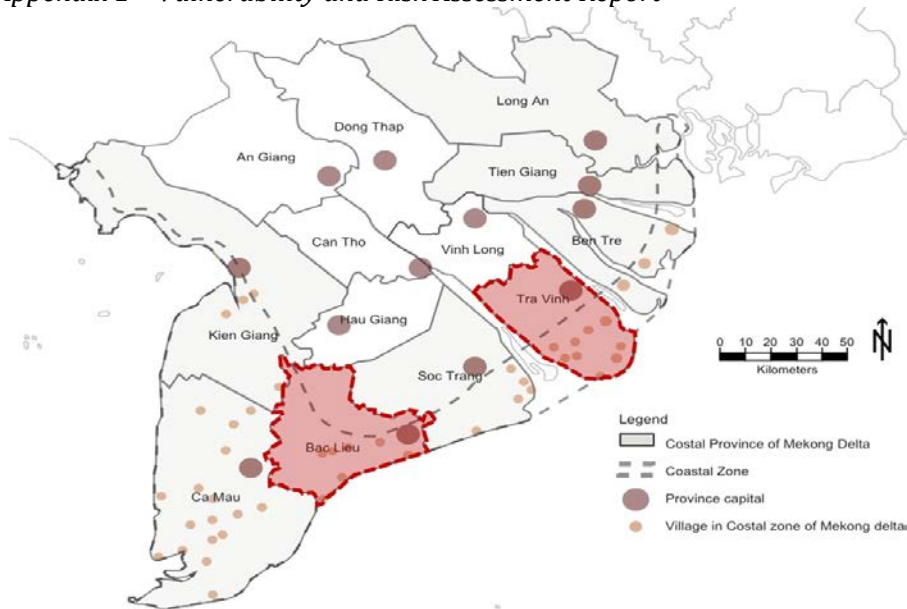


Figure 8. Project Site Location

1. Vulnerability Analysis framework

In order to select the target communes for the project, vulnerability assessment against climate change impact and problem analysis, should be analysed in advance. Figure5 shows the matrix to assess the vulnerability to climate change.

As shown in Figure5, Vulnerability could be measured by subtracting the 'adaptive capacity' from the sum of 'exposure' and 'sensitivity'. Since exposure and sensitivity cannot be enhanced by human intervention, increasing 'adaptive capacity' has been identified as the key to achieving sustainable development.

The sectorial approaches can be applied in mitigating climate change risks; however, this project will specifically focus on water, livelihoods, governance, and planning. Each different approach will be addressed through components of this project which is composed of both hard and soft resilience building processes.

Through the vulnerability assessment from the framework mentioned above, the proposed project would suggest three main rationale for identification of the project site; vulnerability assessment, natural hazard, and the gap and synergy with the exiting projects in project location.

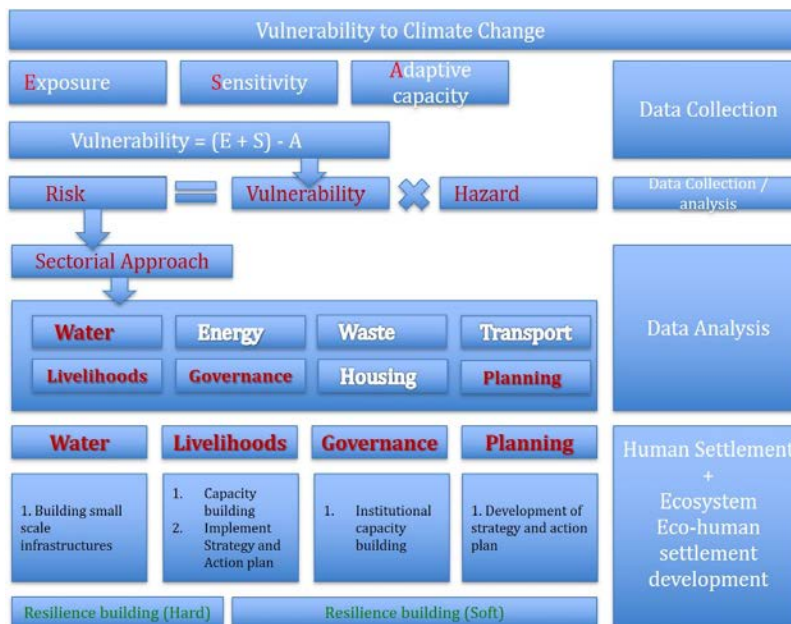


Figure 9. Problem Analysis Framework

2. Basic Vulnerability Assessment – social, economic, and environmental context

a) Basic socio-economic and environmental contexts of Bac Lieu, project site:

Bac Lieu province, located in the Mekong Delta, has an equatorial monsoon climate regime, with two distinct seasons: the rainy season, with average temperature of 25.2 - 29.1°C, and the dry season, with an average temperature of 24.3 and 29.7°C. The temperature amplitude between the months is not significant (1-2°C) but the temperature amplitude between day and night is quite large (dry season: 8-10°C, rainy season: 6-7°C), which is favorable for plant growth and development.

The rainy season starts from May to November, and the dry season lasts from December to April. The annual average rainfall is 1,801.5 mm, and average number of rainy days is about 110-120 days/year. The average air humidity is 82.6%, and around 76–80% in the dry months.

Bac Lieu has numerous rivers, canals and ditches such as Bac Lieu river, Cau Xang Canal, that meet the water demand for agriculture, aquaculture and drainage in urban areas. Recently, the completed maintenance of dikes and sluice gates helps to prevent saltwater intrusion along Highway 1A and Bac Lieu river, in this area the saltwater – freshwater regulation is gradually being improved to serve agricultural and aquaculture practices.

Regarding the terrain characteristics, Bac Lieu is located in the region of the East Sea affected by a semi-irregular tide. Due to the completion of the sluice gates that were built to prevent saltwater intrusion and because the tidal acreage is shrunk, the tidal level is now higher than before, this has the effect of leaching saltwater into shrimp and salt producing areas. To address this issue, it is necessary to dredge the irrigation and dike systems in order to regulate water resources to effectively serve farming and aquaculture. While in the dry season the salinity in the rivers and shrimp ponds increases, during the rainy season the salinity decreases fast for both.

Natural resources in Bac Lieu are distributed as follows:

- Land is divided in 3 main groups: sandy soil (10.08% of the natural area of the city), saline soil (62.25%) and acid sulfate soil land (18.43%).
- Water: salt water (comes from the sea and is mixed with rainwater. It is not suitable for freshwater crops and livestock but is the valuable resource for aquaculture development), groundwater (4 hydrological formations), and surface water (in rainy season freshwater is dominant, but by the end of rainy season water is often acidic and in dry season water is affected by saltwater intrusion).

Bac Lieu is composed by 10 administrative units of wards (wards 1,2,3,5,7,8, and Nha Mat ward) and 3 communes (Hiep Thanh, Vinh Trach and Vinh Trach Dong). By the end of 2015 the population was 155,194 people, with a major percentage of Kinh people, followed by the Khmer and Chinese ethnic minorities. There is an equilibrium between female and male ratio. According to the People's Committee of Bac Lieu Province, both genders have right to give comments, make decisions and discuss problems.

Regarding health issues, the main diseases are related to environmental pollution (41.7%), crowded housing (8.5%), poor diet (11.2%), flies and pests (30.0%) and 27.1% as other causes (such as living habits, low awareness of the community on prevention, care and treatment).

Career opportunities are related directly to the educational background of the people. Most of the people (93.2%) have attended school and university. However, there is still a 6.7 % illiteracy rate in the region, mainly concentrated in poor households in Nha Mat ward and ward 2. Indeed, there is a clear gap between poor households and rich households in the area. The income per capita of rich households (5,182,903VND/person/month) is 8.7 times the income per capita of poor households (594,593VND/person/month). The latter's income generally coming from low-paid, instable and seasonal jobs, while rich households mainly generate revenue from salaries and business activities. Most employment in this region comprises of labour force jobs (44.0%), but there are also people working in the service sector (15.4%), and in state-owned enterprises (13.0%). The percentage of unemployment is at approximately 7.5%.

According to the Peoples Committee of Bac Lieu province, the city reached an economic growth rate of 16.63% in 2015, which is comparatively high growth rate in comparison with other cities in Vietnam. The economic structure of Bac Lieu city in the same year comprised of 45.57% services, 42.04% industries and construction, and 12.39% agriculture and fisheries. Industrial production and small handicraft of Bac Lieu city are being developed based on market demand.

Bac Lieu's agricultural production includes rice, fruits, vegetables, cattle and poultry. Aquaculture and fishery increased gradually from 2012-2015. However, it faces problems such as asynchronous irrigation systems, lack of investment funds for production, prolonged sunny and hot conditions that have negative impacts on shrimp farming due to increasing salinity levels.

The service sector continues to grow. One on hand, Bac Lieu city has opened Bac Lieu shopping center and Hiep Thanh market in Hiep Thanh commune which have relatively stable prices for goods and good compliance of the sellers with regulation on price listing. Tourism has also increased and visitors are increasing the demand for accommodation services.

b) Basic socio-economic and environmental contexts of Tra Vinh, project site:

Tra Vinh Province is located on the Mekong River Delta region, with Ben Tre, Vinh Long and Soc Trang provinces at its borders. It also has 65km of coastline and is surrounded by Tien and Hau rivers. Tra Vinh has a total area of 2,341 square kilometres and a population of over one million people, with 59% of them at working age and distributed through 7 districts: Cau Long, Cau Ke, Tieu Can, Chau Thanh, Tra Cu, Cau Ngang and Duyen Hai. Over 29% of the population is ethnic Khmer. There are also a number of ethnic Chinese (5-6% of the population), and a small Cham population. The number of "poor" households earning less than 90,000d/person/month is 33,545, of which 11,525 households earn less than 60,000/person/month. There is a group of people who are considered the "static poor", they are trapped in a type of poverty that will be difficult to reverse: many of them are landless and in debt to government lending programs and/or private moneylenders. As a result, they are not eligible for any new loans and they must repay with interest.

The economy is predominantly based on agriculture, fish and shrimp breeding. Over 80% of the population are dependent on the agricultural sector. Đĩnh An is one of eight key marine economic areas nationwide, with favourable conditions to develop a sea-based economy, electricity, petrochemicals, shipbuilding, navigation services and tourism.

However, Tra Vinh faces challenges related to the low prices of items obtained from agriculture and aquaculture, such as shrimp, dried coconut, vegetables, and more. Although people have invested in the development of shrimp farming, particularly in the districts of Duyen Hai and Tra Cu, almost 100% of shrimp harvests failed completely. Most people survive through small-scale subsistence farming, handicrafts, and services, but recently have to find other income generating activities. However, demand for labour is limited even in the high season: on average a person can expect to work only 10-15 days in a month, for between 10,000 and 30,000 VND per day. The official unemployment rate is around 10%. In addition, disbursement of capital for infrastructure development is slow and the progress of many licensed investment projects have been delayed.

Tra Vinh province is located in a tropical monsoon region. Dry season is between December to April and the rainy one is between May and November. The annual average temperature is 26C. In this area, ground-water is pumped inland to irrigate farms with upland crops due to the rapid

exhaustion of freshwater ponds. Irrigation was previously done during midday without measuring the amount of water used, hence a large portion of the water evaporated before entering the soil.

The soil in the province, however, is becoming increasingly poor in terms of water-holding capacity and nutrients, and is severely affected by acidity and salinity. Recently, the salinity level of the canal system was reported to be as high as 25%, while the optimum salinity level for shrimp is between 12-15%. Due to this the production and growth of shrimp was reduced, with dead shrimp accounting for 25-30% of the total production. To monitor this situation, the farmers measure the pH and base levels every day and district extension workers also monitor salinity levels from 11 salinity monitoring stations.

3. In depth Vulnerability Assessment

a. Bac Lieu Province

1) Huu Nghi, Vin Trach Dong District

Direct Beneficiary (number of household): 4-500people (80-100 households)

Minority group: Majority of population is Khmer (Ethnic minority)

Infrastructure level: low, detailed in the contents

Livelihood Resources: fishing, haunting, aquaculture (failed)

Income level: low

Education level: elementary school or secondary school

zeature: Huu Nghi commune is newly built commune in 2013 for the migration from the coastal region due to climate change impact. Government provided social housing for migrants but the infrastructure and housing condition is still low.



Figure 10. Location of Huu Nghi commune in Bac Lieu

Water Management:

In Huu Nghi commune, a public water tank and water drainage system has been facilitated, however, the quality of water is not secured with TDS 1,100. According to the government official in Bac Lieu, once they installed the public water tank, there was no proper management of the facility, due to the lack of the management, the water tank no longer functions adequately.



Figure 11. Water tank in the community

As shown in the figure 13, the water drainage system in Huu Nghi commune is covered by waste. The water from each household flows through this water drainage without any treatment.



Figure 12. Water drainage system

Water purification system and upgrading drainage system in the village will benefits approximately 235 people.

Housing Condition:

The houses in Huu Nghi commune has been provided by Government in 2013 when the commune newly built for the migrants. Most of the houses are semi-detached building used by two households and the public toilet is shared with the other households.



Figure 13. House in the community



Figure 14. House alignment and public bathroom

Waste Management:

According to the figure 16, there is no waste management system in Huu Nghi commune. People tend to use the ponds or the aquafarming area as the dumping area and it leads to further water pollution. Waste treatment system can have positive link to water drainage system in the villages and this would benefit 264 people in the villages



Figure 15. Waste Management

☐ Livelihood Resources:

People in Huu Nghi commune still commute every day for 4-5km from their formal residential area, to their daily livelihood. Since the average education level in Huu Nghi commune is elementary school and secondary school, most people from the coastal region rely on fishing and hunting. Even though the government has provided farming land for shrimp farming, the former distribution hasn't been formulated. Due to lack of planning, the farm has been abandoned.



Figure 16. Livelihood resources

2) Commune 14 and Vinh Hau Commune, Hoa Binh district

Potential Direct Beneficiary: around 400 people (will be settled in early 2019)

Infrastructure level: none

Feature: Former residential area has been affected by climate change impact, especially sea level rise, around 400 people are planned to move to commune 14 in early 2019. The government will provide social housing just like the Huu Nghi commune above.

Expected Challenge: Commune 14 might face similar challenges that Huu Nghi has faced since 2013 including insufficient plan for commune, lack of livelihood resources, water security, and insufficient waste management systems.

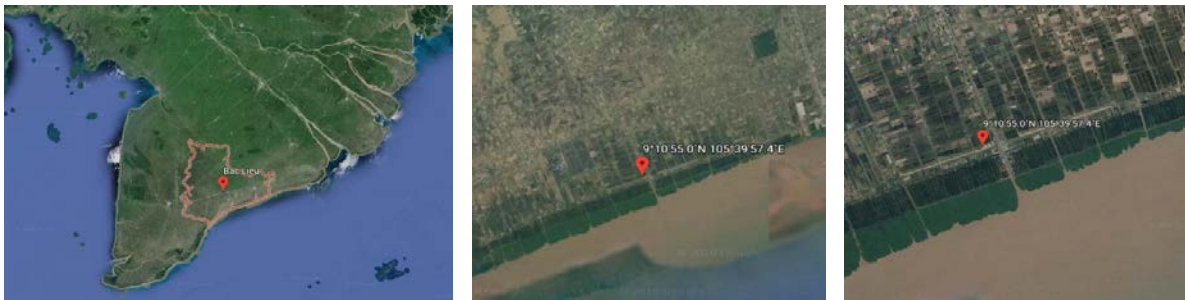


Figure 17. Location of commune 14 in Bac Lieu

☐ Former residential area (Climate Change impacted area):

Around 400 residents living in the vulnerable community are about to migrate to commune 14 in early 2019. This migration is due to the impact of climate change, especially sea level rise. The government has decided to build the new commune for 400 residents in this area.



Figure 18. vulnerable community to the impact of climate change

Current living condition in the vulnerable community is poor as shown in figure 20. Residents in the area are also suffering from the lack of fresh water for drinking and living.



Figure 19. Housing condition in vulnerable community

❑ Potential resettlement area:

The potential resettlement for the residents of the vulnerable area is commune 14 located in Vinh Hau Commune. The plan for migration from the local government is to begin in early 2019, however, basic infrastructure is yet to be provided to commune 14.



Figure 20. Potential resettlement area

According to figure 21 below, the condition of infrastructure is low. Taking into account the timing for the migration, provision of good-conditioned infrastructure is urgent.



Figure 21. Infrastructure in the potential resettlement area

In the circumstances described above, commune 14 is likely to suffer from the same challenges that Huu Nghi commune has been facing since 2013 including fresh water scarcity, lack of livelihood resources and waste management.

A covered well, water restoration, rainwater capture, drainage systems will benefit the most of inhabitants in the villages.

b. Tra Vinh Province

1) Long Hoa, Chau Thanh District

Direct Beneficiary (number of household): 10,280 people (2,547 households)

Infrastructure level: low, detailed in the contents

Livelihood Resources: Agriculture-aquaculture 81.26%

Income level: 37.5 million VND/year per capita

Poverty rate: 12.21%

Households lacking access to clean water: 2,182 (85.67%)

Feature: 136 households in Con Phung village needs resettlements; 2 houses have been destroyed and 5 houses lost their roofs because of tornadoes; water level rise, combined with tide destroyed the shore of 69 shrimp ponds, and 650m of dyke is in risk of land erosion;



Figure 22. Location of Long Hoa

Water Management:

In Long Hoa, people are suffering from lacking of fresh water for drinking and living. Although the government has provided with the rainwater storage tank, only 20% of population living in the center of Long Hoa are currently covered by said tank. The rest of population have to collect rain water individually for their own living and drinking. People also use water pump's in their own

household, but the quality of water from the ground is not sufficient for using as drinking water or water for living.



Figure 23. Water pumping system in the household

According to local people, it is common in Long Hoa to use the waterway as the toilet. As people use the waterway as a toilet, and the water pump for living, the untreated water can be used by local people. A sufficient sanitation system and water management system should be provided in unison. These systems will benefit total approximately 4176 people.



Figure 24. House without sanitation

Waste Management:

According to DONRE in Tra Vinh, there is no proper waste management system or plan in Long Hoa. The absence of a water management system or proper plan leads to the situation that solid waste is abandoned on the road and in the forest. Approximately 1000 people in the commune will have benefit from the waste treatment system and management.



Figure 25. Waste management

People also burn the waste from their household in the public space such as the forest near their house. This type of burned-out area is easily spotted in Long Hoa commune. According to the current waste management in Long Hoa, raising people’s awareness about waste management is an urgent priority.



Figure 26. Burning the waste

❑ Land Erosion:

Since Long Hoa is located in the lower part of the main island in Chau Thanh district, land erosion from sea level rise is the most severe challenge related to climate change impact. As seen in the figures below, no protection is currently provided to prevent land erosion along the coast and waterways. Eco-friendly land protection system will provide the benefit to approximately 4200 people in the commune.



Figure 27. Land erosion

2) Hoa Minh, Chau Thanh District

Direct Beneficiary (number of household): 14,919 people (3,309households)

Infrastructure level: low, detailed in the contents

Livelihood Resources: Agriculture - aquaculture (82%)

Income level: 41.8 million VND/year per capita

Feature: Huu Nghi commune was newly built in 2013 for the migrants from the coastal region due to climate change impact. The government provided social housing for the migrants but the infrastructure and housing condition is still low.



Figure 28. Location of Hoa Minh

In Hoa Minh Commune, for providing water treatment, rainwater capture, waster restoration, and a covered well system will benefit approximately 4700 people, and land erosion can be protected with eco-friendly land restoration and protection system, and this can benefit approximately 5200 people in the Commune.

Housing condition:

In Hoa Minh, many houses are located along the river way without climate change impact resilience design. People are at risk from damage associated with local flooding.



Figure 29. House along the waterway

Basic Infrastructure:

In the whole island in Chau Thanh District, there are approximately 100 bridges over the waterway. More than 80% of them are made with wood and are not resilient against climate change impact. When heavy storms come, the wooden bridge can easily collapse. The collapse of basic infrastructure such as bridges will inevitably lead to increased vulnerability of the local community. Approximately 80 bridges would be upgraded and more than 160 households and 800 people will have benefits.



Figure 30. Wooden bridge

❑ Land Erosion:

Due to the geographical location of Hoa Minh on the island, there are many waterways throughout the commune. Along the waterways, the ecosystem and the available land is threatened by erosion. Mangrove plantation is not sufficiently provided in the area to protect the coast and river banks from erosion.



Figure 31. Land Erosion

4. Natural Hazard

With the exception of 2016 and 2017 when drought severely affected the Mekong Delta Region, generally storms and flooding are the most frequent disasters (storm: 52%, flood: 42% of the total number of disasters). The classification of risk from natural disaster in Vietnam is as follows:

Table 7. Natural Disaster Risks in Vietnam

High Risk	Medium Risk	Low Risk
Flood	Hail rain / Tornado	Earthquake
Typhoon	Drought	Accident (Technology)
Inundation	Landslide	Frost
	Flash Flood	Damaging Cold
	Deforestation	

Source: The World Bank, Vietnam "Increasing Resilience to Climate Change and Natural Hazard"





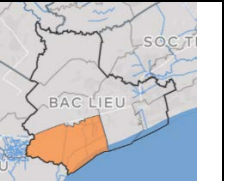



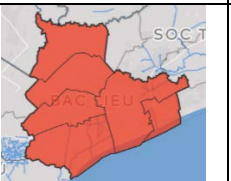

The proposed project used the data from The World bank to demonstrate the overall natural hazard exposure for each province and the definitions for each hazard level is as follows:

- ❑ **High:** Users should be highly aware of potentially severe damage from this hazard for the project location. Without taking measures to mitigate the hazard and risk, high levels of damage can be expected to occur within the project or human lifetime (and potentially frequently in that timeframe, for hydro-meteorological hazards, e.g., floods, extreme heat)
- ❑ **Medium:** Users should be aware of potentially damaging effects of this hazard for the project location. Potentially damaging events can be expected to occur within the project or human lifetime and measures to mitigate the hazard and risk should be considered. For hydro-meteorological hazards, damaging effects could occur frequently in that timeframe
- ❑ **Low:** Potentially damaging events are less likely to occur within the project or human lifetime but are still possible. Measures to mitigate the hazard and risk would be prudent at critical locations. Hazard has been classified based on long-term averages, and there is still potential that damaging events could occur in this timeframe
- ❑ **Very Low:** Available data suggest that potentially damaging effects are unlikely to occur, on average, in the project or human lifetime. Hazard has been classified based on long-term averages, and there is still potential that damaging events could occur in this timeframe

a) *Exposure to natural hazard in Bac Lieu:*

In Bac Lieu, the natural hazards with the worst effects on the region are river flood, urban flood, coastal flood, cyclone, wild fire. Extreme heat is classified as medium level hazard while earthquake, Tsunami and water scarcity are defined as low level hazard. Each district shows a slightly different level of exposure for each natural hazard as follows:

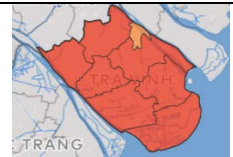
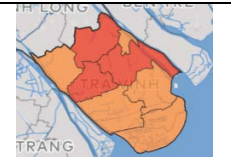








Table 8. Exposure to natural hazard in Bac Lieu

River Flood	Urban Flood	Coastal Flood	Earthquake	Tsunami
				
Volcano	Cyclone	Water Scarcity	Extreme Heat	Wild Fire
				

b) *Exposure to natural hazard in Tra Vinh:*

In Tra Vinh, the natural hazards with the greatest effect on the region are coastal flood, cyclone, wild fire. River Flood, Urban Flood, Tsunami and extreme heat are classified as medium level hazard while earthquake and water scarcity are defined as low level hazard. Each district shows a slightly different level of exposure for each natural hazard as follows:

Table 9. Exposure to natural hazard in Tra Vinh

River Flood	Urban Flood	Coastal Flood	Earthquake	Tsunami
				
Volcano	Cyclone	Water Scarcity	Extreme Heat	Wild Fire
				



5. Gap and synergy from the existing projects

Throughout this region many of the hard-environmental projects focus on flood defense and salinity intrusion. These large-scale projects include The World Bank Mekong Delta Integrated Climate Resilience and Sustainable Livelihoods Project which is working to protect the full Mekong coastal region through the strengthening of coastal and waterway defenses. Projects supporting sustainable Mangrove plantations for coastal defense are also a feature of Bac Lieu and Tra Vinh.

In Tra Vinh one of the most prominent projects is IFAD's AMD project. This project has both hard and soft components. It is also the only major project in the region conducting small scale local hard interventions, these are conducted through the establishment of several funds to support local governance structures in completing projects at household and commune level through consultation with local actors. Whereas the soft interventions such as the sustainable planning aspects of this project have covered the entirety of both provinces, the funding for local development has been limited to a select number of communes divided between the two. This project will conclude in March 2020 just as this project is due to begin, early consultation has identified possible gaps such as AMD's primary focus on supporting agri/aqua-cultural development, at this moment in time the two organizations have committed to work together to find synergy between these two complimentary projects.

According to table 10, Bac Lieu has the largest number of on-going and recently finished projects related to enhancing the resilience capacity against climate change impact. In Bac Lieu it is worth noting that while of the two target provinces there is the highest concentration of projects taking place, many of the projects that make up this difference are have a larger geographical scope and as such are less focused on change at the macro level. Of these macro level projects many are focused on agriculture/salinity intrusion interventions however the different nature of the landscape in Bac Lieu has led to a different approach to deal with the problem, this has primarily been achieved through UNDP's Expanding Models of Rice-Shrimp Cultivation for Efficient Management and Sustainable Use of Alkaline Lands project which propagated a system of seasonal rotation between rice and shrimp. Other projects of note in the region are The World Bank Scaling-Up Urban Upgrading Project which is working on improving city flood defenses and sewage systems and GIZ's green growth reforms program.

Throughout Bac Lieu and Tra Vinh provinces there is a strong onus on capacity building through livelihood support with little focus on the household and community level development, especially for minority and low-income populations. UN Habitat aims to fill that gap by providing small scale community driven climate change adaptation development in some of the most vulnerable communes in these provinces. For more detailed information of the relevant projects in Mekong Delta Region, please see PART II – F (other funding source).

Table 10. Summary of relevant projects in Bac Lieu and Tra Vinh

Geographic Characteristics	Total project	Policy/ Institutional Capacity Building	Hard Environmental-Related Infrastructure	Hard Economic-Related Infrastructure	Community level Capacity Building
Bac Lieu	11	1 (9%)	5 (46%)	1 (9%)	4 (36%)
Tra Vinh	5	1 (20%)	3 (60%)	0 (0%)	1 (20%)
SUM	16	2 (13%)	8 (50%)	1 (6.5%)	5 (30.5%)

Through the vulnerability assessment, the exposure to natural hazard, and finding gaps and making synergy with other projects, the proposed project has identified 2 communes from Bac Lieu and Tra Vinh for the project site as follows:

Table 11. Summary of relevant projects in Bac Lieu and Tra Vinh

Province	District	Commune	Feature	Beneficiary	Livelihood Resources	Challenges	Infrastructure Level
Bac Lieu	Vin Trach Dong	Huu Nghi	Resettlement area with ethnic minority group	400-500	fishing, haunting	Salinity Intrusion, lack of fresh water	low
	Vinh Hau	Commune 14	Newly planned settlement in 2019	400	-		-
Tra Vinh	Chau Than	Long Hoa	Island	10,280	Agriculture; Aquaculture	Sea level rise; Destroyed livelihood resources; lack of fresh water; land erosion	low
		Hoa Minh		14,919		Sea level rise; Rain and storm;	low
SUM				26,099			

B. Project Objectives:

Main Objective

The main objective of the proposed project is **“to enhance the resilience, inclusive and sustainable eco-human settlement development through small scale infrastructure interventions in the coastal regions of the Mekong Delta in Vietnam.”** To align with a government request to promote sustainable eco-human settlement in Vietnam, this project aims to improve the poor and vulnerable communes where climate change impacts have the greatest affect. It is structured around the following components below.

To accomplish this goal, a detailed plan for human settlement development is required; this will be accomplished by designing a set of guidelines and capacity building for eco-human settlement development. Secondly, along with these guidelines, an integrated form of planning with respects of eco system-based climate change adaptation should be achieved by local action. To support both of these components, basic service infrastructure needs to be provided and built in small-scale. The

last project output will be raising awareness and knowledge management through an eco-human settlement development framework.

- **Component 1:** Institutional and community capacity building toward eco-human settlement development for supporting enhancement of local climate response actions
 - This is in line with AF outcome 1: Reduce exposure and vulnerability to climate-related hazards and threats with a particular view to community level resilience
 - AF outcome 2: Strengthened institutional capacity to reduce risks associated with climate-induced socioeconomic and environmental losses
 - AF outcome 7: Improved policies and regulations that promote and enforce resilience measures
- **Component 2:** Integrated planning with respects of eco system-based climate change adaptation and building climate resilient capacity and action plan at local level
 - This is in line with AF outcome 1: Reduce exposure and vulnerability to climate-related hazards and threats with a particular view to community level resilience
 - AF outcome 2: Strengthened institutional capacity to reduce risks associated with climate-induced socioeconomic and environmental losses
 - AF outcome 7: Improved policies and regulations that promote and enforce resilience measures
- **Component3:** Sustainability built through small-scale protective and basic service infrastructure
 - This is in line with AF outcome 4: Increase adaptive capacity with relevant development and natural resource sectors
 - AF outcome 5: Increase ecosystem resilience in response to climate change and variability-induced stress
 - AF outcome 6: Diversified and strengthened livelihoods and sources of in-come for vulnerable people in targeted area
- **Component4:** Awareness Raising and Knowledge Management
 - This is in line with AF outcome 3: Strengthen awareness and ownership of adaptation and climate risk reduction processes and capacity

C. Project Components and Financing:

Table 12. Project Components

Project Components	Expected Outcomes	Expected Concrete Outputs	Amount (US\$)
1. Institutional and community capacity building toward eco-human settlement	1.1 Increase awareness on resilience of human settlements and ecosystem as a	1.1. Capacity building support provided to national government and local authorities to increase the	800,000 (16.7%)

<p>development for supporting to enhance local climate response actions</p>	<p>result of enhanced institutional capacity in development of eco-human settlement strategy and action plan</p>	<p>resilience of human settlement and ecosystem</p> <p>1.1.1. Guidance and training materials development for vulnerability and risk assessment at local levels</p> <p>1.1.2. Planning tools and training materials development for planning approach, strategy and action plan development,</p> <p>1.1.3. Project team orientation/training</p> <p>1.1.4. National Induction Workshop (National and provincial participants)</p> <p>1.1.5. National training of facilitators workshop (national and provincial participants), enabling facilitation of eco-human settlement strategy and action plan development</p> <p>1.1.6. Province and District level workshops and trainings, enabling them to set up eco-human settlement strategy and action plan development</p> <p>1.1.7. Community action planning workshops provided at commune level for the development of climate resilient community plans</p>	
<p>2. Integrated planning in respect of eco system-based climate change adaptation and building climate resilient capacity and action plan at local level</p>	<p>2.1 Increased awareness on assessing system, including infrastructure and natural assets, and planning for adaptation</p> <p>Strengthened knowledge of adaptation and climate risk reduction processes and capacity</p>	<p>2.1. Comprehensive workshops for integrating the eco-human settlement strategies and plans (National, province, district and commune)</p> <p>2.1.1. Community action planning workshops to districts and communes for the development of climate resilient (integrated)</p>	<p>700,000 (14.6%)</p>

		<p>community plans (Utilizing the tools and facilitators developed under 1.1)</p> <p>2.1.1.1. Community level vulnerability and Risk Assessment</p> <p>2.1.1.2. Develop community level eco-human settlement planning based on the output 2.1.2</p>	
3. Sustainability built through small-scale protective and basic service infrastructure	3.1 Increased community adaptive capacity with climate resilient and development sectors, and increase ecosystem resilience in response to climate change	<p>3.1.1 Vulnerable assets strengthened, new sustainable assets constructed (Sectorial approach): Waste, climate-resilient infrastructure: i.e. bridge, housing, and ecosystem</p> <p>3.1.1.1. Small-scale water salination system built to provide clean and safe water for both living and agriculture (Water)</p> <p>3.1.1.2. Climate resilience infrastructure building and refurbishing (Infrastructure)</p> <p>3.1.1.3. Climate resilience housing upgrade (Housing)</p> <p>3.1.1.4. Enhancing ecosystem (Ecosystem)</p> <p>3.1.1.5. Small scale eco-friendly waste treatment and management facility built (Waste)</p>	3,100,000 (64.5%)
4. Awareness Raising and Knowledge Management	4.1 Project implementation is fully transparent. All stakeholders are informed of products and results and have	4.1.1. Lessons learned and best practices regarding resilient urban community development/housing are generated, captured and distributed to other	200,000 (4.2%)

	access for replication;	communities, civil society, and policy-makers in government appropriate mechanisms	
		4.1.2. Regional advocacy and replication	
5. Project Activities			4,800,000
6. Project/Programme Execution cost			504,000
7. Total Project/Programme Cost			5,304,000
8. Project/Programme Cycle Management Fee charged by the Implementing Entity (if appreciable)			450,840
Amount of Financing Requested			5,754,840

D. Project Calendar:

Table 13. Project Calendar

Milestones	Expected Dates
Start of Project/Programme Implementation	01-2020
Project/Programme Closing	01-2024
Terminal Evaluation	03-2023

PART II: PROJECT / PROGRAMME JUSTIFICATION

A. The Project Components

The target areas chosen for the project are characterised by high levels of exposure to severe climate change risks, especially sea-level rise, salinity intrusion, drought, land erosion and rainfall pattern change. Climate sensitivity is underpinned by rapid urbanization and population growth, underlying vulnerabilities (poverty, limited access to basic services, gender inequalities, weather dependent livelihoods, environmental and ecosystem degradation) and limited adaptive capacity at household, community and governance level.

In order to achieve the overall project objective, “to enhance the resilience, inclusive and sustainable eco-human settlement development through small scale infrastructure interventions in the coastal regions of the Mekong Delta in Vietnam”, the project takes a comprehensive and holistic approach, which combines a number of horizontally and vertically interrelated resilience approaches towards the strengthening of institutions, communities, ecosystems and physical, natural and social assets.. This supports the integrated approach to improving knowledge of climate resilience and strengthening basic service infrastructure through improved capacity, better local-level planning and community-level implementation in the coastal regions of the Mekong Delta in Vietnam.

The action taken by this project will be targeted to benefit the most vulnerable people in the coastal regions of the Mekong Delta in Vietnam. To do this, a combination of soft and hard measures is

proposed to ensure that resilience at the household and commune level is strengthened sustainably for resilience building that responds to current and future needs.

Soft measures include institutional and community capacity building and action plans, these are designed to target the most vulnerable settlements and to design and implement the most necessary actions, to improve capacity at commune and district level. It will also aim to sustain these actions and replicate them elsewhere through the development of better planning practices which will mobilise national and international finance. Hard measures will comprise of investments in small-scale protective and basic service infrastructure and natural assets designed to increase people's resilience. With a strong mix of soft and hard interventions, it is anticipated that local resilience at household, community and human settlement level will be sustainably strengthened.

Whilst the planned interventions are strongly rooted in national and local priorities the reshaped global development and climate change agenda provides further guidance. In particular, Sustainable Development Goal (SDG) 11 (and several of its targets); Make cities and human settlements inclusive, safe, resilient and sustainable, and Goal 6, (and its targets), Ensuring availability and sustainable management of water and sanitation for all will be addressed by the project. The New Urban Agenda which emerged as an outcome of the Third United Nations Conference on Housing and Sustainable Urban Development (Habitat III, in Quito, October 2016) will also be utilised as a framework to guide this the project.

The specific needs of women, people with disabilities and youths will be considered at all stages of the project. This will be achieved through engaging representatives of these vulnerable groups in community and stakeholder consultations in the planning process, through a community-based approach and through the people's process – where community groups are formed and sustained throughout all stages of the project and through which communities participate in project implementation and monitoring¹.

The project is developed with four interrelated components, which focus on the importance of institutional and community capacity strengthening within the human settlement plan and guideline development, integrated planning for human settlement and ecosystem, tangible actions, and knowledge management.

The components of the project are as follows:

Component 1: Institutional and community capacity building toward eco-human settlement development for supporting enhancement of local climate response actions

In line with AF outcome 1, 2 and 7 with national government priorities (See Section D) this component will focus on reducing the exposure and vulnerability to climate change risk through the development of holistic planning and strategies for eco-human settlement and institutional capacity building. This will be done by:

¹ Development driven by people/Support Paradigm: when people stays at the center of development planning process, the resource can be optimized with greater utility impacting larger number of people: <http://sopheapfocus.com/wp-content/uploads/2010/06/Picture-31.png> People's process of development can be witnessed through the evolve-ment of people's desire to improve their lives. Humans developed their settlement from living in caves, then build-ing shelters, and now home. Along this settlement evolution, they had also established certain norms, standards, and a mutual understanding surrounding their community. That is called the people's process of development.

- ❑ Guidance and training materials development for vulnerability and risk assessment at local levels
- ❑ Planning tools and training materials development for planning approach, strategy and action plan development, resilient infrastructure
- ❑ National training of facilitators workshop (national and provincial participants), enabling participants to set up eco-human settlement strategy and action plan development
- ❑ Province and District level workshops and trainings, enabling participants to set up eco-human settlement strategy and action plan development
- ❑ Community action planning workshops provided at commune level for the development of community resilience plans

The aim of the activities in Component 1 is to support the capacity building of government officials and practitioners in order to enable them to set up an eco-human settlement strategy and climate change action plan.

1. Existing tools for planning for eco-human settlement strategy and climate change action plan will be reviewed, and the guidance and training tools will be developed in English and Vietnamese. These guidance and training tools will be reviewed by governmental officials and practitioners. For effective implementation, the guidance and training tools will be applied in the pilot training workshop with practitioners.
2. In the implementation, the training workshop will initially be held at national and provincial levels. In these activities, talented practitioners and trainers will be identified and trained for the community level training and action-planning workshop at local level. The outcome of the national and provincial level workshops will be enhanced cross-sectorial coordination. This is a critical aspect of the eco-human settlement strategy and action plan development. Climate change is a crosscutting issue, thus horizontal and vertical coordination will be necessary. National and provincial levels' trainings and workshop will help to increase the coordination of eco-human settlement planning.
3. district and commune levels' trainings and workshops will be conducted. These will help local people understand the impacts of climate change and the importance of forward planning. 'Mainstreaming climate change adaptation into the human settlement planning' will be implemented with locals. Also, the demand for support will be identified and a sectorial approach can be applied to it.

This component has been included in the project because it means that the intervention implemented under Component 3 will be based on the integrated planning for resilience capacity building. UN-Habitat's P4CC² approach ensures that activities are feasible, effective and acceptable to communities, this ensures a solid framework for the participatory approach. The action-planning

² P4CC's principles are to be strategic; meaning implementation should make the best use of the resources (financial, human and time) available, values-based; meaning that actions should be based on what matters most to communities, participatory; that the project should engage as many different stakeholders as possible throughout the project cycle, and integrated; meaning it should align with other plans and policies insofar as possible.

phase also enhances the ability of UN-Habitat and the executing partner to ensure compliance with the Environmental and Social Policy of the Adaptation Fund. Further details of compliance with this are provided in Section K.

Component 2: Integrated planning with respect to the eco system-based climate change adaptation and building climate resilient capacity and action plan at local level

In line with AF outcome 1, 2, and 7 with national government priorities (See Section D) this component will focus on the development of the integrating human settlement and ecosystem into the planning. This will be done by:

- ❑ Comprehensive workshops for integrating the eco-human settlement strategies and plans (province, district and commune)
- ❑ Community action planning workshops to districts and communes for the development of climate resilient (integrated) community plans (Utilizing the tools and facilitators developed under 1.1)

Component 2 is integral to the success of the project. This component is required to execute Component 3 in a way that is efficient and sustainable. Component 2 will begin as the capacity building section of action planning under Component 1. The proposed intervention will be presented as part of the integrated planning for eco-human settlement strategy and action plan development. To ensure awareness and ownership over the project activities, stakeholders and targeted areas will participate in all steps (training, planning, implementation, monitoring, etc) of the project activities and trained to ensure a holistic and comprehensive integrated planning for green and blue networks.

The facilitation of local action planning coupled with bringing together local authorities and communities, will provide a comprehensive resilience framework. The prioritization of vulnerabilities related to the alignment of the ecosystem with human settlement focus of the project will also take place under this component. Furthermore, this component aims to promote the integration of the planning for eco-human settlement development strategy and climate change action plan.

For example, green networks will be assessed and will then be included into the human settlement (urban) planning, also blue networks will be examined mainstreamed into planning. Based on the data from the vulnerability and Risk assessment, 'Green and Blue networks' will be analysed and then discussed in the workshop at district and community levels.

More specifically; the role of the 'Green Network' is to protect green related ecosystems in order to protect them from the impact of flooding, land erosion, and sea-level rise. The 'Blue Network' is a part of planning for protecting water related impacts from climate change and natural hazards. These networks will be included in the planning for the integrated development strategies and climate change action plans. It will then result in the outcome of "mainstreaming climate change adaptation into the eco-human settlement planning".

To build the capacity of communities to climate resilience, training/workshops will be provided at the community level to develop local capacities to plan, construct and maintain climate and disaster resilient infrastructures. The capacity will be sustained through the development of guidelines in planning, construction and maintaining small-scale climate and disaster resilient infrastructure systems and through community agreements for executing component 3.

Component 3: Sustainability built through small-scale protective and basic service infrastructure

In line with AF outcome 4,5 and 6 with national government priorities (See Section D) this component will increase resilience through a mix of soft and hard measures that will include year-round water supply, flood/coastal flood protection, sanitation, ecosystem-based adaptation options including mangrove planting and rehabilitation and commune-level law enforcement of the marine protected area. This will be done by:

- ❑ Vulnerable assets strengthened, new sustainable assets constructed (Sectorial approach): Waste, climate-resilient infrastructure (i.e. bridge), housing, and ecosystem
 - Constructing new and restoring old infrastructure in highly affected locations (districts/communities): Improving climate resilient infrastructure and upgrading the protected areas. This will be done through improved drainage system, rainwater harvesting, capture and storage and improved filtration facilities.
 - Providing land and coastal area protection with improving coastal and river way ecosystems
- ❑ Participatory planning, construction and maintenance of resilient infrastructure

The component aims at enhancing climate and disaster resilient infrastructure systems in human settlements. Due to the projected climate change impacts and disasters already occurring in coastal areas, ecosystem and human settlement can only be protected through physical intervention (with the support of the soft interventions above). Interventions will be selected by assessing their adaptive capacity, the impact of climate change, cost-effectiveness, risks and sustainability, this will result in protection of the coastal region against, flooding, sea level rise, drought, and salinity intrusion (i.e mangroves, or other protective infrastructure). As the result of the subsequent and integrated development plans, community action plans will be developed with 'Green and Blue networks', which will result in increased resilience of water, sanitation, mangrove and land erosion related infrastructure systems, these will be constructed in the most vulnerable/at risk settlements. Where there is prioritised need, climate and disaster resilience of schools and other community infrastructure may be supported.

The project will be both innovative and efficient by using, where possible, the People's Process as a means to implement activities. The People's Process mobilises local people from the affected/target areas to take decisions regarding their resilience, to play an active role in the implementation of the measures and support them in implementing this process. Through this process communities/beneficiaries will have greater ownership of the process of building resilience, and will result in reduced implementation costs.

Component 4: Awareness Raising and Knowledge Management

In line with AF outcome 3 with national priorities (See Section D) this component will ensure that project implementation is fully transparent, that all stakeholders are informed of products and results and that they have access to these for replication. More-over, this component will also contain specific activities to further replicate and scale up the knowledge and awareness building component of this project. This will be done by:

- ❑ Lesson learned and best practices regarding resilient urban community development/housing are generated, captured and distributed to other communities, civil society, and policy-makers in government appropriate mechanisms

- ❑ Advocacy platform built at the national level, with other stakeholders working on local level climate change adaptation work
- ❑ Regional advocacy and replication

Lessons regarding increasing the flood resilience of communities need to be captured and municipal and district level government officials trained to ensure the sustainability of this project and effective replication of best practices.

All knowledge products generated will be made available on a digital format in English and Vietnamese, and uploaded to web portal and spatial database.

B. Economic, Social, and Environmental Benefits:

According to the consultations undertaken in the development of this concept note, locals face serious economic challenges due to the impact of climate change and natural hazards.

The consultation also identified that several climatic impacts and hazards cause resettlement of locals to other designated areas and have an impact on loss of livelihood strategy and resources. The designated resettlement areas have not been well structured for sustainable development of eco-human settlement. There are five challenges, which are water management, waste treatment, climate resilient infrastructure, housing, and livelihood strategy and resources.

A lack of basic infrastructure and service in terms of the five challenges, high exposure to the impact of climate change and natural hazards mean that people regularly lose assets and have less adaptive capacity against the impact of climate change. First, for resettlement areas, they are still suffering from lack of basic infrastructure and service, coupled with a severe lack of livelihood resources and strategy. This has resulted in many people returning to their original settlement areas for livelihood resources and strategy. Without intervention, they would suffer from the impact of climate change and natural hazards as there is no specific strategy and action plan for building resilience capacity. Second, for vulnerable areas, locals are suffering from a lack of protective and climate-resilient infrastructures, and high exposure to sea level rise, coastal flooding, drought, and storms. The capacity building for planning and vulnerability assessment is required to identify safe areas for development and for understanding remaining future climate change threats to which the activities should respond. In both areas, small scale infrastructure interventions will be implemented to enhance the adaptive capacity of communities and locals in terms of water, waste, infrastructure, housing and livelihoods.

By implementing a combination of soft and hard intervention, this project is expected to provide reductions in future climate related economic, household and livelihood losses, and reduction in vulnerabilities of women, indigenous people and youth and reduction in environmental degradation. Moreover, the project will bring numerous social benefits. Women and youth specifically will be involved in the planning, assessment and implementation of all components. In the consultation process focus group interviews will be conducted with women and youth unions in order to encourage them to fully participate in the project.

Given that communities, and especially vulnerable groups, will be involved throughout the project, they will have the opportunity to directly influence project activities and outcomes, thus influencing their direct project benefits. The project activities will be adapted to local impacts of climate change and natural hazards such as sea level rise, flooding, drought and storms, but also to exposure to environmental degradation.

Table 14. Overview of Economic, Social and Environmental Benefits

Type of Benefit	Baseline	With/After Project
Economic	<p>Climate change is already leading to economic and livelihood losses, especially caused by sea level rise and floods, but also by droughts.</p> <p>Less capacity for livelihood strategy and resources in the communities</p> <p>No planning (action plan and strategy) for livelihood strategy and resources</p> <p>Locals face high damage and financial losses as a result. The risks and vulnerability will be assessed under the project and baseline will be set after the capacity building and action on planning, and vulnerability and risk assessment before the proposed project interventions.</p>	<p>Reduction in economic and household losses due to increased resilience of institutions, communities and physical and natural assets, ecosystems and livelihoods and ecosystem.</p> <p>High economic costs of flooding caused by damage on infrastructure and assets can be mitigated; labour intensive works will bring temporary jobs for youths and women and reduce unemployment; flood risk reduction increases confidence of investors in the city;</p> <p>New climate resilience infrastructure and service contributes to economic benefits</p> <p>Community participation in infrastructure projects will benefit the community, livelihood strategy is also to primarily be sourced from the community. Additionally, resilient technologies will be imparted and may provide new livelihood opportunities.</p>
Social	<p>Poor quality housing and infrastructure in the target areas further drive vulnerability, and create additional challenges such as a lack of safety, while facilitating the spread of disease.</p> <p>Regular natural hazards can increasingly be considered as drivers of poverty and lead to financial losses, and compound social problems such as sanitation, food security, community safety issues. The lack of (resilient) houses/ infrastructure, high poverty incidences and density in resettlement areas lead to relative safety issues, especially for women, elderly, disabled people and youth</p> <p>Increasing inequality in the resettlement areas shows that the poorest are not sharing in the proceeds of the country's rapid economic growth</p>	<p>Reduction in climate induced poverty, fatality rates, diseases and food security and safety issues due to increased resilience of institutions, communities and physical and natural assets, ecosystems and livelihoods.</p> <p>Health benefits can be leveraged (stagnant waters are breeding grounds for mosquitoes and water borne diseases); community involvement brings ownership of the intervention and a higher probability of sustainability;</p> <p>Capacity development directs involvement in adaptation actions, increases the resilience capacity of the most disadvantaged in the provinces.</p> <p>Safe and resilient infrastructure will increase security of women and other vulnerable groups and will reduce climate-impacted issues.</p> <p>New climate resilience infrastructure and service contributes to social well-being.</p> <p>The project will use the vulnerability assessment and action planning process conducted in component 1 to ensure that actions target the poorest and most vulnerable, including women, youth and the elderly.</p>

		Alignment with the commune/district investment plans and increased capacity for officials at those levels to plan for and manage climate resilient investments will ensure that infrastructure and settlements are more resilient in the long term.
Environmental	<p>Severe environmental degradation has taken place throughout the coastal area of Viet Nam</p> <p>Climate change is already leading to negative environmental impacts, especially differences in temperature and precipitation, leading to floods and droughts, which in turn leads to above factors and erosion, deforestation, etc</p> <p>Ecosystem degradation and poor waste management lead to reduction of livelihood options and health issues and flood risks due to insufficient waste disposal.</p> <p>The often-informal nature of the target settlements creates environmental problems, especially in waste management</p>	<p>Reduction in climate induced environmental degradation and losses, waste production because of environmental/ecosystem protection, community-based waste reduction and recycling schemes and energy efficient building construction techniques.</p> <p>Reduced human impact through changes to land plans and regulations/zoning, waste e.g. community-based waste reduction and recycling schemes and energy efficient building construction techniques.</p> <p>Promotion of ecosystem-based adaptation in the communities, leading to environmental benefits</p> <p>Reduction of soil erosion and land degradation. Proper waste management will have benefits on the environment through reduced flow of leachates, and reduced air, water and soil pollution in general.</p>

C. Cost-Effectiveness of the Project:

The proposed project maximised cost effectiveness in a number of ways:

Cost effectiveness for the 'Hard' with 'Soft'

The design and implementation of the project focuses on maximizing the size of the hard/tangible component (64.5%) to directly benefit the most vulnerable populations. Where the project makes investments in soft activities, these will either a) directly support the hard investments (i.e training in installation or operation and maintenance), or b) invest in strengthening commune/district level planning – which will help to sustain and replicate the benefits of the project. This means that the 'Soft' component to those activities is required to support the appropriate implementation of the 'hard' component to ensure sustainability of the project.

Cost effective investment

When the project undertakes action planning; cost effectiveness, adaptation-cost effectiveness, 'time to adaptation benefits' and 'no-regret' will all be factors in prioritising investments. This is standard practice according to UN-Habitat's well-established Planning for Climate Change

methodology. This means that cost-effectiveness; adaptation effectiveness and development effectiveness are all part of the action planning process. UN-Habitat also has experience of conducting cost-benefit analysis of specific project options, where their immediate benefit is not clear³. The technical partner of KEITI will conduct feasibility study for environmental technology implementation, which is small-scale hard infrastructure intervention in Component 3. Thus, cost-benefit analysis will also be conducted with technical base.

Cost effective operation through community contribution

UN-Habitat will implement the hard components of the project through the People’s Process where possible. The project will be implemented in close partnership with communities and local government institutions. This implementation approach has been shown to reduce implementation costs by 20-30% over the life of the project by; using community labour instead of external contractors, procuring local materials where they are available.

All investments will be designed to be resilient. UN-Habitat will ensure that it does not select the cheapest options, but the most cost-effective. This means that if resilient infrastructure has a higher investment cost for a demonstrated longer lifespan and/or greater adaptation benefits it will be chosen over options with a lower initial cost.

The alternative implementation model to the People’s Process is to use external contractors, which, as highlighted above, is more expensive and less likely to foster local ownership.

Cost effectiveness of technical solution

General hardware/infrastructure investments have been pre-identified and need to be further developed during the development of the full project proposal. They will be technically finalized through community and expert consultations (as a result of the activities under component 2).

As for resilient design of basic infrastructure, the initial costs are estimated to be around 30-50 per cent higher than non-resilient design. However, the infrastructure is expected to last at least twice as long (thus is more sustainable and cost effective) as non-resilient designed infrastructure because it will still be accessible during and after every flood, storm, salinity intrusion and drought. As for the costs per infrastructure type, this will vary significantly depending on the location of such an intervention (i.e. remoteness, size, terrain, etc.) This is particularly relevant to Component 3 of the project, as US\$2.8m will be invested in resilient infrastructure.

Table 15 shows that to which extent would the proposed actions are more cost effective.

Table 15. Brief Cost Effectiveness Analysis of Proposed Adaptation Options

Proposed Action	Cost Effectiveness Criteria		Alternative Action	Cost Effectiveness Criteria	
Constructing new and restoring old water related system and infrastructure in highly drought	Future cost of climate change	✓	Building sea walls for protecting salinity intrusion and sea level rise, and water system	Future cost of climate change	✓
	Project efficiency	✓		Project efficiency	✗
	Community involvement	✓		Community involvement	✓

³ See for example this example for urban ecosystem-based adaptation options conducted in Fiji - http://www.fukuoka.unhabitat.org/projects/voices/pacific_islands/detail07_en.html

and salinity intrusion locations (Blue Network)	Cost/Feasibility	✓	for rainwater	Cost/Feasibility	✗
	Environmental and social safeguarding risks	✓		Environmental and social safeguarding risks	More Risk
Providing basic service, especially water supply, to drought location. With waster harvesting, capture and storage and improved filtration (Blue Network)	Future cost of climate change	✓	Extending the water supply network (piped water) and construct wells for underground water	Future cost of climate change	✗
	Project efficiency	✓		Project efficiency	✗
	Community involvement	✓		Community involvement	✓
	Cost/Feasibility	✓		Cost/Feasibility	✗
	Environmental and social safeguarding risks	Less Risk		Environmental and social safeguarding risks	More Risk
Improving coastal ecosystem for protecting land erosion and enhancing marine protected areas (Green Network)	Future cost of climate change	✓	Building sea wall and alternative livelihoods (i.e Shrimp cultivating)	Future cost of climate change	✗
	Project efficiency	✓		Project efficiency	✗
	Community involvement	✓		Community involvement	✗
	Cost/Feasibility	✓		Cost/Feasibility	✗
	Environmental and social safeguarding risks	Less Risk		Environmental and social safeguarding risks	More Risk
Expanding the green areas for protecting sea level rise and flooding (wetland) (Green Network)	Future cost of climate change	✓	Relocation / Building sea walls / alternative livelihoods	Future cost of climate change	✗
	Project efficiency	✓		Project efficiency	✗
	Community involvement	✓		Community involvement	✗
	Cost/Feasibility	✓		Cost/Feasibility	✗
	Environmental and social safeguarding risks	Less Risk		Environmental and social safeguarding risks	More Risk
Developing and improving waste treatment system for protecting ecosystem (Green Network)	Future cost of climate change	✓	Develop landfills areas	Future cost of climate change	✗
	Project efficiency	✓		Project efficiency	✗
	Community involvement	✓		Community involvement	✗
	Cost/Feasibility	✓		Cost/Feasibility	✗

	Environmental and social safeguarding risks	Less Risk		Environmental and social safeguarding risks	More Risk
Improving basic physical infrastructures (Bridge etc)	Future cost of climate change	✓	Resettlement	Future cost of climate change	✗
	Project efficiency	✓		Project efficiency	✗
	Community involvement	✓		Community involvement	✗
	Cost/Feasibility	✓		Cost/Feasibility	✗
	Environmental and social safeguarding risks	Less Risk		Environmental and social safeguarding risks	More Risk
Enhancing climate resilient housing	Future cost of climate change	✓	Resettlement /Alternative livelihoods	Future cost of climate change	✗
	Project efficiency	✓		Project efficiency	✓
	Community involvement	✓		Community involvement	✗
	Cost/Feasibility	✓		Cost/Feasibility	✗
	Environmental and social safeguarding risks	Less Risk		Environmental and social safeguarding risks	More Risk

D. Project Consistency with National or Sub-National Sustainable Development Strategies:

This project is consistent with national and sub-national development strategies of Vietnam on Socio Economic Development Plan, Climate Change Adaptation, and Sustainable Development.

In the 2016 -2020 Socio Economic Development Plan, there are two development plans for dealing with environmental issues and it addresses the response to climate change.1) Resource management, environment protection and response to climate change have been strengthened.

This focuses on the use and management of land, water and natural minerals, and environmentally friendly development. For integrating this component into the plan, Master Plans for provinces need to address issues regarding efficient resource use and management.

2) Actively responding to climate change, preventing natural disasters, enhancing natural resource management and environmental protection.

Improving resilience capacity to natural hazards and the efficient use of natural resources have been addressed in this plan. This plan has a specific sectorial approach to issues such as waste treatment, monitoring system for water, land use plan and environmental protection.

The Socio-Economic Development Plan (SEDP) is the main plan for socio-economic development in Viet Nam. Action plan and strategy need to be integrated into SEDP to obtain the support of national and provincial government. This helps all levels of society in Viet Nam to participate in the planning of their province, district and commune. This is a driving factor in reform of local planning which can include climate-related action.

Along with international climate policy grounded in the UNFCCC, Vietnam has developed its own strategies through government policies and strategies to achieve the Sustainable and Climate Change Adaptation goals. **Resolution 24/NQ/TW (2013) on Responding to Climate Change by Central Party Committee** has taken on the role of the mainstream agency on policies for climate change adaptation which includes the following tasks:

- ❑ Building capacity of early forecasting warning, actively preventing and mitigating natural disasters and adapting to climate change;
- ❑ Promoting measures to prevent, combat and limit the impact of surges, inundation and flooding, saline intrusion caused by sea level rise especially in the **Mekong Delta, Red River Delta, and Central Coast**;
- ❑ Mitigating greenhouse gas emission, protecting and developing natural ecosystems, enhancing the ability to absorb greenhouse gases

To align with the sustainable and climate change adaptation goal in Vietnam, the proposed project aims to enhance the resilience, inclusive and sustainable eco-human settlement development through small scale infrastructure interventions in the coastal regions of the Mekong Delta in Vietnam.

As shown in Figure 34, National Climate Change Strategy, National Green Growth Strategy are under **Resolution 24/NQ/TW (2013) on Responding to Climate Change by Central Party Committee** to support national policy in achieving the adaptation goal against climate change in Vietnam.

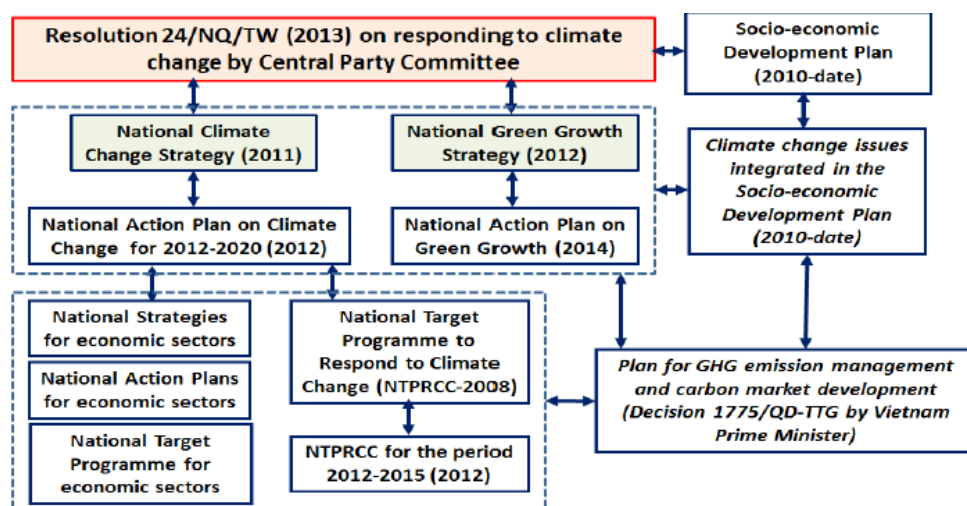


Figure 32. Evolution of Climate Change Policies in Vietnam

The National Climate Change Strategy (NCCS, 2011) states that Mekong Delta is one of the world's three most vulnerable deltas in the world (together with the Nile Delta in Egypt and the Ganges Delta in Bangladesh) to rising sea levels. According to climate change scenarios, in late 21st century, Vietnam's yearly mean temperature will go up by 2-3 degrees, the total yearly and seasonal rainfall

increases while the rainfall in dry seasons will decrease, while sea level is estimated to rise by 75 cm to 1 m compared to the 1980-1999 period. To cope with the challenges from climate change impact, Vietnam has been trying to:

- ❑ Improve public awareness and capacity of responding to climate change;
- ❑ Promote economic development in order to raise the country's economic competitiveness and national status on the international arena

NCCS has 3 phases of the progress, The first was Vietnam's government focused on imperative and non-delayable adaptation until 2012, with emphasis to be put on capacity building of science and technology sectors, adjustment and development of green growth mechanisms, climate change adaptation and GHG mitigation policies in line with the international situation. The second phase is to create a modern industrialised country, it is likely that after 2025 Vietnam will have to focus on GHG emission reduction to protect the earth's climate system. Climate change adaptation and GHG emission reduction must be carried out in parallel, in association with socio-economic development actives by 2025. Third, with Vietnam being an industrialised country, GHG emission reduction will become criteria of the socio-economic development processes between 2025 and 2050. The strategic tasks will be reviewed and adjusted to ensure the low-carbon economy and resilience to climate change impacts.

Based on NCCS, the National Target Program to Respond to Climate Change (NTP-RCC) is the umbrella program and guiding framework for the Government of Vietnam's efforts in adaptation and mitigation of climate change risk. The Ministry of Natural Resources and Environment developed the program and is responsible for its implementation. The current program, which covers the period from 2009 to 2015, has the global objectives of: (i) assessing potential impacts of climate change; (ii) ensuring that a climate change response action plan is developed by each sector; (iii) initiating efforts to move the country towards a low-carbon economy, and (iv) contributing to global efforts for the mitigation of GHGs.

The Vietnam Green Growth Strategies (VGGS, 2012) as a mean to achieve a low carbon economy and to enrich natural capital, will become the principal direction in sustainable economic development; While GGS suggested overall strategies to achieve sustainable development goals, some of the components related to climate change adaptation align with the aims of the proposed projects including:

- ❑ Communication, awareness raising and encouragement of support to implementation;
- ❑ Development of key sustainable infrastructure including transportation, energy, irrigation and urban works;
- ❑ Develop the new rural model with lifestyles in harmony with environment

In November 2017, the Government Resolution 120/NQ-CP on Sustainable and Climate-Resilient Development of the Mekong Delta of Vietnam was signed by PM Nguyen Xuan Phuc. The resolution was issued followed a conference on sustainable development in the Mekong Delta on adaptation to climate change that took place in Can Tho in September 2017. The principal solutions in Resolution 120 are well fit to the activities in the concept note.

- ❑ Establish ecological sub-zones to orient the development of economy, agriculture and infrastructure (floodplain, freshwater ecosystem, brackish water and saltwater ecological area, etc.)
- ❑ Formulate a master plan for sustainable and climate-resilient development of the Mekong delta which shall be conformable to the regional conditions according to uniform integration of the master plan for development of certain industries, areas and key products. Address overlapping

issues and settle interbranch, inter-regional and inter-provincial conflicts in a uniform manner. Develop potentials and comparative advantages of the region and turn the challenges into opportunities in the context of globalization and global economic integration, especially cooperation with ASEAN countries and Greater Mekong sub-region.

- ❑ Propose some inter-sectoral and inter-regional policies and strategies, master plans, plans, programs, schemes, projects and tasks for sustainable and climate-resilient development of the Mekong Delta.

Along with the strategies and policies highlighted above, implementation of the Paris Agreement (PIPA) tries to be suitable to development circumstances of Vietnam and the level of international support received; Needs to follow direction from Parties, Government and inherit viewpoints, undertaking activities for climate change response and green growth which have been and are being implemented, and take advantage of opportunities presented by the Paris Agreement. Adaptation continues to be the main focus of the implementation of the Paris agreement in Vietnam, with the main resources coming from the public budget and international support mechanisms such as the climate change fund. The following figure summarizes 22 priority tasks that are to be implemented until 2030 in order to fulfil climate change commitments in Vietnam. Overall national adaptation plans are described in Figure 35 below.

Based on the assessment of key three policies on Climate Change in Vietnam above and PIPA, current focus of policies and strategies is as follows:

- ❑ Upgrading monitoring and meteorological forecasting systems;
- ❑ Integrate disaster prevention and reduction in socio-economic development programs of sector, region and local, especially in agricultural areas;
- ❑ Raising public awareness of disaster prevention;
- ❑ Education, training, and guides of disaster prevention for poor households at coastal areas;
- ❑ Annual state budget for disaster prevention; prioritize for national target programs such as forestry, dam and water reservoir upgrading, land slide prevention; upgrade and construct irrigation systems;
- ❑ Local province arrange budget for disaster prevention and solve problems

In Vietnam adaptation policies and strategies have more of a focus on the coastal zones due to the greater impact on these regions from sea level rise. Investment in the construction of adaptive infrastructure, development agricultural techniques and elevation houses above flood levels are key components to minimize the losses in coastal zones.



Figure 33. National Adaptation Plans (UN-Habitat retrieve)

Table 16 shows how the proposed project aligns with policies, strategies and plans of Vietnamese government. The main objective of the proposed project is to ***enhance the resilience, inclusive and sustainable eco-human settlement development through small scale infrastructure interventions in the coastal regions of the Mekong Delta in Vietnam***. To achieve its main objective, the project consists of four components as follows:

1. Institutional and community capacity building toward eco-human settlement development for supporting to enhance local climate response actions: Development of the environmental and ecological detailed plan for human settlement, design guideline for eco-human settlement development, and institutional strengthening to enhance local climate response actions (*align with GGS, NDC, NTP and PIPA*)
2. Integrated planning with respects of eco system-based climate change adaptation and building climate resilient capacity and action plan at local level for resilience strengthening (*align with SDS*)
3. Sustainability built through small-scale protective and basic service infrastructure (align with Resolution 24/NQ/TW, GGS, NCCS, NDC and SDS)
4. Awareness Raising and Knowledge Management (*align with Resolution 24/NQ/TW, GGS, NCCS, NTP and PIPA*)

Accomplishing main four components above, the proposed project will support national development goal based on the assessment of national strategies of Vietnam and also provide additional support on the other components related to climate change adaptation.

Table 16. Project Alignment with Government Priorities

Measure	Resolution 24/NQ/TW (2013) on Responding to Climate Change by Central Party Committee	Green Growth Strategy (GGS)	National Climate Change Strategy (NCCS)	National Determined Contribution (NDC)	National Target Program to Climate Change (NTP)	National Action Plan on Climate Change in 2012-2020	Sustainable Development Strategy (SDS) for 2011-2020	Plan for Implementation of the Paris Agreement (PIPA)
<input type="checkbox"/> Institutional and community capacity building toward eco-human settlement development for supporting to enhance local climate response actions		Δ		✓	✓			✓
<input type="checkbox"/> 2. Integrated planning with respects of eco system-based climate change adaptation and building climate resilient capacity and action plan at local level		✓	✓		✓	✓	✓	
<input type="checkbox"/> Sustainability built through small-scale protective and basic service infrastructure	✓	Δ	✓	✓			Δ	
<input type="checkbox"/> Awareness Raising and Knowledge Management	✓	Δ	✓		✓			✓
✓: sufficient support Δ: need more support /: no support								

E. Compliance with Relevant National Technical Standards:

All project activities are in compliance with existing rules, regulations, standards and procedures endorsed by the government, as shown in the following table. In addition, compliance with tools are discussed below:

Table 17. Project Compliance

Expected Concrete Outputs / Intervention	Relevant rules, Regulations, Standards and Procedure	Compliance, Procedure and Authorizing Offices
<p>1.1. Capacity building support provided to national government and local authorities to increase the resilience of human settlement and ecosystem</p>	<p>Res. 120 2c: Encourage participation of all relevant parties to ensure intra-regional organic connectivity and close connection between Southern key economic region and Greater Mekong Sub-region.</p> <p>Res 120 3d Top priority should be given to necessary works serving people's life. Attach importance to and mainly apply non-structural measures.</p> <p>Res 120 3e: Improve cultural and social levels equivalent to the national average level. Combine economic development and social development, reduce poverty, create jobs, ensure social security and protect the environment.</p> <p>Res 120 6a: The Ministry of Natural Resources and Environment shall take charge and cooperate with the National Committee on Climate Change and relevant authorities in periodically reviewing and assessing the implementation of the Resolution.</p> <p>Ordinance 34/2007/PL-UBTVQH11, Implementation of Democracy in Communes, Wards and Townships</p>	<p>National Commission on Climate Change, The Ministry of Natural Resources and Environment, the Ministry of Agriculture and Rural Development, ministries and relevant local authorities, People's Committees, The Ministry of Construction</p> <p>The project will train government officials in eco-human settlement strategy and action plan. It will also encourage them to discuss and propose new strategic orientations and solutions with results and deadlines at the request of the Prime Minister or the Government.</p>
<p>1.1.1. Guidance and training materials development for vulnerability and risk assessment at local levels</p>	<p>UN-Habitat Planning for Climate Change</p> <p>Res 120 3a: The Mekong Delta development model must be human-centered, serve people and narrow the gap between the</p>	<p>The project will maximize use of existing VA tools/guidelines to minimize tool fatigue and to build on experiences in-country, where possible</p> <p>Ministry of Planning and</p>

	<p>rich and the poor; focus on quality rather than quantity, shift breadth to depth, have proactive and flexible approach in the context of accelerated and increasingly extreme climate change and the impact of extraction and use of water on a large scale and in high-intensity on the Mekong River upstream.</p> <p>SEA: Article 13: Objects to implement Strategic Environmental Assessment: including several new types of plan; Article 14: implementation of Strategic Environmental Assessment: when preparing strategy, planning and plan, the final result of Strategic Environmental Assessment must be checked and incorporated into the strategy, planning and plan</p> <p>MONRE 27 EIA/SEA guidelines for project types such as Urban Development, Socio-economic development planning, Land-use planning (...).</p> <p>MONRE circular No. 27/2015/TT-BTNMT - on strategic environmental assessment, environmental impact assessment and environmental protection plans.</p> <p>Law No. 52/2005/QH11 on environmental protection Article 5.4. Article 5.7. To increase human resource training...</p> <p>Circular No. 27/2015/TT-BTNMT MONRE on strategic environmental assessment, environmental impact assessment and environmental protection plans.</p> <p>Ordinance 34/2007/PL-UBTVQH1, Implementation of Democracy in Communes, Wards and Townships</p>	<p>Investment, National Commission on Climate Change, Ministry of Natural Resources and Environment, the Ministry of Agriculture and Rural Development, ministries and relevant local authorities, People's Committees.</p> <p>The project will develop the guidance and training materials in compliance with the policy, laws, guidelines and draft strategy, but simplified to be used at local levels. It will also have the focus described in resolution 120 3a. In addition, the project will engage the Ministry of Natural Resources and Environment to identify the most vulnerable communities and conduct assessments.</p>
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<p>1.1.2. Planning tools and training materials for development for comprising of planning approach, strategy and action plan development, resilient infrastructure</p>	<p>Decree No. 19/2015/ND-CP of the Government on detail guiding the implementation of some articles in Law on Environmental Protection 55/2014/QH13</p> <p>Decree No. 18/2015/ND-CP of the Government concerns Environment protection planning, Strategic environmental assessments, environmental impact reports and environmental protection program</p> <p>Circular No. 27/2015/TT-BTNMT MONRE on strategic environmental assessment, environmental impact assessment and environmental protection plans.</p> <p>Res 120 4d: Formulate a master plan for sustainable and climate-resilient development of the Mekong delta which shall be conformable to the regional conditions according to uniform integration of the master plan for development of certain industries, areas and key products.</p> <p>Res 120 5b: Review, complete and prepare the planning for land use, use of water resources, environmental protection, extraction and sustainable use of bank natural resources of the Mekong Delta.</p>	<p>Ministry of Planning and Investment, National Commission on Climate Change, The Ministry of Construction, Ministry of Agriculture and Rural Development, Mekong River Commission</p> <p>The project will provide planning tools and training materials for a comprehensive and holistic climate change adaptation strategy according to the environmental protection law and in compliance with Government development planning approach.</p>
<p>1.1.3. Project team orientation/training</p>	<p>N/A</p>	<p>N/A</p>
<p>1.1.4. National Induction Workshop (National and provincial participants)</p>	<p>Res 120 3d: Coordinate investment activities in a uniform, inter-regional, inter-sectoral and targeted manner and an appropriate road map must be available.</p>	<p>Prime Minister, Ministry of Planning and Investment, Ministry of Construction, National Commission on Climate Change, Ministry of Foreign Affairs, People’s Committee, Ministry of Agriculture and Rural Development, Ministry of Natural Resources and Environment, Mekong River Commission</p> <p>The project will engage</p>

		government officials to share knowledge and will train them in eco-human settlement strategy and action plan.
1.1.5. National training of facilitators workshop (national and provincial participants), enabling them to set up eco-human settlement strategy and action plan development	<p>Res 120 3d</p> <p>Ordinance 34/2007/PL-UBTVQH1, Implementation of Democracy in Communes, Wards and Townships</p> <p>Prime Ministers Decision No. 1393/QĐ-TTg Establishment of Green Growth Strategy for Vietnam</p>	<p>Ministry of Construction, National Commission on Climate Change, People’s Committee, Ministry of Agriculture and Rural Development, Ministry of Planning and Investment, Ministry of Natural Resources and Environment, Mekong River Commission</p> <p>The project will engage government officials to disseminate UN Habitats experience in the field and share knowledge and train them in eco-human settlement strategy and action plan.</p>
1.1.6. Province and District level workshops and trainings, enabling them to set up eco-human settlement strategy and action plan development	<p>Res 120 3d</p> <p>Res 120 4d: Continue to complete the mechanism for coordinating the development of the region and ecological sub-region so as to enhance effectiveness and essence towards focal point reduction. The focus shall be given to smart management of water resources and climate change resilience in conformity with practical conditions of Vietnam and the Mekong Delta.</p> <p>Prime Ministers Decision No. 1393/QĐ-TTg Establishment of Green Growth Strategy for Vietnam</p> <p>III 3. Solutions.1</p> <p>- Promote and support communities to develop models of eco-city, green rural areas, green housing, sorting wastes at source through the approach reduce- reuse-recycle (3R), and improve energy efficiency.</p> <p>12. Encourage replication of green housing solutions under models of eco-houses and eco-villages in accordance with local customs, traditions, lifestyle for each region and ethnic group.</p>	<p>The Ministry of Construction, People’s Committee, Ministry of Natural Resources and Environment, Mekong River Commission</p> <p>The activities set to achieve this output is aligned to the Government’s priority of boosting region’s economy as well as strengthening climate change resilience. MONRE will organize the consultation workshop at local level.</p>

	Ordinance 34/2007/PL-UBTVQH1, Implementation of Democracy in Communes, Wards and Townships	
1.1.7. Community action planning workshops provided to commune level for the development of climate resilient community plans	<p>Res 120 2d: Encourage and mobilize all social classes, international partners and enterprises to participate in the development.</p> <p>Res 120 3c: combine modern technology with traditional knowledge and experience, ensure the stability and livelihood of the people. The people and enterprises should play a central role and the State should play a role in the direction.</p> <p>Ordinance 34/2007/PL-UBTVQH1, Implementation of Democracy in Communes, Wards and Townships</p> <p>Prime Ministers Decision No. 1393/QĐ-TTg Establishment of Green Growth Strategy for Vietnam</p>	<p>National Commission on Climate Change, People’s Committee, Mekong River Commission</p> <p>The project will contribute towards the development and strengthening of local action to climate change adaptation by community planning, while local people have a central role and their actions are guided according to government’s goals in terms of climate change resilience.</p>
2.1 Comprehensive workshops for integrating the eco-human settlement strategies and plans (National, province, district and commune)	<p>Res 120 3g: Promote international integration and cooperation with the Greater Mekong Sub-region countries on a mutual beneficially basis through regional cooperation initiatives and promote bilateral cooperation in order to effectively and sustainably use water resources and relevant natural resources in the Mekong basin together.</p> <p>3D: Enhance development cooperation among areas in the region, between the region and Ho Chi Minh City, Southeast provinces and other regions nationwide, between Southwest and Southeast, between Vietnam and other countries, firstly the Greater Mekong Sub-region countries.</p>	<p>Ministry of Construction, National Commission on Climate Change, Ministry of Foreign Affairs, People’s Committee, Ministry of Agriculture and Rural Development, Ministry of Natural Resources and Environment, Mekong River Commission</p> <p>The project will encourage cooperation among Mekong Delta with national and province authorities as well as the target communities.</p>

	<p>5a: National Commission on Climate Change will propose some inter-sectoral and inter-regional policies and strategies, master plans, plans, programs, schemes, projects and tasks for sustainable and climate-resilient development of the Mekong Delta.</p> <p>Decree No: 16/2003/QH11 Construction Law. All Relevant procedures will be adhered to with special consideration given to: Chapter 2: Construction Planning. Section 1: General Planning. Section 3: Urban Construction Planning. Article 11. International cooperation in planning activities covers experience sharing, application of scientific and technological advances, and training and attraction of human resources for planning work.</p> <p>Ordinance 34/2007/PL-UBTVQH1, Implementation of Democracy in Communes, Wards and Townships</p> <p>Resolution No. 51/2001/QH10; Law on Urban Planning Article 8.3. Agencies and organizations responsible for urban planning activities shall create conditions for commenting on and supervising urban planning activities. Article 13.7. Conducting international cooperation in urban planning activities. Article 72.1 People's Committees of rural districts, urban districts, towns and provincial cities shall manage according to planning the development of new urban centers within the administrative boundaries under their management.</p> <p>SEA: environmental protect in planning article 8 to article 12. Environmental Protection</p>	
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	<p>Planning at the central level is a single, and at the local level is a single or the integrated in a master planning of socio-economic development for province or city under the central government.</p>	
<p>2.1.1 Community action planning workshops to districts and communes for the development of climate resilient (integrated) community plans (Utilizing the tools and facilitators developed under 1.1)</p> <p>2.1.1.1 Community level vulnerability and Risk Assessment</p>	<p>Res 120 2d</p> <p>Ordinance 34/2007/PL-UBTVQH1, Implementation of Democracy in Communes, Wards and Townships</p> <p>UN-Habitat Planning for Climate Change</p>	<p>The project will maximize use of existing VA tools/guidelines to minimize tool fatigue and to build on experiences in-country, where possible</p>
<p>2.1.1.2 Develop community level eco-human settlement planning based on the output 2.1.2</p>	<p>Res 120 5g: - Review, amend and implement the planning for regional construction planning, urban planning and rural planning in conformity with regional natural ecological characteristics, rearrangement of population and relocation of houses along rivers, canals and ditches to minimize the risk of erosion. Continue to execute the smart urban development program and safe water supply project in the Mekong Delta. - Continue to implement current programs and formulate new mechanisms and projects according to specific conditions of the Mekong Delta, keep houses safe from floods, droughts, storms, thunderstorms, whirlwinds and sea level rise. - Research into creation of new substitute materials serving leveling and construction (limit removal of riverbed sand for foundation bed heave). Plan and invest in stationary and modern wastewater and waste treatment stations; promote recycling, reuse and production of energy from waste.</p>	<p>The Ministry of Construction, People’s Committee, Ministry of Planning and Investment, Ministry of Natural Resources and Environment</p> <p>The Project will full comply with all urban planning laws, while paying special attention to Article 8</p> <p>While also aiming to develop local capacity through involvement in the planning process, allowing better local understanding of how to benefit from project implementation in the long term.</p>

	<p>Ordinance 34/2007/PL-UBTVQH1, Implementation of Democracy in Communes, Wards and Townships</p> <p>Decree No: 16/2003/QH11 Construction Law. All Relevant procedures will be adhered to with special consideration given to: Chapter 2: Construction Planning. Section 1: General Planning. Section 3: Urban Construction Planning. Article 11. International cooperation in planning activities covers experience sharing, application of scientific and technological advances, and training and attraction of human resources for planning work.</p> <p>Resolution No. 51/2001/QH10; Law on Urban Planning Article 8: Article 13.7. Conducting international cooperation in urban planning activities. Article 72.1: People’s Committees of rural districts, urban districts, towns and provincial cities shall manage according to planning the development of new urban centers within the administrative boundaries under their management.</p> <p>Prime Ministers Decision No. 1393/QĐ-TTg Establishment of Green Growth Strategy for Vietnam</p>	
<p>2.1.2 Training and community action planning workshops to district and commune for the development of community resilience plans and to plan, construct and maintain green and blue networks (Utilizing the tolls and facilitators developed</p>	<p>Res 120 2d</p> <p>Res 120 3c: Switch the development model according to the ecosystems to ensure suitability for natural conditions, biodiversity, culture, people and natural laws</p> <p>Res 120 5b Ordinance 34/2007/PL-UBTVQH1, Implementation of Democracy in Communes, Wards</p>	<p>Ministry of Agriculture and Rural Development, National Commission on Climate Change, People’s Committee, Ministry of Natural Resources and Environment</p> <p>The project will build resilient communities by holding workshops to improve community actions to climate change adaptation. MONRE will support these workshops.</p>

under 1.1)	<p>and Townships</p> <p>Prime Ministers Decision No. 1393/QĐ-TTg Establishment of Green Growth Strategy for Vietnam</p> <p>Law on Water Resources (LWR) Order No. 15/2012/L-CTN of July 2, 2012, on the promulgation of law</p>	
3.1.1 Increased community adaptive capacity with climate resilient and development sectors, and increase ecosystem resilience in response to climate change	<p>Res 120 2d</p> <p>Res 120 3c</p>	<p>National Commission on Climate Change, People’s Committee</p> <p>The project will improve community knowledge and awareness of climate change adaptation</p>
3.1.1.1 Built small-scale of water salination system to provide clean and safe water for both living and agriculture (Water)	<p>Res 120 3b</p> <p>Res 120 3c</p> <p>Prime Ministers Decision No. 1393/QĐ-TTg Establishment of Green Growth Strategy for Vietnam. Development of key sustainable infrastructure including irrigation and water infrastructure.</p> <p>Decree No. 201/2013/ND-CP Detail regulations for implementing some articles of the Water Resources Law</p>	<p>Ministry of Construction, Ministry of Agriculture and Rural Development, Ministry of Planning and Investment, Ministry of Natural Resources and Environment Department of Natural Resources and Environment, Department of Planning and Investment, Department of Agriculture and Rural Development, People’s committee</p> <p>The project will improve structure for water management in compliance with Government resolution of water as a core element for regional development.</p>
3.1.1.2 Climate resilience infrastructure building and refurbishing (Infrastructure)	<p>Res 120 5g</p> <p>Decree No: 16/2003/QH11 Construction Law. All Relevant procedures will be adhered to with special consideration given to: Chapter 2: Construction Planning. Section 1: General Planning. Section 3: Urban Construction Planning. Article 11. International cooperation in planning activities covers experience sharing, application of scientific and technological advances, and</p>	<p>Ministry of Construction, Ministry of Planning and Investment, Ministry of Natural Resources and Environment Department of Natural Resources and Environment, Department of Planning and Investment, Department of Agriculture and Rural Development, People’s committee</p> <p>The project will improve climate resilience infrastructure according to national policy and law on land, and in compliance with Government resolution of</p>

	<p>training and attraction of human resources for planning work.</p> <p>Resolution No. 51/2001/QH10; Law on Urban Planning. Article 13.7. Conducting international cooperation in urban planning activities.</p> <p>Decree No. 43/2014/ND-CP detailing the implementation of some articles of the Law on Land</p> <p>Law on Water Resources (LWR) Order No. 15/2012/L-CTN of July 2, 2012, on the promulgation of law</p>	<p>keeping houses safe from floods, droughts, storms and sea level rise.</p> <p>Project will respect all prohibited actions under LWR and will consult with governing bodies for water use MONRE and PPC to ensure compliance on any actions undertaken with regards with waterways, water and wastewater management.</p>
3.1.1.3 Climate resilience housing upgrade (Housing)	<p>Resolution No. 51/2001/QH10; Law on Urban Planning. Article 13.7. Article 72. Management of development of new urban centers and urban quarters</p> <p>Decree No: 16/2003/QH11 Construction Law. Section 4: Planning on Construction of Rural Population Quarters</p> <p>Decree No. 47/2014/ND-CP on compensation, support and resettlement when the State recovers land</p>	<p>Ministry of Construction, Ministry of Planning and Investment, Ministry of Natural Resources and Environment</p> <p>Department of Construction, Department of Natural Resources and Environment, Department of Planning and Investment, Department of Agriculture and Rural Development, People's committee</p> <p>The project will improve climate resilience infrastructure according to national policy and law on land, and in compliance with Government resolution of keeping houses safe from floods, droughts, storms and sea level rise.</p>
3.1.1.4 Enhancing ecosystem (Ecosystem)	<p>Res 120 2c: Respect natural laws and avoid violent interference with nature; select development models adaptive to natural conditions and friendly to the environment and develop sustainably with the motto "living with floods, brackish water and saltwater";</p> <p>Res 120 3c: Promote innovation, creativity and start-up support, speed up the application of scientific and technological advances, especially the achievements of the fourth industrial revolution. The</p>	<p>Ministry of Natural Resources and Environment, Vietnam Environment Administration, Vietnam Administration on Sea and Island</p> <p>Ministry of Construction, Ministry of Agriculture and Rural Development, Ministry of Planning and Investment Department of Natural Resources and Environment, Department of Planning and Investment, Department of Agriculture and Rural Development, People's committee</p>

	<p>switching process requires a long-term vision. Priority shall be given to climate change resilience and opportunities shall also be grasped for the development of low-carbon economy and green economy, and protection of natural ecosystems.</p> <p>Circular No.16/2009/TT-BTNMT Regulations of environmental national technical for ambient air quality and toxic substances in the ambient air.</p> <p>Decree No. 179/2013/ND-CP On sanctions against administrative violations in the field of environmental protection</p> <p>Law on Water Resources (LWR) Order No. 15/2012/L-CTN of July 2, 2012, on the promulgation of law</p>	<p>The project will enhance ecosystem according to the Government motto “living with floods, brackish water and saltwater” and giving priority to the protection of natural ecosystems. It will follow the national regulations on environment protection.</p> <p>Project will respect all prohibited actions under LWR and will consult with governing bodies for water use MONRE and PPC to ensure compliance on any actions undertaken with regards with waterways, water and wastewater management.</p>
3.1.1.5 Built small scale of eco-friendly waste treatment and management facility (Waste)	<p>Res 120 2c</p> <p>Res 120 3c</p> <p>Circular No.16/2009/TT-BTNMT Regulations of environmental national technical for ambient air quality and toxic substances in the ambient air.</p> <p>Decree No. 179/2013/ND-CP On sanctions against administrative violations in the field of environmental protection</p> <p>Law on Water Resources (LWR) Order No. 15/2012/L-CTN of July 2, 2012, on the promulgation of law</p>	<p>Ministry of Construction, Ministry of Planning and Investment, Ministry of Natural Resources and Environment Department of Construction Department of Natural Resources and Environment, Department of Planning and Investment, Department of Agriculture and Rural Development, People’s committee</p> <p>The project will improve waste management system against natural hazards impact, in compliance with Government policy and regulations on waste management.</p> <p>Project will respect all prohibited actions under LWR and will consult with governing bodies for water use MONRE and PPC to ensure compliance on any actions undertaken with regards with waterways, water and wastewater management.</p>
4.1.1 Lesson learned and best practices regarding resilient urban	N/A	N/A

	community development/housing are generated, captured and distributed to other communities, civil society, and policy-makers in government appropriate mechanisms		
4.1.2	Regional advocacy and replication	N/A	N/A

F. Other Funding Sources:

One of the selection criteria of the targeted towns and informal settlements is to avoid overlapped projects on the same region. The table below lists relevant projects that are either recently completed, ongoing or about to start in the Mekong Region. They have been identified based on in-depth consultations with the national and local government from targeted region and through online research.

UN-Habitat also has expressed its long-standing commitment to Vietnam through its many projects in country where it has used its in-depth experience to help shape sustainable human settlements and urban development.

Considering the high-risk and transnational nature of the Mekong Delta Subregion (GMS) there are many projects being undertaken in the region. These transnational projects focus primarily on policy and strategies for increased cooperation in water management and economic development between both national and international stakeholders. An example of one of these projects is GIZ's transnational projects in the region focus on water management and land management. A recent study conducted with the support of AFD concluded that sediment loss in the lower delta was having a detrimental effect on erosion levels and biodiversity in the lower Mekong. GIZ's project has addressed this issue by facilitating the development of regional policy to try and ensure that dam and hydroelectrical projects throughout the GMS have as little negative effect as possible on the waterways and in turn the livelihoods of those who depend on them.

Other projects such as SECO's Mekong Region Land Governance Project (MRLG) has assisted families and small holder farmers who have had their livelihoods impacted by government concessions to large scale industrial producers by ensuring equal access to land with a heightened focus on gender issues to reduce conflict between local stakeholders while also creating a quick disbursement fund and innovation fund to support local business with these endeavours.

Other projects from ADB and SECO in the GMS have invested in projects to enhance economic ties through the creation of transport infrastructure connecting major industrial hubs in the region. While these projects have made massive advancements towards the goals of strengthening livelihoods and dealing with the ecological impacts of large-scale industrial development throughout the GMS, their regional focus and the massive geographical scale of the affected region leaves many gaps at commune and small stakeholder level.

In the Vietnamese Lower Delta projects focused on addressing some of these gaps, primarily through waterways management, strengthening flood and coastal defences and the development of sustainable agriculture and aquaculture. Projects dealing with waterways and flood and coastal defences have provided hard intervention outputs to increase capacity and improve infrastructure in a more localised context. The most notable of these is the Mekong Delta Plan (MDP). The MDP contains guidelines for government, donors and international financial institutions on moving from planning to implementation and placing investment projects in a long-term context, through the creation of the Mekong Delta Alliance it has also facilitated further studies into the subcategories of the SEDP's to identify the actual problems and constraints specific to waterways management in the Vietnamese area of the Mekong Delta. In line with the aims of the MDP is the World Bank, "Mekong Delta Integrated Climate Resilience and Sustainable Livelihoods Project" which is working to strengthen coastal and riverbank defences and support local aquaculture and agriculture throughout the region. These projects are significant developments for the region but the 90-year duration of the MDP highlights how much is still to be done in the region to prepare for the effects of advanced climate change in this highly sensitive ecosystem.

The table below has been broken down further by the geographical focus of the projects aims. Projects in Urban locations main priorities are; flood control, public transportation and social protection. Linking in with these are projects focusing on waterways management through mitigation of the damage caused by urban populations such as the wastewater treatment facility being development in Ben Tre by JICA. While Projects such as this will have a big impact on water quality in general and vector control in times of flooding the lack of infrastructure in rural areas of the province will not be covered and are still in need of WATSAN interventions.

Water quality is also an issue in coastal regions where salinity intrusion has become a source of conflict between local agriculture and aquaculture producers, many projects in Bac Lieu have tried to address this issue through education on more resistant rice crops and seasonal rotation of produce. The capacity of these interventions at province level have been supported by the development of Early Warning Systems and other developments to help local farmers such as the Salinity Monitoring System installed by IFAD in Tra Vinh province. This system has already proven its effectiveness in assisting local farmers to better manage their produce and increase their yields. It is part of a larger IFAD project aiming to increase community involvement at planning level in 29 communes in these two regions through soft interventions. It is also facilitating adaptive change through sustainable rural financial services and strategic government co-financing for investing in climate resilient livelihoods at household and community levels. This project will finish in 2019, recent reports have identified both a need for synergy with other projects in the target area to help develop and further scale up their project outputs.

Meetings with GIZ identified several areas for potential cooperation, including GIZ's ability to support the project as their history of development in the region has led to strong networks with local government and well-developed institutional arrangements. It has been noted that UN Habitat could would along-side GIZ's Integrated Coastal Management Program to potentially up-scale their infrastructure project using the guidelines and data provided through AF fund. Consultation with GIZ has also identified a need for mitigation of riverbank erosion; informal settlements along the rivers edges have greatly increased the rate of man-made erosion in the region making resettlement a pressing matter for the government.

After this review of other regional projects UN Habitat has opted to address a need for more sustained climate change planning and development at household and commune level to increase both local capacities to adapt to climate change and increase the quality of life for local populations.

In the interest of clarity, the table has been broken down, first into regional headings where the soft projects mentioned above can primarily be found. Then into coastal, waterways and urban settings where the focus tends to be more on hard projects at the local level.

Table 19. Relevant Projects and their Complimentary Potential

Implementor	Relevant Project/ Programme	Lessons Learned	Complimentary Potential	Project Timeline and Budget
Greater Mekong Subregion				
GIZ	Supporting the Mekong River Commission with Trans-boundary Water Management in the Mekong River Basin	<p>Linking with universities has seen best practice integrated into regional university curriculums.</p> <p>MRC range of studies, tools and guidelines to support sustainable development consider avoidance/mitigation.</p> <p>Based on the scientific inputs and policy analysis, the Mekong Adaptation Strategy and Action Plan (MASAP) has been developed through a highly participative process</p>	<p>Assessments of climate change impacts with specific methodologies on water and water-related resources (hydrology, flood, drought, ecosystems, food security, socio-economics and hydropower) have been carried out.</p>	2016-2018
GIZ	Improved Land Management in the Mekong Region	<p>Project is a contribution to the overarching Mekong Region Land Governance Project (MRLG) of the Swiss Agency for Development and Cooperation (SDC). The larger programme addresses land access issues. Programme activities are geared particularly towards the interests of ethnic minorities and women.</p> <p>Improved practices in recognising women's land rights as provided under the 2013 Viet Nam Land Law.</p> <p>Nine legal aid events were organised successfully in nine communes attended by 1,354 community members (mostly women). Through these events, legal</p>	<p>GIZ contributes to a Quick Disbursement Fund and an Innovation Fund.</p> <p>Quick Disbursement Fund for short notice urgent actions.</p> <p>Innovation Fund for development and piloting, analysis and sharing of experiences from sub-projects managed by stakeholders, each with a longer-term perspective of up to two years.</p>	2015 - 2019

		specialists and communal land officers supported 245 clients and their cases.		
SECO	Mekong Region Land Governance (MRLG)	<p>The various stakeholders and their competing interests make land governance a highly sensitive and politically important topic that is at the very centre of development challenges in the Mekong region.</p> <p>Concessions for agricultural land have led to a reduction in land area available for family agriculture, played a major role in deforestation and reduced access to forests by communities.</p> <p>Communities, in particular ethnic minorities, are often facing resettlement, and are sometimes driven out of agriculture altogether, with limited prospects of finding alternative employment.</p>	<p>The project also supports advocacy for victims and humanitarian principles and provides information about the situation of victims.</p> <p>The project also supports partner organisation improvements.</p> <p>Successful deployment of Grants Funding of a total of USD 5.8 million. 65 organisations in the Mekong.</p> <p>80 different Reform Actors across the CLMV have improved their methods of addressing farmer tenure security, either through rights awareness and training, improved conflict resolution and mediation techniques to solve land conflict cases, development of responsible community-business partnerships, or through policy advocacy on laws and policies to recognise customary and community land rights in protected/conservation areas and forests.</p>	<p>01-Mar-2012 –</p> <p>30-Sept-2022</p> <p>CHF 21,000,000</p>
SECO	Regional and Local Economic Development in the East West Corridor	<p>The East-West economic corridor has been the most disadvantaged of the three regional corridors and is home of a majority of ethnic groups with high poverty rates</p> <p>The challenge currently facing the Lower Mekong Basin countries is how to support local people's livelihoods in an changed water use regime. Equitable development, which benefits all water users, will require coordinated responses and cross-border collaboration</p>	<p>Implementation of basin-wide integrated water resources management approaches in national policies and programs, leading to sustainable and equitable development of the river basin.</p> <p>In Vietnam, the Quadripartite Cooperation Model, a mechanism to improve the access to commercial loans for appropriate fertilizer, has been successfully implemented among the farmer groups. The Dutch</p>	<p>01-Sept-2011 –</p> <p>30-July-2017</p> <p>CHF 3'955'000</p>

		by all of these countries.	INGO SNV has taken up the model for replication.	
ADB	Greater Mekong Subregion Ben Luc-Long Thanh Expressway	<p>Construction of 57.1km expressway between Ben Luc and Long Thanh. Short link of GMS Southern Economic Corridor</p> <p>Good environmental and resettling policies.</p>	<p>Project expressway is part of national N-S expressway that links into the Mekong Delta. Will be used for heavy freight.</p> <p>Ranked C for protection of indigenous Tay and Chinese population</p>	<p>20-May-2016 – 30-June -2020</p> <p>Ordinary Capital: USD \$286,000,000.00</p> <p>JICA Capital USD \$305,520,000</p> <p>Project estimated at USD \$1.608 billion at time of appraisal</p>
ADB	Second Northern Greater Mekong Subregion Transport Network Improvement Project	Maximising economic potential of GMS North-eastern Corridor		USD \$71,300,000.00
ADB	Greater Mekong Subregion Biodiversity Conservation Corridors Project	<p>Climate resilient sustainable forest ecosystems in the Central Annamites benefiting local livelihoods and downstream users.</p> <p>Addressing the ongoing fragmentation of the forest landscape and its ability to provide critical ecosystem services such as carbon storage, sustainable biodiversity and local livelihoods.</p>	Developed village conservation plan which prioritized project interventions for sustainable forest management and use and livelihood improvement linked to conservation outcomes; outlining responsibilities and commitments of each stakeholder and a framework for monitoring their commitments; and a plan for meeting the technical support and capacity development needs of the community in achieving their targets.	<p>24-June-2015 – 30-Sept-2019</p> <p>USD \$3,790,000.00</p>
ADB	Greater Mekong Subregion Tourism	Increased tourism employment for people living in underdeveloped		26-Sept-2014 – 30-June-

	Infrastructure for Inclusive Growth Project	<p>segments of the GMS corridors in Viet Nam.</p> <p>Delayed Government's approval in 2015 ODA budget and no ODA budget allocation for 2016 led to delay in implementing project activities.</p>		<p>2020</p> <p>USD \$50,000,000</p>
USAID	USAID Mekong ARCC Climate Change Impact and Adaptation Study for the Lower Mekong Basin	<p>Natural coastal protection from inundation needs to be strengthened through community-based rehabilitation and protection programs, particularly for mangrove ecosystems. Degradation of mangrove ecosystems is a major factor in the exposure of coastal zone livelihoods to climate change.</p> <p>Low-elevation areas should be protected from inundation and from the more intense flooding identified in climate change projections. Some current responses to inundation threats may in the longer term constitute maladaptation. The construction of sea dykes using structural engineering methods, for example, may prevent a natural recession of mangroves and exacerbate coastal erosion in the longer term. Traditional and bioengineering approaches may be cheaper and more resilient. The costs involved in protection may eventually outweigh the benefits. IPCC (2007) points out that a staged and managed retreat of infrastructure and communities from the coast may, in some cases, be a more efficient allocation of resources.</p> <p>This is an important consideration and any</p>	<p>It highlighted ways of applying scientific findings at a community level that are helping to raise awareness as many farmers in rural, under-resourced communities are unaware of how climate change will affect them.</p> <p>The project worked with 20 communities and released a report that highlights the lessons learned from applying a "community adaptation decision-making method." It is intended to help government planners, donors, researchers and practitioners understand how scientific knowledge can be merged with local knowledge. Villagers can share their experiences and struggles while learning to collaborate and develop adaptation plans. In addition, resilience-strengthening livelihood solutions are being tested in target communities.</p>	<p>2011–2016</p> <p>\$9.4 million</p>

		<p>decision would have to be informed by scientific evidence, as well as socio-economic analysis of the trade-offs involved.</p> <p>Improvements to canal networks including an emphasis on maintenance are required to cope with more intense flood events, particularly to ensure effective drainage of fields and waterways</p>		
USAID	SERVIR - Mekong	<p>The project supports governments, regional institutions and other key stakeholders in the Lower Mekong countries to use publicly available satellite imagery and geospatial technologies, such as mapping and related analyses, to prepare for and respond to disasters, manage natural resources and improve food security.</p>	<p>The SERVIR-Mekong project conducted a comprehensive regional geospatial needs assessment to set project priorities and worked with partners to develop and make available a Surface Water Mapping Tool, a Land Cover Monitoring System and a Drought and Crop Yield Information System. To increase awareness and access to geospatial information, the project has created a web-based geoportal where geospatial information and other tools are continually being uploaded for free access.</p>	2014-2019
USAID	Sustainable Infrastructure for the Mekong (SIM)	<p>Sustainable Infrastructure for the Mekong will provide Lower Mekong partner governments with rapidly deployable technical assistance from the U.S. Government's premier scientists and engineers to mitigate potential negative social and environmental consequences from large infrastructure projects. As part of the Lower Mekong Initiative, SIM will look to 21st Century innovations as alternatives to traditional infrastructure development in order to address sustainability challenges</p>	<p>SIM technical assistance offerings could include:</p> <p>Peer review consultations on infrastructure assessments such as environmental and social impact assessments, hydrological modelling, climate change vulnerability, siting proposals, etc.</p> <p>Technical training for decision makers on environmental and social impact assessments and public participation processes</p> <p>Analyses of innovative alternatives to traditional infrastructure development</p>	2016-2020

			designs Notable achievements include strengthening Vietnam's landmark Mekong Delta Study on the impact of hydropower developments	
USAID	Mekong Partnership for the Environment Project (MPE)	Works to advance informed multi-stakeholder dialogues in Lower Mekong countries of the anticipated social and environmental costs and benefits of regional development projects. By strengthening technical capacity and regional networking of stakeholders in infrastructure planning and investment, MPE aims to increase the social and environmental soundness of development projects in the region.	MPE objectives include: Increase the capacity of civil society to influence development decisions that have significant anticipated social and environmental impacts. Strengthen regional platforms for multi-stakeholder participation in development decision-making. Increase public access to quality, timely information on environmental and social costs and benefits of development projects	2016-2020
USAID	Improving Water and Sanitation Services in Asia	The Water Links Alliance seeks support from private sector and development partners to expand positive impacts to urban water services delivery through twinning partnerships and regional training. Through the Alliance, USAID and Water Links will collaborate with development partners including international development agencies, civil society groups, and national water associations to: increase access to water service to urban communities, including the underprivileged; build the capacities of water services providers to enhance and sustain operational efficiency improvements; and promote increased cooperation and sharing of information between urban	Twinning partnerships between urban water service providers can prove invaluable in expanding access to water and sanitation services and building climate resiliency. Partnerships drive peer-to-peer exchanges of innovative approaches to build capacities. Increased capabilities foster more efficient and effective management and operations of water services, ultimately leading to better delivery of water and sanitation services to urban residents.	2013 - 2015 Total Lifetime Investment USD \$ 4,745,985.00 USG Investment USD \$ 1,399,757.00 Non-USG Investment USD \$ 3,346,228.00

		water service providers to address common challenges in their delivery of water and sanitation services		
DFAT	ASEAN and Mekong Program	<p>Australia's ASEAN and Mekong Program helps ASEAN implement a coordinated response to regional challenges such as constraints to trade, transboundary water management and human trafficking.</p> <p>Enabling regional economic cooperation and inclusive growth. Australia directly supports the ASEAN Secretariat by providing high quality economic research and policy advice in priority sectors. Including but not limited to:</p> <ul style="list-style-type: none"> (i) Greater Mekong Water Resources Program (ii) Women's Economic Leadership and Empowerment (iii) Mekong Business Initiative (MBI) 		2018-19 ASEAN and Mekong Program Bilateral Budget Estimate \$32.6 million
IUCN	Mekong WET: Building Resilience of Wetlands in the Lower Mekong Region through a Ramsar Regional Initiative	<p>Through its focus on wetland ecosystems, the project also supports governments in implementing their National Biodiversity Strategies and Action Plans (NBSAPs) under the Convention on Biological Diversity and pursuing their commitments on climate change adaptation and mitigation under the United Nations Framework Convention on Climate Change</p> <p>The overarching goal is the establishment of an effective and replicable framework</p>	<p>Develop management plans in ten selected Ramsar sites, with a focus on climate change adaptation and resilience building</p> <p>Improve regional collaboration on transboundary wetlands management.</p> <p>Share best practices and build capacity for 150 wetland management staff and 300 community representatives.</p> <p>Share lessons and approaches with a further 18 Ramsar sites, as well as a number of potential or proposed new sites in the</p>	1-Jan-2017 – 31-Dec-2020

		for delivery of ecosystem-based adaptation and mitigation benefits from existing and planned Ramsar sites (or wetlands of international importance) in the region, including through transboundary collaboration	four Mekong WET countries.	
IUCN	Building Resilience to Climate Change Impacts-Coastal Southeast Asia [Ben Tre]	<p>Although this is a transnational project the focus in the Mekong delta is on Thanh Hai and Thanh Phong communes</p> <p>community working groups developed through the BCR project had contributed to the improvement of natural-resource management and use.</p> <p>Workshop teams discussed alternative solutions and methods of community involvement, which IUCN will use as valuable feedback for its work in the future</p> <p>However, there were requests for additional support, such training on finance.</p>	Further assistance on exploring soft and hard engineering solutions to combat climate change was also needed.	<p>Jan-2011 - Dec-2014</p> <p>EU Funding € 2,450,000</p>
Vietnam Delta Region				
Netherlands Embassy (PPP)	Climate Change and Water Supply in the Mekong Delta, Vietnam	<p>This public private partnership (PPP) will improve drinking water supply by increasing availability and reducing climate change effects on three water companies in or adjacent to the Mekong Delta: Saigon Water Corporation (SAWACO), Soc Trang Water Supply Company, and Tra Vinh Water Supply and Drainage Company.</p> <p>Providing access to water for low-income households and minorities (i.e. network extensions in Ho Chi Minh City, Soc Trang and Tra</p>	<p>Academic Climate Change course curriculum developed & 10 student theses on this subject</p> <p>Water consumption reduction plans drafted with 5 participating industries in Mekong Delta</p>	<p>Apr-2013 – Mar-2017</p>

		Vinh) Reduction of water consumption of industries (in the Mekong Delta provinces of Soc Trang and Tra Vinh)		
IUCN	Flood-based Livelihoods in Mekong Delta, Vietnam	The project will train and assist farmers in the delta's Đồng Tháp, Long An and An Giang provinces to adopt financially attractive, low-risk, flood-based livelihoods as alternatives to unsustainable third rice crops.	At a local level, Đồng Tháp is working on a feasibility report for a project to improve flood drainage, develop stable livelihoods and adapt to climate change	2018 - 2021 Total cost: USD \$29.1 million Multiple funding sources.
SECO	Strengthening Decentralized Trade Support Services for Small/Medium Enterprises	The program will strengthen decentralized trade support services for Small and Medium-sized Enterprises (SMEs) through strengthening the service capacities of trade promotion organisations and trade support institutions. the program will work at provincial level (North, Centre, South) and be executed nationally by Vie trade.	Three regional trade support networks established and operational Regional Export Development Plans implemented An Export Development Consultative Group is established Strengthened functional technical capacities of Vie trade in trade promotion and technical support to trade promotion organisations and trade support institutions	01.01.2012 - 31.05.2018 CHF 3'320'000
USAID	Mekong Vitality Expanded Alliance	Mekong Vitality Expanded Alliance supports women's microenterprise development and business leadership in Vietnam's Mekong Delta region. The project delivers business skills training, improves linkages to trade and markets and uses mobile technology training to support women-led savings and loan groups that empower female entrepreneurs. Mobile technology solutions provided by the activity help women increase their access to market information and more easily identify additional business opportunities. With smart phones, select women entrepreneurs are able to access advanced business	As of July 2017, 400 women have received advanced business skills training. 60% of these women have started small businesses. Going forward, the Alliance aims to support women with microenterprise development and further improve women's socio-economic empowerment and enhance their leadership role in their families and communities. Through regular group activities, training courses and conversations with project empowerment workers, women create social networks that help them find ways to support one another. Increasing social networks not only strengthens their businesses, but it leads to	JULY 2014 - DECEMBER 2017 PLANNED BUDGET: \$600,000

		<p>training courses and market information, enabling them to make more informed decisions to grow their businesses.</p> <p>Primary focus in Vinh Long province</p>	<p>social empowerment by raising their awareness of social issues such as domestic violence, women's voice in the family and the role of women in modern society</p>	
GIZ	Macroeconomic Reforms/ Green Growth	<p>Five provinces in the Mekong Delta outlined options for local green growth measures by developing green growth action plans.</p> <p>The Programme focuses on capacity development, trainings and e-learning courses to enable its partner organizations and key stakeholders to implement reforms in an independent and sustainable manner.</p> <p>Provides technical advisory and capacity development services to the key government agencies implementing the VGGS: The Ministry of Planning and Investment (MPI), the Central Institute for Economic Management (CIEM), the Ministry of Finance (MOF), the State Bank of Viet Nam (SBV), and the State Securities Commission (SSC).</p>	<p>The State Bank of Viet Nam introduced a green credit programme providing access to 240 Million US-dollars for green investments in Viet Nam. The State Bank of Viet Nam also introduced social and environmental risk assessments in the lending activities of the banking sector.</p> <p>The Ho Chi Minh Stock Exchange launched the Green Index (Vietnam Sustainability Index - VNSI). The VNSI is expected to become an important driver of sustainable investment and corporate sustainable development in Viet Nam.</p>	2014 - 2018
The World Bank	Mekong Delta Integrated Climate Resilience and Sustainable Livelihoods Project	<p>The project implementation has been slower than expected due to various reasons, key among which is the finalization of the on-lending arrangements to provinces. The setting up of the monitoring and evaluation (M&E) system has been slow due to the delays in setting up the on-lending arrangements.</p> <p>The M&E system is being put in place, and some of the baseline information remains to be determined.</p>	<p>Component 1: enhancing monitoring, analytics, and information systems to ensure the capacity to undertake 'smart investments.'</p> <p>Component 2: managing upper delta flood risk. Protecting and/or reclaiming the benefits of controlled flooding measures while increasing rural incomes and protecting high-value assets in An Giang, Kien Giang, and Dong Thap provinces.</p>	<p>10-Jun-2016 – 31-Dec-2022.</p> <p>Total Project Cost - USD \$387,000,000.00</p> <p>Commitment Amount - USD \$310,000,000.00</p>

		<p>The Bank and the implementing agency are working jointly to refine the measurement methodologies and also to determine how the impact of the livelihoods interventions/demonstration can be best measured to show how they contribute to the intended project impacts.</p>	<p>Component 3 aims to address the challenges related to salinity intrusion, coastal erosion, sustainable aquaculture, and improved livelihoods for communities living in the coastal areas of Ben Tre, Tra Vinh, and Soc Trang provinces.</p> <p>Component 4, aims to address the challenges related to coastal erosion, groundwater management, sustainable aquaculture, and improved livelihoods for communities living in the coastal areas of Ca Mau, Bac Lieu, and Kien Giang provinces.</p>	
Netherlands Embassy	The Mekong Delta Plan	<p>The Delta Plan contains guidelines for government, donors and international financial institutions on moving from planning to implementation and placing investment projects in a long-term context.</p> <p>Taken from Dutch Delta planning, aims to create 90-year programme, currently in "no regrets" stage 0-15 years, measures of investments and policy making, adoption of the vision and the strategy as laid down in the MDP requires reviewing the next national socio-economic development plan, sectoral master plans and related provincial development plans</p>	<p>Integrated long-term vision (2100) and strategy for a safe, prosperous and sustainable development of the Mekong Delta in view of plausible socio-economic and climatic developments.</p> <p>Recommendations on strengthening intergovernmental cooperation and institutional arrangements, legislation and financing options in order to create a transition in agriculture policy, adequate land and water management and rationalising sector investments by integrated planning and cost benefit analyses.</p> <p>Coherent view on short term (2015-2025) priority and 'no-regret" measures.</p> <p>The major donor agencies have already indicated that the MDP constitutes a coherent approach for the delta and support this strategy</p>	<p>2010 - 2013 Mekong Delta Plan 2014 - 2100 Mekong Delta Programme</p>
Coastal				

<p>USAID</p>	<p>Vietnam Forests and Deltas (VFD) program</p>	<p>VFD’s goal is to accelerate Vietnam’s transition to climate-resilient, low-emission sustainable development.</p> <p>The program assists the Government of Vietnam (GVN) to implement recently enacted national policies and legislation on climate change adaptation and green growth at the provincial and local levels. VFD focuses on adaptation activity in two coastal delta provinces, and on sustainable landscapes/mitigation activity in two upland forest provinces.</p> <p>In Mekong focus on Long An Province (Mekong Delta): Reducing vulnerability to climate change, conducting disaster risk reduction, climate-smart agriculture (rice) and animal husbandry.</p> <p>VFD has three main areas of activity: 1) sustainable landscapes; 2) climate change adaptation; and 3) coordination and national policy support, which was recently added at the GVN’s request. VFD also features crosscutting themes on livelihood support, gender integration and institutional capacity building.</p> <p>VFD has achieved notable progress in the sustainable landscapes component.</p> <p>Among 73 people who participated in the assessment for CBDRM training, 59 (80 percent) applied what they learned from the training in field practice,</p>	<p>VFD livelihood models have achieved mixed results. Some models seem to have increased productivity such as smart rice in Long An. VFD’s work with climate smart rice in Long An appears to enjoy government support and should be considered for expanded support.</p> <p>Provided assistance at commune level, which included:</p> <ol style="list-style-type: none"> 1) Capacity building on community-based disaster risk management (CBDRM) with community-based disaster risk assessment (CBDRA) as an entry point, and the development of community disaster preparedness and climate change adaptation plans; 2) Assistance to implement school-based disaster risk management activities; 3) Assistance to implement Program Enhancement of Emergency Responses (PEER); and 4) Assessment and upgrading of early warning systems (EWS). <p>Supported capacity building for provincial hydro-meteorological forecast station in Long An. Also provided additional assistance to DONRE to upgrade the provincial climate change adaptation action plan.</p>	<p>September 25, 2012 - 2017</p> <p>\$26.5 million</p>
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		indicating its usefulness and effectiveness.		
USAID	Enhanced Capacity of the Vietnam Red Cross	Project expected to benefit 13,700 people directly and 30,000 people indirectly in the three targeted provinces of Bac Lieu, Hoa Binh, and Quang Tri.	Project utilized a community-based approach to help communes better prepare for and increase their resilience against disasters. Project activities include developing hazard risk reduction and disaster preparedness plans; providing training to teachers and students on water use, sanitation, and hygiene in emergencies; organizing “train the trainer” courses for Provincial Disaster Response teams; developing and adapting Health Emergency Response Guides; and providing first aid and epidemic-prevention training.	\$800,000 Phase 2: 2017 - 2019
GIZ	Bac Lieu Wind Farm - Phase 1&2	Supply chain and financing challenges experienced	The larger project focuses on identifying the environmental, economic, and social effects of climate change in the Lower Mekong Basin (LMB), and on assisting highly exposed and vulnerable rural populations in ecologically sensitive areas adapt to climate change impacts on agriculture, fisheries, livestock, ecosystems, and livelihood options.	USD 260 million
GIZ	Climate Change Adaptation Through Biodiversity Promotion in Bac Lieu Province	Around 100 hectares of mangrove forest have been rehabilitated (in addition to the 100 hectares of mangroves that were already restored in the previous project on 'Sustainable Development of Coastal Forests in Bac Lieu Province') Field trials and training for farmers on improved rice cultivation systems were conducted in cooperation with the International Rice Research Institute (IRRI);	Advisory support to the provincial government towards developing a land-use plan adapted to climate change impacts has been implemented. Broad-based awareness-raising has been realised through environmental education programmes at schools. The materials have since been modified further and introduced in the surrounding provinces.	Dec 2010 - Dec 2014 BMU Grant: € 3,528,706.2 9

		<p>propagation of salt-tolerant rice varieties was tested</p> <p>Rotational farming systems that are more ecologically friendly (mixed mangrove aquaculture, like shrimp/mangrove, crab/mangrove) have been developed, shared throughout the province, and integrated into state structures; results have indicated an average increase in income of 30%</p>		
GIZ	Sustainable Development of Coastal Protected Forests (Wetlands) in Bac Lieu Province	<p>Activities to restore coastal forests have been supported, including the afforestation of 100 hectares of coastal strip incorporating biodiversity considerations; about five hectares were planted with rare endemic mangrove species</p> <p>Alternative sources of income, such as mussel or snail farming, have been trialled</p>	The project generated alternative sources of income for coastal communities, which do not damage the coastal forests. This made people less dependent on the coastal forests with the result that they can use them more sustainably. The project also trained local government employees and relevant institutions in the management of coastal areas.	<p>Oct 2008 - Oct 2011</p> <p>BMU Grant: € 1,619,433.02</p>
UNDP	Expanding models of rice-shrimp cultivation for efficient management and sustainable use of alkaline lands in Bac Lieu	<p>In the Mekong Delta coastal region, freshwater shortage and freshwater/saline-water conflict in the rice-shrimp farming areas are frequently observed towards the end of MBD crop season. Freshwater shortage could severely reduce rice yield while closing sluices to prevent saline water could affect shrimp farming.</p> <p>Community awareness raising and capacity building to manage land as well as water resources; effective exploitation of saline-alkaline lands for rice cultivation; development and expansion of rice-shrimp farming model using MBD rice variety, all of which contribute to poverty reduction and new rural</p>	<p>The rice-shrimp rotation model has been confirmed to be suitable with the production capacity of the majority of farmers in the area, bringing high efficiency and sustainability, having fewer negative impacts on the surrounding environment due to its closed production, mutual support, contributing to ecological stability, suitable in current climate change conditions. In fact, many households followed this farming model have brought high economic efficiency and low risk.</p> <p>Investigation, data collection, comparison and evaluation of the model effectiveness on acid sulphate soils in four</p>	<p>June 2015 - June 2018</p> <p>Grant Amount: USD \$48,000.00</p> <p>Co-Financing Cash: USD \$18,212.00</p> <p>Co-Financing in-Kind: USD \$184,288.00</p>

		<p>development of the region.</p> <p>b) Specific objectives:</p> <ol style="list-style-type: none"> 1. Raise community awareness and understanding on the impacts of climate change and the urgency of applying management as well as technical measures for effective use of land, water and biodiversity resources in rice-shrimp farming. 2. Expand and develop model of sustainable rice-shrimp farming in saline-alkaline and freshwater/saline-water conflict lands of the Mekong Delta coastal region. 3. Review and evaluate results of the model, draw lessons learned for sharing with relevant stakeholders, and propose measures for model replication and transfer. 	<p>hamlets of Phuoc Long commune. 129 households self-financed shrimp seed valued over VND 400 million as the counterpart fund.</p> <p>In collaboration with the Agriculture-Aquaculture Seed Breeding Centre, the FFS training on transferring the prototype rice seed production procedure and certification organized, certificates granted to 50 farmers in Phuoc Tho hamlet.</p>	
GIZ	<p>Integrated coastal and mangrove forest protection Mekong provinces to adapt to climate change</p>	<p>At the operational level, the scope of the interventions and the cooperation system are well defined and aimed at achieving the impact identified at the results level as well as by the programme objective indicators. The monitoring system developed by the programme is excellent.</p> <p>The gender issue was particularly addressed by supporting provincial Departments of Labour, Invalids and Social Affairs (DOLISAs) in integrating provincial Climate Change Action Plans into provincial Gender Action Plans</p>	<p>The programme worked towards a systematic change, focusing on developing climate-resilient integrated coastal protection and management. First phase delivered technical and managerial innovations that were translated into policies, thus becoming binding and ready for application on a greater scale during the programme's second phase.</p> <p>The programme has leveraged funds from other development partners for joint activities. EUR 300,000 from the Embassy of the Netherlands on coastal protection; EUR 233,000 from (UNEP) on coastal spatial planning; EUR 190,000 from the United Nations Development Programme (UNDP) on regional coordination</p>	<p>June 2011- July 2018 EUR 23,570,000</p>

JICA	Ben Tre Water Management Project	The project will provide saline water intrusion control facilities in Ben Tre Province in southern Vietnam, where saline water intrusion is damaging crops.	<p>This will improve the agricultural productivity by providing agricultural water with low salinity.</p> <p>The agricultural sector of Ben Tre drives the economy of the province, and the ratio of the agricultural sector to the gross domestic product (44 percent) greatly exceeds that of the average of the country.</p>	<p>JPY 24,257</p> <p>Completion Date: October 2022</p>
GGGI	Vietnam Wastewater Management System (Ben Tre)	Has demonstrated project feasibility and sub sovereign lending approved for USD \$30m approved.	Supports adaptation to floods, droughts, and salinity intrusion through the increase of sewerage coverage and improvement of wastewater treatment process, and mitigation through implementation of low energy/low carbon technologies and the increase of sewerage coverage.	<p>Start Date: Q4 2015</p> <p>End Date: Unknown</p> <p>Approved Budget: USD \$30,000,000.00</p>
Waterways				
The World Bank	VN-Mekong Delta Water Management for Rural Dev	<p>Institutional Support and Sustainability - continuous long-term institutional support mechanisms are limited for the water users' associations, and that poses a risk to effectively manage irrigation infrastructures. Safe management or disposal of faecal sludge is important otherwise it can become a health hazard.</p> <p>Financial Sustainability - although O&M arrangements were made both for irrigation and water supply structures through user fees, they were reportedly still under moderate risk particularly the ones that required additional financial support from provinces.</p> <p>Ownership and Commitment - scaling up of soft activities may not go as planned; approval of plans may be</p>	<p>An integrated database, rather than the interlinked Excel and Word documents that were used, would have made the M&E system more user-friendly and accessible.</p> <p>The M&E system was mainly used as a system to report progress against targets rather than an integrated management tool and a tool to support evidence-based learning.</p> <p>While water resource management in delta regions requires an integrated approach to address all water related issues, including agriculture, irrigation, sanitation, and climate change adaptation, project success can be attained through a strong results framework, and implementation</p>	<p>7-June-2011 - 15-Sep-2017</p> <p>Total Project Cost: USD \$134,289,842.21</p> <p>Commitment Amount: USD \$160,000,000.00</p>

		<p>delayed at the provincial levels and scaling up of pilot projects might be partial.</p> <p>Climate change and upstream development - increasing saline intrusion and intensification of rice cultivation pose additional risks.</p> <p>Measures to mitigate negative impacts on Physical Cultural Resources (PCRs), such as relocating normal graves or chance finds of graves, were adequately incorporated into subproject ESMPs.</p> <p>The project had a lofty vision, which tried to integrate 'water for agriculture' and 'water for people', and introduced 'climate change adaptation' as a cross-cutting element. This was associated with additional technical complexity, sensitivities to changing environment, and the need for multi-sectoral solutions. In such a scenario, a stronger results framework, close monitoring and supervision, as well as sound implementation arrangements with sufficient capacity building support are key to project success.</p>	arrangements with sufficient capacity building.	
The World Bank	Northern Delta Transport Development Project Additional Financing	Alleviation of physical and institutional bottlenecks, in two major waterway corridors in the Northern Delta Region. This additional credit will be used to help finance construction of a canal to connect two rivers with a navigational lock, known as the Day-Ninh Co interconnecting canal.	Failure to adequately implement a performance-based contract as originally intended. It is expected that construction of the canal will reduce transport and logistics costs, including the cost of environmental externalities, along a major waterway corridor in the Red River Delta region.	05-May-2017 - n/a Total Project Cost - USD \$107,000,000.00 Commitment Amount - USD

				\$78,000,00 0.00
Netherlands Embassy	Water Treatment Project	<p>The project will deliver sanitation for residents and industries whose wastewater is currently discharged untreated, resulting in high levels of environmental pollution. The Dutch Government is financing the project as part of its Facility for Infrastructure Development (ORIO programme) in developing countries.</p> <p>The project also includes the construction of four pumping stations, over 100km of pipeline network and the connection of 15,000 households and over 1,000 small-and medium-sized enterprises</p>	<p>The environmental benefits will be visible in a significantly improved water quality in the area's lakes, canals and Thi Vai river and will result in better living conditions for residents. It will also help small and medium enterprises to protect the quality of the environment around their businesses.</p>	<p>July - 2017 - Dec-2019</p> <p>Royal Harkening in Vietnam has signed a € 9.5 million contract with the Ba Ria Vung Tau</p>
Urban				
GIZ/SECO	Mekong Urban Flood Proofing and Drainage Programme (FPP)	<p>The project aims, through a multi-level approach (national, provincial and city level), to improve the capacity of public institutions and communities to adapt to more frequent and severe urban flooding in the wake of climate change, by implementing awareness and adaptation measures.</p> <p>Under the FPP, this consulting contract supports three cities in the Mekong Delta (Ca Mau, Rach Gia and Long Xuyen. in developing flood risk sensitive urban planning, particularly land-use planning and drainage planning. Moreover, the project will develop flood risk models and update urban drainage master plans to follow climate change resiliency guidelines for the above-mentioned cities in</p>	<p>Flood risk models and flood risk model management systems are important tools to communicate flood risk to different target groups as they provide an evidence-based foundation for decision making purposes to public authorities for flood control and disaster mitigation operations, land-use planning and flood evacuation planning</p>	

		order to help public authorities to improve disaster risk management in urban areas.		
The World Bank	Can Tho Urban Development and Resilience	<p>There are still bottlenecks related to institutional and technical capacity, project management issues, slow procurement and slow resettlement.</p> <p>No measurable results are expected until Year 3 of implementation except for some minor training in Year 2 (2017).</p>	<p>Component 1: structural and non-structural measures to help the city manage urban flood risk. It consists of three sub-components: priority flood control investments in urban core; drainage and waste water systems; and operation of the city integrated flood risk management system and early warning system.</p> <p>Component 2: urban corridor development. Increase intra-city connectivity and encourage compact, mixed-use, pedestrian, and public transport oriented urban development in the less flood prone area of Cai Rang. It consists of three sub-components: road and bridge links; construction of the residential area for resettlement; and effective transport systems management and equipment.</p> <p>Component 3: spatial planning platform and financial and social protection instruments. Building management systems to improve spatial planning, data and information management, post-disaster budget execution, and responsiveness of safety nets to flood events. It consists of two sub-components: risk informed spatial planning platform; and disaster responsive social assistance system.</p>	<p>24-Mar-2016 - 30-Jun-2022.</p> <p>Total Project Cost – USD \$322,000,000.00</p> <p>Commitment Amount – USD \$250,000,000.00</p>
The World Bank	Scaling-Up Urban Upgrading Project	Improving access to infrastructure in priority city areas and improve urban	Living and income generating activities of Khmer people will be	Approval Date: 30 May 2017

		<p>planning in the participating cities.</p> <p>The first component will support tertiary investments in approximately 30 LIAs including, improvements to environmental sanitation by rehabilitating or constructing public sewers, constructing septic tanks, providing access to septic management services, and house connections to public sewers.</p> <p>The second component provides support to improve priority networked infrastructure in line with the broader city development agenda, focus on social infrastructure facilities such as markets, community halls, public places, schools and green spaces.</p> <p>The third component will include the construction of resettlement areas for affected persons.</p> <p>The fourth component will provide implementation support as well as enhance the cities' capacity to manage urban development in a risk informed manner.</p>	<p>affected by land acquisition, possibility that project design may change to mitigate this, for example upgrading the current canal and drainage system, construction works on public land and also providing technical support for Khmer households to upgrade their households.</p> <p>The task team has also initiated discussions with SECO to seek bilateral grant support for the project, given that the objectives of the project are fully aligned with the Pillar 4 for SECO's 2017-2021 prioritization plan.</p>	<p>Closing Date: 31 Dec 2023</p> <p>Total Project Cost: USD \$330,000,000.00 million</p>
ADB	Second Lower Secondary Education for the Most Disadvantaged Areas Project	<p>The project funds new school facilities, teacher training, textbooks, community outreach activities and the creation of school cluster groups to boost enrolment and retention of disadvantaged students. The project targets areas with large ethnic minorities and those prone to typhoons.</p>	<p>Strong grievance redress mechanism established.</p> <p>Introduced new initiatives to equip the schools and communities with knowledge and facilities to effectively deal with disasters caused by typhoons and other natural calamities as part of climate change adaptation measures and new programs and curriculum for lifelong skills, including vocational orientation for ethnic</p>	<p>24-Oct-2016 to 31-Dec-2020</p> <p>Total Project Cost: USD \$93,000,000.00</p> <p>ADB Commitment: USD \$80,000,000.00</p>

			minority students.	
SECO	Mekong Urban Flood Proofing and Drainage Project in Three Mekong Delta Cities	There is a lack of procedures and capacities at national and subnational level to implement measures to deal with these risks effectively and in a sustainable way.	Development of a urban master plan for the three cities. The gaps or inconsistencies in the overall framework of national regulations and guidelines for urban drainage will be eliminated. Better coordination amongst relevant stakeholders in the three cities.	26-May-2016 - 31-Dec-2019 Total Project Cost: CHF 5'250'000
Local Capacity Building Projects				
IFAD	Rural Development: Project for Adaption to Climate Change in the Mekong Delta in Ben Tre and Tra Vinh Provinces	<p>The AMD approach involves building evidence and knowledge for improving participatory planning, policy formulation and facilitating adaptive change through sustainable rural financial services and strategic government co-financing for investing in climate resilient livelihoods at household and community levels.</p> <p>In this regard, the AMD will provide a counterpoint to the GoV's and Ministry of Agriculture and Rural Development's (MARD) emphasis on structural adaptation (infrastructure oriented), by articulating a number of non-structural or "soft" adaptation responses, which, considering the sensitive and uncertain hydrological dynamics of delta ecosystems, provide a more dynamic response without prejudicing future options, or risk of maladaptation. By working along a salinity gradient that extends from the coast inland, the AMD will enable the testing and deployment of alternative rural livelihoods in the context of changing salinity</p>	Thirty communes have been selected in each province based on their poverty ranking, vulnerability to climate change and overlap with communes covered by the government's National Target Programme on New Rural Development in partnership with Tra Vinh University (TVU), regional research institutes and international collaboration, the project will evaluate climate adaptation technologies and approaches that show potential for scaling up.	11- Dec-2013 - 30-Mar-2020 Total Project Cost: USD \$49,340,000.00

		<p>concentrations, and heat and water stress.</p> <p>The project proposes the development of a real-time salinity monitoring and forecasting system comprising of a network of 60 automated salinity monitoring stations, a network of up to 2000 CIG manual monitoring points</p> <p>There are concerns with respect to (i) allocation of adequate resources to the implementation of the Annual Work Plan and Budget (AWPB); (ii) establishment of the Automated Salinity and Water Quality Monitoring System (ASWQMS) and (iii) compliance by the Women's Development Fund (WDF) of Tra Vinh to the criteria of the State Bank of Vietnam (SBV) for full registration as a Micro-Finance Institution (MFI).</p>		
<p>New Zealand's Aid/Oxfam</p>	<p>Building Resilience to Disaster and Climate Risks of Men and Women in Ben Tre Province</p>	<p>Through the project a Disaster Risk Reduction Fund has also been set up. The fund provides financing for (DRR) and (CCA) activities that local communities have identified as important.</p> <p>To support the promotion of alternative livelihoods, Oxfam has introduced goat and cow breeding in the target communes.</p> <p>In addition, more than 2,500 poor households have been provided with 2,000 litre water containers, which can store enough drinking water to last six months during the dry season.</p> <p>In 2013, it provided the 15</p>	<p>The emergency relief responds to urgent needs of children, women, and men in 15 most affected communes in districts of Binh Dai, Ba Tri, and Thanh Phu.</p> <p>Oxfam and the provincial Department of Planning and Investment have developed a guideline for integrating disaster risk reduction (DRR), climate change adaptation (CCA), and gender equality into socio-economic development plans (SEDPs).</p> <p>Local authorities are now better able to conduct participatory vulnerability and capacity assessments and to integrate the results of these into the annual</p>	<p>June-2012 - Oct-2017</p> <p>US\$50,000</p>

		<p>communities with early warning disaster equipment and other machines worth over 1.4 billion VND while training courses on community-based disaster management and disaster risk reduction were also opened.</p> <p>Besides encouraging the adoption of environmentally friendly behaviours, the project has also built four livelihood models to support poor women, one in making eco-bags in Bao Thanh commune and three in raising cows in Ba Tri and Thanh Phu communes.</p>	<p>SEDP. As a result, women's specific needs and capabilities are now taken into consideration in the SEDP, and about 42 percent of local women participate in local government consultations and planning meetings to develop the SEDP.</p>	
ICCG	<p>Strengthening capacity of Khmer women in adapting to climate changes in Tra Vinh province, Vietnam</p>	<p>The goal is to strengthen quality of human resources of Khmer women in the Tra Vinh province, to mitigate and adapt to climate change impacts. The outcome of this project will be increased adaptive capacity of community in the Tra Vinh province to climate change</p>	<p>A network of capable women in the project will be useful for other government development programs and future rural and community development projects in the Mekong Delta</p>	<p>20-Apr-2017 - 20-Dec-2017</p> <p>Total Cost: EU 3000</p>
MCNV	<p>Climate Change Adaptation for the Poor Coastal Community in Ben Tre</p>	<p>Loans from MCNV microfinance project in Binh Dai district allow poor family to build high capacity water container of about 3m³ each.</p> <p>With financial support from Jumpstart Foundation, MCNV collaborates with the Ben Tre provincial Women's Union to establish women cooperatives, which provide stable jobs and income for poor women.</p> <p>MCNV would like to establish a livelihood adaptation knowledge website to share our field experience to help poor communities to improve their livelihoods by adapting to climate change.</p>	<p>At the same time, MCNV also looks for Corporate Social Responsibility programs to supply water containers to kindergartens, commune health centers and friendship houses for extreme poor people in Ben Tre.</p> <p>Creative trainings on adapted livelihoods should be provided widely to raise awareness for everyone to better prepare them for unavoidable climate change.</p> <p>MCNV expects to find additional development partners to do practical field research and bring innovative methods that could help poor communities to stabilise their lives and overcome the</p>	

			additional challenges from climate change	
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Table 20 shows the summary of the projects in Mekong Delta Regions. As shown in the table, most of the projects in Mekong Delta Regions have focused on community level capacity building or else policy and institutional level capacity building.

Even over the last 8 years there have been 44 projects in the Mekong Delta region, this analysis of exiting projects aims to find gaps in programming and create synergy with them to help facilitate the implementation of this project. Based on this assessment the proposed project and would like to focus on providing hard environmental-related infrastructure in small scale with suitable capacity building for the ownership of the community.

Table 20. Brief Summary of the projects in MDR

Geographic Characteristics	Total project	Policy/ Institutional Capacity Building	Hard Environmental-Related Infrastructure	Hard Economic-Related Infrastructure	Community level Capacity Building
Greater Mekong Subregion	16	9 (56.25%)	0 (0.00%)	2 (12.50%)	5 (31.25%)
Vietnam Delta Region	7	3 (42.85%)	2 (28.57%)	0 (0.00%)	2 (28.57%)
Coastal	9	2 (22.22%)	4 (44.44%)	1 (11.11%)	2 (22.22%)
Waterways	3	0 (0.00%)	1 (33.33%)	1 (33.33%)	1 (33.33%)
Urban	5	0 (0.00%)	2 (40.00%)	0 (0.00%)	3 (60.00%)
Small scale local	4	0 (0.00%)	1 (25.00%)	0 (0.00%)	3 (75.00%)
SUM	44	14 (31.85%)	10 (22.72%)	4 (9.09%)	16 (36.36%)

G. Capturing and Disseminating Lessons Learned:

A dedicated component (4) addresses awareness raising, knowledge management and communication. While this provides the cornerstone for capturing and disseminating lessons learned, other project components directly contribute to knowledge management mechanisms and dissemination of lessons learned from local to national and to international levels.

At the local level, a participatory approach involving communities, local authorities and will lead to increased local knowledge on planning, constructing and maintaining resilient infrastructure. Project demonstration sites will contribute to sharing lessons and training through local disseminators and tools and guidelines, this will take place from the beginning of the project and throughout its implementation. The project will also use a participatory monitoring process, which will enable the beneficiary communities under component 4.

At the national level, this project will allow other vulnerable regions in Vietnam to draw on this framework and lessons learned through replication and scale-up of good practice. Information obtained through this project will be consolidated in reports, then tools and guidelines will be

developed for resilient and sustainable urban communities for developing and upgrading human settlement. The partnering departments of the various ministries at the regional level will directly link with the ministries at the national level to facilitate national wide dissemination.

As part of the sustainability/exit strategy, the project will develop participatory monitoring processes, which will trigger institutional learning processes, participation from local groups, knowledge exchange and replication and scale-up of good practices.

At the international level, projects related to climate change, especially for eco-human settlement, and resilient housing and community level infrastructure may benefit from the proposed project. UN-Habitat is plugged into a number of international mechanisms. The Knowledge Centre on Cities and Climate Change (K4C) provides a knowledge management platform for Climate Change Adaptation and Human Settlement Interventions. It is proposed to use this platform, accessible at UN-Habitats website, to disseminate the lessons learned from this project. UN-habitat has also been working on integrating knowledge generated from the project with the knowledge management component of CCCA programme, and through the ‘camclimate’ website⁴

Table 21. Project Outputs and Related Learning Objectives, Indicators and Products

Expected Concrete Outputs / Intervention	Learning Objectives (LO) And Indicators (I)	Knowledge Products
1.1 Capacity building support provided to national government and local authorities to increase the resilience of human settlement and ecosystem	(LO): Improved Climate Change awareness and knowledge of mainstreaming climate change adaptation into the planning of government officials at all levels (National, province, district and commune), specific focus on District and commune levels (I) Guidance and materials for trainings Number of training workshop and participants	<i>Training materials, guidelines comprising of planning approach, resilient infrastructure, and technical standards, environmental and social safeguards and community action planning</i>
1.1.1 Guidance and training materials development for vulnerability and risk assessment at local levels	(LO) Develop the guidance and training materials for mainstreaming climate change adaptation into the planning Integrate local climate action into community planning (I) Number of guidance and training materials Quality of participants on the development of materials Pilot workshop with practitioners	<i>Training materials, guidelines comprising of planning approach, resilient infrastructure, and technical standards, environmental and social safeguards and community action planning Pilot training workshop with practitioners</i>

⁴ <http://www.camclimate.org.kh>

1.1.2	Planning tools and training materials development for comprising of planning approach, strategy and action plan development, resilient infrastructure	(LO) See 1.1.1 and guidance and training materials will be included planning approach, strategy, and action plan for comprehensive and holistic climate change adaptation (I) Number of guidance and training materials Quality of participants on the development of materials Pilot workshop with practitioners	<i>Training materials, guidelines comprising of planning approach, resilient infrastructure, and technical standards, environmental and social safeguards and community action planning</i>
1.1.3	Project team orientation/training	(LO): Improved Climate Change Adaptation tool and planning approach (I): Training guidance materials Number of plans (LO): Improved awareness and local vulnerability (I): Number of participating government officials	<i>Planning tool for community vulnerability Training materials Guidance for training Workshop report and documentation (Concept note, Agenda and List of Participants)</i>
1.1.4	National Induction Workshop (National and provincial participants)	(LO): Improved knowledge and strategies sharing (I): Number of participating government officials, Number of strategies shared Number of local plans reflecting climate change adaptation/resilience	<i>Training report and training materials Eco-human settlement strategy and action plans</i>
1.1.5	National training of facilitators workshop (national and provincial participants), enabling them to set up eco-human settlement strategy and action plan development	(LO): Improved Climate Change awareness of government officials (I): Number of participating national and local government officials Number of local plans reflecting climate change adaptation/resilience	<i>Training report and training materials Eco-human settlement strategy and action plans</i>
1.1.6	Province and District level workshops and trainings, enabling them to set up eco-human settlement strategy and action plan development	(LO): Improved Climate Change awareness of government officials (I): Number of participating local government officials Number of local plans reflecting climate change adaptation/resilience	<i>Training report and training materials Eco-human settlement strategy and action plans</i>

<p>1.1.7 Community action planning workshops provided to commune level for the development of climate resilient community plans</p>	<p>(LO): Improved Climate Change Adaptation plan (community level) (I): Project tools for planning approach and guidance Number of workshops Number of community-based plan /strategies (developed and/or revised)</p>	<p><i>Project tool / guidelines comprising of assessment and planning approach, resilient infrastructure, and technical standards, environmental and social safeguards and community action planning Task report for workshop Eco-human settlement action plans and strategies</i></p>
<p>2.1 Comprehensive workshops for integrating the eco-human settlement strategies and plans (province, district and commune)</p>	<p>(LO): Improve the local's knowledge and awareness of climate change adaptation and planning (I): Number of workshops Number of local plans reflecting climate change adaptation / resilience</p>	<p><i>Workshop and feedback report Revised action plan and strategy for climate change adaptation Revised community planning</i></p>
<p>2.1.1 Community action planning workshops to districts and communes for the development of climate resilient (integrated) community plans (Utilizing the tools and facilitators developed under 1.1)</p>	<p>(LO): Improve local action for climate change adaptation and planning Integrate climate change action plan and strategy into community planning (I): Number of local action workshop Number of local plans reflecting climate change adaptation / resilience</p>	<p><i>Workshop and feedback report Revised action plan and strategy for climate change adaptation Revised community planning</i></p>
<p>2.1.1.1 Community level vulnerability and Risk Assessment</p>	<p>(LO) Based on participatory approach, locals can participate in the vulnerability and risk assessment for their communities. Locals can improve their knowledge and awareness of climate change adaptation and action plan (I) Vulnerability and risk assessment report Community mapping for assessment Number of workshops at local level</p>	<p><i>Community base vulnerability and risk assessment report Workshop and feedback report Mapping based on vulnerability and risk assessment</i></p>
<p>2.1.1.2 Develop community level eco-human settlement planning based on the output 2.1.2</p>	<p>(LO) Develop community based eco-human settlement planning and strategy Revise the climate change adaptation action plan through the workshop (I) Number of action plan work shop Number of eco-human settlement strategies and action plans</p>	<p><i>Community based eco-human settlement strategy and planning Revised action plan and strategies for climate change adaptation</i></p>

<p>3.1.1 Vulnerable assets strengthened, new sustainable assets constructed (Sectorial approach): Waste, climate-resilient infrastructure: i.e. bridge, housing, and ecosystem</p>	<p>(LO): Improved knowledge and awareness of climate resilient infrastructure Enhanced local ownership for hard infrastructures Encourage locals to join the project of climate change adaptation and action plans</p> <p>(I): Number of workshops for understanding about hard infrastructure intervention Number of training workshop for maintenance and operation</p>	<p><i>Local operation and management framework and manuals</i> <i>Guidance for maintenance and operation</i></p>
<p>3.1.1.1 Built small-scale of water salination system to provide clean and safe water for both living and agriculture (Water)</p>	<p>(LO) Improve the physical infrastructure for water management</p> <p>(I) Number of hard infrastructures in communities Number of training workshop for maintenance and operation</p>	<p><i>Design and technology for water management system</i> <i>Implementation plan and report</i></p>
<p>3.1.1.2 Climate resilience infrastructure building and refurbishing (Infrastructure)</p>	<p>(LO) Improve the physical and climate resilient infrastructure</p> <p>(I) Number of hard infrastructures in communities Number of training workshop for maintenance and operation</p>	<p><i>Design and technology for climate resilience infrastructures</i> <i>Implementation plan and report</i></p>
<p>3.1.1.3 Climate resilience housing upgrade (Housing)</p>	<p>(LO) Improve the physical condition for house and implement climate resilient housing design</p> <p>(I) Number of improved houses Number of climate resilient housing design implemented house Number of training workshop for maintenance and operation</p>	<p><i>Design and technology for climate resilience housing</i> <i>Implementation plan and report</i></p>
<p>3.1.1.4 Enhancing ecosystem (Ecosystem)</p>	<p>(LO) Improved the ecosystem against the impact of climate change and natural hazards</p> <p>(I) Number of eco-friendly technologies implemented Number of training workshop for maintenance and operation</p>	<p><i>Design and technology for climate resilience ecosystem</i> <i>Implementation plan and report</i></p>

3.1.1.5 Built small scale of eco-friendly waste treatment and management facility (Waste)	(LO) Improved waste management system against the impact of natural hazards (I) Number of eco-friendly technologies implemented Number of training workshop for maintenance and operation	<i>Design and technology for climate resilience and eco-friendly waste management system</i> <i>Implementation plan and report</i>
4.1.1. Lesson learned and best practices regarding resilient urban community development/housing are generated, captured and distributed to other communities, civil society, and policy-makers in government appropriate mechanisms	(LO): Sharing of lessons learned and best practices (I): Number of platforms used for sharing Number of workshops for sharing experience and best practices	<i>Dissemination through regional organizations and websites</i> <i>Sharing experience and best practice materials</i> <i>Workshop and feedback report0</i>
4.1.2. Regional advocacy and replication	(LO): Scaling up the good practices to the policy level at provincial level (I) Number of knowledge sharing workshop at local level	<i>Reports of dialogue and knowledge sharing workshop</i>

The Integrated knowledge management approach as demonstrated in Table 21 will result in the tools, guidance, training materials, guidelines, trained officials, developed and revised action plan and strategies for climate change adaptation and demonstration sites. In particular the close collaboration with key stakeholders at national and local levels will take a role in building code and producing the guidelines and tools that can be used autonomously by other stakeholders as well in order to ensure the sustainability of the proposed project.

H. The Consultation Process:

The idea of the project has been started from the field mission to the coastal region of the Mekong Delta between 10 and 14 September 2018. In the field mission, the impact of climate change was specifically identified at provincial and district level. In the meetings with provincial level government officials, general and current status of the impact of climate change was discussed, and economic, social and environmental related issues were also considered. For more detailed information and analysis, data collection was requested to relevant government agencies.

The first meeting with focal point, which is the Ministry of Natural Resources and Environment, focused on showing the interest of the project development and find out the demand of Vietnams government and national priorities for climate change adaptation.

The additional meetings at the national level focused primarily on alignment with national priorities (as identified in Section D), coordination (and avoiding duplication) with other development partner initiatives (outlined in Section F), the thematic and geographic focus, and the pre-identified target communities.

National level consultation meeting was held in 7 November with various stakeholders and experts. Community level consultation was held in December with rapid vulnerability and risk assessment. In the community consultations women, indigenous people, elderly, youth and people with disability have been part of the consultation process.

In November, project related agencies were contacted and consultation meetings were held. The consultation focused on synergizing with other projects, avoiding overlaps and identifying lessons learned from other projects. In Vietnam, there is the Mekong Delta Working Group that facilitates discussion about projects and policy.

In December, community consultation took place. The objective was to understand the local climate change impact/effects per community, individual communities adaptive capacity, the demand for resilience capacity building and barriers to building resilience, specific resilience building needs and interests and concerns regarding the propose project in general. For the full project proposal, the in-depth consultation with communities will take place where we'll discuss and select possible activities and hard interventions with communities by considering:

- Alternative options for increasing resilience
- Costs (also for maintenance), also looking at alternative options
- Potential environmental and social risks and impacts of intervention (identified by through initial screening)

Table 22 shows about the overview of stakeholders consulted and the outcome of these consultations.

Table 22. Stakeholder Consultation Meeting Held

Agency	Consultation objective	Outcome	Conclusion
MONRE	Show the interest of AF project development and implementation / RE-confirm focal point willingness/ Establish preferred target areas/Ensure coordination with other ongoing adaptation activities and policy alignment	MONRE coordinated for consultation meeting and supports UN-Habitat for administration MONRE will support UN-Habitat to organize the consultation workshop at local level MONRE also supports to find the most vulnerable communities for the AF project development	Set up the consultation meeting on 7 November 2018 Sharing the experience that MONRE support UNEP's AF project development UN-Habitat receives the full support of MONRE for project development
MONRE	To collect the feedback of the project from governmental officials and experts To discuss about the potential project sites for the project To find the gap between existing and UN-Habitat projects	Various departments in MONRE and experts participated in the consultation meeting Sharing the experience and knowledge about the current local situation Reviewed the developing project and its draft of the concept note	Narrow down for the project locations: Bac Lieu and/or Ben Tre Potential project site: An Giang, Ca Mau. The project site will be decided by 16 November Components and activities in the draft will be revised Collected the data about

			ongoing and planned projects in the Mekong Delta Collected data for identifying the gap between existing and UN-Habitat projects
Province officials in three provinces	Agree target sites/Understanding climate change vulnerability, integrating climate change action into urban planning/highlight possible adaptation investments	Data collection, possible project sites were introduced and visited, understanding of current status of the impact of climate change, provincial priorities for climate change adaptation, the level of awareness of climate change	Getting the feedback from the locals about the project and identifying the needs of locals Providing socio-economic and environmental data for districts and communes Discussing about implementation
Commune officials in three provinces	Agree target sites/Understanding climate change vulnerability, integrating climate change action into urban planning/highlight possible adaptation investments/understanding community coping mechanisms/Barriers to building resilience	Data collection, possible project sites were introduced and visited, understanding of current status of the impact of climate change, district and commune levels priorities for climate change adaptation, the level of awareness of climate change	Locals understood about the project and benefits from the implementation Identifying the real needs from locals and obtaining the feedback about the projects Also recognizing the challenges what locals face because of the impact of climate change Also checking the knowledge about the impact of climate change and climate change adaptation
GIZ	Ensure synchronicity with the GIZ integrated Coastal Management Project in the Mekong Delta	For site selection process, GIZ supports their new information system from ICMP Their ICMP did not be implemented in Ban Tre and Tra Vinh, thus AF project can fill the gap. Small-scale infrastructure will be added as pilot project, which could be the common area between to agencies. GIZ could provide concrete evidence and data in MD when UN-Habitat develop its concept note for Adaptation Fund.	Project site could be overlapped, but we should focus on how we make the synergy within the same project site through proper cooperation GIZ suggested also focus on river erosion since the informal settlement along the river accelerate the river bank erosion; the resettlement of the informal sector along the river is urgent issue for the government
JICA	Ensure synchronicity with the JICA Ben Tre Water Management Project and share the	Identified the gap between JICA's and UN-Habitat's AF project in terms of geography and context: JICA	JICA is focusing on overall Ben Tre in province level while UN-Habitat is constructing small-scale

	data from JICA's Feasibility study, vulnerability assessment, and climate change projection	project mainly focuses on hard infrastructure, and not including planning component. JICA's project is big scale infrastructure construction project, thus they cannot cover all the region. Thus, they only can cover the around of Ben Tre City and upper area of the province. Data collection	infrastructure in commune level; combination of diverse level could make synergy for both project Ben Tre Water Management Project only covers upper part of Ben Tre; TP. BEN TRE; the project cannot cover overall Ben Tre province so UN-Habitat might be able to fill the gap also geographically in the same province JICA and UN-Habitat could also work together on developing master plan for Ben Tre since planning is not included in Ben Tre Water Management Project
SECO	Gain experience from SECO on the implementing modality for multi-lateral climate finance projects Synergize with other projects, avoiding overlaps and identify lessons learned	Have suitable institutional arrangement for implementation of the project is the key; To succeed on developing the project in MDR, reflection of the local needs is important; Identifying local's demand and vulnerability and risk assessment are the key aspects for small-scale infrastructure intervention project;	SECO suggested the projects relevant to the proposed project: WB project in urban climate resilient project in Can Tho could be good reference for developing the small-scale infrastructure; GIZ project in Anh Giang, Kien Giang, and Cau Mau on sustainable drainage system link to green infrastructure
NISTPASS	Gain knowledge and practices for environmental technology application at local level	Data collection Possible project sites were introduced and potential environment related technology would be introduced with understanding of current status of the impact of climate change, district and commune levels Priorities for climate change adaptation, the level of awareness of climate change	Will clarity of how to transform outputs to outcomes is essential to ensure a real change Will have a dialogue events for integration needs to be apply at local level
ISPONRE	To find the gap in the Vietnamese context and seek advice for project site selection	Notes that there is also a need to proof more resilience for activities. Adds that the component of knowledge sharing the model should be scalable for the implementation.	Will revise the planned activities Considering about ecosystem approach with agricultural base

		With the ecosystem approach it is necessary to ensure the house supply chain in the market of flooding rice	
IFAD	Review AMD Project and Adaptation Fund Project, and discuss possible synergy.	Notes the agencies challenges, such as the lack of details. Offers to share useful of IFAD reports for the project implementation. Notes the need of communication with PPC for further details.	The gaps perceived in Ben Tre and Tra Vinh are being filled by IFAD. Will contact IFAD for details of PPC.

In Vietnam, UN-Habitat has been implementing projects in support and strengthening policy interventions, institutional capacity building, climate change adaptation and mitigation and disaster risk management, youth development, housing and urban planning at both national and subnational level. UN-Habitat has been a longstanding partner with Vietnam at national and provincial level and has also supported the development of cities in Vietnam. It is the agency with the best expertise in dealing with human settlement planning at local level with the highest capacity to implement adaptation projects on a significant scale, as is recognized and valued by all partners.

I. Justification of Funding Request:

The proposed project components, outcomes and outputs fully align with national and local government/institutional priorities/ identified gaps and with the needs of the target communities and vulnerable groups as identified through project analysis. It will also align with the Adaptation Fund’s seven outcomes as stated in the Adaptation Fund results framework. This alignment has resulted in the design of a comprehensive approach in which the different components strengthen each other and in which outputs and activities are expected to fill identified gaps of Vietnam’s climate change response. UN-Habitat is well placed to execute the proposed project based in its human settlements related climate change work in the Asia-Pacific Region and its strong presence in Vietnam; it has a history of strong partnerships with national and sub-national government agencies, a wide range of other stakeholders and most importantly communities with vulnerabilities.

The project strongly addresses the climate resilience of the most vulnerable communities in the coastal region of the Mekong Delta in Vietnam where numerous underlying vulnerabilities predispose communities to climate vulnerability. The project aims to maximizing the funding amount for the local investment component (component 3); funding allocation of the ‘soft’ components is required for complementarity/support for Component 3 in order to achieve sustainability and quality assurance of the project.

The table below provides justification for funding requested, focusing on the full cost of adaptation reasoning, by showing the impact of AF funding compared to no funding (baseline) related to expected project outcomes.

Table 23. Overview of Impact of AF funding compared to no funding (baseline) related to expected project outcomes

Project Objectives	Baseline (without AF)	Additional (with AF)	Comment / Alternative Adaptation Scenario
Institutional and community capacity building toward eco-human settlement development for supporting to enhance local climate response actions	There are no detailed plans for human settlement and ecosystem. No awareness of the linkage between human settlement and ecosystem. No support plans for local climate response actions in terms of human settlement and ecosystem.	There will be detailed plans for human settlement and ecosystem. Public can understand about the correlation between human settlement and ecosystem. Develop the plans for local climate actions in terms of human settlement and ecosystem	Local people will adapt to the impact of climate change and they could transform by themselves. However, it would not be the well-structured adaptation and will be not efficient and effective. Without the intervention, the enhancement of adaptive capacity will be limited in terms of eco-human settlement planning
Integrated planning with respects of eco system-based climate change adaptation and building climate resilient capacity and action plan at local level	Detailed plans for human settlement and ecosystem would not be integrated into the provincial, district and commune level plans. Lack of integration of climate action plans and strategies. Community level demand will not be reflected into the plans	Identifying the demand from community level. This demand can be developed to local climate response actions. This action plans will be integrated into the socio-economic development plans. Green and Blue network can be set up and support to local to strengthen climate resilience.	Planning will be developed, but it would not be the comprehensive one. No holistic approach will be implemented for responding the climate change. Without the intervention, the opportunity that planning for responding the climate change at local level into provincial and national level planning will be limited, and the actual challenges and financing mechanism for climate change related projects will not be captured
Sustainability built through small-scale protective and basic service infrastructure	National government and local authorities will not be able to respond to climate change impacts because local development plans do not include specific action plans and there is insufficient financial capacity to invest climate resilient infrastructures	Locals can have physical infrastructure to prevent from the impact of climate change. Locals can understand exact challenges from the impact of climate change and they can utilize the infrastructures for strengthening climate resilience. Locals will be able to have basic service for water management and waste treatment.	Without undertaking actions through the People's Process, adaptation actions would not be participatory or generate the levels of local ownership achieved by this project.
Awareness Raising and Knowledge Management	Local levels (district and communes) have limited	Locals have capacity building for knowledge	Without these interventions, the

	<p>knowledge of resilient planning and protection of human settlement Less coordination of vertical governance and knowledge management</p>	<p>management. Well-structured and coordinated governance ensures that local participation enhances climate resilience. Local government is aware of climate change and its impact. Knowledge will increase and the likelihood of follow up finance for additional investment will be increased</p>	<p>chances of wider knowledge generation and follow-up financing would be severely limited.</p>
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J. Sustainability of the Project:

Institutional Sustainability

The project will pave the way for the national government and local authorities in Vietnam to sustain and up-scale the project to vulnerable settlements in other regions, by utilising the planning tool equipped through the proposed project and sharing lessons learned from the project. Trained government officials at different levels will guide the process in combination with technical and financial support from the government. At the same time, the project will also strengthen the strategies and plans to cope with Climate Change Adaptation in Vietnam.

Social Sustainability

By implementing the project through the People’s Process methodology, whereby people take ownership for the design and construction of the infrastructure that they will ultimately be beneficiaries of, there will be greater social sustainability as people will take ownership of their adaptation infrastructure. In implementing the project, communities will gain greater awareness of climate change and adaptation, and vocational skills to build and maintain infrastructure.

Economic Sustainability

Adaptation is a highly important economic activity in the targeted areas. In most of the targeted settlements, people rely on tanker-supplied or bottled water, which is expensive. This project will enable people to access water in a sustainable manner at much lower cost. This frees-up household income for other purposes.

Environmental Sustainability

The project will make use of local materials, where possible. The project will be implemented in the Mekong Delta and as such, activities undertaken in this area will make special consideration of the delicate environment. The part of the project is also implemented in the coast; a sensitive environmental location. The rest of the project is also implemented in coastal areas; a sensitive environmental location. The project will also make provisions for the protection of the environment through its safeguarding procedures. As shown in Section K, below, the project will ensure the

protection of natural habitats, conservation of biological diversity, prevention of emissions that cause climate change, and prevent pollution and promote resource efficiency

K. Environmental and Social Risk and Impacts:

The proposed project seeks to fully align with the Adaptation Fund’s Environmental and Social Policy (ESP). Outlined below is a summary of the findings of the preliminary screening and assessment process that has been carried out to evaluate the environmental and social impacts and risks of the entire project. There is also a categorization of the project and a completed risks and impacts checklist.

UN-Habitat conducted a preliminary project screening of environmental and social risks according to the 15 principles outlined in the AF’s Environmental and Social Policy based on analyzing information available at the project design stage. The potential risks identified and preventive or mitigation measures planned are presented below (Table 24).

The project has been and will be further designed to generate positive economic, social and environmental impacts. It will achieve this by using inputs from local authorities and by incorporating best practices from other projects, while also placing specific priority on inputs from women and marginalized and vulnerable groups in target communities. The adaptation measures proposed in the full proposal will be selected together by the communities and local authorities, making sure they are culturally and locally appropriate

The community and vulnerable groups consultations that are planned to contribute to the design of the full proposal will aim at getting as much detail as possible to further identify / concretize the current unidentified sub-projects, including identifying possible environmental and social risks. However, to get a comprehensive understanding of all needs of the target population and risks related to specific groups and interventions, further screening of the 15 AF principles will be incorporated in-the in-depth climate change vulnerability and disaster risk assessments and planning processes as part of project implementation.

Table 24. Overview of the Environmental and Social Impacts and Risk Identified

Checklist of environmental and social principles	No further assessment required for compliance	Potential impacts and risks - further assessment and management required for compliance
<i>Compliance with the Law</i>		X
<i>Access and Equity</i>		X
<i>Marginalized and Vulnerable Groups</i>		X
<i>Human Rights</i>		X
<i>Gender Equity and Women’s Empowerment</i>		X
<i>Core Labor Rights</i>		X
<i>Indigenous Peoples</i>		X
<i>Involuntary Resettlement</i>		X
<i>Protection of Natural Habitats</i>		X
<i>Conservation of Biological Diversity</i>		X
<i>Climate Change</i>	X	
<i>Pollution Prevention and Resource Efficiency</i>		X

<i>Public Health</i>		X
<i>Physical and Cultural Heritage</i>	X	
<i>Lands and Soil Conservation</i>		X

As shown in Table 24 the project seeks full alignment with Adaptation Fund’s Environmental and Social Policy (ESP) and will also be screened according to UN-Habitat’s new Environmental and Social Safeguards policy. This section briefly describes the initial analysis of environmental and social impacts of the project based on the ESP.

Activities under Component 1, 2 and 4 have been categorized as low risk (Category C). De-spite this, steps will be taken to ensure that no environmental or social impacts can occur. This includes the use of quota systems for involving women and marginalized and vulnerable groups in the planning processes and ensuring transparency of the execution of all activities, such as posting attendance lists and outcomes of meetings and trainings.

The activities under Component 3 are currently being regarded as unidentified sub-projects, and as such, some activities have the potential, without an environmental and social safeguarding system, including mitigation measures, to create negative environmental and social impacts.

As such, the activities under component 3 are to fit into medium risk (Category B) or low risk (Category C). This is due to the scope of the proposed numerous interventions; they are characterised by their small scale and very localized nature, they will be proposed and co-managed by communities where possible, who have a stake in avoiding environmental and social impacts.

In Component 3, small-scale water salination system built to provide clean and safe water for both living and agriculture (Water), climate resilience infrastructure building and refurbishing (Infrastructure), climate resilience housing upgrade (Housing), enhancing ecosystem (Ecosystem), and small scale eco-friendly waste treatment and management facility built (Waste) will be considered for hard infrastructure intervention, and these aspects are currently being explored through community and stakeholder engagement, and for social and environmental risk impact, further safeguard analysis will be implemented with feasibility studies.

This means that the potential for direct impacts is small and localized, that there can be few indirect impacts, and that transboundary impacts are highly unlikely. Given this, cumulative impacts are also unlikely.

Because of the nature of activities under components 3 the entire project is regarded as a medium risk (Category B) project.

Table 25. Possible risks and mitigation measures

Adaptation Fund environmental and social principles	Possible Risks	Possible Mitigation Measures
<i>Compliance with the Law</i>	Possible conflicts over land ownership Failure to comply with laws relating to procurement procedures	Only citing infrastructure on public land. Engagement with Department of Natural Resources and Environmental for land use and Department of Construction for approval

		Integrating legal compliance into all training
<i>Access and Equity</i>	That certain groups are denied access to infrastructure, or that preferential access is given to others	Community management with rules ensuring that equal access is guaranteed
<i>Marginalized and Vulnerable Groups</i>	There would be small number of vulnerable groups to access to livelihood resources	Community management with rules ensuring that equal access is guaranteed
<i>Human Rights</i>	Human rights breaches can arise from denying access to water and other basic services, or from land conflicts, for example	at project proposal stage, and in line with UN-Habitat's Project Management Cycle and Work Flow policy, the project will further be screened for its adherence to three cross-cutting issues which are: gender, human rights and climate change. The Human Rights Officer of UN-Habitat will ensure that the project is designed to respect and adhere to the requirements of all relevant conventions on human rights.
<i>Gender Equity and Women's Empowerment</i>	Women could be denied access to infrastructure, or excluded from making critical decisions	The project design will ensure that gender considerations are included in all project interventions, with a specific focus on capacity building on the all levels as well as activities on the ground. During the development of the full project proposal, the Gender Officer of UN-Habitat will be consulted to ensure that the project follows best-practice guidelines.
<i>Core Labor Rights</i>	Labour rights may not be respected when contracting communities	All community contracts must be scrutinized to ensure they comply with both Vietnamese law and international standards. The activities under Component 3 will create employment enabling some marginalized and vulnerable groups including unemployed youth and women to access employment. The relevant national labour laws guided by the ILO labour standards will be followed throughout project implementation.
<i>Indigenous Peoples</i>	The certain minority group can be denied to access to infrastructures and excluded from the process of decision	Community management with rules ensuring that equal access is guaranteed and participating in the process of decision making

	making	
<i>Involuntary Resettlement</i>	Possible eviction arising from conflicts over land ownership	Tenure security is part of UN-Habitat's core mandate. In the event that resettlement is necessary to protect life in case of an urban area in high risk, the due process as laid out in national and international laws will be followed. UN-Habitat has a long experience in participatory planning in high risk area avoiding systematically involuntary resettlement
<i>Protection of Natural Habitats</i>	While damage to natural habitats and threats to biological diversity are unlikely, there is a possibility that construction work undertaken or reforestation measures may adversely impact on local biodiversity	Environmental Impact Assessment will be conducted and the damage will also be investigated at full project stage.
<i>Conservation of Biological Diversity</i>		
<i>Climate Change</i>	N/A	This project is inherently an adaptation project and as such no maladaptation is foreseen. The project will not provide or install infrastructure or appliances that result in increased emissions
<i>Pollution Prevention and Resource Efficiency</i>	Construction of infrastructure generates waste	Incorporating waste management and disposal into design.
<i>Public Health</i>	N/A	No public health issues are foreseen, and improving public health is a secondary impact area of this project.
<i>Physical and Cultural Heritage</i>	N/A	No physical or cultural heritage impacts are foreseen; however, this will have to be reviewed when the activities are being developed in more detail at full proposal stage.
<i>Lands and Soil Conservation</i>	The physical demarcation of areas at risk for limiting urban development will seek to protect risk areas and critical natural habitats from urban development	Soil conservation will be enhanced through afforestation components as protective measures for land erosion control.

A thorough environmental and social impact assessment will be undertaken during full proposal stage, before submission to the Adaptation Fund. This assessment will identify the environmental and social impacts and will also develop a safeguards system for the implementation plan, outlining roles and responsibilities, budgetary requirements (if needed) and the timeline required to implement safeguarding actions.

The environmental and social impact assessment will consider all activities proposed by the project, event those that, at this stage, are considered 'soft' activities and have been placed in risk

level Category B or C. At this stage, the activities listed in bullet points below have been clustered together, as similar types and levels of environmental and social impacts (and thus safeguarding measures) are foreseen. However, these will be revisited during the full proposal development stage, when activities are detailed out further and when further information will be provided about the nature and extent of the environmental and social impact assessment that will be undertaken.

PART III: IMPLEMENTATION ARRANGEMENTS

Note:

According to Adaptation Fund Project/Programme Review Criteria (Review-Criteria-5.12),

“For regular projects/programmes using the two-step approval process, only the first four criteria will be applied when reviewing the 1st step for regular project/programme concept”.

Review Criteria as follows:

- 1. Country Eligibility***
- 2. Project Eligibility***
- 3. Resource Availability***
- 4. Eligibility of NIE/MIE***
- 5. Implementation Arrangement***

The following section (Part III: Implementation Arrangement) will be completed at a later stage of the project formulation and approval process.

PART IV: ENDORSEMENT BY GOVERNMENT AND CERTIFICATION BY THE IMPLEMENTING ENTITY

A. Record of endorsement on behalf of the government⁵ *Provide the name and position of the government official and indicate date of endorsement. If this is a regional project/programme, list the endorsing officials all the participating countries. The endorsement letter(s) should be attached as an annex to the project/programme proposal. Please attach the endorsement letter(s) with this template; add as many participating governments if a regional project/programme:*

<i>H.E Dr. Tran Hong Ha, Minister, Ministry of Natural Resources and Environment</i>	<i>Date: 24 December 2018</i>
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⁶ Each Party shall designate and communicate to the secretariat the authority that will endorse on behalf of the national government the projects and programmes proposed by the implementing entities.



SOCIALIST REPUBLIC OF VIET NAM
MINISTRY OF NATURAL RESOURCES AND ENVIRONMENT

Hanoi, 18 December 2018

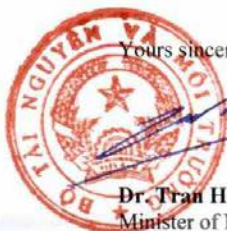
To: The Adaptation Fund Board
c/o Adaptation Fund Board Secretariat
Email: Secretariat@Adaptation-Fund.org
Fax: 202 522 3240/5

Subject: Endorsement for the Concept Proposal on “Enhancing the resilience, inclusive and sustainable eco-human settlement development through small scale infrastructure interventions in the coastal regions of the Mekong Delta”

In my capacity as designated authority for the Adaptation Fund in the Socialist Republic of Vietnam, I confirm that the above national concept project proposal is in accordance with the government’s priorities in implementing adaptation activities to reduce adverse impacts of, and risks, posed by climate change in the coastal region of the Mekong Delta, Socialist Republic of Vietnam.

Accordingly, I am pleased to endorse the above concept project proposal with support from the Adaptation Fund. If approved, the project will be implemented by United Nations Human Settlement Programme (UN-Habitat) and executed by Ministry of Natural Resources and Environment of Vietnam and national partners.

Yours sincerely,



Dr. Tran Hong Ha
Minister of Natural Resources and Environment
Socialist Republic of Vietnam

B. Implementing Entity certification

I certify that this proposal has been prepared in accordance with guidelines provided by the Adaptation Fund Board, and prevailing National Development and Adaptation Plans including Socio Economic Development Plan (2016-2020), National Climate Change Strategy, National Green Growth Strategy, National Action Plan on Climate Change for (2012-2020), and National Action Plan on Green Growth and subject to the approval by the Adaptation Fund Board, commit to implementing the project/programme in compliance with the Environmental and Social Policy of the Adaptation Fund and on the understanding that the Implementing Entity will be fully (legally and financially) responsible for the implementation of this project/programme.

For Rungtong
OIC.

Raf Tuts
Director, Programme Division
UN-Habitat

Date: January 3rd, 2019

Tel. and email:
+254-20-762-3726
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Appendices

LIST OF CONTENTS

Appendix1. Vulnerability and Risk Assessment Report

Appendix2. National level Consultation Meeting Report

Appendix3. Local level Consultation Meeting Report

Appendix4. Stakeholder Consultation Meeting Report



ADAPTATION FUND

Vulnerability and Risk Assessment Report

*Bac Lieu and Tra Vinh Province
In Mekong Delta, Vietnam*

Contents

Introduction.....	1
City Profile and Context.....	2
1. Project Site Location.....	2
2. Socio-economic and Environmental Context in Bac Lieu.....	3
3. Socio-economic and Environmental Context in Tra Vinh.....	4
Vulnerability and Risk Assessment.....	6
0. Assessment Framework.....	6
1. Climate Change Projections in Vietnam.....	6
2. Climate Change Projections in Mekong Delta.....	8
3. Vulnerability and Risk Assessment in Bac Lieu.....	9
4. Vulnerability and Risk Assessment in Tra Vinh.....	14
Findings, Recommendations, and Further steps.....	19
<i>Annex1. Questionnaire for the focus group interview.....</i>	<i>20</i>
<i>Annex2. Climate Vulnerability.....</i>	<i>21</i>
<i>Annex3. Detailed sociodemographic data of Tra Vinh.....</i>	<i>22</i>
<i>Annex4. Detailed sociodemographic data of Bac Lieu.....</i>	<i>24</i>
<i>Annex5. List of participants on the consultation workshop in Vinh Trach Dong district.....</i>	<i>25</i>
<i>Annex6. List of participants on the consultation workshop in Hoa Binh district.....</i>	<i>26</i>
<i>Annex7. List of participants on the consultation workshop in Chau Than district.....</i>	<i>28</i>

Introduction

Vietnam is one of the most hazard-prone countries in the East Asia and Pacific region, with droughts, severe storms, and flooding causing substantial economic and human losses. Over the past two decades, disasters in Vietnam have caused more than 13,000 deaths as well as property damage in excess of US\$6.4 billion. Climate change is projected to increase the impact of disasters, especially the timing, frequency, severity, and intensity of hydro-meteorological events.

The Mekong Delta is considered one of the world's three most vulnerable deltas (together with the Nile Delta in Egypt and the Ganges Delta in Bangladesh) to rising sea levels. In the Mekong Delta, river water and ground water levels are decreasing, while sea levels, flood tides and salt intrusion are on the rise, the demand for water has also increased in production and daily activities due to industrialisation, urbanisation and population growth. It produces 50% of Vietnam's overall food mainly rice, fruits, fish and shrimp, this sector accounts for 70% of the Mekong population's income and food security.

The vulnerability report will focus on 2 provinces in Mekong Delta Region in order to ensure that the project and related activities reduce the climate change vulnerability and disaster risks of targeted communities/ethnic groups. Understanding the needs and challenge of local people in the project site is the key for successful completion of the projects objectives.

Key Terminologies:

Exposure: nature and degree to which a system is exposed to significant climatic variations.

Sensitivity: responsiveness of a system to climatic influences (shaped by both socio-economic and environmental conditions).

Adaptive capacity: ability of communities to cope, reorganise and minimise losses from climate change impacts at different levels. The key determinant of adaptive capacity is access to resources and capital (natural, financial, social, human and physical).

Climate change: A change in climate that is attributed directly or indirectly to human activity, that alters the composition of the global atmosphere and is contrary to natural climate variability observed over comparable periods.

Vulnerability: Refers to the degree to which people, places, institutions and sectors are susceptible to, and unable to cope with, climate change impacts and hazards.

Sources:

IPCC, 2007. Climate Change 2007: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, Parry, M.L., Canziani, O.F., Palutikof, J.P., van der Linden, P.J., Hanson, C.E. (Eds.), Cambridge University Press: Cambridge, UK, 976 pp.

UN-Habitat planning for climate change guide, including vulnerability assessment methodology: <http://unhabitat.org/books/planning-for-climate-change-a-strategic-values-based-approach-for-urban-planners-cities-and-climate-change-initiative/>

City Profile and Context

0. Project Site Location

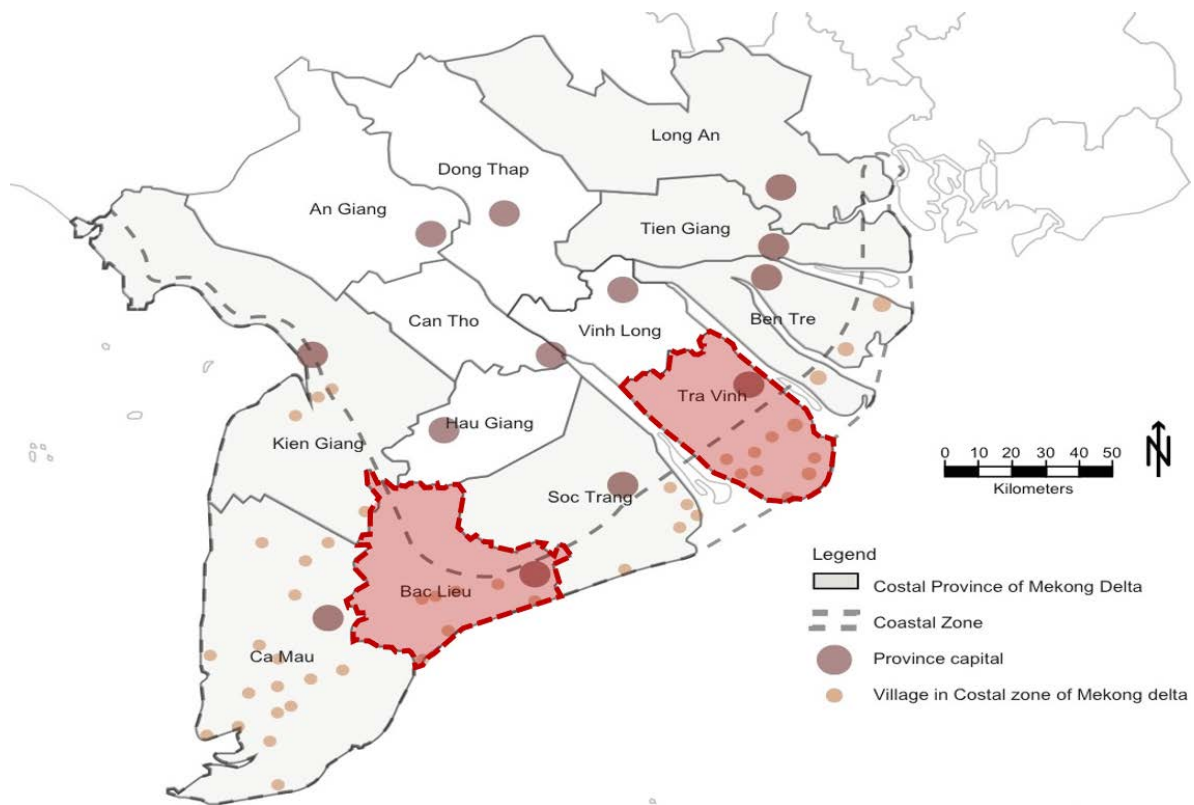


Figure 1. Project Site Location

Mekong Delta is southern part of the Vietnam with high risk from natural hazard and climate change impact. The Project site for the vulnerability and risk assessment report is Bac Lieu and Tra Vinh, located on the coastal line of Mekong Delta Region.

1. Socio-economic and Environmental Context in Bac Lieu

Bac Lieu province, located in the Mekong Delta, has an equatorial monsoon climate regime, with two distinct seasons: the rainy season, with average temperature of 25.2 - 29.1°C, and the dry season, with an average temperature of 24.3 and 29.7°C. The temperature amplitude between the months is not significant (1-2°C) but the temperature amplitude between day and night is quite large (dry season: 8-10°C, rainy season: 6-7°C), which is favorable for plant growth and development.

The rainy season starts from May to November, and the dry season lasts from December to April. The annual average rainfall is 1,801.5 mm, and average number of rainy days is about 110-120 days/year. The average air humidity is 82.6%, and around 76–80 % in the dry months.

Bac Lieu has numerous rivers, canals and ditches such as Bac Lieu river, Cau Xang Canal, that meets the water demand for agriculture, aquaculture and drainage in urban areas. Recently, the fairly complete maintenance of dikes and sluice gates prevents saltwater intrusion along Highway 1A and Bac Lieu river, and the saltwater – freshwater regulation is gradually being improved to serve agricultural and aquaculture practices.

Regarding the terrain characteristics, Bac Lieu is located in the region of the East Sea that is affected by a semi-irregular tide. Since the completion of the sluice gates that prevent saltwater and because the tidal acreage is shrunk, tidal levels are currently higher than previously observed in the region. This facilitates saltwater leaching into shrimp and salt production areas. To address this issue, it is necessary to dredge the irrigation and dike systems in order to regulate water resources so that can water be managed effectively to c serve both farming and aquaculture. While in the dry season the salinity in the rivers and shrimp ponds increases, during the rainy season the salinity decreases rapidly for both.

Natural resources in Bac Lieu are distributed as follows:

- Land is divided in 3 main groups: sandy soil (10.08 % of the natural area of the city), saline soil (62.25 %) and acid sulfate soil land (18.43 %).
- Water: salt water (comes from sea and is mixed with rainwater. It is not suitable for freshwater crops and livestock but is the valuable resource for aquaculture development), groundwater (4 hydrological formations), and surface water (in rainy season freshwater is dominant, but by the end of rainy season water is often acidic, where as in dry season water is affected by saltwater intrusion).

Bac Lieu is composed by 10 administrative units of wards (wards 1,2,3,5,7,8, and Nha Mat ward) and 3 communes (Hiep Thanh, Vinh Trach and Vinh Trach Dong). By the end of 2015 the population was 155,194 people, with a major percentage of Kinh people, followed by the Khmer and Chinese ethnic minorities. There is a relative equilibrium between female and male ratio. According to the People's Committee of Bac Lieu Province,

both genders have the right to give comments, make decisions and discuss problems.

Regarding health issues, the main diseases are related to environmental pollution (41.7 %), crowded housing (8.5 %), poor diet (11.2 %), flies and pests (30.0 %) and other causes (27.1 %), such as living habits, low community awareness on prevention, care and treatment.

Career opportunities are related directly to the educational background of the people. Most of the people (93.2%) had attended to school and university. However, there are still 6.7 % illiterate or uneducated, these are mostly concentrated in poor households in Nha Mat ward and ward 2. There is a clear gap between poor and rich households in the area. The income per capita of rich households (5,182,903VND/person/month) is 8.7 times higher than the income per capita of poor households (594,593VND/person/month). Poor household's main income source is typically from low-paid, instable and seasonal jobs, where as rich household's revenue generation comes mainly from salaries and business activities. The main form of employment in the region is labor force jobs (44.0%), but there are also people working in the service sector (15.4%), and in state-owned enterprises (13.0%). The rate of unemployment is approximately 7.5%.

According to the People's Committees of Bac Lieu province, the city reached an economic growth rate of 16.63% in 2015, which is quite a high rate in comparison with other cities in Vietnam. The economic structure of Bac Lieu city in the same year included 45.57% of services, 42.04% of industries and construction, and 12.39% of agriculture and fisheries. Industrial production and small handicraft of Bac Lieu city are being developed depending of the market's demand.

Agricultural production includes rice, fruits, vegetables, cattle and poultry. Aquaculture and fishery production increased gradually from 2012-2015. However, this sector faces problems such as asynchronous irrigation system, lack of investment funding for production and prolonged sunny and hot condition that have negative impacts in the shrimp farming due to the salinity.

The service sector continues to grow. Bac Lieu city has opened Bac Lieu shopping center and Hiep Thanh market in Hiep Thanh commune which maintain relatively stable prices for goods and good compliance of the sellers with regulations on price listing. Tourism has also increased resulting in higher demand for accommodation services.

2. Socio-economic and Environmental Context in Tra Vinh

Tra Vinh Province is located on the Mekong River Delta region, with Ben Tre, Vinh Long and Soc Trang provinces as borders. It also has 65km of seaside and is surrounded by Tien and Hau rivers. Tra Vinh has a total area of 2,341 square kilometres and a population of over one million people with 59% at working age and distributed through 7 districts: Cau Long, Cau Ke, Tieu Can, Chau Thanh, Tra Cu, Cau Ngang and Duyen Hai. Over 29% of the

population is ethnic Khmer. There are also a number of ethnic Chinese (5-6% of the population), and a small Cham population. The number of “poor” households earning less than 90,000d/person/month is 33,545, of which 11,525 households earn less than 60,000/person/month. There is a group of people who are considered the “static poor”, they are trapped in a type of poverty that will be difficult to reverse: many of them are landless and in debt to government lending programs and/or private moneylenders. As a result, they are not eligible for a new loan and they must repay interest.

The economy is predominantly based on agriculture, fish and shrimp breeding. Over 80% of the population are dependent on the agricultural sector. Đĩnh An is one of eight key marine economic areas nationwide, with favourable conditions to develop a sea-based economy, electricity, petrochemicals, shipbuilding, navigation services and tourism.

However, Tra Vinh faces challenges related to the low prices of items obtained from agriculture and aquaculture, such as shrimp, dried coconut, vegetables, and more. Although people have invested in the development of shrimp farming, particularly in the districts of Duyen Hai and Tra Cu, almost 100% of shrimp harvests failed completely. Most people survive through small-scale subsistence farming, handicrafts, and services, but recently have to find other income generating activities. However, demand for labor is limited even in the high season: on average a person can expect to work only 10-15 days in a month, for between 10,000 and 30,000 VND per day. The official unemployment rate is around 10%. In addition, disbursement of capital for infrastructure development is slow and the progress of many licensed investment projects have been delayed.

Tra Vinh province is a tropical monsoon region. Dry season is from December to April and the rainy season is between May and November. The annual average temperature is 26C. In this area, ground-water is pumped to irrigate farms with upland crops due to the rapid exhaustion of freshwater in ponds. A proof of how severe is the drought is the wilting of bamboo plants. Irrigation was previously done at midday without measuring the amount of water used, hence a large portion of the water evaporated before entering the soil.

The soil in the province, however, is becoming increasingly poor in terms of water-holding capacity and nutrients, and is severely affected by acidity and salinity intrusion. Recently, the salinity level of the canal system was reported to be as high as 25%, while the optimum salinity level for shrimp is between 12-15%. Indeed, the production and growth of shrimp has been heavily reduced, with dead shrimp accounting for 25-30% of the total production. To monitor this situation, the farmers measure the pH and base levels every day and district extension workers also monitor salinity levels from 11 salinity monitoring stations.

Vulnerability and Risk Assessment

0. Assessment Framework

In order to select the target communes for the project, vulnerability and risk assessment against climate change impact, problem analysis, should be analysed in advance. Figure5 shows the matrix to assess the vulnerability to climate change.

As shown in Figure5, Vulnerability could be measured by subtracting the ‘adaptive capacity’ from the sum of ‘exposure’ and ‘sensitivity’. Since exposure and sensitivity cannot be enhanced by human intervention, increasing ‘adaptive capacity’ is key to achieving sustainable development. Several sectorial approach could be defined in climate change risk;

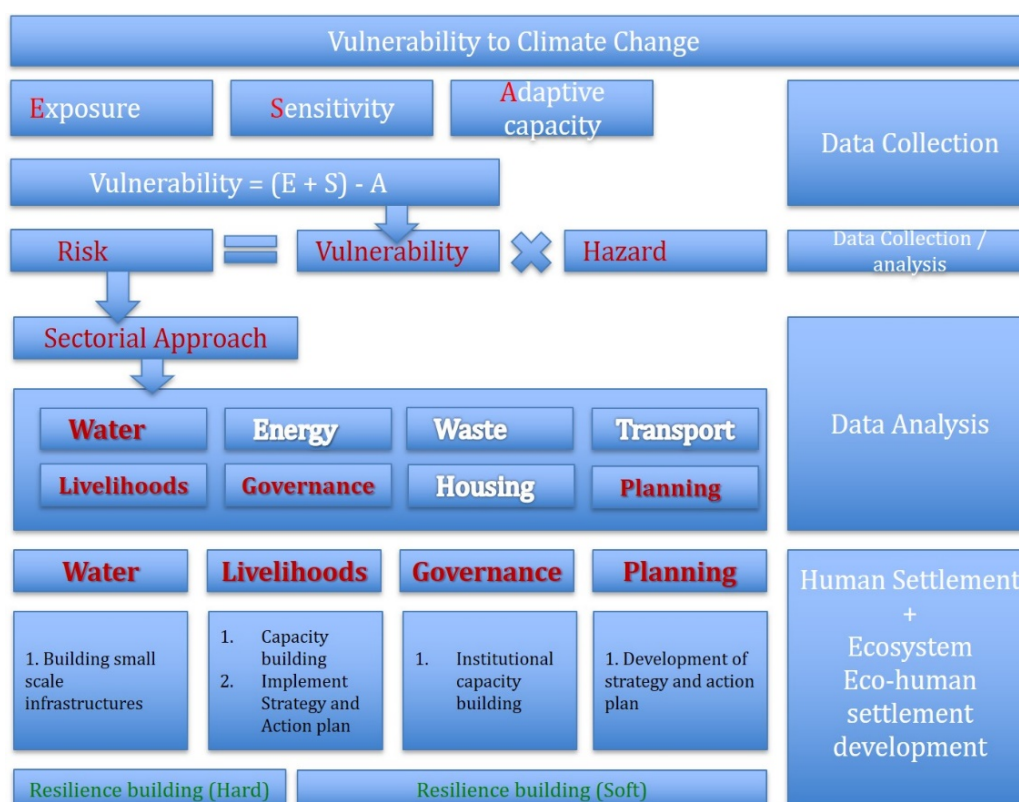


Figure 1. Problem Analysis Framework

1. Climate Change Projections in Vietnam

The results suggest that areas of the Northern Mountains and the Mekong Delta contain districts with high flood risk and high poverty levels (darkest shade of brown in Map 12). The results are slightly different when comparing relative and absolute numbers. When using absolute figures (the number of poor and number exposed to flooding) more areas of high flood and poverty are visible in the Mekong and Red River Delta, as well as along the eastern coasts.

However, even though not all of the poorest districts face a higher exposure risk to flooding, it is important to remember that poor households and poor individuals within high exposure areas generally have a higher vulnerability to the impact of flooding. Further, it is very likely that within a district or city, the poorest are the most exposed to flood risk.

According to IPCC (2013), climate change projections for Vietnam include:

- ❑ Annual mean temperatures will continue to rise by 0.1-0.3°C per decade, and the number of days with temperatures above 33°C will increase;
- ❑ The number of cooler days with temperatures below 15°C will drop by two to three per year;
- ❑ The dry season will get longer;
- ❑ There will be more intense rainfall events, and more frequent and severe droughts and floods; and,
- ❑ Maximum monthly flows in the Mekong Basin will increase by 35-41%, while minimum monthly flows will drop by 17-24% by 2100, further exacerbating flood and drought risks.

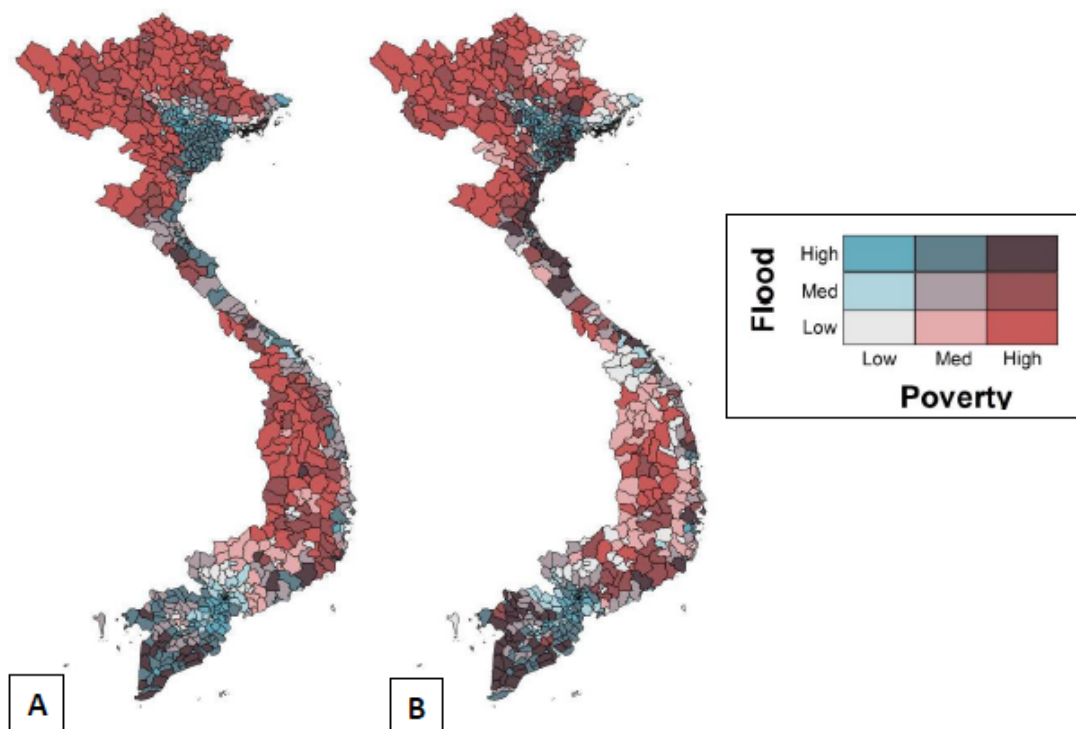


Figure 2. Overlay of poverty and flood at the district level for the 25 year-return period floods with climate change. Map A shows relative exposure, overlaying the % of poor and % of population flooded, Map B shows the absolute exposure, overlaying the # of poor and # of population flooded.

2. Climate Projections in Mekong Delta

Climate change projections for Vietnam from an IPCC report (2013) show that the southernmost provinces, especially the Mekong Delta Region in particular, will experience more droughts in the dry season and a slight increase in rain during the wet season due to climate change related increases in temperature. On the other hand, rainfall from the central or northern provinces will lead to increased flood risks in the southern provinces.

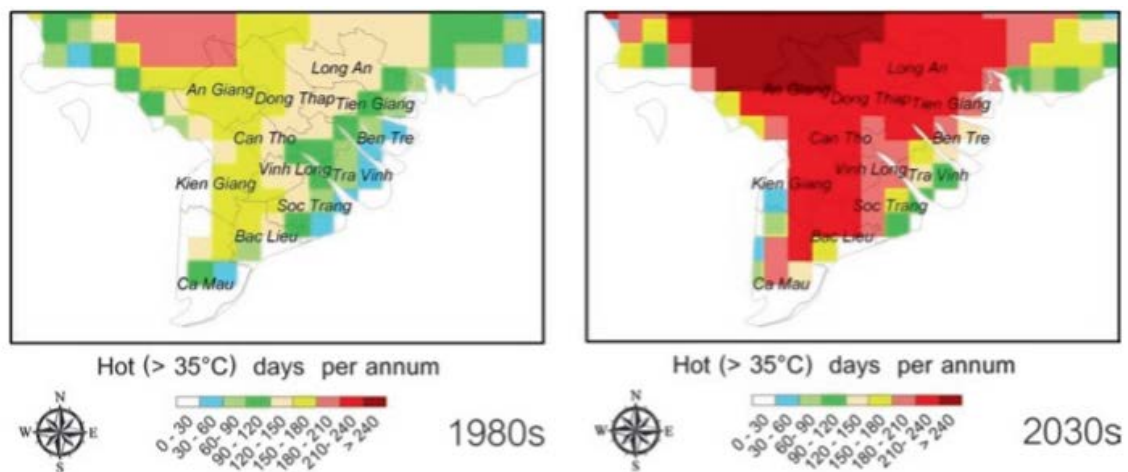


Figure 3. Hot period (number of hot days in a year) in the Mekong River Delta in the 1980s and 2030s (simulated)

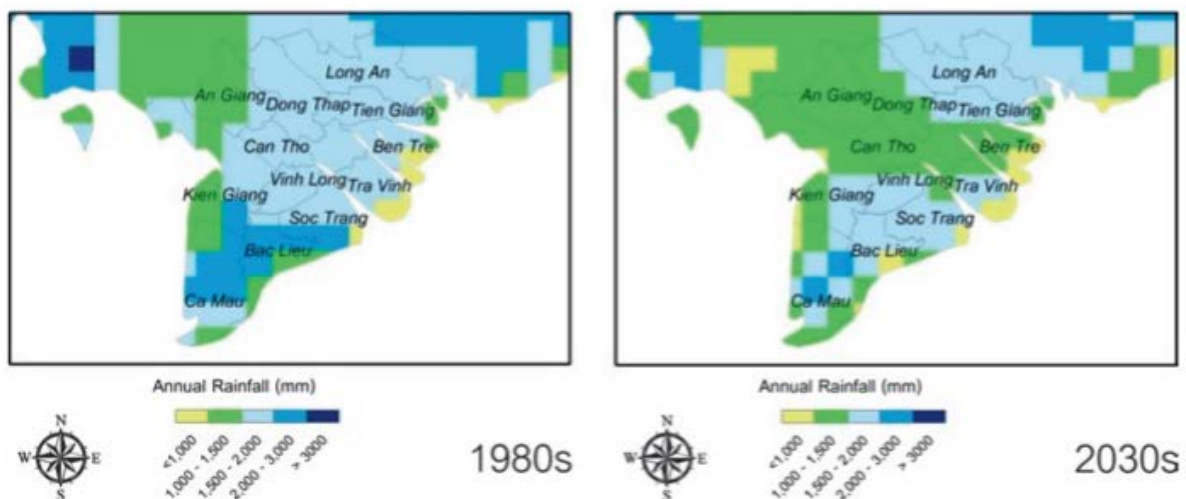


Figure 4. Annual precipitation in the Mekong River Delta in the 1980s and 2030s (simulated)

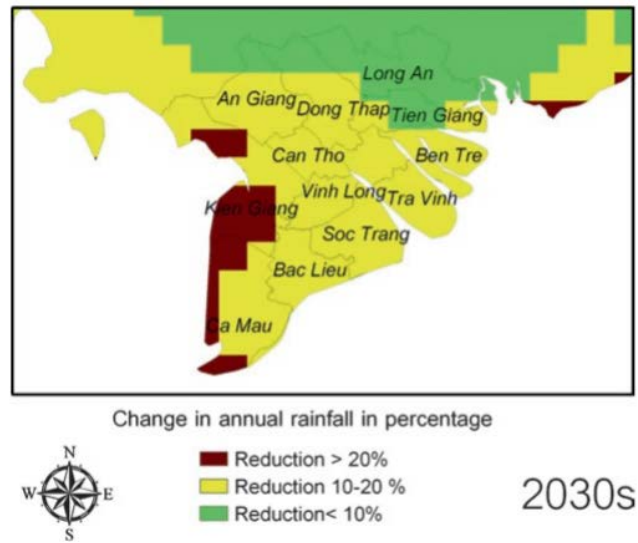


Figure 5. Comparison of change in annual precipitation in the Mekong River Delta between the 1980 and 2030 (simulated)

3. Vulnerability and Risk Assessment in Bac Lieu

Bac Lieu is one of the most vulnerable provinces in Mekong Delta Region to climate change impact. The vulnerability and risk assessment conducted in Bac Lieu has focused on Vinh Trach Dong and Vinh Hau districts. The following information has been compiled through a combination of desk research and consultation workshops in the local area.

0) Project location and basic information

Huu Nghi, Vinh Trach Dong District

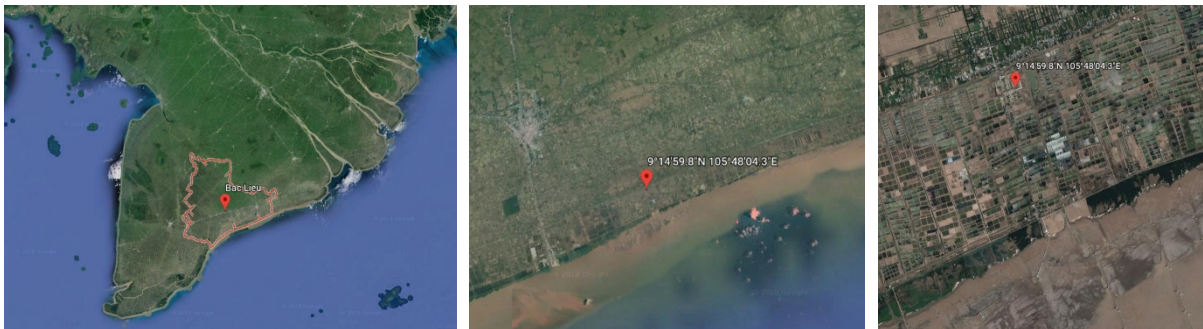


Figure 6. Location of Huu Nghi commune in Bac Lieu

Direct Beneficiary (number of household): 4-500people (80-100 households)

Minority group: Majority of population is Khmer (Ethnic minority)

Infrastructure level: low, detailed in the contents

Livelihood Resources: fishing, haunting, aquaculture (failed)

Income level: low

Education level: elementary school or secondary school

Feature: Huu Nghi commune is newly built commune in 2013 for migrants from the coastal region due to climate change impact. The government has provided social housing for the migrants but the infrastructure and condition of the housing is still low.

Vinh Hau District

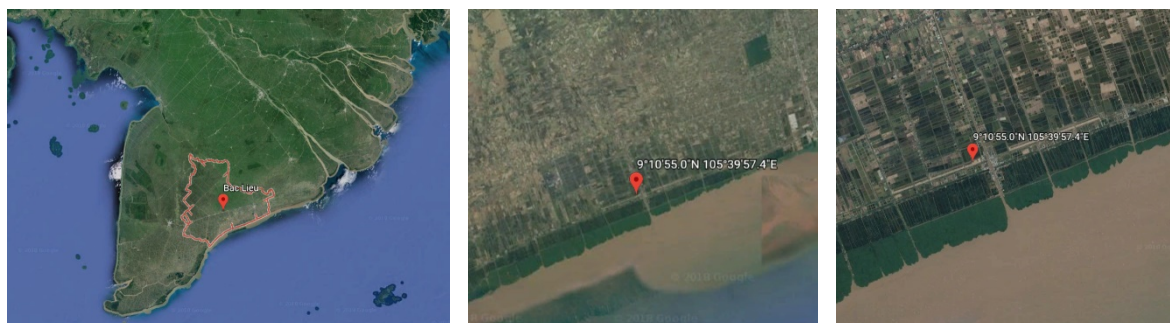


Figure 7. Location of Vinh Hau District in Bac Lieu

Potential Direct Beneficiary: around 400 people (will be settled in early 2019)

Infrastructure level: none

Feature: Former residential area has been affected by climate change impact, especially sea level rise, around 400 people are planned to move to Commune 14 in early 2019. The government will provide social housing just like in Huu Nghi commune above.

Expected Challenges: may face similar challenges that Huu Nghi has faced since 2013, including insufficient planning for commune, lack of livelihood resources, water security, and waste management systems.

1) Exposure to Natural Hazard and Climate Change Scenario in Bac Lieu:

In Bac Lieu, the most affected natural hazards are river flood, urban flood, coastal flood, cyclone, wild fire. Extreme heat is classified as medium level hazard while earthquake, Tsunami and water scarcity are defined as low level hazards. Each district shows slightly different level of exposure for each natural hazard as follows:

Table 1. Exposure to Natural Hazard in Bac Lieu

River Flood	Urban Flood	Coastal Flood	Earthquake	Tsunami
Volcano	Cyclone	Water Scarcity	Extreme Heat	Wild Fire

Climate change projections in Bac Lieu are stated in the table 2 with the change in average annual temperature and the change in annual rainfall along with the spring and winter conditions. As shown in the table, even the RCP 4.5 scenario, change in average annual temperature in Bac Lieu reaches almost 2 degree in 60 years which is over 1.5 degree, IPCC set up for the limit for the global warming goal recently. Change in rainfall is more severe in spring, dry season, which leads to the situation that could increase the shortage of fresh water in the province.

Table 2. Climate Change Projections in Bac Lieu

Province	Climate Change	RCP 4.5 scenario			RCP 8.5 scenario		
		2016-2035	2046-2065	2080-2099	2016-2035	2046-2065	2080-2099
Bac Lieu	Change in average annual Temperature	0.7	1.4	1.8	0.8	1.8	3.3
	Change in annual rainfall (%)	9.6	11.0	13.6	11.8	16.5	18.0
	Change in spring rainfall (%)	8.4	-5.8	9.9	-0.5	-0.1	2.0
	Change in winter rainfall (%)	2.2	3.8	7.8	5.7	9.6	12.7

2) Huu Nghi, Vinh Trach Dong district

① Exposure

According to the comments, the most severe exposure to a natural hazard in Vinh Trach Dong is salinity intrusion at 27.78%. Flood, drought, and storm follow after salinity intrusion, this also relates to the water issue. Due to the geographic characteristics of the province, local people and their livelihood resource are highly exposure to the impact of climate change.

② Sensitivity

Sensitivity in this report was composed of the damage to human life and economic losses including the reduced productivity from agriculture and aquaculture. Since the main livelihood resources in Vinh Trach Dong district are agriculture and aquaculture, the local people have been suffering from economic losses due to salinity intrusion and drought. Some answered that there has also been damage to human life due to climate change impact.

③ Adaptive Capacity

For the adaptive capacity, the report only focused on the awareness of people on climate change impact and climate change adaptation. The majority of the participants on the consultation workshop in Vinh Trach Dong district were not aware of both climate change impact and climate change adaptation. Very few answered that he/she was aware of the terminology of climate change impact and climate change adaptation.

④ *Improvement Needs*

For the improvement needs in Vinh Trach Dong district, the provision of fresh water with a water management system is in high demand. As was already mentioned in *Exposure*, the major exposure and biggest challenge in this province is salinity intrusion. Along with the exposure, the needs from the local people are primarily related to water issues.

⑤ *Estimated Beneficiary from the improvements*

Based on the assessment of improvement needs from the local people, the number of beneficiaries for each hard intervention has been estimated. Around 235 people will get benefit from the water management system by supporting clean water in town. Along with the water system, eco-friendly infrastructure will improve the quality of life of 221 from the total population with 44% of people in town. Lastly, from the improvement of waste management system 29 people will get benefit from the project.

⑥ *Focus group Interview*

A focus group interview was conducted with the women's union in Huu Nghi. During the interview, the questionnaire divided into three parts to find out the exposure, sensitivity, adaptive capacity, and improvement needs in more details. To summarise the major findings from the interview, women in Vin Trach Dong do not consider climate change to impact them more as women than it would other genders. The key findings from the focus group interview could be summarized as follows:

- The impact of climate change leads to a decrease in the average income in the district;
- In the dry season, the impact to the productivity of shrimp and rice cultivation is more intense than at other times;
- Children cannot go to school as they need to support their family with livelihood resources;
- A number of women have to travel far from their house; and
- Most people do not want to move to the new settlement area without proper basic infrastructure;



Figure 8. focus group interview

3) Vinh Hau district

① *Exposure*

From the comments of the consultation workshop, 27.27% of the participants consider the largest threat from natural hazards in Vinh Hau district to be flooding and sea level rise. Storms were next considered the next biggest threat following on from these two issues. Generally, most people have suffered from issues related to water security which has also led to economic losses.

② *Sensitivity*

For sensitivity in this report the report focused on the damage to human life and economic losses. Based on the comments from the province, the local people have suffered more from economic losses rather than damage to human life. It could be stated that the main livelihood resource from the district could easily be affected by the impact of climate change.

③ *Adaptive Capacity*

For the adaptive capacity, the report only focused on the awareness of people on climate change impact and climate change adaptation. The local people in Vinh Hau are more familiar with the term of climate change adaptation rather than climate change impact. The general awareness of climate change in the province is around 10%.

④ *Improvement Needs*

Based on the comments from the consultation workshop, the most urgent improvement in Vinh Hau was defined as eco-friendly environment protection with 30.16%. Since the location of Vinh Hau province is between both Mekong Delta river and the sea, the damage and effect from sea level rise and flood is intense.

⑤ *Estimated Beneficiary from the improvements*

Based on the assessment of improvement needs from the local people, the number of beneficiaries for each hard intervention has been calculated. Approximately 121 people will get benefit from the water management system by constructing water supply infrastructure in town. Along with the water system, eco-friendly infrastructure including sea dyke will improve the quality of life of 230 from the total population covering 58% of people in town. Lastly, from the improvement of waste management system 61 people will get benefit.

⑥ *Focus group Interview*

In order to delve deeper into needs assessment and gather more information from the more vulnerable groups present, a focus group interview was conducted with only the

women's union in the province. The women in the district have felt that they are not treated well because the men in the household do not take care of their family. Thus, most of the women in the district are in charge of taking care of everything including the expense. Rather than the gender issues in the district, the key findings from the focus group interview are as follows:

- The impact of climate change leads to decrease of the average income in the district, it also creates fluctuations in the productivity of agriculture and aquaculture;
- Most of the children in the district are not educated due to the fluctuation in their household income;
- From the view of the local people, the geographical location is also seen as part of the threat from climate change impact as it is more prone to sea level rise and flood;
- Ethnic minorities account for 60% of population and they have lost land from climate change impact and have had difficulty finding another livelihood resource;



Figure 9. focus group interview

4) Vulnerability and Risk Summary in Bac Lieu

To summarize the vulnerability in Bac Lieu, from the comments of the local people the most severe challenge from exposure to natural hazards in the province is considered to be sea level rise and salinity intrusion. As the team went to the local area for the field trip to the project site, it was observed that the basic infrastructure including bridges and roads are not sufficiently provided throughout the province.

4. Vulnerability and Risk Assessment in Tra Vinh

Tra Vinh is one of the most vulnerable provinces in Mekong Delta Region against climate change impact. The vulnerability and risk assessment in Tra Vinh focused on the two communes in Chau Thanh district. The following information has been complied through desk research and consultation workshops in the local area.

0) Project location and basic information

Long Hoa, Chau Thanh District



Figure 10. Location of Long Hoa

Direct Beneficiary (number of household): 10,280 people (2,547 households)

Infrastructure level: low, detailed in the contents

Livelihood Resources: Agriculture-aquaculture 81.26%

Income level: 37.5 million VND/year per capita

Poverty rate: 12.21%

Households lacking access to clean water: 2,182 (85.67%)

Feature: 136 households in Con Phung village need resettlements; 2 houses destroyed and 5 houses have lost their roofs because of tornadoes; sea level rise, combined with tide has destroyed 69 shrimp ponds, and 650m of dyke is in risk of land erosion;

Hoa Minh, Chau Thanh District



Figure 11. Location of Hoa Minh

Direct Beneficiary (number of household): 14,919 people (3,309 households)

Infrastructure level: low, detailed in the contents

Livelihood Resources: Agriculture - aquaculture (82%)

Income level: 41.8 million VND/year per capita

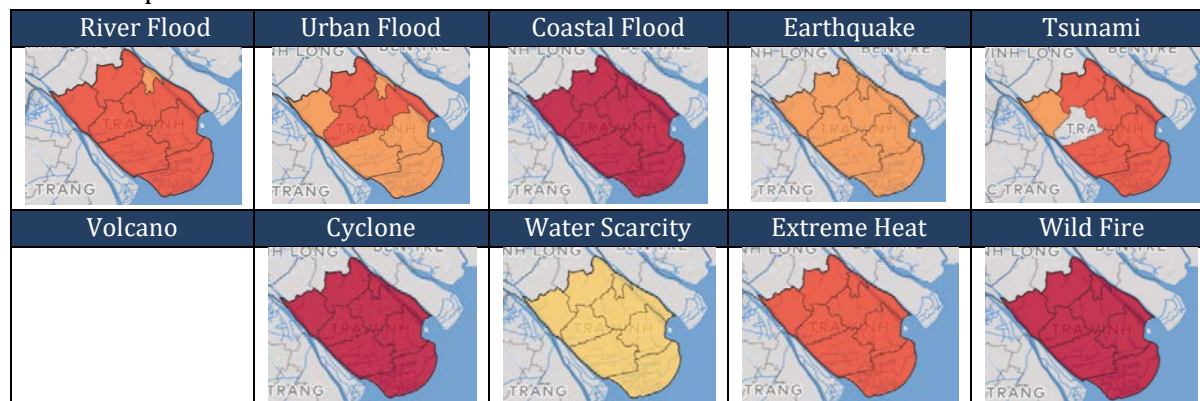
Feature: High tide (sea level rise); combined with rain and storms will affect 100% of households in Hoa Minh commune; particularly through property loss and damage; the first areas to be affected will be Con Chim village, Ta and Huu dyke;

1) Exposure to Natural Hazards and Climate Change Projections in Tra Vinh

In Tra Vinh, the most affected natural hazards are coastal flood, cyclone, wild fire. River

Flood, Urban Flood, Tsunami and extreme heat are classified as medium level hazard while earthquake and water scarcity are defined as low level hazard. Each district shows slightly different level of exposure for each natural hazard as follows:

Table 5. Exposure to Natural Hazard in Tra Vinh



In Tra Vinh, the climate change projection for the temperature and the change in annual rain fall is stated in the table 6. Annual change in average temperature is over 1.5 degree with RCP 4.5 scenario which can be the threat to the province with global warming effect. The annual change in rainfall in Tra Vinh is almost 20% over 60 years. With RCP 4.5 scenario, Tra Vinh is likely to suffer from lack of fresh water for drinking, living, and even for agriculture.

Table 6. Climate Change Projections in Tra Vinh

Province	Climate Change	RCP 4.5 scenario			RCP 8.5 scenario		
		2016-2035	2046-2065	2080-2099	2016-2035	2046-2065	2080-2099
Tra Vinh	Change in average annual Temperature	0.7	1.4	1.8	0.8	1.9	3.4
	Change in annual rainfall (%)	10.9	15.7	17.7	11.4	14.6	18.2
	Change in spring rainfall (%)	10.9	0.9	7.9	4.9	1.6	2.0
	Change in winter rainfall (%)	4.2	3.6	5.2	6.8	8.5	11.2

2) Long Hoa, Chau Thanh District

① Exposure

Due to the geographical characteristics of Long Hoa, the most severe natural hazard in the commune are sea level rise, as was recognized in 31.58% of the comments. Land erosion due to sea level rise was also found to be a serious issue during the field mission. Mangrove forest has also been completely depleted in some coastal areas.

② Sensitivity

For the sensitivity assessment, the report had focused on damage to human life and economic loss. Similar to the other districts, the local people in Chau Thanh district also have suffered from economic losses as opposed to damage to human life.

③ Adaptive Capacity

For the adaptive capacity, the report only focused on the awareness of people on climate change impact and climate change adaptation. Awareness checking from the district has been conducted with the two communes simultaneously in the consultation workshop. Compared to the awareness on climate change in Bac Lieu, people in Tra Vinh, Chau Thanh district have deeper understanding of climate change in terms of climate change impact and climate change adaptation.

④ Improvement Needs

The needs for the improvement on the Long Hoa commune are mainly water management and eco-friendly environmental protection as was mentioned in 29.55% of the total comments. As stated above given the unique location of the Chan Thanh district, people are eager to enhance their security from the threat of sea level rise.

⑤ Estimated Beneficiary from the improvements

Based on the assessment of improvement needs from the local people, the number of beneficiaries for each hard intervention has been calculated. Around 4,176 people could get benefit from the water management system by constructing water supply infrastructure in town. Eco-friendly infrastructure will also benefit 4,176 people from providing sustainable sea dyke covering 41% of total population in Commune. Lastly, from the improvement of waste management system 964 people will get benefit.

⑥ Focus group interview

For the adaptive capacity, the report only focused on the awareness of people on climate change impact and climate change adaptation. The woman's union pointed out that in an emergency situation such as, a heavy storm or the cyclone, the women and children should be provided with their own shelters and additional supplies. The key findings from the focus group interview could be summarized as follows:

- One of the major issues that came out of the interview was on water management system;
- Support on children for their education is urgent; and
- Training for the awareness on climate change to the local people needed;

3) Hoa Minh, Chau Thanh District

① Exposure

The most severe exposure to natural hazard in Chau Thanh district from the comments is sea level rise. It was mentioned in 42.11% of the total comments from the consultation workshop. Sea level rise, the heavy storm followed after as the next biggest concerns.

② Sensitivity

For the sensitivity assessment, the report had focused on damage to human life and the economic loss. Similar to the other districts, the local people in Chau Thanh district have also suffered more from economic losses than they have to damage to human life.

③ Adaptive Capacity

For the adaptive capacity, the report only focused on the awareness of people on climate change impact and climate change adaptation. Awareness checking from the district has been conducted with the two communes simultaneously in the consultation workshop. Compared to the awareness on climate change in Bac Lieu, people in Tra Vinh, Chau Thanh district have deeper understanding of climate change in terms of climate change impact and climate change adaptation.

④ Improvement Needs

Eco-friendly environmental protection including sea dyke ranked 1st from the 6 other options including water management, waste management, housing, basic infrastructure, and awareness training. Due to the lack of proper environmental protection along the waterway and seaside, people are desperate for improvements on coastal and riverbank defense.

⑤ Estimated Beneficiary from the improvements

Based on the assessment of improvement needs from the local people, the number of beneficiaries for each hard intervention has been estimated. Around 4,662 people could get benefit from the water management system by constructing water supply infrastructure in town. Eco-friendly infrastructure will benefit the most in down with 5,128 people from providing sustainable sea dyke covering 34% of total population in Commune. Lastly, from the improvement of waste management system 1,865 people will get benefit.

4) Vulnerability and Risk Summary in Tra Vinh

In Tra Vinh, based on the comments from the local people, the priority issue against the impact of climate change is sea level rise, since both commune in Chau Thanh district are located on islands. Along with the information from the local consultation workshop, the vulnerability and risk assessment team conducted the field visit to each commune to check the overall condition in Chau Than district. As stated from the local people, the basic

infrastructure in terms of fresh water provision in Chau Thanh district appeared to be insufficient for the whole population of the commune.

As part of the needs assessment for improvements within the commune, providing the water management system and eco-friendly environmental protection was in high demand due to the geographical characteristics of the district.

Findings, Recommendation, and Further steps

Given its socio-economic and environmental conditions, Vietnam can be classified as highly vulnerable to climate change impacts. The country's vulnerability to climate change is attributed to observed trends in increasing mean annual and maximum temperature, increase in mean rainfall, occurrence of extreme weather events including heavy storms and observations on sea level rise. Mekong delta region is one of the most vulnerable regions in Vietnam especially from the impact of climate change. We focused on two provinces in Mekong Delta which is Bac Lieu and Tra Vinh.

According to the local consultation workshop and the field visit to the project site, the most severe exposure in both Bac Lieu and Tra Vinh appears to be sea level rise which results in a lack of fresh water for living, drinking, and cultivating. Among the 6 hard interventions that the project proposal suggested in this context, the most urgent facilities required in each province is be water management systems. To give ownership to the province and raise awareness on climate change impact and adaptation, knowledge management, in both national and local level should be provided alongside the hard intervention.

There is a big opportunity to enhance the climate change adaptive capacity of the project sites in Bac Lieu and Tra Vinh through following components in the project proposal.

With regard to the proposed project to AF, the steps will be conducted as follows:

- *Component 1: Institutional and community capacity building toward eco-human settlement development for supporting enhancement of local climate response actions*
- *Component 2: Integrated planning with respects of eco system-based climate change adaptation and building climate resilient capacity and action plan at local level*
- *Component3: Sustainability built through small-scale protective and basic service infrastructure*
- *Component4: Awareness Raising and Knowledge Management*

Annex1. Questionnaire for the focus-group interview

I. Engagement Questions:

- What do you think about the topic that has brought us here today (Climate Change)?
- Asking their brief feedback about the consultation workshop, if there is anything unclear or any concerns

II. Exploration Questions:

Poverty

- What is the average income in your household? Is it sustainable or there is fluctuation by season?
 - If there is a fluctuation, what is the main reason? Do you think it is related to climate change impact?
- Have you experienced income loss from climate change impact?
 - If yes, was there any support from government or other agency?
 - If support provided, was it enough or was/is there anything more that you needed?

Challenges

- When flood or drought happens, what problems do you see as a woman (youth)?
- Where do you go for help when you need it as a woman (youth)?
 - If there is a facility, what do you feel about the program/facilities?
 - If there is no facility, what do you suggest?

Livelihoods

- What are the main livelihood resources?
- Is there any situation where you have to change your resources due to climate change impact?
 - If yes, does it also affect the income?

Ecosystem

- Do you know ways in which the ecosystem can help you prevent the impacts of climate change?
 - If yes, is there any improvement needed?
 - If no, please give the suggestion to prevent the impact of climate change

1. Resettlement and Migration

- Do you think you need resettlement or migration? / or your migration or resettlement was necessary?
 - If yes or no, why?
- What challenges do you see when you move to the new place, especially as a woman (youth)?

III. Closing Questions:

- In this community, what are the best ways to inform people about the topic today (Climate Change)?
- Asking if there is anything they need, but was not presented during the workshop

Annex2. Climate Vulnerability

Issue		Vinh Trach Dong		Vinh Hau		Chau Thanh			
						Long Hoa		Hoa Minh	
Exposure	Flood	7	19.44%	15	27.27%	2	5.26%	1	5.26%
	Sea level rise	4	11.11%	15	27.27%	12	31.58%	8	42.11%
	Land erosion	1	2.78%	6	10.91%	9	23.68%	1	5.26%
	Salinity Intrusion	10	27.78%	5	9.09%	9	23.68%	2	10.53%
	Drought	7	19.44%	6	10.91%	2	5.26%	1	5.26%
	Storm	7	19.44%	8	14.55%	4	10.53%	6	31.58%
Total Comments		36		55		38		19	
Sensitivity	Damage of human life	6	31.58%	6	40.00%	0	0.00%	1	33.33%
	Economic loss (mainly livelihood)	13	68.42%	9	60.00%	3	100.00%	2	66.67%
Total Comments		19		15		3		3	
Adaptation Capacity	Awareness of Climate Change Impact	1	2.94%	5	15.15%	5	15.63%	5	15.63%
	Awareness of Climate Change Adaptation	0	0.00%	3	9.09%	7	21.88%	7	21.88%
Total participants		34		33		32			
Improvement Needs	Water Management	16	29.63%	10	15.87%	13	29.55%	10	29.41%
	Waste Management	2	3.70%	5	7.94%	3	6.82%	4	11.76%
	Housing	4	7.41%	11	17.46%	6	13.64%	4	11.76%
	Basic Infrastructure	9	16.67%	12	19.05%	6	13.64%	4	11.76%
	Eco-Friendly Environmental Protection	15	27.78%	19	30.16%	13	29.55%	11	32.35%
	Awareness Training	8	14.81%	6	9.52%	3	6.82%	1	2.94%
Total participants		54		63		44		34	

Annex3. Detailed sociodemographic data of Tra Vinh

NO.	District	Chau Than					
	Commune	Long Hoa			Hoa Minh		
		Population	Household	Feature	Population	Household	Feature
1	Total population	10,280			14,191		
2	Number of households		2,547			3,309	
3	Female rate	5,097		49.58%	6,385		44.99%
4	Under 17-year-old population	2,986		29.05%	3,027		21.33%
5	Working group population	6,417		62.42%	8,310		58.56%
	Male				4,586		18-60
	Female rate				3,724		18-55
6	Disabled, invalid and lost ability to work population	314		3.05%	256		1.80%
	Disabled	150			149		
	Invalid	52			36		
	Lost ability to work	112			71		
7	Indigenous population	-				55	
8	immigrant population				142		
9	Ethnic minority population	49	15	Khmer	56	16	sKhmer
10	Population, number of households in need for resettlement		136	in Con Phung village	1,544	386	
					419	103	Huu dyke
					924	231	Ta dyke
					201	52	Con Chim village
11	Population, number of households lacking access to clean water		2182	85.67%		1,166	35.24%
12	Rate of poor and near-poor households		311	12.21%		191	5.77%
	Poor		144	5.65%		72	2.18%
	near-poor		167	6.56%		119	3.60%

13	Income per capita			37.5 million VND/ year			41.8 million VND/ year
14	Main income source			Agriculture-Aquaculture (81.26%)			Agriculture-Aquaculture (82%)
15	Sectorial structure and household rate by sector						
	Agriculture		625	24.54%			
	Aquaculture		1,531	60.11%			
	Industry		67	2.63%			
	Construction		62	2.43%			
	Trade		96	3.77%			
	Transportation		28	1.11%			
	Other Sectors		138	5.42%			
16	Loss and damage caused by natural disaster and climate change			* 2 houses destroyed and 5 housed lost the roof because of tornadoes * water level rise, combined with tide destroyed the shore of 69 shrimp ponds, and 650m of dyke is in risk of land erosion			High tide (sea level rise), combined with rain and storm will affect 100% of households in Hoa Minh commune, particularly human - property loss and damage; the first areas to be affected will be Con Chim village, Ta and Huu dyke

Annex4. Detailed sociodemographic data of Bac Lieu

NO.	District	Vinh Hau District		
		population	household	feature
1	Total Population	12,106		
2	# of household		2,835	
3	Number of Female	6,040		49.89%
4	# of age 0-17	2,808		23.20%
5	# of age 18-60	8,198		67.72%
6	# of age > 60	1,100		9.09%
7	# of local people	11,653		96.26%
8	# of disabled population	109		0.90%
9	# of immigrants	453		3.74%
10	# of people living in informal settlements	-		
11	# of people suffering from shortage of water	-		
12	# of minority (ethnic) group	3,818		31.54%
	Khmer	3,814	960	31.51%
	Hoa	1	1	0.01%
	Cao Lang	1	4	0.01%
	Tay	1	4	0.01%
	Thai	1	1	0.01%
13	Poverty Rate (%)		546	19.26%
	Poor		387	13.65%
	near-poor		159	5.61%
14	Livelihood resource			Fishery, Agriculture, Aquaculture, and small-scale trading

Annex5. List of Participants on the consultation workshop in Vinh Trach Dong district

DANH SÁCH ĐẠI BIỂU NHẬN TÀI LIỆU VÀ HỖ TRỢ THAM DỰ TỌA ĐÀM THAM VẤN CÁC BÊN LIÊN QUAN							
Tên tổ chức	Số lượng	Ông/Bà	Họ và tên	Chức danh	Tài liệu/Email	Hỗ trợ tham dự tham vấn	Ký nhận
UN-HABITAT							
	1	Ông	Jay Nam Jonghyo	Chuyên gia Phát triển Đô thị			
	1	Bà	Hyemi Yang				
	1	Bà	Nguyễn Phương Ngân				
	1	Ông	Adam Keegen				
Các đơn vị							
P. TNMT P	1	Đ	Vũ Công Hải	Đại Phó phòng TNMT TPBL			
SỞ TNMT	1	Ông	Hồ Văn Linh	Phó Giám đốc Sở			
	1	Bà	Nguyễn Thủy Trung	Chuyên viên			
	1	Ông	Sơn Văn Lân	Chủ tịch thị trấn xã			
	1	Ông	Lâm Văn	Chủ tịch ấp Bình Đông A			
	1	Ông	Nguyễn Minh Bình	Chủ tịch ấp Bình Đông A			
	1	Bà	Nguyễn Thị Hiền	Chủ tịch ấp Bình Đông B			
	1	Bà	Sơn Thị Kim Liên	Chủ tịch thị trấn xã			

	1	Bà	Chị Chu Hồng	Hi. Chỉ tịch Hội phụ nữ xã	Thy	Thy
	1	Ông	Lý Quý	Đi dân cấp 1000 đồng	Thy	Thy
	1	Bà	Chị Chi Cầu Hồng	Đi bộ thu tiền 1000	Thy	Thy
	1	Ông	Trần Hiệp	Truyền cấp.	Thy	Thy
	1		Lý Thanh Phong	Hợp tác cấp A.	Thy	Thy
	1		Lý Kim Chung	Biên Tây A.	Chau	Chau
	1		Trần Bông	Biên Tây B.	Thy	Thy
	1		Quách Hòa Ngà	Đông giữa B	Thy	Thy
	1		Trần Thanh Phong	PCT hội Nông dân.	Thy	Thy
	1		Lưu Chí Hòa	P. Tài chính.	Thy	Thy
	1		Cao Thanh	P. Quản lý đô thị	Thy	Thy
	1		Trần Hồng Khoa	P. Kinh tế + P. Bảo Liễn	Thy	Thy
	1		Trương Thanh Phương	Công chức NN xã Vĩnh Phước Đông	Thy	Thy
	1		Lưu Chí Nguyệt Mai	PCT. HĐ ND xã Vĩnh Phước Đông	Thy	Thy
	1		Trần Văn Hậu	Công chức VH - XH	Thy	Thy
	1		Mai Hưng	CC VP - TK	Thy	Thy

	1	Sơn Phước Tâm	Vườn Tây B	<u>U</u>	<u>U</u>
	1	Lâm Thuý Hằng Thuý	Đông B	<u>U</u>	<u>U</u>
	1	Thạch Sĩ Riêng	"	<u>U</u>	<u>U</u>
	1	THẠCH HOÀNG THUYỀN	"	<u>U</u>	<u>U</u>
	1	Trần Thị Hà Linh	Vườn Đông A	<u>U</u>	<u>U</u>
	1	Lê Quốc Cường	Đông B	<u>U</u>	<u>U</u>
	1	Long Thiý Thanh	Đông B	<u>U</u>	<u>U</u>
	1	Điền Quang Vinh	V-PK	<u>U</u>	<u>U</u>
	1	Lê Quỳnh Hương	Chỉ tịch UBND xã	<u>U</u>	<u>U</u>
	1	Kim Văn Bình	Phó Chủ nhiệm UBND	<u>U</u>	<u>U</u>
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Annex6. List of Participants on the consultation workshop in Vinh Hau district

DANH SÁCH ĐẠI BIỂU NHẬN TÀI LIỆU VÀ HỖ TRỢ THAM DỰ TỌA ĐÀM THAM VẤN CÁC BÊN LIÊN QUAN							
Tên tổ chức	Số lượng	Ông/Bà	Họ và tên	Chức danh	Email	Hỗ trợ tham dự tham vấn	Ký nhận
UN-HABITAT							
	1	Ông	Jay Nam Jonghyo	Chuyên gia Phát triển Đô thị			
	1	Bà	Hyemi Yang				
	1	Bà	Nguyễn Phương Ngân				
	1	Ông	Adam Keegen				
Các đơn vị							
	1		Ngã Duy Hân	Trưởng Ủy ban dự án	Flas		Flas
	1		Ngã Ngọc Phụng	Đoàn tác nghiệp và M&E	Ngh		Ngh
	1		Phan Hoàng Anh	CBĐC chính - môi trường	Pha		Pha
	1		Hoàng Văn Dũng	ấp 14	Hoang		Hoang
	1		Lê Vũ Đào	Cán bộ KS	LM		LM
	1		Phạm Minh Tuấn	ấp 14	Tuan		Tuan
	1		Nguyễn Văn Thuận	ấp 14	Thuan		Thuan
	1		Nguyễn Văn Thới	ấp 11	Thoi		Thoi

1		Phạm Minh Hải	11		Minh	Minh
1		Lưu Thành Kiên	11		Kim	Kim
1		Thúc Tâm Nguyễn	"		Thúc Tâm	Thúc Tâm
1		Đào Anh Thi	UBND Xã		Anh Thi	Anh Thi
1		Châu Huỳnh Quốc Nam	Phòng kinh tế & Ho. tổng huyện		Nam	Nam
1		Nguyễn Thị Mỹ Duyên	phụ nữ ấp 141		Mỹ Duyên	Mỹ Duyên
1		Nguyễn Ngọc Chánh	Trưởng ấp 141		Chánh	Chánh
1		Đỗ Quốc Nghĩa	UBND xã		Nghĩa	Nghĩa
1		Nguyễn Trung Phái	UBND xã		Phái	Phái
1		Huyền Nguyễn Tú Như	UBND xã		Thu	Thu
1		Ninh Văn Trung	UBND xã		Trung	Trung
1		Lâm Chánh	UBND xã		Chánh	Chánh
1		Le Hoàng Tuấn	Phòng Tài Chính - NS		Tuấn	Tuấn
1		Trần Văn Linh	Chủ tịch UBND xã V. K. K.		Linh	Linh
1		Le Ngọc Yên	UBND xã		Yên	Yên
1		Đông Thị Lan	UBND xã		Lan	Lan

	1	Trần Văn Thuận	UBND xã Vĩnh Hậu	<u>Trần Văn Thuận</u>		<u>Trần Văn Thuận</u>
	1	Hương Thị Minh Thủy	VP UBND xã Vĩnh Hậu	<u>Hương Thị Minh Thủy</u>		<u>Hương Thị Minh Thủy</u>
	1	Trần Văn Năm	ấp 14 xã Vĩnh Hậu	<u>Trần Văn Năm</u>		<u>Trần Văn Năm</u>
	1	Võ Xuân Cường	ấp 14 xã Vĩnh Hậu	<u>Võ Xuân Cường</u>		<u>Võ Xuân Cường</u>
	1	Vũ Thành Dã	ấp 13, xã Vĩnh Hậu	<u>Vũ Thành Dã</u>		<u>Vũ Thành Dã</u>
	1	Trần Trung Hiếu	Ban CHQS xã	<u>Trần Trung Hiếu</u>		<u>Trần Trung Hiếu</u>
	1	Trần Văn Lập	UBND xã	<u>Trần Văn Lập</u>		<u>Trần Văn Lập</u>
	1	Sơn Trường	ấp 14 xã Vĩnh Hậu	<u>Sơn Trường</u>		<u>Sơn Trường</u>
	1	Trần Văn Năm	ấp 14 xã Vĩnh Hậu	<u>Trần Văn Năm</u>		<u>Trần Văn Năm</u>
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Annex7. List of Participants on the consultation workshop in Chau Thanh District

DANH SÁCH ĐẠI BIỂU NHẬN TÀI LIỆU VÀ HỖ TRỢ THAM DỰ TỌA ĐÀM THAM VẤN CÁC BÊN LIÊN QUAN							
Tên tổ chức	Số lượng	Ông/Bà	Họ và tên	Chức danh	Email	Hỗ trợ tham dự tham vấn	Ký nhận
UN-HABITAT							
	1	Ông	Jay Nam Jonghyo	Chuyên gia Phát triển Đô thị			
	1	Bà	Hyemi Yang				
	1	Bà	Nguyễn Phương Ngân				
	1	Ông	Adam Keegen				
Các đơn vị							
HM	1		Ngã Thị Bích Vân	ấp - Cồn Chim			
HM	1		Nguyễn Hữu Hưng	ấp Long Hưng 1			
HM	1		Võ Thị Kiều	ấp Long Hưng 1			
LH	1		Phạm Văn Quyền	ấp: Rạch Giảng			
LH	1		Nguyễn Văn Kiên	ấp Cồn Phụng			
LH	1		Phạm Công Minh	P. Chủ tịch UBND xã			
LH	1		Nguyễn Văn Toàn	Ấp UBND ấp Cồn Phụng			
LH	1		Nguyễn Văn Toàn	T. B. N. ấp Cồn Phụng			

LH	1		Ng. Trung Vinh	PER. HCCB xã LH	<u>TC</u>		<u>TC</u>
LH	1		Nguyễn Văn Lũ	ấp Rạch Sâu	<u>TC</u>		<u>TC</u>
LH	1		Đoàn Văn Côn	ấp Hai Thửa	<u>TC</u>	<u>TC</u>	
LH	1		Huỳnh Văn Dũng	ấp Rạch Ngựa	<u>TC</u>		<u>TC</u>
LH	1		Đinh Văn Thuận	ấp Xẻo Râu	<u>TC</u>		<u>TC</u>
HM	1		Phạm Văn Chanh	ấp Bà Liền	<u>TC</u>		<u>TC</u>
HM	1		Nguyễn Minh Triều	ấp Long Hưng 2	<u>TC</u>		<u>TC</u>
HM	1		Nguyễn Thị Chơn	ấp Đại Thôn B	<u>TC</u>		<u>TC</u>
HM	1		Phạm Văn Hải	ấp Giồng Giã	<u>TC</u>		<u>TC</u>
LH	1		Huỳnh Thị Cẩm Loan	chủ tịch ấp Thủ Mủ Long Trì	<u>TC</u>		<u>TC</u>
LH	1		Võ Thị Thủy Linh	P. DT ấp Long Trì	<u>TC</u>		<u>TC</u>
LH	1		Ngân Thị Cẩm Thủy	P. DT chi bộ ấp Thôn Vạn	<u>TC</u>		<u>TC</u>
HM	1		Đỗ Hữu Hòa	D. CS. UBND TG	<u>TC</u>		<u>TC</u>
HM	1		Kê Trung Nghĩa	CE DE - XD	<u>TC</u>		<u>TC</u>
HM	1		Nguyễn Văn Quỳ	T. BND ấp Bãi Chanh	<u>TC</u>		<u>TC</u>
LH	1		Nguyễn Văn Giàu	T. BND ấp R. Cầu	<u>TC</u>		<u>TC</u>

ctt m.	1		Ngô Thành Sáng	Ấp Đại Hưu A	<u>Sauk</u>		<u>Sauk</u>
LH	1		Trương Vũ Thành	Ấp Rạch Giộc	<u>Thanh</u>		<u>Thanh</u>
LH	1		Ung Văn UTRANG	Ấp Bưng Bịch	<u>Ung</u>		<u>Ung</u>
Dương Văn Hợp	1		Dương Văn Hợp	Chợ Cuo Bảo và mố hững	<u>Thanh</u>		<u>Thanh</u>
	1		Nguyễn Thị Đoàn Duyên	phòng 011 Khắp đôn m. biếu	<u>Thanh</u>		<u>Thanh</u>
	1		Nguyễn Trọng Kiên	phòng 1111 Cầu Thành	<u>Thanh</u>		<u>Thanh</u>
H M	1		Trần Trung Kha	UBND xã Hòa Ninh	<u>Thanh</u>		<u>Thanh</u>
LH	1		Nguyễn Thanh Trường	UBND xã Long Hòa	<u>Thanh</u>		<u>Thanh</u>
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TỔNG							



ADAPTATION FUND

National level Consultation Meeting Report

Introduction

The consultation meeting on Adaptation Fund took place on November 7th 2018 at the Ministry of Natural Resources and Environment. The participants were Dr. Nguyen Quang, Jay Nam, Hyemi Yang, Daniela Suarez and Adam Keegan from UN-Habitat; Phan Tuan Hung (Director General), Nguyen Ngoc Anh, Dr. Nguyen Sy Linh, Prof. Tran Thuc, Pham Thi Thuy Hanh and Dr. Michael Parsons (Senior Advisor to Minister) from MONRE; Prof. Truong Quang Hoc from Hanoi National University; Ly Minh Dang from GIZ; Nguyen Anh Quynh from NISTPS; and Nguyen Phuong Nam from Clitech.

Objectives

- To revise draft of Adaptation Fund concept note from UN-Habitat
- To discuss the potential project site for the project

Findings

Mr. Hung (MONRE) explains the process for project selection: Minister of MONRE must sign off and Technical board will then approve before World Bank signs contract. He also discusses 3 models of project implementation, highlights that for this project it is proposed to use 3rd approach through a multilateral agency and says that the features of adaption fund must be capacity for adaption and knowledge sharing built into the project, no overlap of projects. He explains that the maximum fund for country 10 million USD for multilateral 50% of this and speaks about the need for high quality concept note, which includes close consultation with local community. Addressing needs of people and compatibility with Government frameworks is a must. 3 sets of meeting with local communities have already been undertaken, AF requires at least one more round of meetings. Last year a UNESCO project was rejected by the fund, therefore careful planning is a must.

Mr. Quang (UN-Habitat) explains the concept of Adaptation Fund, notes that submission day is in January or else in July but time is need for revision. We need to work close to beneficiary group to develop a good plan.

Jay Nam (UN-Habitat) explains that community base project and hard infrastructure, focused on innovation, adaptation and knowledge share are key for our project. He also stated than 70% will be invested in hard infrastructure. Then showed the key outputs and talked about how the implementation is going to be. However, project is flexible and open to changes depending on the conversation with other agencies. Then discusses why the project is situated in the Mekong Delta, followed by analysis of other projects in the region, highlighting that most of them are related to the land issue and soft infrastructure. To finish, he opens the topic of project location for discussion.

Mr. Hoc (HNU) explains the complimentary potential of his current project in Red River, which is currently developing criteria for assessing vulnerability to climate change based in system resiliency and livelihood and assessment on integrated approach. He recognizes that project components from concept note are logical and comprehensive and suggests some revisions to document format as follows: the second column should

talk about detailed components, outputs also reflected in the third column; second component integrate climate issues and ecosystem into development project. For the project location he is happy that adequate consultation has led to a good location in Mekong Delta and suggests linking the project with other active hard interventions in the region.

Mr. Chiem (HNU) highly appreciates the concept note, agrees that MONRE will be focal body to orchestrate, but desires to strictly adhere to or shorten the timeline. Also notes changes to structure as follows: name of component, objective, activities, outcome. He says that financial resource and time are needed and recognizes a need to align with other local projects. He also notes that Government policy to improve productivity of aquaculture may affect activities and outcomes and that local migration patterns into the Mekong region make it very important to take care with beneficiary selection. Later he states the possible need to cooperate with universities or other institutions for project implementation. For location he suggests the possibility of An Giang province as hydropower has increased flooding. He suggests separation of project components based on regional needs as follows:

- Component 1: All Mekong delta provinces suffer from salinity intrusion. Should cover all region
- Component 2 & 3: select one province only, give households enterprise
- Referral to resolution 120 in planning process as next year planning will become regional rather than provincial.

Mr. Dang (GIZ) thinks that the document has a standard model and components are ambitious but it is up to UN to decide about it. He discusses a gap in river erosion. Erosions have direct connections with the settlement of the people. In Ben Tre province there are thousands of projects working on coastal erosion. The local government of Ben Tre is struggling to find solutions for the people living next to the river. Therefore, he suggests to develop a Comprehensive review/research on erosion and why it happens because according to him the project should focus on river side erosions. He also suggests to check what other organizations have done in the area. For component 3 he suggests conducting assessments and provide visible solutions such as constructing water storage supply. As the project use an ecosystem approach, it is worth noting that there's a Flooding rice system that save a lot of water and provide great conditions for aquaculture. He adds that farmers need support in terms of settlement, houses and other basic facilities for living. Indeed, he suggests to have a sub component to support farmers that cultivate rice, maybe to invest in 100 households. Even if it looks like a small number, it's really helpful and it will bring change. From his experience, the cooperation with local government, people and PPC is a key of success. They are willing to share experiences because they have been working during the last 10 years in the Mekong Delta river.

Ms. Hanh (GDLA) outlines the need to stay up to date with land planning procedures and suggests that project team should have meeting with land admin authority to ensure compliance. Component 1: land planning with integration of climate change, no provincial planning, district planning from 2020, project approved Aug 2019.

Mr. Linh (ISPONRE) says that in order to have a successful approach to the adaption fund we need to meet certain criteria: the project should be clearer about how the housing/settlement is enhancing the resilience to climate change and should proof more resilience for activities. For the introduction of the project he thinks that small infrastructure is important but priority should be on water storage due to lack of access to fresh water. With the ecosystem approach it is necessary to ensure the house supply chain in the market of flooding rice. He adds that the component of knowledge sharing model should be scalable for the implementation and that the project location will be found after clarifying the best areas of intervention.

Mr. Than (VEA) highlights the potential for crossovers with other big projects in the area and suggests to review other projects in MK, especially the World Bank project on urban resettlement. He states that main climate change issue for local people is that they're ill prepared in terms of skill and information. Many lose their livelihoods due to lack of preparedness. He also notes conflict in terms of livelihood between seawater and fresh water livelihood people and suggests more participatory tools that involve local people. He notes that with solution 120 the government is encouraging more inter-regional projects and he suggest to target a certain beneficiary group from the river basin instead of a geographical location.

Mr. Nam (Clietch) notes that structure proposed is good and that components align with the overall structure. However legal basis is a priority. The project needs to be in line with current legal documents in Vietnam. Component 1 needs to be more specific in this context. Selection of location following IPCC, depends primarily on local condition. Also notes that whether government decides to centralize or scatter the project location, and beneficiary group will have a big impact on activities. Assessment methodology needs to be finalized. Notes that high density areas normally have higher vulnerability, recommends prefeasibility study to identify this. However due to budget constrictions he recommends field trips with survey and practical observation to some selected provinces. Adds that climate change is interregional issue, location is not within boundary of one province, but it may reach out which will involve working with multi-location authorities. Capacity building is a priority. Should clarify and identify target group for training whether government staff, local people, etc. They are eager to train but may have difficulty getting to training centers. However, they should also think about methodology for training. For feasibility of hard intervention, he suggests considering 3 dimensions: implementation, sustainability and representativeness to community. States that resettlement would have big impact on rural people and there may be a need to differentiate the solutions for rural/urban peoples, ie rural on water processing, urban on wastewater. Also adds that in terms of water quality aspect of the project there is another project related to land and water management, national program for climate change response which plans to build 2 large water reserve tanks in Mekong river.

Michael (MONRE) feels that the project should build on strengths on UN Habitat, with a focus on human settlement and that onus should be on commune-capital, district-capital or both. It is necessary to get the idea of bounded human settlement size and make up both urban and rural. He agrees on GIZ suggestion about river erosion and adds that a human settlement version of VAC model would be preferable as there is no community model that self-replicates in this way. He notes that focus should be on

livelihood options, branded marketing, flooding raise, etc. This model will provide more certainty about target population in terms of their natural environment. He discusses ecological constraints and how man-made activities are exacerbating climate change issues. Therefore, he suggests to approach the target behavioral change in response. He believes that this is an opportunity for UN-Habitat to foster a model of a sustainable human settlement adapted to climate change focusing on a specific community and based on selected communities willingness to be part of such a project

Ms. Quynh (NISTPS) says that component 1 and 2 overlap content related to planning. If possible, she suggests to ensure better and more sustainable outcomes, and notes a need for dialogue for integration needs to be apply at local level. Related to column 2, she suggests a vulnerability assessment and to develop a small-scale model clarifying how to transform outputs to outcomes in order to ensure a real change.

Mr. Quang (UN-Habitat) appreciates participants inputs and strongly agrees on role of community, harmony and role of private sectors in the project. The shortage and excessive water issues are big problem in Mekong Delta. UN-Habitat has leveraged technology to climate change response, and completely agrees with Michael about building a resilient community. Moving forward he would like detailed activity: models, policy guidelines and qualified targets of training whether for leadership or community resilience.

Summary

Mr. Hung (MONRE) explains the process for project selection and discusses 3 models of project implementation, highlights that for this project it is proposed to use 3rd approach through a multilateral agency. For him, adaption fund must build capacity for adaption and knowledge sharing. He suggests to address the needs of people and compatibility with Government frameworks.

Jay Nam (UN-Habitat) explains that the project has community base and hard infrastructure approach, focused on innovation, adaptation and knowledge sharing. Then showed the key outputs and how the implementation is going to be. Then discusses why the project is situated in the Mekong Delta and opens the discussion for project location.

Mr. Hoc (HNU) explains the complimentary potential of his current project in Red River, suggests some revisions to the document format and suggests to link the project with other active hard interventions in the region.

Mr. Chiem (HNU) suggests changes to the structure and talks about the need of cooperation with universities for implementation. He also notes that Government policy to improve productivity of aquaculture may affect activities and outcomes for location he suggests the possibility of A Giang province and suggests separation of project components based on regional needs.

Mr. Dang (GIZ) discusses about gaps in river erosion and how it affects people in Ben Tre province. He suggests to develop a Comprehensive review/research on erosion and

why it happens. He makes recommendations to component 3 and adds that farmers need support in terms of settlement, houses and other basic facilities for living.

Ms. Hanh (GDLA) outlines the need to stay up to date with land planning procedures and suggests a meeting with land admin authority to ensure compliance. She makes recommendations to component 1.

Mr. Linh (ISPONRE) recommended to meet certain criteria and adds that the component of knowledge sharing model should be scalable for the implementation and that the project location will be found after clarifying the best areas of intervention.

Mr. Than (VEA) highlights that many people in MK lose their livelihoods due to lack of preparedness and that there are conflicts to get access to fresh water. He suggests to use more participatory tools and to target a certain beneficiary group from the river basin instead of a geographical location.

Mr. Nam (Clitech) notes that legal basis is a priority and makes suggestions about component 1 and selection of project site. He recommends to do pre-feasibility study to identify vulnerability in highly density areas and as capacity building is a priority he calls on a training for it. He states that resettlement would have big impact on rural people and there may be a need to differentiate the solutions for rural/urban peoples.

Michael (MONRE) agrees on river erosion and adds that a human settlement version of VAC model would be preferable. He notes that focus should be on livelihood options, branded marketing, flooding raise, etc. And suggests to approach the target behavioral change in response. He believes that this is an opportunity for UN-Habitat to foster a model of a sustainable human settlement adapted to climate change focusing on a specific community.

Ms. Quynh (NISTPS) makes recommendations on column 2 and suggests to ensure the outcomes.

Adaptation Fund Project Development Consultation Meeting

9:00 -12:00 7 November 2018

Room 1101, MONRE

English-Vietnamese Interpreter

I. Background

The United Nations Human Settlements Programme (hereinafter referred to as “UN-Habitat”) is the agency for human settlements. It is mandated by the UN General Assembly to promote socially and environmentally sustainable towns and cities with the goal of providing adequate shelter for all. UN-Habitat has been working with the government of Viet Nam since 1990 and established its country office in 2007.

To promote sustainable and inclusive urban development in Viet Nam, UN-Habitat Viet Nam office has been working with Viet Nam government and key stakeholders through a programme of work focused on:

- (i) designing and developing new project and programme for mainstreaming **climate change into urban development;**
- (ii) **providing technical assistance and supporting capacity development;**
- (iii) strengthening intergovernmental processes; and
- (iv) networking and partnership development, among others.

As an implementing entity of Adaptation Fund (hereinafter referred to as “AF”), UN-Habitat Viet Nam office is developing the full-size proposal for sustainable eco-human settlement development along with small-scale infrastructure intervention that includes technical support such as water purification system in consultation with the Government of Vietnam. UN-Habitat Viet Nam office is aiming to submit the full-size project proposal to Adaptation Fund Board by August 2019.

II. Objectives

1. To introduce the climate change adaptation project for accessing global climate financing, especially Adaptation Fund
2. To find out the gap between existing and developing projects
3. To identify the appropriate project location for the project
4. To discuss about the project components for identifying the proper actions

III. Agenda

09:00-09:10	Opening	MONRE
09:10-09:20	Introduction of Adaptation Fund	UN-Habitat
09:20-09:40	Introduction of Project Concept	UN-Habitat
09:40-10:10	Discussion about the challenges of existing climate change adaptation projects in Viet Nam <ul style="list-style-type: none">- Define the adaptation requirement- Define the national priority about the climate change adaptation- Data → CC information →	Moderator: MONRE

	Vulnerability and risk assessment → Current Action → Priority	
10:10-10:50	Discussion about the project I: Project location II: Project Component	Moderator: UN-Habitat
10:50-11:00	Closing	MONRE

VI. List of Participants

#	Agency	Name	Note/Contact
1.	UN-Habitat	Dr.Nguyen Quang Jay Nam Hyemi Yang Laid Cea Maria	
2.	MONRE-Department of Climate Change	Mr. Tang The Cuong Director General	
3.	MONRE –Department of Legal Affairs	Phan Tuan Hung Director General	
4.	MONRE- Department of Science and Technology		
5.	MONRE- Vietnam Environment Egency	Department of Biodiversity	
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Bộ Tài nguyên và Môi trường


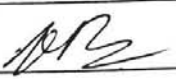




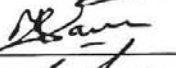
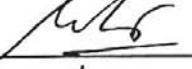

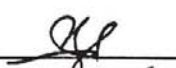


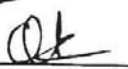
DANH SÁCH ĐẠI BIỂU

Nội dung: Hội thảo tham vấn đề xuất kế án Quy hoạch vùng

Thời gian: 01/11/2018

Địa điểm: P. 1107 - Nhà A - B. 7. NAM

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Appendix 3. Local level Consultation Meeting Report



ADAPTATION FUND

**Local level Consultation
Meeting Report**



UNITED NATIONS HUMAN SETTLEMENTS PROGRAMME

Chương Trình Định Cư Con Người Liên Hợp Quốc

VIETNAM COUNTRY OFFICE

FIELD MISSION REPORT UN-Habitat Viet Nam

PLACE VISITED: Bac Lieu and Tra Vinh

DATES: 6th to 11th December 2018 (6 days)

RELATED PROJECT: Support Project Development for accessing Global Climate Financing (Adaptation Fund)

PARTICIPATION AGENCY: UN-Habitat and MONRE

DATE OF REPORT: December 2018

Introduction:

1. UN-Habitat team visited two coastal provinces: Tra Vinh and Bac Lieu for organizing Adaptation Fund consultation workshops and meetings with local government and locals.
2. Tra Vinh DONRE organized the consultation meeting with DORNE and District and commune leaders for UN-Habitat
3. Bac Lieu DONRE supported UN-Habitat organizing consultation workshops in two communes: 1) Vinh Trach Dong district and Vinh Hau commune
4. Tra Vinh DONRE supported UN-Habitat organizing a consultation workshop with two communes: Long Hoa and Hoa Minh in Chau Thanh District
5. The mission accomplished by Jay Nam, Hyemi Yang, Ms. Ngan and Mr. Adam Keegan from UN-Habitat, and Mr. Thi and Ms. Uyen from MONRE. The present report contains the findings and recommendations of the team's visit to Mekong Delta Region for the project implementation
6. The team combined visits to the potential project sites of Mekong Delta region and had consultation meetings and workshops with the Government (PPC and DONRE), local government (District) representatives and locals in Tra Vinh and Bac Lieu.

Principal purpose of the field mission:

The main purpose of this field mission was to collect the data of vulnerability and risk, and locals' needs from multiple-levels at local through organizing consultation meetings and workshops at local level.

Schedule:

Date	From	To	Activity
Wednesday 5 December	Hanoi Airport		Meet @ 17:00
	Hanoi	Can Tho	18:50 - 21:00
	Can Tho	Tra Vinh	21:30 – 11:30
Thursday 6 December	Tra Vinh	District	8h30-10h30 AM: Meeting with DONRE/District (at DONRE)
	Tra Vinh	Bac Lieu	Moving
	Bac Lieu	Bac Lieu	Preparation of the workshop
Friday 7 December	Bac Lieu	District	8AM: Consultation workshop (Huu Nghi Commune, Vinh Trach Dong District)
	Bac Lieu	District	2PM: Consultation Meeting (Commune 14, Vinh Hau District)
	Bac Lieu	Can Tho	Moving
Saturday 8 December	Can Tho		Mission Report/Workshop Report/Analysis/Drafting
Sunday 9 December	Can Tho		Mission Report/Workshop Report/Analysis/Drafting
Monday 10 December	Can Tho	Tra Vinh	7AM: Moving
	Tra Vinh	District	Field Visit
	Tra Vinh	District	2 PM: Consultation Workshop with Long Hoa and Hoa Minh
	Tra Vinh	Can Tho	Moving
Tuesday 11, December	Can Tho	Hanoi	13:25 - 15:40

Role of assignment

- UN-Habitat: Organizing consultation workshops and meeting with logistics and leading consultation
- MONRE: Coordination with local governments
- Local Government: DONRE- focal point with MONRE for coordination
- District and commune government: support UN-Habitat to organize the workshops and meetings

1. Consultation meeting with DONRE of Tra Vinh Province and leaders of district and communes

On Thursday 6 December, UN-Habitat, leaders of DONRE in Tra Vinh, and district and commune leaders had the consultation meeting for Adaptation Fund project development.

1	Dang Van Dien	Deputy Director of DONRE
2	Ms. Nguyen Thi My Hoa	Head of Natural Resource and Sea Management
3	Mr. Nguyen Quoc Tuan	Official of DONRE
4	Mr. Tran Van Thanh	Deputy Head of Natural Resource division at district
5	Mr. Tran Trung Kha	Vice Chairman of Hoa Minh Commune
6	Mr. Nguyen Thanh Thuong	Vice Chairman of Long Hoa Commune
7	Ms. Nguyen Thi Doan Diem	Specialist of Natural Resource and Sea Management Division

Discussion points:

- Introduction of UN-Habitat and Adaptation Fund
- Introduction of project development and progress including project activities
- DONRE provided comments on the project
 - Tra Vinh DONRE recommended two communes in Chau Thanh District as the most vulnerable communities in the province
 - Can be supportive if the project could address the challenges of locals in two communes in Chau Thanh district
 - Approved the field visit and the consultation workshop on Monday 10 December 2019

- District and commune leaders provided more detailed data for their district and communes: Attached as Annex 2
- The leaders explained about the needs of communities and challenges against the impact of climate change
 - Water management is the most challenge for the locals
 - Waste can be one of challenges
 - Infrastructures: road, bridge, river bank and etc
 - Ecosystem: Mangrove etc
- The leaders of district and communes provided the feedback about the project
 - They are interesting in Component 3, which is small-scale infrastructure intervention
 - They also consider the necessity of capacity building for the development of planning, action plans and strategies against the impact of climate change.



Figure 1. Meeting with Tra Vinh DONRE and leaders of district and communes



Figure 2. Meeting with DONRE and leaders of district and communes in Tra Vinh

The leaders of Long Hoa and Hoa Minh communes claimed that locals who live in climate change affected areas do not want resettlement, because of the concern of the loss of their livelihood strategy and resource.

2. Consultation workshop in Vinh Trach Dong District in Bac Lieu Province



Figure 3. Consultation workshop in Vinh Trach Dong District

Total 30 Persons from district and commune level participated in the consultation workshop. UN-Habitat provided the information about UN-Habitat and Adaptation Fund Project. MONRE also supported us to make local understand about the activities in the project.

For obtaining the detailed feedback about the project, the team developed and provided three questions to the participants. The first question is “what is the most challenges against the impact of climate change in your communities?” Second question is “Do you think the UN-Habitat’s project will help your communities enhance adaptive capacity? And How?”. The final question is “what kind of solution for climate change adaption is necessary in your communities?”.

We also conducted focus group discussion (Interview) with Women’s Union in the communities (See Figure 4). The discussion questionnaires will be attached as Annex.



Figure 4. Focus group interview (Women Union)

Focus group interview has conducted with only women and it took 30 to 40 minutes. The purpose of focus group discussion is to identify and clarify about gender issues in human settlement of the Mekong Delta coastal region. The main issues of the group was that many women have to work away from home, due to the livelihood strategy, thus They need vocational training support for diversifying livelihood strategies and resources.

Current status: Salinity Intrusion and high tides, high temperature and no raining in wet season, Lack of clean water, and environmental pollution from waste and other human activities. They suggested that UN-Habitat would be able to support the implementation of resettlement, and develop and maintain the planning in the productive manner.

Also, they suggested

- 1) The investment to hard infrastructures such as roads, dykes and etc
- 2) The investment on the efficient use of underground water for drinking and agriculture
- 3) Support for development livelihood strategy
- 4) Support the improvement of basic service and infrastructures

Le Truong Han (Chairman of Vinh Trach Dong Commune) addressed that,

- a. It is an extremely difficult commune with an area of 4000 ha, 14,000 households and more than 3,000 households
- b. Main production: shrimp, fruit, rice
- c. Offer:
 - i. Training to improve the capacity of commune officials
 - ii. Raise awareness of local people
 - iii. Create sustainable livelihoods
 - iv. Regarding investment: to make coastal roads, embankments against saline intrusion (40Km)
 - v. Clean water only meets 65% of the remaining water shortages in 4 coastal hamlets
 - vi. Investment in retail locations such as schools (toilets, classrooms)
 - vii. Collect garbage: currently only trolley, trash; Vehicle collection assistance is required
 - viii. Livelihood: many households have no land for production, land for rice is about 480 hectares low efficiency; lack of employment (support for business but not sustainable)
 - ix. Housing: big demand: in 2017, 100 houses was be supported. Currently, we need 100 houses more to be built for relocation for the households who lives along the river and dykes

Vinh Trach Dong

1. What is the most challenges against the impact of climate change in your communities?

- Vietnam is also affected by climate change. Recently, in Vinh Trach Dong commune, it's very hot in sunny days, and when it's rain, it usually associates with heavy wind, which causes the trees to fall, and make transportation impossible
- Lack water for production due to drought, salinity intrusion and flood
- Water level rise during rainy season (2)
- Salinity intrusion (2)
- Environmental protection
- Lack of clean water
- Climate change means significant changes on climate, associated with a lot of risks, affecting people's health, causing floods which damage the crops of farmers. In Vinh Trach Dong, there are houses in coastal area, and they are the most vulnerable against climate change risks (salinity intrusion)
- Unusual pattern of weather.
- Sea level rise, salinity intrusion and floods that happen frequently have affected people
- Salinity intrusion causes damage on the shrimp pond and kills the trees
- Heavy storms cause damage and loss on human, property and housing
- Climate change affects people's health
- The biggest challenges against the impact of climate change in locality are unusual pattern of weather and increased salinity intrusion which affected production and economic development at household level (2), the disease caused by climate affected the crops and animals. In addition, people were also affected from waste, due to slow and improper waste treatment
- Flood, caused by sea level rise affects agricultural production
- Proposal: change to new crops which adaptive to the area, build sea dyke and provide financial support for people
- Sea level rise, drought, flood, unpredictable weather pattern...
- Climate change causes unusual weather pattern, drought, which affects agricultural activities of people. In addition, sea level rise, associated with salinity intrusion also directly affects production activities and people's life.
- Unpredictable development of salinity intrusion, storms that occur more frequent, drought that is more extreme and increasing environmental pollution
- Reduction of agricultural productivity due to salinity intrusion
- Loss and damage on production and aquaculture
- Long-term dry season → drought, has affected production activities of people, and caused lack of water for agriculture
- Uneven distribution of rainfall, it usually focuses in a certain period of time, causing flood which affects production activities
- Unusual weather pattern, which affects people life and economic activities, particularly shrimp breeding and rice cultivation (2)

- Storms, hot weather, rains at unusual time, flood and drought

2. Do you think the UN-Habitat's project will help your communities enhance the adaptive capacity? And how?

- UN-Habitat project can support us by finding solutions on responding to climate change and improving climate change resilience, and those solutions should be locally appropriate
- UN-Habitat project can help locality to improve its climate change adaptive capacity, by focusing on building infrastructure in vulnerable areas, as well as improving people awareness and their capacity on climate change adaptation
- UN-Habitat can support by providing water drainage system and medical centers, and also provide knowledge for people on climate change. Infrastructure and resettlement areas should be invested
- UN-Habitat's support will be the best condition to help people to focus on production and doing business, without concerning about the climate change
- UN-Habitat project can help locality to enhance its adaptive capacity, by supporting in building dyke, to prevent salinity intrusion and sea level rise, as well as developing solutions to cope with heavy storms, building shelters for people when the storm comes
- UN-Habitat project can act as supplement for local's developing models (2), such as "self-manage residential area on environmental protection", and also provide financial support for operation, as well as provide equipment like trash bin, garbage truck... for highly populated areas or locations near residential areas, for instance, install 1 trash bin in every 0.5 km. UN-Habitat should invest more in irrigation system and field facilities, to help people to focus on production without having to concern, and also to respond to climate change. Build dyke and water drainage system

UN-Habitat's project can support locality to enhance the adaptive capacity, by:

- Support in building water station in rural areas
- Build residential areas for low income people, for poor and homeless people (housing, electricity, road, sewer, water treatment system...)
- Provide ecological infrastructure, such as mangrove, sea dyke.
- UN-Habitat's project will help locality to enhance its capacity, raise people awareness on climate change adaptation and environmental protection through their daily activities, reduce loss and damage. The project can also support people by means of physical and activities
- UN-Habitat's investment in Vinh Trach Dong commune will be a great support for the locality, particularly investment in local infrastructure, social security
- Forecast the scenario, develop plan for preventing salinity intrusion, and for infrastructure development
- UN-Habitat's project can support locality to build dyke system, to prevent salinity intrusion to rice production zones, as well dredge the canals, so farmers can do aquaculture with more convenient and higher productivity
- UN-Habitat's project can support in regulating the water, to keep fresh water in dry season and discharge water in rainy season, it will reduce losses in production activities

- UN-Habitat can support in building sewer system, to ensure water drain quickly, to prevent flood
- UN-Habitat's project can support in environmental treatment, building the dyke to prevent salinity intrusion, and dredging the canals
- Locality needs projects that can address the negative impacts caused by climate change
-

3. What kind of solution for climate change adaptation is necessary in your communities?

- This consultation workshop provided me knowledge about MONRE and DONRE programs. So far, they invested more than 30 billion VND for Bac Lieu province in general, and the commune in particular. The programs are in national level and have great significance. I would like to give UN-Habitat the following suggestions based on my working experience: The commune developed waste collection teams in its 6 villages. However, they have low efficiency, due to lack of equipment (trash bins, waste truck) and also human resources. In addition, people have low awareness on this matter. Currently, there are lots of waste in waste collection sites, and waste transportation and treatment have not been done properly, causing environmental pollution-→ the commune needs support.
- Build infrastructure in vulnerable areas
- Develop climate change adaptive capacity for locality
- Raise community awareness on climate change adaptation
- Dissemination on climate change, reduce resource exploitation and plant more trees, renovate the transportation, irrigation and dyke system
- UN-Habitat project should conduct site survey and build water drainage system along the seawall, and build the dyke to prevent landslide in the shoreline
- Should have a plan for dyke construction, protecting from sea level rise and salinity intrusion
- Raise people awareness on forest and greenery protection, to prevent storms and long-term drought
- All shrimp ponds and breeding facilities must have wastewater treatment system, to avoid water pollution which causes diseases to people.
- Build dyke to prevent salinity intrusion, especially in areas with short and long-terms crops (longan, annona, mango)
- Build permanent dyke system (2)
- Build water supply and drainage system
- Provide trash bins, garbage trucks, for promptly waste treatment (2)
- Provide fund for people for economic development (2), re-production and re-investment
- Build water drainage system
- Adjust and implement planning on water drainage system
- Move residential areas along coastal line to different areas, reinforce the sea dyke system to reduce salinity intrusion
- Forestation, prevent excessive forest exploitation

- Dissemination on forest protection, raise people awareness on climate change adaptation
- Develop vocational course on breeding and farming for people
- Develop supporting policies and build necessary facilities
- UN-Habitat's project can support in building dyke system, to prevent salinity intrusion and protect local rice production zone.
- Currently, there is a model of super-intensive shrimp breeding, UN-Habitat's project can support locality to develop this new production model, as well as monitoring the water environment for shrimp breeding, to prevent water pollution.
- Invest and expand longan and green asparagus cultivation model at local level
- Develop plans and solutions to prevent salinity intrusion
- Support farmers to switch from normal to adaptive crops (cultivation)
- Plant more trees to reduce environmental pollution, and reduce impacts from storms
- UN-Habitat's project should invest in water supply and drainage system to prevent flood in the case of climate change
- Support equipment for wastewater treatment, to facilitate a more green-clean-beautiful environment.
- Develop system that prevent salinity intrusion and keep fresh water
- Build water stations to regulate water
- Expand the road, to facilitate the operation of local garbage trucks (2)
- To facilitate the development of breeding and farming activities

3. Consultation workshop in Vinh Hau Commune in Bac Lieu Province

Total 35 participants attended to the consultation workshop and also had focus group interview with Women's union. We also had same questions to the participants as the previous consultation workshop in Vinh Trach Dong.



Figure 5. Consultation workshop in Vinh Hau Commune

Vinh Hau Commune is very interesting in the Adaptation Fund project and they would like to know more detailed information, thus we had several explanations about the project. Moreover, the Focus group discussion was conducted for 30 to 40 minutes with only women. Vinh Hau prepared for basic information about the commune, and provided it to us.



Figure 6. Focus group interview (Women Union)

For focused group interview, there were only 4 locals, thus there was some limitation to gather all data, but it could be more depth interview with small group.

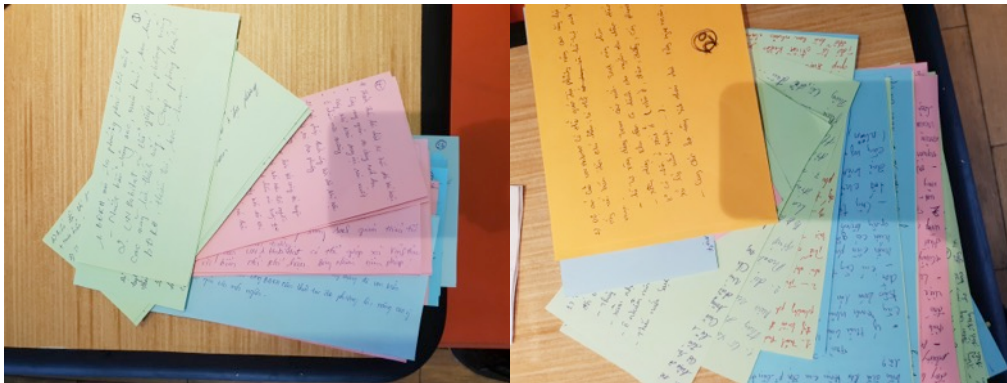


Figure 7. Feedback from locals

The feedback will be translated into English and the data will be used for 1) drafting the concept note and 2) vulnerability and risk assessment report.

Vinh Hau

1. What is the most challenges against the impact of climate change in your communities?

- Sea level rise, rains, storms, floods and droughts (3)
- Insufficient fund for responding to climate change
- Sea level rise happens every year, destroying houses and crops, aquaculture activities also affected by water pollution. Sea dyke is very weak and easy to break. People are in danger when storms happen
- Unusual pattern of sea level rise and storms happen frequently
- Reduction of biodiversity
- Climate change causes difficulties in production activities
- Environmental pollution
- High tide → flood in residential area
- Sea level rise causes flood and poses challenge in aquaculture activities
- Drought → insufficient water for aquaculture activities
- Unusual pattern of weather affects people and animal health
- High tide, landslide at dyke area, sea level rise
- Reduction of mangrove area → landslide at dyke area; Sea level rise, lack of clean water for daily activities
- Unusual pattern of weather affects agricultural productivity, particularly shrimp breeding: shrimp is infected by disease, causing reduction of quality
- Sea level rise affects transportation (flooding the road) and causes difficulties in aquaculture activities (as water flows into ponds) (2)
- Storms, floods, sea level rise, high tide, drought and unusual pattern of temperature
- Sea level rise, environmental pollution, people's health affected by climate change
- Unusual pattern of natural disasters, floods, and droughts, affects the climate system in Southern Viet Nam
- Higher sea level rise leads to higher cost for preventing and overcoming solutions, causing pressure on state budget, hindering economic development and people's life
- Long-term drought and salinity intrusion → affect people's life
- Sea level rise directly affects local production and people's living activities (2)
- Sea level rise causes flood during high tide, and together with salinity intrusion affects rice cultivation. Climate change pollutes water for aquaculture and people's living activities
- Landslide, water level rise, salinity intrusion, storms and floods
- Higher tide and more frequent storms
- Water level rise, hot weather, environmental pollution

2. Do you think the UN-Habitat's project will help your communities enhance the adaptive capacity? And how?

- UN-Habitat's project can support locality in responding to climate change and natural disaster

- UN-Habitat's project can support by organizing capacity building for locality, investing in essential infrastructure to respond to climate change; building dyke in areas in risk of flood, building road in rural area.
- UN-Habitat can develop projects that help locality to respond better to climate change
- Renovate the road and sewer system, move or resettle households affected by natural disasters and extreme weathers. Build strong and permanent sea dyke which can withstand big tides, heavy winds and storms. Reinforce houses to withstand impacts from extreme weathers
- Build industrial clusters, creating stable job for people
- Invest and build key infrastructure, especially in 30/4 residential area
- UN-Habitat can support infrastructure, housing...to help people adapt and improve living condition in case of climate change happening
- UN-Habitat's project can support locality in building water treatment plant and sea dyke
- UN-Habitat's project can support fund to address flood and high tide issues, which caused by climate change
- UN-Habitat's project can provide technical support in shrimp breeding (2), preventing disease, as well as build infrastructure to prevent salinity intrusion, to improve people's life
- Upgrade roads and sea dyke system
- Strengthen clean water system
- Locality doesn't have capacity on climate change adaptation, it needs support and investment from projects, particularly upgrading the dyke and sewer system, planning on resettlement areas for villagers, investing and building permanent houses to withstand climate change impacts
- Closed dyke system to respond to sea level rise
- Invest in waste and water treatment system
- UN-Habitat can support locality, but it will be a very long-term process, so UN-Habitat have to monitor it regularly, particularly in the form of site survey
- UN-Habitat's project can help locality in environmental renovation, upgrading roads, bridges, sewer system and dredging the canal, investing in clean water supply system and waste collection
- UN-Habitat's project can support locality in responding to sea level rise, drought, flood and landslide
- UN-Habitat's project can support fund for building infrastructure for climate change response and adaptation, building water treatment plants for people's living activities
- UN-Habitat's project can support locality in building dyke system to prevent landslide and floods
- UN-Habitat's project can support locality in building dyke

3. What kind of solution for climate change adaptation is necessary in your communities?

- Build climate change adaptive infrastructure, develop vocational training projects, create jobs and develop economic development models at household level
- Develop climate change adaptation projects at local level
- Support physical and spiritual life of people
- Build permanent and durable infrastructure, such as sea dyke, road, drainage system...

- Build strong dyke system; build dam and sewer system to respond with high tide.
- Build resettlement areas and develop plans to move people in there, provide knowledge for people on how to prevent and respond to climate change
- Forestation (protected forest) (2)
- Strengthen and improve dissemination on climate change to people, to prevent environmental pollution – one of the causes of climate change
- Build waste treatment system
- Build wind power plant
- Build sewer system in rivers nearby sea
- Provide fund to build modern and large-scale bridge and sewer system at riverbank, to respond to sea level rise
- Invest and build dyke system in residential areas, to prevent human and property loss
- Invest and build clean energy station, to reduce environmental pollution
- Strengthen the dyke system to prevent flood
- Move households living in areas prone to landslide to different areas
- Build resettlement areas
- Raise people awareness on climate change
- Provide land at high areas for people to build houses, so they can avoid being affected by high tide.
- Local authority must develop regulation on making high foundation when build house
- Renovate and upgrade roads in flooded areas.
- Dissemination on threats of climate change to people.
- Move households living in climate change affected areas to different ones
- Build local waste treatment plants (2), and provide equipment for waste collection
- Provide clean water for people
- Invest in medical facilities and equipment, to treat people affected by climate change
- Build dyke to prevent salinity intrusion
- Plant trees around sea dyke system, to block the tide
- Proper waste collection and treatment
- Develop settlement areas for people
- Provide and secure clean water for people's daily activities
- Disseminate and encourage people on environmental protection
- Develop regulations on waste dumping at regulated sites
- Strengthen the dyke system, build water drainage system and improve basic infrastructure, promoting sustainable development and reducing burden in life.
- Move households into areas far away from the sea, build dyke to block the tide, and plant trees to prevent storms and floods
- Move households into areas protected by dyke and far away from the sea
- UN-Habitat can disseminate people on climate change and its impact, then to develop solutions to negative impacts of climate change

4. Field Visit to Long Hoa and Hoa Minh communes in Chau Thanh District in Tra Vinh Province

- Water management and sanitation

Most households use rainwater and underground water for domestic use, however, for drinking water, locals need to spend money for buying drinking water. In the dry season, they experience lack of underground water and water became saline water due to salinity intrusion. In the commune, they have a water tank, but quality of water cannot be guaranteed. Moreover, during the focus group discussion with women group, they claimed that there are no proper toilets and sanitation system.



Figure 7. Water tank and treatment system in Hoa Minh and Long Hai



Figure 8. Domestic use water system in Hoa Minh and Long Hoa

- Waste treatment

There are no proper waste treatment system, each household burn their waste in their allotments and throw them away.



Figure 9. Waste management in Long Hoa and Hoa Minh

- Infrastructure

Basic physical infrastructures, which can be affected by the impact of climate change, were discovered. Bridges in the target areas were made by log and it seems not climate resilient infrastructure. Locals also agreed that due to poor infrastructures, their adaptive capacity become lower.



Figure 10. Infrastructure in Long Hoa and Hoa Minh

- Housing

Most houses were built by wood, not climate resilient materials. Some houses were located near by sea and riversides. Local wanted to resettle to the other areas in the commune, but due to lack of funding and livelihood strategies and resources, they cannot resettle to other areas. Thus their houses need the great improvement for protecting the impact of climate change.



Figure 11. Housing condition

- Ecosystem

On the riverside, there is huge land erosion around the target areas, and this makes protection forest (buffer zone) such as Mangrove was ruined gradually. Locals also commented about this in the workshop.



Figure 12. Rive bank erosion

5. Consultation workshop in Chau Thanh District for Long Hoa and Hoa Minh communes

Consultation workshop for Long Hoa and Hoa Minh communes has been conducted once because those communes are located in the same district.



Figure 13. Consultation workshop in Tra Vinh

In the consultation workshop in Tra Vinh, 34 participants attended and they gave comments on the project. The team tried to make locals understand about the projects and identify the needs and challenges against the impact of climate change. Locals face three challenges. The first challenge is lack of clean water and sanitation system. Second one is poor physical infrastructure and planning for climate change adaptation. One lady claimed that when cyclones and floods come, they have no ideas for evacuation and due to poor infrastructures; it is hard to escape to safe areas timely. Third challenge is land erosion. Locals also aware that land erosion on the river and seaside makes buffer zone being collapsed. Thus locals mentioned that the project would be very helpful to identify the challenges in the communes, and developing planning strategies and action plans for climate change adaptation is necessary for them, especially, building small scale infrastructures would be essential for themselves.

Hoa Minh

1. What is the most challenges against the impact of climate change in your communities?

- Sea level rise, long-term salinity intrusion and hot weather affect production and life of people (especially low-income people)
- Climate change poses great challenge, need to upgrade the surrounding dyke, as the area is surrounded by sea
- Sea level rise, flood, drought affect people activities, causing human and property losses and damages
- Sea level rise and storms (2)
- Sea level rise, associated with tide caused landslide
- Storms and tornadoes destroyed houses and roads
- Intensive salinity intrusion, sea level rise, heavy rains and erosion
- Storms and water level rise due to long-term rains
- Sea level rise, storms and landslide
- Global warming, unusual pattern of weather
- Sea level rise, storms and hot weather

2. Do you think the UN-Habitat's project will help your communities enhance the adaptive capacity? And how?

- UN-Habitat's project can help people to understand better on responding to natural disasters, as well as support locality to build dyke, to prevent landslide
- Facilitate forestation projects in riverbank areas to prevent landslide and to maintain the dyke around Hoa Minh and Long Hoa commune
- UN-Habitat's project can support locality in landslide prevention, providing clean water for people, building roads and canals, upgrading dyke system and supporting people living around the damaged dyke (by landslide)
- UN-Habitat's project can support locality in addressing negative impacts caused by climate change
- UN-Habitat's project can support locality in landslide prevention, providing clean water for people, developing housing projects, developing bio-organic and clean shrimp programs
- Support water treatment system (2), maintain and protect the forest and aquaculture resources.
- Develop wastewater treatment and clean water projects
- Support green production model, particularly bio-organic rice cultivation

3. What kind of solution for climate change adaptation is necessary in your communities?

- Build and strengthen the dyke system to prevent landslide
- Build sewer system to reduce flood
- Build shelters at high place, so people can go there when floods occur
- Build waste and water treatment plant
- Provide financial support for people living around the dyke, especially in the context of climate change
- Build protected forest in riverbank areas
- Build concentrated waste incinerators or landfills

- Build storm shelters so people can go there when storms happen
- Invest and build concreted road, which can withstand sea level rise
- Invest and build water treatment plants, to provide sufficient clean water for people
- Provide non-refundable capital for people to build biogas chamber in breeding activities
- Support clean water, housing and livelihood...
- Maintain environmental hygiene, reduce waste discharge to environment
- Build strong infrastructure
- Build concentrated resettlement areas for people living around rivers or seas
- Transformation of production model, which is locally appropriate
- Invest in clean technology and production
- Responsible exploitation of resources
- Waste separation and treatment, landslide prevention, in-place water treatment
- Upgrade the dyke (2); clean production; prevent water pollution; support resources; prevent landslide (addressing the issue of illegal sand exploitation)
- Develop clean rice and shrimp production projects
- Provide financial support for locality in upgrading the dyke system
- Upgrade transport infrastructure, particularly the dyke, roads, and electric power network, to support aquaculture activities of people

Long Hoa

1. What is the most challenges against the impact of climate change in your communities?

- Landslide, harvest loss, natural disaster, flood
- Rains and storms happen frequently, sea level rise occurs suddenly, destroying the shore of shrimp ponds
- Sea level rise and salinity intrusion (2)
- Long-term hot weather and drought; Sudden and more intense storms and rains
- Sea level rise → landslide at the shoreline (2)
- Land slide, unusual pattern of high tide and salinity intrusion
- Sea level rise, storms and long-term hot weather
- Sea level rise → landslide → water pollution and flooding the road
- Land slide, sea level rise, lack of clean water
- Unusual pattern of weather, causing difficulties in aquaculture activities
- How to address the issues of expanding salinity intrusion and increasing landslide, raising people awareness on how to respond to storm in case it happens
- Long-term salinity intrusion, landslide, high tide and untreated waste
- Salinity intrusion, landslide and sea level rise
- Drought, high tide and salinity intrusion
- Sea level rise, landslide (2) → affect the economy
- Salinity intrusion → affects local rice production
- Unusual pattern of salinity intrusion and sea level rise
- Complicated issues of hot weather and rain

2. Do you think the UN-Habitat's project will help your communities enhance the adaptive capacity? And how?

- Facilitate forestation at coastal areas to strengthen the dyke system
- Repair and rebuild the damaged dyke (because of landslide)
- Build clean water system for households live far away from water pipeline
- Build storm shelter for each village
- Build clean water and dyke system
- Capacity building for farmers in breeding, aquaculture and agriculture
- Support economic and road infrastructure
- Support organic rice production model, combined with shrimp breeding
- UN-Habitat's project can support locality in responding with negative impacts of climate change: landslide, sea level rise...
- Support people's livelihood, expand the area for shrimp breeding
- Support in building the septic tank
- Build dyke system, to respond to landslide issue
- Build clean water system in Con Phung village
- UN-Habitat's project can support locality by building resettlement areas, protected forest, providing clean water for people's living and production

- Upgrade the dyke system
- Plant trees and protected forests
- Financial support for construction of dyke and clean water system
- Build resettlement area in Con Phung village
- Support locality in economic development
- Build dyke and protect the dykes around the crop fields
- Build anti-storm houses, so people can take shelter there when the storms come

3. What kind of solution for climate change adaptation is necessary in your communities?

- Encourage people to plant trees in their land, plant coastal forest to maintain the land
- Repair the damaged roads and bridges in commune
- Support the tools for waste treatment, and organize trainings on climate change
- Build dyke system in areas affected by climate change (to prevent landslide which affects people's life)
- Upgrade and expand the water plant to serve people
- Finalize the irrigation system, renovate and repair the downgraded roads
- Build roads, electric power and clean water system, to serve people needs for production
- Expand and raise the road, to prevent flood
- Planning for waste treatment sites
- Build water treatment plant, to address the issue of clean water deficit
- Build water treatment system for people
- Support economic stability and development (aquaculture model) for people
- Forestation to prevent landslide
- Build resettlement areas for people affected by landslide
- Waste treatment without pollution
- Effective dissemination on responding to climate change
- UN-Habitat need to disseminate people about climate change, so they have better understanding, and also encouraging them to protect the environment
- Build dyke to prevent landslide
- Provide investment fund for people
- Invest and develop new crops toward climate change adaptation
- Build water treatment plant for people's living activities, but without using the ground water
- Build resettlement areas, prevent landslide, create clean water sources for people (2)



ADAPTATION FUND

Stakeholder Consultation Meeting Report

Contents

1. Meeting with MONRE on October 23rd	1
2. Meeting with GIZ on November 1st	3
3. Meeting with JICA on November 2nd	5
4. Meeting with MONRE on November 11th	7
5. Meeting with IFAD on November 19th	9
6. Meeting with MONRE on November 20th	11
7. Meeting with SECO on December 4th	13

Meeting with MONRE on October 23rd

Introduction

This meeting was about the Adaptation Fund Concept Note Development. It took place on October 23th 2018 at the Ministry of Natural Resources and Environment. The participants were Phan Tuan Hung (PH) from MONRE and Dr. Nguyen Quang (NQ), Jay Nam (JN) and Hyemi Yang (HY) from UN-Habitat.

Objectives

- To review proposed concept note
- To discuss tentative project sites for the project and further steps for developing concept note

Findings

PH explained that MONRE and UNEP are waiting for the final approval from AF on their concept note, that he is happy to share the concept note and since MONRE already worked with UNEP on developing AF concept note, he is well aware of the process and criteria of AF.

Then JN stated that concept note from UN-Habitat would be combination of Human Settlement and Eco System in Mekong Delta, while other agencies are mostly focused on DRR or only hard components. In this sense, NQ explained the key components of the concept note, such as land use planning, infrastructure, community resilience, government system, and capacity building for community level. Connection from the pilot study to policy implementation is also important. In addition, JN addressed the timeline for the concept note, pointing out that submission date will be January 2019 and therefore UN-Habitat needs full support from MONRE because there are only 2 months left until the submission.

PH explained the process of endorsement from MONRE as follows: consultation meeting with related department in MONRE. Then it has to be submitted to the minister, who will revise the concept note and sign it. He also said that MONRE can support UN-Habitat on working with local government and obtaining data from local government as well.

JN addressed the funding support from KEITI, so KEITI will take the part for F.S. in the concept note, will make the concept note more concrete and will support funding while UN-Habitat is developing the concept note.

When discussing about the project site, PH suggested Can Tho and NQ agreed on it. However, JN suggested Ben Tre based on his field mission experience and explained the conditions of the province. PH and NQ also agreed on JN's idea on site selection. PH mentioned MONRE has close relationship with Ben Tre and it will take around 2 weeks and he also mentioned hiring local expert for the assessment is urgent and he might have recommendations from Can Tho. All agreed that detailed data and plan for community will be key for approval from AF.

Regarding the process of developing concept note, technical meeting (consultation meeting) should be held ASAP and 2 workshops will be done after the consultation meeting. The first workshop will be held in project site and it will be also with consultation meeting with local government and data collecting. The second workshop will be in Hanoi with all the stakeholders and sharing the work done for the concept note development.

After the meeting, the work task are as follows: PH will share the concept note with UNEP and be the focal point from MONRE; JN will work on developing the concept note and organising 1 consultation meeting and 2 workshops, and he will be a focal point for country team.

Summary

UN Habitat explained that concept note from UN-Habitat would be combination of Human Settlement and Eco System in Mekong Delta, which includes land use planning, infrastructure, community resilience, government system, and capacity building for community level. Connection from the pilot study to policy implementation is also important. PH explained the process of endorsement from MONRE and said that MONRE can support UN-Habitat on working with local government and obtaining data from local government as well. KEITI will take the part for F.S. in the concept note, will make the concept note more concrete and will support funding while UN-Habitat is developing the concept note. After discussion, Ben Tre looks like a good option for project site, but Can Tho also does. MONRE has close relationship with Ben Tre and they offer recommendations to hire local an expert for the assessment in Can Tho. All agreed that detailed data and plan for community will be key for approval from AF. Some meetings and workshops have to held after the consultation meeting. After that, both MONRE and UN Habitat have work tasks to accomplish.

Meeting with GIZ on November 1st

Introduction

This meeting was about cooperation between GIZ and UN-Habitat in Mekong Delta. It took place on November 1st 2018 at ICMP office. The participants were Ly Minh Dang (LD), GIZ Programme Officer, and Jay Nam (JN) and Hyemi Yang (HY) from UN-Habitat.

Objectives

- To discuss the role of each agency in the afternoon session for the workshop
- To review the concept note from UN-Habitat
- To discuss how GIZ and UN-Habitat can cooperate in Mekong Delta

Findings

The afternoon session for the workshop will be focus on the coastal management in Mekong Delta, which is relevant from the morning session of VASI Marine Spatial Planning and for GIZ since ICMP has concrete output on this region.

GIZ and UN-Habitat might be able to work together on “Component 3: small-scale infrastructure” from the concept note. Since ICMP has been working in MD for around 10 years, GIZ has good network in local government, PMU, and also good institutional arrangement.

The new releasing project from GIZ, MCIP, will expand its project area from 5 to 8 provinces along the coastal line, including Ben Tre and Tra Vinh. Also, small-scale infrastructure will be added as pilot project, which could be the common area between to agencies.

ICMP and MCIP mainly focuses on Technical Advice with full package of supporting the process of financing and also chance of up-scaling the project with other donors such as WB, ADB, and so on. Therefore, GIZ could provide concrete evidence and data in MD when UN-Habitat develop its concept note for Adaptation Fund. In addition, UN-Habitat could also up-scale the infrastructure project from GIZ using the guideline and data provided with the fund from AF. LD suggested also to focus on river erosion since informal settlement along the river accelerate the river bank erosion. Indeed, it is an urgent issue for the government. However, project site could be overlapped, but focus should stay on how we make the synergy within the same project site through proper cooperation.

Upcoming event for GIZ for GIZ will be a consultation meeting on November 6th and UN-Habitat does as well on November either 7th or 8th. It would be good for both agencies to participate in consultation meetings for further cooperation.

Summary

The workshop afternoon will focus on coastal management in MD. About cooperation, GIZ and UN-Habitat will work together in component 3 and we will consider as an advantage the good network that GIZ has with local government. The project area will be in 8 provinces and it will include small-scale infrastructure intervention. On their side, GIZ will focus on technical advice and will provide data to UN-Habitat, which will scale -up infrastructure project from GIZ. To conclude, river erosion should be consider due to the informal settlements along the river.

Meeting with JICA on November 2nd

Introduction

This meeting was about cooperation between JICA and UN-Habitat in Mekong Delta. It took place on November 2nd 2018 at JICA office. The participants were Sho Tomita (ST) and Nguyen Thanh Ha (NH) from JICA, and Jay Nam (JN) and Hyemi Yang (HY) from UN-Habitat.

Objective

- To discuss 'Ben Tre Water Management Project' from JICA
- To discuss how JICA and UN-Habitat can cooperate in Mekong Delta

Findings

Since UN-Habitat potential site is Ben Tre and found 'Ben Tre Water Management Project' while developing concept note for AF in Mekong Delta, UN-Habitat asked whether the project is only focused on 'agricultural water' not 'drinking water'; if the project also includes planning for Ben Tre or not; and if it was possible to access to the Ben Tre vulnerability assessment data from JICA.

ST explained that Ben Tre Water Management Project is a big scale infrastructure construction project (building 8 sluice gates), that covers upper part of Ben Tre in order to protect the agriculture of crops that needs fresh water to grow. It mainly focuses on hard infrastructure, but it doesn't include a planning component

However, JICA is working with MARD for this project and ODA loan signed by prime minister; MARD already selected EE for the project and is about to start the consultation process, but the project has been postponed for about half a year and it might be started April next year.

JN pointed out that since AF board will look carefully of duplicate of project in Mekong Delta, it would be important not to overlap the contents. Therefore, UN-Habitat would like to fill the gap of weakness for 'Ben Tre Water Management Project' and ST agreed on that. He also suggested that a combination of diverse level could make synergy for both project since JICA is focusing on overall Ben Tre in province level while UN-Habitat is constructing small-scale infrastructure in commune level.

Also, as Ben Tre Water Management Project only covers upper part of Ben Tre, UN-Habitat might be able to fill the gap also geographically in the same province. Finally, JICA and UN-Habitat could also work together on developing a master plan for Ben Tre and JICA might be able to provide vulnerability assessment data on Ben Tre to UN-Habitat.

Summary

Ben Tre Water Management Project is a big scale infrastructure construction project, focused on hard infrastructure and that covers upper part of the province, but it doesn't include a planning component. ST suggested to make synergy for both projects since JICA is focusing on overall Ben Tre in province level while UN-Habitat is constructing small-scale infrastructure in commune level. Additionally, UN-Habitat could fill the geographical gap in the same province and they can work together on developing a master plan for Ben Tre.

Meeting with MONRE on November 11th

Introduction

This meeting on adaptation fund took place on November 9th 2018 at Ministry of Natural Resources and Environments. The participants were Phan Tuan Hung (PH) and Nguyễn Ngọc Anh (NA) from MONRE, and Jay Nam (JN) and Hyemi Yang (HY) from UN-Habitat.

Objectives

- To discuss and identify the potential project site and Mekong Delta Forum in early December
- To hire the local consultant

Findings

PH explains the priority to identify the project site must be as follows: to meet the requirement from AF is the key for identifying the project site, to **find the gap** between the existing project and to commit form PPC. However, MONRE and UN-Habitat could work on it through consultation meeting. Among the three options (Bac Lieu, Ben Tre, Tra Vinh), PH also prefers Bac Lieu, but if the gap could not be identified, project site should be the one that we can find the gap. He will also contact DONRE in Bac Lieu to get some recommendations on potential project site (district or commune level) and their needs

PH shared the process they went through with UNEP when developing the concept note and states that we should identify a specific location, district or commune level by the end of next week:

contact directly to district level → Involve DONRE on consultation meeting and DONRE will be the focal point → DONRE talks to PPC directly.

JN briefly explains the idea from UN-Habitat on identifying the project site. UN-Habitat also agrees the most priority key would be finding the gap from the current project in project site. However, we have not decided the district or commune where we have to focus so we need support from DONRE. Strong commitment of PPC will be one of keys according to Dr. Quang AND UN-Habitat will find the gap by the end of next week (16th of November) and share with MONRE

PH suggests to participate in Mekong Delta Forum in early December. Therefore, tentative schedule is December 3rd or 4th, and the forum will be two days. UN-Habitat can have small meeting or side events for the AF project development for introducing the project to PPCs in Mekong Delta and other experts from the whole nation. It would be good opportunity to have consultation meeting after the forum immediately. For example, 3-4 December for the Forum, and then 5-6 for the local consultation workshop with communities. MONRE will fix the schedule of this Forum after more discussion with WB and PH suggests we can go directly to the project site after the meeting

JN requests the recommendation for the local consultant and will work on ToR while PH is looking for potential candidates for the local consultant. PH mentions the professor in Can Tho University and states that selecting the right person for the local consultant will be very important since we do not have much time.

The work tasks are as follows. For UN-Habitat, to find the gap in Bac Lieu by end of next week (16th of November) and to develop ToR for the local consultant by end of next week (16th of November). For MONRE, to make recommendations of local consultant, to provide detailed information of Mekong Delta Forum in early December soon and to contact DONRE in Bac Lieu for more information.

Summary

PH says it is important to **find the gap** between the existing project and the commitment from PPC. PH also prefers Bac Lieu as project site, but if the gap could not be identified, project site can change. He will consult DONRE in Bac Lieu to get recommendations on potential project site. Finally, he suggests to identify a specific location by contacting them directly and involving DONRE on consultation meeting and as focal point. JN briefly explains the idea from UN-Habitat on identifying the project site and agrees on finding the gap from the current project in project site. PH suggests to participate in Mekong Delta Forum in early December so they can introduce the project to PPCs and other experts from the whole nation. It would be good opportunity to have consultation meeting after the forum immediately. JN will work on ToR while PH is looking for potential candidates for the local consultant. PH. Both UN-Habitat and MONRE have work tasks to accomplish after the meeting.

Meeting with IFAD on November 19th

Introduction

This meeting on adaptation fund took place on November 19th 2018 at IFAD. The participants were Thomas Rath (TR) from IFAD, and Jay Nam (JN), Hyemi Yang (HY) and Adam Keegan (AK) from UN-Habitat.

Objectives

- To review AMD Project and the Adaptation Fund Project
- To discuss possible synergy between projects

Findings

TR welcomed UN-Habitat and opened discussion with review of AMD project Summary Report 2018. TR discussed how IFAD is utilising USD \$49 million budget and he explained that the project works from province to commune level with focus on socio-economic development through market orientated planning process utilising a value chain action plan. The resource allocation is assigned through the establishment of 4 funds supporting: infrastructure, farmer groups (providing loans of CC activities), farmer/enterprise loans (stabilising value chain) and Women's Development Fund (micro financing). The project has also developed a salinity monitoring system and EWS system through PPP.

JN explained that the concept note from UN-Habitat would be combination of Human Settlement and Eco System in Mekong Delta and briefly explained the meetings with MONRE, GIZ and JICA and how they perceived a gap in SEDP in Ben Tre and Tra Vinh which IFAD is currently filling.

TR explained the implementing process for AMD:

- Works in a similar format to WorldBank funding process
- Implemented through partnership with DONRE
- Projects use community involvement in planning stage with DONRE
- Provincial Gov sets up Project Management Structure
- DONRE then presents project and funding is granted based on compliance with project aims

JN enquired further details of project activities, explained details of AF funding requirements % of hard infrastructure and detailed UN-Habitat's standard mandate for soft intervention/advocacy.

TR notes the agencies potential challenges, such as further details are not available yet. It is necessary to facilitate communication with PPC for further details and he offers to share Project Plan and latest Summary Report and suggests possible adaptation of IFAD project process for implementation of project. HY have to contact TR for details of PPC after the meeting.

Summary

TR discussed how the project and the resource allocation of IFAD works. He also explained the implementing process for AMD. JN explained the concept note from UN-Habitat and AF funding requirements and UN-Habitat mandate, the meetings with MONRE, GIZ and JICA and the gaps perceived in Ben Tre and Tra Vinh, which IFAD is currently filling. TR notes the agencies potential challenges and offers to share useful reports and possible adaptation of IFAD project process for the implementation of our project. HY will contact TR for details of PPC.

Meeting with MONRE on November 20th

Introduction

This meeting on adaptation fund took place on November 20th 2018 at Ministry of Natural Resources and Environments. The participants were Phan Tuan Hung (PH) and Nguyễn Ngọc Anh (NA) from MONRE, and Jay Nam (JN) and Hyemi Yang (HY) from UN-Habitat.

Objectives

- To discuss and identify the potential project site
- To discuss further steps for concept note development

Findings

UN-Habitat will try to cover all three provinces and 1-2 communes per province (Ben Tre, Tra Vinh, and Bac Lieu) and will visit the selected ones to have a consultation meeting. The rationale for the focus of the proposal are: Basic Vulnerability Assessment including social, economic, and environmental context from the province; Exposure to natural hazard; and filling the gap and making synergy with existing projects in the province. Part II – F includes detailed information and analysis on the relevant projects going on in MDR.

PH suggested that since focusing on three provinces could be complicated, it would be better to select the two provinces for project site, such as Bac Lieu and Tra Vinh due to the distance. However, PH will contact the three provinces to get the suggestions for the potential project site; vulnerable commune near from both waterway and sea. The process for the consultation meeting is as follows:

- MONRE contact DONRE for the cooperation
- DONRE will be the focal point on organising the workshop and ask PPC to invite the local groups, including woman union, youth union, and other social groups in commune
- If DONRE is the focal point, PPC and other commune-level government agency do not need to get the permission from DONRE
- MONRE will send the request letter and official with UN-Habitat so she/he could work with UN-Habitat on consultation meeting with local government in December

PH will also contact to the three provinces to get the suggestions for the vulnerable commune near from both waterway and sea; JN will get the confirmation of the funding from KEITI within this week and UN-Habitat and MONRE will set the concrete schedule for the consultation meeting with local government in project site and HY will prepare the list of the data needed for the in dept vulnerability assessment of commune before the workshop. Leaders in district level, commune level, DONRE, community, youth and women union will be invited with the purpose of: introduction of AF and our project, finding out the needs from local government and collecting data from the list that has been provided before the meeting.

The work tasks for UN-Habitat are: to send the agenda for the workshop to MONRE, to wrap up the final version of the AF concept note (14th of December) and to finish the list of the questions for the commune (end of November). MONRE has to contact DONRE to find out the potential project site in Ben Tre, Bac Lieu, and Tra Vinh.

Summary

UN-Habitat will try to cover all three provinces and 1-2 communes per province and will have a consultation meeting with the selected ones, guided by the rationale. PH suggested to focus on Bac Lieu and Tra Vinh, but still he will contact the three provinces to get the suggestions for the potential project site. PH explains the process for the consultation meeting and says he will contact to the three provinces to get the suggestions for the vulnerable commune near from both waterway and sea. JN will confirm the funding from KEITI, MONRE will set a schedule for the consultation meeting with local government in project site and HY will prepare data for vulnerability assessment. Leaders in district level, commune level, DONRE, community, youth and women union will be invited.

Meeting with SECO on December 4th

Agenda

- Discuss the gap and potential synergy with the projects in SECO
- Feedback from the concept note

Key Discussion Points

- IN briefly explained the components of the proposed project:
 - The proposed project has 4 main components as follows:
 - Institutional and community capacity building toward eco-human settlement development for supporting to enhance local climate response actions;
 - Integrated planning with respects of eco system-based climate change adaptation and building climate resilient capacity and action plan at local level;
 - Sustainability built through small-scale protective and basic service infrastructure; and
 - Awareness Raising and Knowledge Management;
 - UN-Habitat will submit the concept note in January 2019
- TP highlighted that it is important to have suitable institutional arrangement for implementation of the project:
 - Lastly, the suitable institutional arrangement would be the key for implementation;
 - To succeed on the project in Mekong Delta related to climate change, the project should reflect the local needs including political agenda and the components should be related to climate change;
 - Identifying local's demand and vulnerability and risk assessment are the key aspects for small-scale infrastructure intervention project;
 - For vulnerability and risk assessment, data collection and implementation process for small-scale infrastructure intervention, please see the GIZ project in three cities. GIZ applied the systematic framework for the assessment and it can be lesson learned for UN-Habitat;
- RM also recommended to look at the two relevant projects:
 - WB project in Mekong Delta (urban climate resilient Project in Can Tho) on developing the infrastructure against urban flooding;
 - GIZ project (pilot project) on sustainable drainage system link to green infrastructure in three cities: Anh Giang, Kien Giang, and Cau Mau



ADAPTATION FUND

**REQUEST FOR PROJECT/PROGRAMME
FUNDING FROM THE ADAPTATION FUND**

*Enhancing the resilience inclusive and sustainable eco-human settlement development
through small scale infrastructure interventions in the coastal regions of the Mekong Delta*



UN HABITAT
FOR A BETTER URBAN FUTURE

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ADAPTATION FUND

PROJECT/PROGRAMME PROPOSAL TO THE ADAPTATION FUND

PART I: PROJECT/PROGRAMME INFORMATION

Project/Programme Category:	Regular
Country/ies:	Vietnam
Title of Project/Programme:	Enhancing the resilience inclusive and sustainable eco-human settlement development through small scale infrastructure interventions in the coastal regions of the Mekong Delta
Type of Implementing Entity:	Multilateral
Implementing Entity:	United Nations Human Settlements Programme (UN-Habitat),
Executing Entity:	
Amount of Financing Requested:	\$ 5,754,840

Project Summary

The main objective of the proposed project is “**to enhance the resilience, inclusive and sustainable eco-human settlement development through small scale infrastructure interventions in the coastal regions of the Mekong Delta in Vietnam.**” To align with a government request to promote sustainable eco-human settlement in Vietnam, this project aims to improve the poor and vulnerable communes that climate change impacts have affected the most. It is structured around the following components:

Component 1: Institutional and community capacity building toward eco-human settlement development to support enhancement of local climate response actions (USD 800,000 / **16.7%**)

Component 2: Integrated planning with respects of eco system-based climate change adaptation, building climate resilient capacity and an action plan at local level (USD 700,000 / **14.6%**)

Component 3: Sustainability built through small-scale protective and basic service infrastructure (USD 3,100,000 / **64.5%**)

Component 4: Awareness Raising and Knowledge Management (USD 200,000 / **4.2%**)

A. Project Background and Context:

Socio-Economic Context

Vietnam has gone through rapid demographic and social change over the past decade. From about 60 million in 1986, Vietnam's population grown to 94 million by 2016 and is expected to expand to 120 million before tailing off around 2050. Currently, 70 percent of the population is under 35 years of age, with a life expectancy of close to 73 years, though the population is rapidly aging, with the share of the population aged 65 years and older projected to more than double by 2035 (from 7 to 15 percent). Some 85% of the population is from the Kinh ethnic majority group; 53 ethnic minority groups make up the remaining 15%. There is an emerging middle class, currently accounting for around 10% of the population, which is expected to increase to 26% by 2026. Vietnam is urbanizing, with estimates that the urban population will reach 50 percent by 2025. Administratively, the country has 63 provinces, each governed by a People's Council and a People's Committee.

Despite a challenging global environment, Vietnam's economy has shown resilience in recent years. After an increase in GDP of 6.7% in 2015, preliminary data has shown that in 2016 it has continued to grow by a further 6.2% (Table 1), it has been primarily driven by export-oriented manufacturing and robust domestic demand. Headline inflation has also accelerated to 4.7% in 2016, this was driven by increases in administered prices—while core inflation remained subdued. Due to sustained exports, which also expanded by 9% on the previous year, and also due to moderate import growth, Vietnam's external position has remained in balance, underpinned by strong export growth, robust remittance inflows, and a capital account surplus owing to consistent foreign direct investment inflows (FDI). These developments have helped ease foreign exchange pressures and supported the State Bank of Vietnam (SBV) in building up international reserves, from 2.1 months of import cover at the end of 2015 to 2.8 months a year later. However, international reserves are still below a prudent level for an economy as open as Vietnam's

Table 1. Vietnam - key economic indicators, 2014–22 (The World Bank, 2016)

	2014	2015	2016	2017f	2018f	2019f	2020f	2021f	2022f
Real economy									
Real GDP (% change)	6.0	6.7	6.2	6.3	6.4	6.4	6.5	6.5	6.5
Unemployment rate (% of total labor force)	2.1	2.3	2.3	2.4	2.4	2.4	2.4	2.4	2.4
Prices									
Consumer price index (% change, annual average)	4.1	0.6	2.7	4.0	4.0	4.0	4.0	4.0	4.0
GDP deflator (% change)	3.7	-0.2	1.1	4.2	3.9	3.8	4.0	4.0	4.0
Fiscal									
Total revenue and grants (% GDP)	22.2	23.3	22.9	22.9	23.1	23.3	23.4	23.4	23.4
Total expenditure (% GDP)	28.5	29.5	29.5	29.1	29.0	28.6	28.3	28.3	28.3
Fiscal balance (% GDP)	-6.3	-6.2	-6.5	-6.2	-5.9	-5.3	-4.9	-4.9	-4.8
Public debt (GFS definition, % GDP)	55.1	58.3	62.1	63.6	64.0	65.3	66.6	66.9	67.0
External									
Exports of goods (% change)	13.8	7.9	9.0	9.0	9.5	9.9	10.1	10.3	10.3
Imports of goods (% change)	12.0	12.0	5.2	9.6	10.2	10.5	10.8	11.1	11.4
Current account balance (% GDP)	5.1	0.5	3.0	1.2	0.8	0.5	0.5	0.4	0.3
Reserves (in months of imports)	2.8	2.1	2.8	3.1	3.2	3.2	3.2	3.2	3.1
Memo:									
GDP (nominal, trillion dong)	3,938	4,193	4,503	4,987	5,517	6,095	6,747	7,472	8,279

Access to household infrastructure has improved dramatically. In 2016, 99% of the population used electricity as their main source of lighting, up from 14 percent in 1993. In 2016 in rural areas, 77% of the population had access to sanitation facilities—compared to only 36% in 1993. Rural access to clean water has also improved, up from 17% in 1993 to 70% in 2016. Access to these services in urban areas is currently above 95%. While access to clean water in urban areas has been

improved, water security in the Mekong Delta is still an urgent issue, especially in rural areas such as the small islands along the coast and especially in dry season.

Despite its rapid growth on both economic and social context, Vietnam is one of the world's most vulnerable countries to climate change impact, including but not limited to; sea level rise, longer and more severe droughts, flooding and tropical cyclones; as is typical with climate change in this region the poorest are the most exposed. By 2050, a 1–3% loss in real GDP is predicted from climate change impacts. Natural disasters have caused average annual economic losses estimated to be at 1–1.5% of GDP over the last two decades, while more than 70% of the population is already exposed to significant natural hazard risk. Ongoing climate disaster events and climate change effects can also set back development gains, particularly as safety net programs have not yet been adapted to support the poor and vulnerable in response to natural hazard shocks.

This is particularly evident on poverty reduction, according to the aggregate data of MPI (2015), the poverty rate declined from 58.1% in 1993 to 19.5% in 2004, raising 20 million people out of poverty. Similarly, in the period from 2011 to 2015, the poverty rate again dropped significantly, from 14.2% in 2010 to 9.8% in 2013. In the Mekong Delta, however, the speed of poverty reduction has slowed compared to national levels while the poverty rate in mountainous and remote areas also remains high. This multidimensional poverty has been more pronounced by urbanization and migration.

Mekong Delta is however, the largest producer of agricultural and aquaculture product in Vietnam and is suffering the most in economic loss due to Climate Change Impact. The Labor force found in Mekong delta is around 10.3 million (out of a total national labour force of 54.5 million). It is also responsible for more than 13% of national GDP solely for the fishery industry (Vietnam net, 2016). The Mekong Delta currently has an increasing economic rate of around 11% of GDP annually. In this economic context, climate change issues have a major effect on economic activities in the region, while local residents are exposed to climate change threats it has also presented new opportunities, especially in the coastal region of the Mekong delta.

Environmental Context

River and ground water:

In the Mekong Delta, river water and ground water levels are decreasing, while sea levels, flood tides and salt intrusion are on the rise, the demand for water has also increased in production and daily activities due to industrialisation, urbanisation and population growth.

Assessments made in the Greater Mekong Subregion over the last 30 years have revealed the great potential of the groundwater resources in the region, including trans-boundary aquifers. However, groundwater resource usage, emerging environmental problems and the priorities for water resource management differ for each country, this is partly due to variations in levels of development and populations. A growing number of countries in the Mekong River Basin are experiencing depleted and degraded freshwater supplies because of population growth and climate change.

The extraction of groundwater has increased rapidly over the past decades and forms one of the main causes of saline water intrusion into the coastal aquifers. This intrusion has been accelerated by the on-going sea level rise. Saline intrusion of groundwater in the Vietnamese Mekong Delta is a highly complex issue as it heavily depends on varying factors, including changes in water supplies

and rising water demands (e.g. the amount of fresh groundwater extracted for different purposes like domestic, agriculture and aquaculture use).

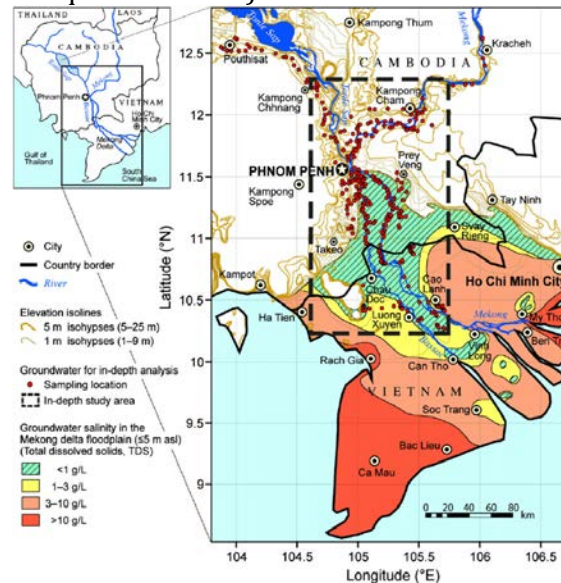


Figure 1. Mekong Delta depicting groundwater and salinity level (Buschmann et al, 2008)

Land erosion and degradation:

It is estimated that the Mekong Delta may lose up to half of its land to erosion due to current rampant levels of sand exploitation.

562 erosion locations have been identified with a total length of 786 kilometers in the Mekong Delta. This includes 55 critically endangered locations that are 173 kilometers in length, 140 endangered locations at 97 kilometers in length, and 367 normal erosion spots 516 kilometers long. Especially, the erosion rate at Ca Mau Peninsula is 12.2 metres per year. 70% of the coastal area is currently being threatened by erosion. Moreover, the large socio-economic and environmental changes have led to environmental problems. Saline intrusion and soil acidification have increased (NEDECO, 1993), storm and flood damage have also been very severe since 1996 (Voice of Vietnam, 1998), and natural ecosystem functions, including biodiversity have been lost. During the onset of the rainy season, drain-off from reclaimed acid surface soils areas pollute a large part of the Mekong Delta.



Figure 2. The images of land erosion in the Mekong Delta

The Mekong Delta is generally used for agriculture and aquaculture along with its preservation areas (forest area). The total superficies is around 40,755 km² (12% of Vietnam) with 13 provinces,

8 of which are coastal provinces that are directly exposed to climate change risks and natural hazards.

Due to rising sea levels, provinces in the coastal zone are highly affected by salinity intrusion and flooding. Salinity intrusion varies according to micro-climate conditions such as water flow intensity. The provinces affected with a maximum salinity concentration of 10g/L are all provinces situated in the coastal zone: LongAn, TienGiang, BenTre, TraVinh, KienGiang, SocTrang, BacLieu, CaMau (source: The World Bank, 2016). Moreover, flooding issues continually change the quality and quantity of water sources, leading to changes in ecosystem and increases in the overall number of migrating people. Severe drought occurrences in the Mekong Delta region exacerbates unsustainable settlement in the concerned region (Saigoneer, 2016).

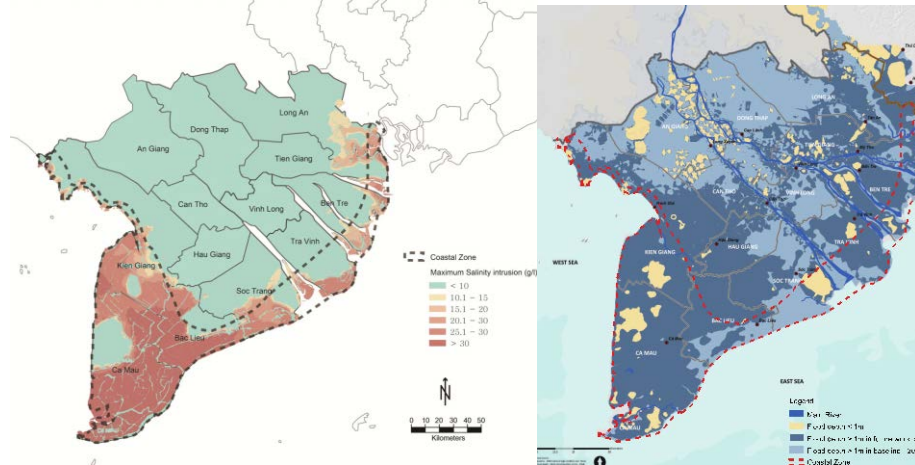


Figure 3. Salinity intrusion and flooding maps

Due to temperature increases and changing dry season patterns, severe drought has impacted all provinces in the Mekong Delta, Southern Central and Central highland regions since the end of 2015. Out of Vietnam's 39 provinces, 63 have requested support from the central government to cope with the most severe El Nino/drought in 90 years. Currently 10 provinces have declared drought emergencies: Bình Thuận, Bến Tre, Vĩnh Long, Sóc Trăng, Cà Mau, Trà Vinh, Tiền Giang, Long An, Bà Rịa-Vũng Tàu and Gia Lai.

Drought:

In 2016 and 2017 dry season, a record drought in the Mekong Delta region, followed by saltwater intrusion, cost Vietnam VND 15 trillion (\$669 million) due to the heavy toll on agricultural production. It also caused dire humanitarian and other economic impacts: almost half a million households lacked fresh drinking water and experienced food shortages and thousands of affected people had to migrate to urban areas in search of jobs.

Most of the affected provinces of the Delta have begun to secure freshwater by all measures available to them. In many vulnerable communes in Hau Giang, Ben Tre, and Tien Giang provinces, farmers have used water tanks to collect rain-water and drilled wells to extract groundwater. They also have reduced the annual rice crop and switched to cash crops that require less water.

Vietnam's 2015–2016 drought and associated saltwater intrusion (SWI) offer a preview of what could become the new norm, and demonstrate the need to take action in order to ensure the country's economic and societal well-being. According to the Ministry of Agriculture and Rural Development (MARD), in this period 18 provinces were severely affected by drought and SWI

(figure 0.1, table 0.1), resulting in direct economic losses of VND 15,032 billion (about US\$674 million), representing 0.35 percent of national GDP and resulting in negative agricultural growth for the first time in decades.

The drought and SWI may make it harder for Vietnam to meet its targets under the Socio-economic Development Plan (SEDP) 2016–2020. These targets include a gross domestic product (GDP) growth rate of 6.5–7.0% a year, and a reduction in the share of poor households by an average of 1.0–1.5% a year. The impact of adverse climate conditions on the economy is already evident: in the first half of 2016, GDP growth was recorded at 5.5%, much lower than the 6.5% average growth in 2015. The World Bank accordingly lowered its 2016 growth projections from 6.5% down to 6.2 percent. The average GDP growth was recorded at 6.2% for 2016, below the government’s 6.7% target.

Like past floods and typhoons, the prolonged drought and SWI of 2015–2016 have hurt people’s livelihoods and assets, making it difficult for affected households to bounce back and recover. Although disasters do not discriminate, poor and near-poor households are often more exposed to and disproportionately affected by the impacts of disasters. Other disproportionately affected groups include women and girls, who are typically responsible for household water gathering, and ethnic minorities located in the drought-stricken provinces of the Central Highlands. Such impacts underscore the importance of efforts that target the most vulnerable and that promote inclusive planning and implementation at the local level.

The serious socioeconomic and environmental effects of the 2015–2016 drought and SWI in Vietnam are due to both adverse climate conditions associated with El Niño and gaps in the capacity of the government and communities to manage the impact of those conditions. Although many good practices have been initiated in programs and policies across the country, the current situation shows that more investment is needed to meet the growing challenges arising from climate change and from increasing disaster risks.

Table 2. Overview of Damage Impact of 2015-2016 Drought and SWI in Vietnam

Region	Number of Severely affected Provinces	Production area affected (ha)			Number of Household lacking access to water for consumption and daily use	# of livestock lost	Total Economic loss (billion VND)
		Rice	Crop	Aquaculture			
National	18	243,762	168,064	69,008	457,796	-	15,023
South Central Coast	3	10,776	15,000	-	43,482	5,126	1,457
Central Highlands	5	17,541	141,756		72,060	494	6,004
Mekong Delta	10 out of 13 (Long An, Tien Giang, Ben Tre, Tra Vinh, Vinh Long, Soc Trang, Hau Giang, Bac Lieu, Ca Mau, and Kien Giang)	215,445	-	68,916	342,254	933	7,517

Source: MARD 2016

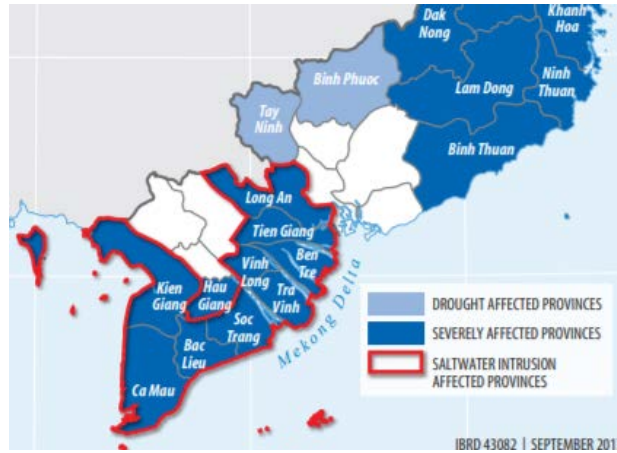


Figure 4. Drought- and SWI -affected provinces

Climate Change Projections and Expected Impacts

Climate Change Projections:

According to IPCC (2013), climate change projections for Vietnam include:

- ❑ Annual mean temperatures will continue to rise by 0.1-0.3°C per decade, and the number of days with temperatures above 33°C will increase;
- ❑ The number of cooler days with temperatures below 15°C will drop by two to three per year;
- ❑ The dry season will get longer;
- ❑ There will be more intense rainfall events, and more frequent and severe droughts and floods; and,
- ❑ Maximum monthly flows in the Mekong Basin will increase by 35-41%, while minimum monthly flows will drop by 17-24% by 2100, further exacerbating flood and drought risks.

Climate change projections for Vietnam from IPCC report (2013) show that the southernmost provinces, especially the Mekong Delta Region in particular, will experience increases in temperature resulting in more droughts in the dry season and a slight increase in rain during the wet season. On the other hand, rainfall from the central or northern provinces will lead to increased flood risk in the southern provinces.

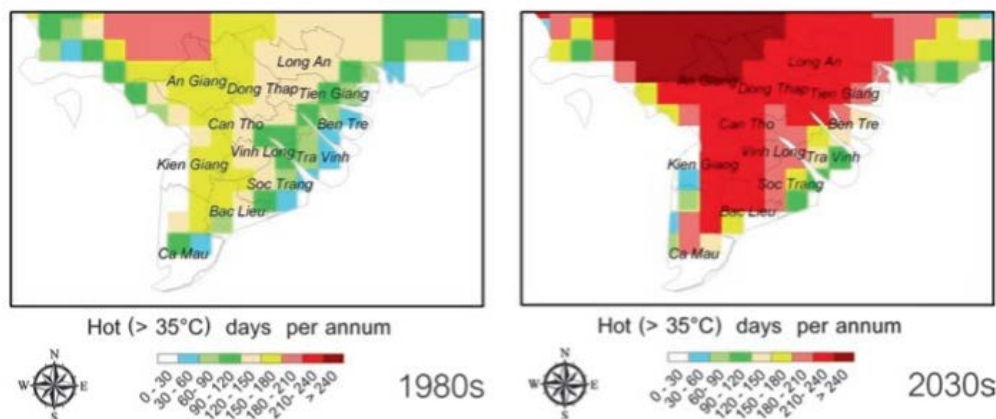


Figure 5. Hot period (number of hot days in a year) in the Mekong River Delta in the 1980s and 2030s (simulated)

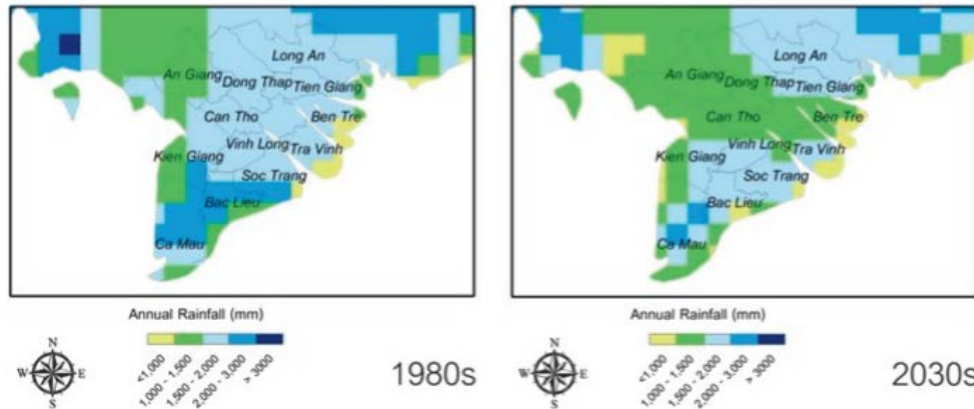


Figure 6. Annual precipitation in the Mekong River Delta in the 1980s and 2030s (simulated)

From figure's 5 and 6, it can be observed that the changes in the average temperature and annual rainfall in Mekong Delta vary from province to province, however, the Mekong Delta as a whole is still an area highly affected by Climate Change impact in the national context. The coastal areas where the land averages 5m above sea level or less are especially vulnerable to sea level rise. Climate change in the Mekong Delta will bring strong fluctuations in rainfall, will increase the frequency of extreme weather events such as floods and droughts and will result in rising sea levels with the potential to inundate land or increase salinity. All these impacts of climate change in the Mekong Delta could be significant threats to the region's agricultural and fisheries productivity, as well as coastal ecosystems. Along with the general climate change projections in overall Vietnam, the Mekong Delta has had its own region-specific climate change projections as follows:

- ❑ According to the RCP4.5 scenario, the average annual temperature will likely increase by 1.3 to 1.4°C in the mid-21st century and by 1.7 to 1.9°C at the end of the 21st century;
- ❑ According to the RCP8.5 scenario, the average annual temperature will likely increase by 1.8 to 2.0°C in the mid-21st century and 3.4 to 3.6 at the end of the 21st century;
- ❑ The average maximum temperature increases higher than the average minimum temperature and the increasing trend gradually reduces from northern to southern regions of the Mekong Delta;
- ❑ Annual precipitation is likely to decrease by 10–20% in the future throughout the Delta area;

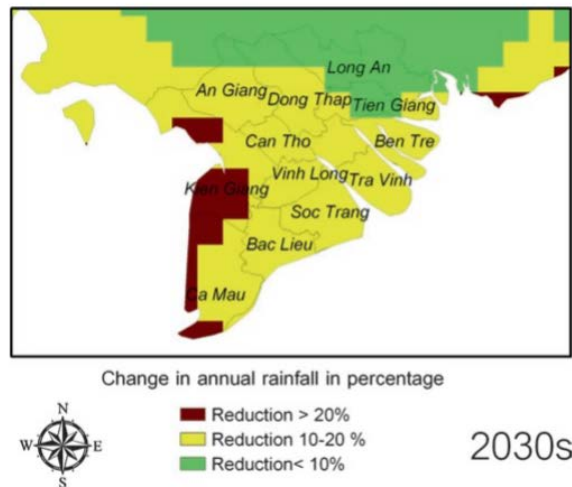


Figure 7. Comparison of change in annual precipitation in the Mekong River Delta between the 1980 and 2030 (simulated)


Table 3. Climate Change Projections in Bac Lieu and Tra Vinh

Province	Climate Change	RCP 4.5 scenario			RCP 8.5 scenario		
		2016-2035	2046-2065	2080-2099	2016-2035	2046-2065	2080-2099
Bac Lieu	Change in average annual Temperature	0.7 (0.4-1.3)	1.4 (1.0-2.0)	1.8 (1.2-2.5)	0.8 (0.6-1.2)	1.8 (1.4-2.5)	3.3 (2.7-4.2)
	Change in annual rainfall (%)	9.6 (5.0-13.9)	11.0 (2.3-20.5)	13.6 (4.3-22.8)	11.8 (6.4-18.0)	16.5 (10.1-23.3)	18.0 (8.5-29.0)
	Change in spring rainfall (%)	8.4 (-3.3+19.9)	-5.8 (-16.8+4.7)	9.9 (-7.9+25.7)	-0.5 (-10.2+8.6)	-0.1 (-6.8+6.4)	2.0 (-10.8+15.5)
	Change in winter rainfall (%)	2.2 (-2.8+6.7)	3.8 (-4.2+12.4)	7.8 (-0.1+15.1)	5.7 (1.3+10.7)	9.6 (2.2+16.8)	12.7 (2.6+22.5)
Tra Vinh	Change in average annual Temperature	0.7 (0.4-1.2)	1.4 (1.0-2.0)	1.8 (1.2-2.6)	0.8 (0.6-1.2)	1.9 (1.4-2.6)	3.4 (2.7-4.5)
	Change in annual rainfall (%)	10.9 (4.9-16.3)	15.7 (5.7-26.8)	17.7 (4.1-30.0)	11.4 (5.6-17.5)	14.6 (8.4-21.5)	18.2 (9.0-28.2)
	Change in spring rainfall (%)	10.9 (-0.5+21.8)	0.9 (-14.4+15.5)	7.9 (-5.0+19.5)	4.9 (-5.2+14.7)	1.6 (-6.7+9.9)	2.0 (-9.2+13.7)
	Change in winter rainfall (%)	4.2 (0.4+8.2)	3.6 (-4.5+11.6)	5.2 (-0.2+10.6)	6.8 (2.5+11.4)	8.5 (2.8+13.9)	11.2 (3.5+18.8)

Table 2 shows the climate change projections for change in average temperature and change in annual rainfall trends in Bac Lieu and Tra Vinh in Mekong Delta Region. As Bac Lieu and Tra Vinh show similar levels of change for average annual temperature, the proposed project has focused on the tendency of the change in rainfall, one of the main causes of drought and flood. Figure 7 also shows that the change in annual precipitation in the Mekong Delta will decrease by 10-20% in average. Ben Tre province is predicted to be highly affected by drought in the future, the data on table 2 shows since the transit of rainfall trends is most various in Ben Tre.


Table 4. Land Erosion map and data for Bac Lieu and Tra Vinh

Bac Lieu Province



District	Area (ha)	Inundation Percentage (% area) corresponding to rising sea level						
		50cm	60cm	70cm	80cm	90cm	100cm	200cm
Gia Rai Town	35506	1.43	3.01	7.54	15.48	31.27	48.71	98.88
Hoa Binh	36735	2.28	4.78	6.97	11.74	18.87	33.96	96.15
Hong Dan	44050	10.70	22.48	41.24	59.51	72.66	90.78	95.79
Phuoc Long	42346	4.32	9.07	20.95	37.25	54.56	73.45	99.40
Bac Lieu City	15920	0.67	1.40	2.64	4.99	8.81	14.80	84.63
Vinh Loi	25267	1.54	3.23	6.58	12.71	23.88	43.83	97.87
Dong Hai	56111	1.68	3.54	5.09	7.12	10.45	17.98	90.81
Province	252600	3.65	7.65	14.54	23.37	33.78	48.60	95.29

Tra Vinh Province



District	Area (ha)	Inundation Percentage (% area) corresponding to rising sea level						
		50cm	60cm	70cm	80cm	90cm	100cm	200cm
Chau Thanh	34552	11.99	12.09	12.29	12.36	16.04	21.23	94.15
Cang Long	29438	9.12	10.87	13.66	18.69	32.95	50.02	90.29
Cau Ke	24635	0.55	1.04	2.13	4.46	8.98	14.05	96.29
Cau Ngang	32494	11.36	12.63	13.42	15.07	19.07	20.30	93.07
Duyen Hai Town	51268	5.39	5.48	5.56	5.64	5.69	3.41	78.96
Tra Vinh City	6755	7.61	7.82	7.91	8.08	8.87	10.66	72.48
Tieu Can	22776	0.53	1.47	4.71	9.73	25.40	59.30	91.34
Tra Cu	37667	1.64	2.67	4.56	7.09	11.60	18.31	98.35
Province	234120	6.20	6.97	8.16	10.34	16.20	23.30	94.03

According to table 4, the figures and tables from Tra Vinh and Bac Lieu province show the risk of land erosion as sea-level rises by different levels in each province.

Expected Impacts:

Due to extreme natural hazards from the impact of climate change, human settlement and ecosystem in Vietnam are becoming devastated, securing access to clean water is also becoming an urgent priority. Climate change impacts such as rising temperature, changing rainfall patterns and sea level rise are posing new and bigger risks to human settlement and the environment in this region. The result is that human settlement will be increasingly vulnerable to climate change and extreme natural hazards as they are generally located in high risk areas, typically along riverbanks and in costal lands.

The issues of climate change caused the further degradation of several environmental problems; floods; drought; rainfall pattern change; and salinity intrusion. These environmental problems result in malignant changes in ecosystem, forced migration and also disturb livelihood strategies and resources management.

Table 5. Impact of Climate Change on Human Settlement and Ecosystem

Climate Change Impact	Human Settlement	Eco-system (Environment)
High Temperature	<ul style="list-style-type: none"> - Health issue - Reduce the productivity on agriculture 	<ul style="list-style-type: none"> - Intensify disaster - Drought
Drought	<ul style="list-style-type: none"> - Lack of water for drinking and agriculture - Transit of main source of income 	<ul style="list-style-type: none"> - Salinity Intrusion

Sea Level Rise	<ul style="list-style-type: none"> - Migration due to lack of human settlement - Transit of main source of income 	<ul style="list-style-type: none"> - Threat to bio diversity - Floods
Salinity Intrusion	<ul style="list-style-type: none"> - Lack of Fresh and safe water for drinking and agriculture - Transit of main source of income 	<ul style="list-style-type: none"> - Threat to biodiversity
Rainfall Pattern Change	<ul style="list-style-type: none"> - Unexpected flood and storm - Reduce the productivity on agriculture 	<ul style="list-style-type: none"> - Threat to bio diversity - Intensify disaster; flood, drought

Focus of the Proposal

This proposal has mainly focused on ***‘enhancing the resilience, inclusive and sustainable eco-human settlement development through small scale infrastructure interventions in the coastal regions of the Mekong Delta in Vietnam.’*** Based on the vulnerability assessment frame work and analysis on relevant projects in the province, Bac Lieu and Tra Vinh are selected as the most vulnerable provinces in the Mekong Delta. In these provinces, a number of communes have been identified as our project site due to the reasons as follows:

The project will focus its actions on highly vulnerable human settlements in Bac Lieu and Tra Vinh province of the Mekong Delta in order to achieve its above objective. The selected communes are a combination of the most vulnerable human settlements to climate change impact in the selected regions and are also the communes where UN-Habitat could make best synergy with other international donors who are currently active or have done relevant projects in the province. In Bac Lieu and Tran Vinh, the targeted project site will be 4 communes – Huu Nghi, Commune 14, Hoa Minh, and Long Hoa (with the total number of 26,099 beneficiaries). Further details can be described in *Appendix 1 – Vulnerability and Risk Assessment Report*

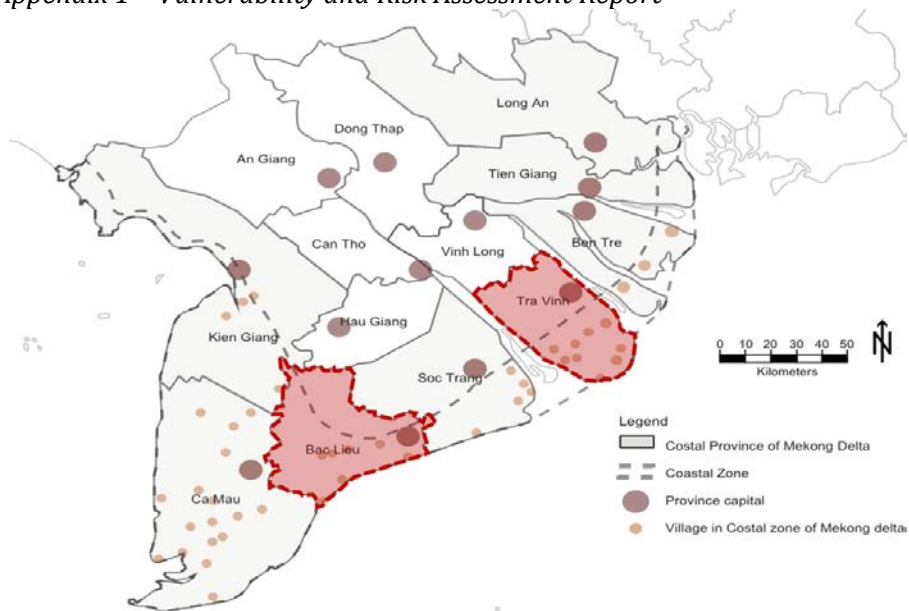


Figure 8. Project Site Location

1. Vulnerability Analysis framework

In order to select the target communes for the project, vulnerability assessment against climate change impact and problem analysis, should be analysed in advance. Figure5 shows the matrix to assess the vulnerability to climate change.

As shown in Figure5, Vulnerability could be measured by subtracting the 'adaptive capacity' from the sum of 'exposure' and 'sensitivity'. Since exposure and sensitivity cannot be enhanced by human intervention, increasing 'adaptive capacity' has been identified as the key to achieving sustainable development.

The sectorial approaches can be applied in mitigating climate change risks; however, this project will specifically focus on water, livelihoods, governance, and planning. Each different approach will be addressed through components of this project which is composed of both hard and soft resilience building processes.

Through the vulnerability assessment from the framework mentioned above, the proposed project would suggest three main rationale for identification of the project site; vulnerability assessment, natural hazard, and the gap and synergy with the exiting projects in project location.

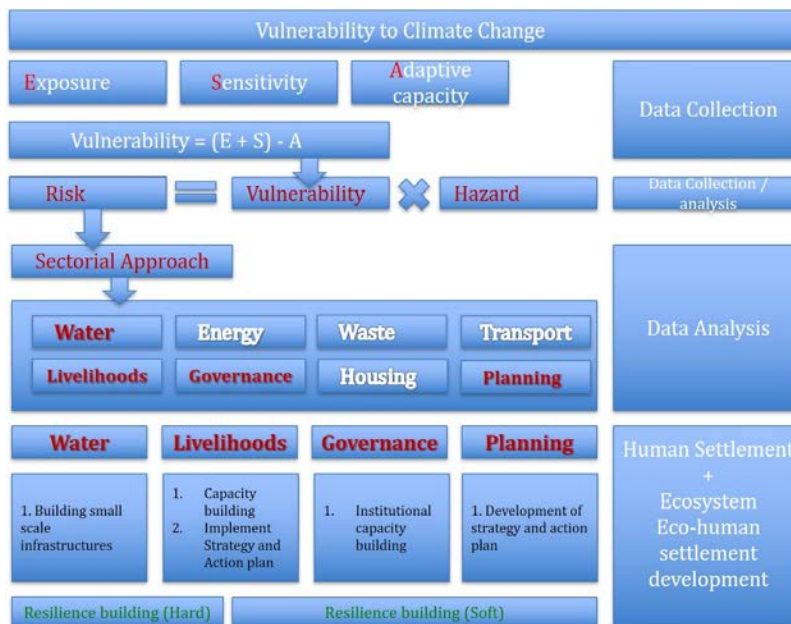


Figure 9. Problem Analysis Framework

2. Basic Vulnerability Assessment – social, economic, and environmental context

a) Basic socio-economic and environmental contexts of Bac Lieu, project site:

Bac Lieu province, located in the Mekong Delta, has an equatorial monsoon climate regime, with two distinct seasons: the rainy season, with average temperature of 25.2 - 29.1°C, and the dry season, with an average temperature of 24.3 and 29.7°C. The temperature amplitude between the months is not significant (1-2°C) but the temperature amplitude between day and night is quite large (dry season: 8-10°C, rainy season: 6-7°C), which is favorable for plant growth and development.

The rainy season starts from May to November, and the dry season lasts from December to April. The annual average rainfall is 1,801.5 mm, and average number of rainy days is about 110-120 days/year. The average air humidity is 82.6%, and around 76–80% in the dry months.

Bac Lieu has numerous rivers, canals and ditches such as Bac Lieu river, Cau Xang Canal, that meet the water demand for agriculture, aquaculture and drainage in urban areas. Recently, the completed maintenance of dikes and sluice gates helps to prevent saltwater intrusion along Highway 1A and Bac Lieu river, in this area the saltwater – freshwater regulation is gradually being improved to serve agricultural and aquaculture practices.

Regarding the terrain characteristics, Bac Lieu is located in the region of the East Sea affected by a semi-irregular tide. Due to the completion of the sluice gates that were built to prevent saltwater intrusion and because the tidal acreage is shrunk, the tidal level is now higher than before, this has the effect of leaching saltwater into shrimp and salt producing areas. To address this issue, it is necessary to dredge the irrigation and dike systems in order to regulate water resources to effectively serve farming and aquaculture. While in the dry season the salinity in the rivers and shrimp ponds increases, during the rainy season the salinity decreases fast for both.

Natural resources in Bac Lieu are distributed as follows:

- Land is divided in 3 main groups: sandy soil (10.08% of the natural area of the city), saline soil (62.25%) and acid sulfate soil land (18.43%).
- Water: salt water (comes from the sea and is mixed with rainwater. It is not suitable for freshwater crops and livestock but is the valuable resource for aquaculture development), groundwater (4 hydrological formations), and surface water (in rainy season freshwater is dominant, but by the end of rainy season water is often acidic and in dry season water is affected by saltwater intrusion).

Bac Lieu is composed by 10 administrative units of wards (wards 1,2,3,5,7,8, and Nha Mat ward) and 3 communes (Hiep Thanh, Vinh Trach and Vinh Trach Dong). By the end of 2015 the population was 155,194 people, with a major percentage of Kinh people, followed by the Khmer and Chinese ethnic minorities. There is an equilibrium between female and male ratio. According to the People's Committee of Bac Lieu Province, both genders have right to give comments, make decisions and discuss problems.

Regarding health issues, the main diseases are related to environmental pollution (41.7%), crowded housing (8.5%), poor diet (11.2%), flies and pests (30.0%) and 27.1% as other causes (such as living habits, low awareness of the community on prevention, care and treatment).

Career opportunities are related directly to the educational background of the people. Most of the people (93.2%) have attended school and university. However, there is still a 6.7 % illiteracy rate in the region, mainly concentrated in poor households in Nha Mat ward and ward 2. Indeed, there is a clear gap between poor households and rich households in the area. The income per capita of rich households (5,182,903VND/person/month) is 8.7 times the income per capita of poor households (594,593VND/person/month). The latter's income generally coming from low-paid, instable and seasonal jobs, while rich households mainly generate revenue from salaries and business activities. Most employment in this region comprises of labour force jobs (44.0%), but there are also people working in the service sector (15.4%), and in state-owned enterprises (13.0%). The percentage of unemployment is at approximately 7.5%.

According to the Peoples Committee of Bac Lieu province, the city reached an economic growth rate of 16.63% in 2015, which is comparatively high growth rate in comparison with other cities in Vietnam. The economic structure of Bac Lieu city in the same year comprised of 45.57% services, 42.04% industries and construction, and 12.39% agriculture and fisheries. Industrial production and small handicraft of Bac Lieu city are being developed based on market demand.

Bac Lieu's agricultural production includes rice, fruits, vegetables, cattle and poultry. Aquaculture and fishery increased gradually from 2012-2015. However, it faces problems such as asynchronous irrigation systems, lack of investment funds for production, prolonged sunny and hot conditions that have negative impacts on shrimp farming due to increasing salinity levels.

The service sector continues to grow. One on hand, Bac Lieu city has opened Bac Lieu shopping center and Hiep Thanh market in Hiep Thanh commune which have relatively stable prices for goods and good compliance of the sellers with regulation on price listing. Tourism has also increased and visitors are increasing the demand for accommodation services.

b) Basic socio-economic and environmental contexts of Tra Vinh, project site:

Tra Vinh Province is located on the Mekong River Delta region, with Ben Tre, Vinh Long and Soc Trang provinces at its borders. It also has 65km of coastline and is surrounded by Tien and Hau rivers. Tra Vinh has a total area of 2,341 square kilometres and a population of over one million people, with 59% of them at working age and distributed through 7 districts: Cau Long, Cau Ke, Tieu Can, Chau Thanh, Tra Cu, Cau Ngang and Duyen Hai. Over 29% of the population is ethnic Khmer. There are also a number of ethnic Chinese (5-6% of the population), and a small Cham population. The number of "poor" households earning less than 90,000d/person/month is 33,545, of which 11,525 households earn less than 60,000/person/month. There is a group of people who are considered the "static poor", they are trapped in a type of poverty that will be difficult to reverse: many of them are landless and in debt to government lending programs and/or private moneylenders. As a result, they are not eligible for any new loans and they must repay with interest.

The economy is predominantly based on agriculture, fish and shrimp breeding. Over 80% of the population are dependent on the agricultural sector. Đĩnh An is one of eight key marine economic areas nationwide, with favourable conditions to develop a sea-based economy, electricity, petrochemicals, shipbuilding, navigation services and tourism.

However, Tra Vinh faces challenges related to the low prices of items obtained from agriculture and aquaculture, such as shrimp, dried coconut, vegetables, and more. Although people have invested in the development of shrimp farming, particularly in the districts of Duyen Hai and Tra Cu, almost 100% of shrimp harvests failed completely. Most people survive through small-scale subsistence farming, handicrafts, and services, but recently have to find other income generating activities. However, demand for labour is limited even in the high season: on average a person can expect to work only 10-15 days in a month, for between 10,000 and 30,000 VND per day. The official unemployment rate is around 10%. In addition, disbursement of capital for infrastructure development is slow and the progress of many licensed investment projects have been delayed.

Tra Vinh province is located in a tropical monsoon region. Dry season is between December to April and the rainy one is between May and November. The annual average temperature is 26C. In this area, ground-water is pumped inland to irrigate farms with upland crops due to the rapid

exhaustion of freshwater ponds. Irrigation was previously done during midday without measuring the amount of water used, hence a large portion of the water evaporated before entering the soil.

The soil in the province, however, is becoming increasingly poor in terms of water-holding capacity and nutrients, and is severely affected by acidity and salinity. Recently, the salinity level of the canal system was reported to be as high as 25%, while the optimum salinity level for shrimp is between 12-15%. Due to this the production and growth of shrimp was reduced, with dead shrimp accounting for 25-30% of the total production. To monitor this situation, the farmers measure the pH and base levels every day and district extension workers also monitor salinity levels from 11 salinity monitoring stations.

3. In depth Vulnerability Assessment

a. Bac Lieu Province

1) Huu Nghi, Vin Trach Dong District

Direct Beneficiary (number of household): 4-500people (80-100 households)

Minority group: Majority of population is Khmer (Ethnic minority)

Infrastructure level: low, detailed in the contents

Livelihood Resources: fishing, haunting, aquaculture (failed)

Income level: low

Education level: elementary school or secondary school

zeature: Huu Nghi commune is newly built commune in 2013 for the migration from the coastal region due to climate change impact. Government provided social housing for migrants but the infrastructure and housing condition is still low.



Figure 10. Location of Huu Nghi commune in Bac Lieu

Water Management:

In Huu Nghi commune, a public water tank and water drainage system has been facilitated, however, the quality of water is not secured with TDS 1,100. According to the government official in Bac Lieu, once they installed the public water tank, there was no proper management of the facility, due to the lack of the management, the water tank no longer functions adequately.



Figure 11. Water tank in the community

As shown in the figure 13, the water drainage system in Huu Nghi commune is covered by waste. The water from each household flows through this water drainage without any treatment.



Figure 12. Water drainage system

Water purification system and upgrading drainage system in the village will benefits approximately 235 people.

Housing Condition:

The houses in Huu Nghi commune has been provided by Government in 2013 when the commune newly built for the migrants. Most of the houses are semi-detached building used by two households and the public toilet is shared with the other households.



Figure 13. House in the community



Figure 14. House alignment and public bathroom

Waste Management:

According to the figure 16, there is no waste management system in Huu Nghi commune. People tend to use the ponds or the aquafarming area as the dumping area and it leads to further water pollution. Waste treatment system can have positive link to water drainage system in the villages and this would benefit 264 people in the villages



Figure 15. Waste Management

☐ Livelihood Resources:

People in Huu Nghi commune still commute every day for 4-5km from their formal residential area, to their daily livelihood. Since the average education level in Huu Nghi commune is elementary school and secondary school, most people from the coastal region rely on fishing and hunting. Even though the government has provided farming land for shrimp farming, the former distribution hasn't been formulated. Due to lack of planning, the farm has been abandoned.



Figure 16. Livelihood resources

2) Commune 14 and Vinh Hau Commune, Hoa Binh district

Potential Direct Beneficiary: around 400 people (will be settled in early 2019)

Infrastructure level: none

Feature: Former residential area has been affected by climate change impact, especially sea level rise, around 400 people are planned to move to commune 14 in early 2019. The government will provide social housing just like the Huu Nghi commune above.

Expected Challenge: Commune 14 might face similar challenges that Huu Nghi has faced since 2013 including insufficient plan for commune, lack of livelihood resources, water security, and insufficient waste management systems.

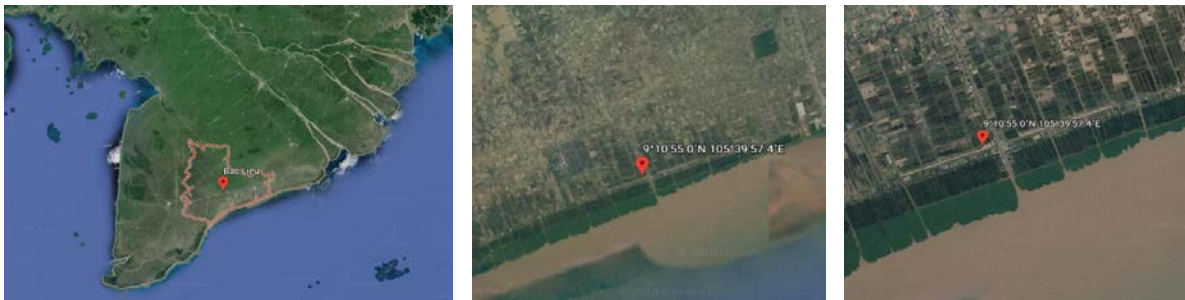


Figure 17. Location of commune 14 in Bac Lieu

☐ Former residential area (Climate Change impacted area):

Around 400 residents living in the vulnerable community are about to migrate to commune 14 in early 2019. This migration is due to the impact of climate change, especially sea level rise. The government has decided to build the new commune for 400 residents in this area.



Figure 18. vulnerable community to the impact of climate change

Current living condition in the vulnerable community is poor as shown in figure 20. Residents in the area are also suffering from the lack of fresh water for drinking and living.



Figure 19. Housing condition in vulnerable community

Potential resettlement area:

The potential resettlement for the residents of the vulnerable area is commune 14 located in Vinh Hau Commune. The plan for migration from the local government is to begin in early 2019, however, basic infrastructure is yet to be provided to commune 14.



Figure 20. Potential resettlement area

According to figure 21 below, the condition of infrastructure is low. Taking into account the timing for the migration, provision of good-conditioned infrastructure is urgent.



Figure 21. Infrastructure in the potential resettlement area

In the circumstances described above, commune 14 is likely to suffer from the same challenges that Huu Nghi commune has been facing since 2013 including fresh water scarcity, lack of livelihood resources and waste management.

A covered well, water restoration, rainwater capture, drainage systems will benefit the most of inhabitants in the villages.

b. Tra Vinh Province

1) Long Hoa, Chau Thanh District

Direct Beneficiary (number of household): 10,280 people (2,547 households)

Infrastructure level: low, detailed in the contents

Livelihood Resources: Agriculture-aquaculture 81.26%

Income level: 37.5 million VND/year per capita

Poverty rate: 12.21%

Households lacking access to clean water: 2,182 (85.67%)

Feature: 136 households in Con Phung village needs resettlements; 2 houses have been destroyed and 5 houses lost their roofs because of tornadoes; water level rise, combined with tide destroyed the shore of 69 shrimp ponds, and 650m of dyke is in risk of land erosion;



Figure 22. Location of Long Hoa

Water Management:

In Long Hoa, people are suffering from lacking of fresh water for drinking and living. Although the government has provided with the rainwater storage tank, only 20% of population living in the center of Long Hoa are currently covered by said tank. The rest of population have to collect rain water individually for their own living and drinking. People also use water pump's in their own

household, but the quality of water from the ground is not sufficient for using as drinking water or water for living.



Figure 23. Water pumping system in the household

According to local people, it is common in Long Hoa to use the waterway as the toilet. As people use the waterway as a toilet, and the water pump for living, the untreated water can be used by local people. A sufficient sanitation system and water management system should be provided in unison. These systems will benefit total approximately 4176 people.



Figure 24. House without sanitation

Waste Management:

According to DONRE in Tra Vinh, there is no proper waste management system or plan in Long Hoa. The absence of a water management system or proper plan leads to the situation that solid waste is abandoned on the road and in the forest. Approximately 1000 people in the commune will have benefit from the waste treatment system and management.



Figure 25. Waste management

People also burn the waste from their household in the public space such as the forest near their house. This type of burned-out area is easily spotted in Long Hoa commune. According to the current waste management in Long Hoa, raising people’s awareness about waste management is an urgent priority.



Figure 26. Burning the waste

Land Erosion:

Since Long Hoa is located in the lower part of the main island in Chau Thanh district, land erosion from sea level rise is the most severe challenge related to climate change impact. As seen in the figures below, no protection is currently provided to prevent land erosion along the coast and waterways. Eco-friendly land protection system will provide the benefit to approximately 4200 people in the commune.



Figure 27. Land erosion

2) Hoa Minh, Chau Thanh District

Direct Beneficiary (number of household): 14,919 people (3,309households)

Infrastructure level: low, detailed in the contents

Livelihood Resources: Agriculture - aquaculture (82%)

Income level: 41.8 million VND/year per capita

Feature: Huu Nghi commune was newly built in 2013 for the migrants from the coastal region due to climate change impact. The government provided social housing for the migrants but the infrastructure and housing condition is still low.



Figure 28. Location of Hoa Minh

In Hoa Minh Commune, for providing water treatment, rainwater capture, waster restoration, and a covered well system will benefit approximately 4700 people, and land erosion can be protected with eco-friendly land restoration and protection system, and this can benefit approximately 5200 people in the Commune.

Housing condition:

In Hoa Minh, many houses are located along the river way without climate change impact resilience design. People are at risk from damage associated with local flooding.



Figure 29. House along the waterway

Basic Infrastructure:

In the whole island in Chau Thanh District, there are approximately 100 bridges over the waterway. More than 80% of them are made with wood and are not resilient against climate change impact. When heavy storms come, the wooden bridge can easily collapse. The collapse of basic infrastructure such as bridges will inevitably lead to increased vulnerability of the local community. Approximately 80 bridges would be upgraded and more than 160 households and 800 people will have benefits.



Figure 30. Wooden bridge

❑ Land Erosion:

Due to the geographical location of Hoa Minh on the island, there are many waterways throughout the commune. Along the waterways, the ecosystem and the available land is threatened by erosion. Mangrove plantation is not sufficiently provided in the area to protect the coast and river banks from erosion.



Figure 31. Land Erosion

4. Natural Hazard

With the exception of 2016 and 2017 when drought severely affected the Mekong Delta Region, generally storms and flooding are the most frequent disasters (storm: 52%, flood: 42% of the total number of disasters). The classification of risk from natural disaster in Vietnam is as follows:

Table 7. Natural Disaster Risks in Vietnam

High Risk	Medium Risk	Low Risk
Flood	Hail rain / Tornado	Earthquake
Typhoon	Drought	Accident (Technology)
Inundation	Landslide	Frost
	Flash Flood	Damaging Cold
	Deforestation	

Source: The World Bank, Vietnam "Increasing Resilience to Climate Change and Natural Hazard"

The proposed project used the data from The World bank to demonstrate the overall natural hazard exposure for each province and the definitions for each hazard level is as follows:

- ❑ **High:** Users should be highly aware of potentially severe damage from this hazard for the project location. Without taking measures to mitigate the hazard and risk, high levels of damage can be expected to occur within the project or human lifetime (and potentially frequently in that timeframe, for hydro-meteorological hazards, e.g., floods, extreme heat)
- ❑ **Medium:** Users should be aware of potentially damaging effects of this hazard for the project location. Potentially damaging events can be expected to occur within the project or human lifetime and measures to mitigate the hazard and risk should be considered. For hydro-meteorological hazards, damaging effects could occur frequently in that timeframe
- ❑ **Low:** Potentially damaging events are less likely to occur within the project or human lifetime but are still possible. Measures to mitigate the hazard and risk would be prudent at critical locations. Hazard has been classified based on long-term averages, and there is still potential that damaging events could occur in this timeframe
- ❑ **Very Low:** Available data suggest that potentially damaging effects are unlikely to occur, on average, in the project or human lifetime. Hazard have been classified based on long-term averages, and there is still potential that damaging events could occur in this timeframe

a) *Exposure to natural hazard in Bac Lieu:*

In Bac Lieu, the natural hazards with the worst effects on the region are river flood, urban flood, coastal flood, cyclone, wild fire. Extreme heat is classified as medium level hazard while earthquake, Tsunami and water scarcity are defined as low level hazard. Each district shows a slightly different level of exposure for each natural hazard as follows:

Table 8. Exposure to natural hazard in Bac Lieu

River Flood	Urban Flood	Coastal Flood	Earthquake	Tsunami
Volcano	Cyclone	Water Scarcity	Extreme Heat	Wild Fire

b) *Exposure to natural hazard in Tra Vinh:*

In Tra Vinh, the natural hazards with the greatest effect on the region are coastal flood, cyclone, wild fire. River Flood, Urban Flood, Tsunami and extreme heat are classified as medium level hazard while earthquake and water scarcity are defined as low level hazard. Each district shows a slightly different level of exposure for each natural hazard as follows:

Table 9. Exposure to natural hazard in Tra Vinh

River Flood	Urban Flood	Coastal Flood	Earthquake	Tsunami
Volcano	Cyclone	Water Scarcity	Extreme Heat	Wild Fire



5. Gap and synergy from the existing projects

Throughout this region many of the hard-environmental projects focus on flood defense and salinity intrusion. These large-scale projects include The World Bank Mekong Delta Integrated Climate Resilience and Sustainable Livelihoods Project which is working to protect the full Mekong coastal region through the strengthening of coastal and waterway defenses. Projects supporting sustainable Mangrove plantations for coastal defense are also a feature of Bac Lieu and Tra Vinh.

In Tra Vinh one of the most prominent projects is IFAD's AMD project. This project has both hard and soft components. It is also the only major project in the region conducting small scale local hard interventions, these are conducted through the establishment of several funds to support local governance structures in completing projects at household and commune level through consultation with local actors. Whereas the soft interventions such as the sustainable planning aspects of this project have covered the entirety of both provinces, the funding for local development has been limited to a select number of communes divided between the two. This project will conclude in March 2020 just as this project is due to begin, early consultation has identified possible gaps such as AMD's primary focus on supporting agri/aqua-cultural development, at this moment in time the two organizations have committed to work together to find synergy between these two complimentary projects.

According to table 10, Bac Lieu has the largest number of on-going and recently finished projects related to enhancing the resilience capacity against climate change impact. In Bac Lieu it is worth noting that while of the two target provinces there is the highest concentration of projects taking place, many of the projects that make up this difference are have a larger geographical scope and as such are less focused on change at the macro level. Of these macro level projects many are focused on agriculture/salinity intrusion interventions however the different nature of the landscape in Bac Lieu has led to a different approach to deal with the problem, this has primarily been achieved through UNDP's Expanding Models of Rice-Shrimp Cultivation for Efficient Management and Sustainable Use of Alkaline Lands project which propagated a system of seasonal rotation between rice and shrimp. Other projects of note in the region are The World Bank Scaling-Up Urban Upgrading Project which is working on improving city flood defenses and sewage systems and GIZ's green growth reforms program.

Throughout Bac Lieu and Tra Vinh provinces there is a strong onus on capacity building through livelihood support with little focus on the household and community level development, especially for minority and low-income populations. UN Habitat aims to fill that gap by providing small scale community driven climate change adaptation development in some of the most vulnerable communes in these provinces. For more detailed information of the relevant projects in Mekong Delta Region, please see PART II – F (other funding source).

Table 10. Summary of relevant projects in Bac Lieu and Tra Vinh

Geographic Characteristics	Total project	Policy/ Institutional Capacity Building	Hard Environmental-Related Infrastructure	Hard Economic-Related Infrastructure	Community level Capacity Building
Bac Lieu	11	1 (9%)	5 (46%)	1 (9%)	4 (36%)
Tra Vinh	5	1 (20%)	3 (60%)	0 (0%)	1 (20%)
SUM	16	2 (13%)	8 (50%)	1 (6.5%)	5 (30.5%)

Through the vulnerability assessment, the exposure to natural hazard, and finding gaps and making synergy with other projects, the proposed project has identified 2 communes from Bac Lieu and Tra Vinh for the project site as follows:

Table 11. Summary of relevant projects in Bac Lieu and Tra Vinh

Province	District	Commune	Feature	Beneficiary	Livelihood Resources	Challenges	Infrastructure Level
Bac Lieu	Vin Trach Dong	Huu Nghi	Resettlement area with ethnic minority group	400-500	fishing, haunting	Salinity Intrusion, lack of fresh water	low
	Vinh Hau	Commune 14	Newly planned settlement in 2019	400	-		-
Tra Vinh	Chau Than	Long Hoa	Island	10,280	Agriculture; Aquaculture	Sea level rise; Destroyed livelihood resources; lack of fresh water; land erosion	low
		Hoa Minh		14,919		Sea level rise; Rain and storm;	low
SUM				26,099			

B. Project Objectives:

Main Objective

The main objective of the proposed project is **“to enhance the resilience, inclusive and sustainable eco-human settlement development through small scale infrastructure interventions in the coastal regions of the Mekong Delta in Vietnam.”** To align with a government request to promote sustainable eco-human settlement in Vietnam, this project aims to improve the poor and vulnerable communes where climate change impacts have the greatest affect. It is structured around the following components below.

To accomplish this goal, a detailed plan for human settlement development is required; this will be accomplished by designing a set of guidelines and capacity building for eco-human settlement development. Secondly, along with these guidelines, an integrated form of planning with respects of eco system-based climate change adaptation should be achieved by local action. To support both of these components, basic service infrastructure needs to be provided and built in small-scale. The

last project output will be raising awareness and knowledge management through an eco-human settlement development framework.

- **Component 1:** Institutional and community capacity building toward eco-human settlement development for supporting enhancement of local climate response actions
 - This is in line with AF outcome 1: Reduce exposure and vulnerability to climate-related hazards and threats with a particular view to community level resilience
 - AF outcome 2: Strengthened institutional capacity to reduce risks associated with climate-induced socioeconomic and environmental losses
 - AF outcome 7: Improved policies and regulations that promote and enforce resilience measures
- **Component 2:** Integrated planning with respects of eco system-based climate change adaptation and building climate resilient capacity and action plan at local level
 - This is in line with AF outcome 1: Reduce exposure and vulnerability to climate-related hazards and threats with a particular view to community level resilience
 - AF outcome 2: Strengthened institutional capacity to reduce risks associated with climate-induced socioeconomic and environmental losses
 - AF outcome 7: Improved policies and regulations that promote and enforce resilience measures
- **Component3:** Sustainability built through small-scale protective and basic service infrastructure
 - This is in line with AF outcome 4: Increase adaptive capacity with relevant development and natural resource sectors
 - AF outcome 5: Increase ecosystem resilience in response to climate change and variability-induced stress
 - AF outcome 6: Diversified and strengthened livelihoods and sources of in-come for vulnerable people in targeted area
- **Component4:** Awareness Raising and Knowledge Management
 - This is in line with AF outcome 3: Strengthen awareness and ownership of adaptation and climate risk reduction processes and capacity

C. Project Components and Financing:

Table 12. Project Components

Project Components	Expected Outcomes	Expected Concrete Outputs	Amount (US\$)
1. Institutional and community capacity building toward eco-human settlement	1.1 Increase awareness on resilience of human settlements and ecosystem as a	1.1. Capacity building support provided to national government and local authorities to increase the	800,000 (16.7%)

<p>development for supporting to enhance local climate response actions</p>	<p>result of enhanced institutional capacity in development of eco-human settlement strategy and action plan</p>	<p>resilience of human settlement and ecosystem</p> <p>1.1.1. Guidance and training materials development for vulnerability and risk assessment at local levels</p> <p>1.1.2. Planning tools and training materials development for planning approach, strategy and action plan development,</p> <p>1.1.3. Project team orientation/training</p> <p>1.1.4. National Induction Workshop (National and provincial participants)</p> <p>1.1.5. National training of facilitators workshop (national and provincial participants), enabling facilitation of eco-human settlement strategy and action plan development</p> <p>1.1.6. Province and District level workshops and trainings, enabling them to set up eco-human settlement strategy and action plan development</p> <p>1.1.7. Community action planning workshops provided at commune level for the development of climate resilient community plans</p>	
<p>2. Integrated planning in respect of eco system-based climate change adaptation and building climate resilient capacity and action plan at local level</p>	<p>2.1 Increased awareness on assessing system, including infrastructure and natural assets, and planning for adaptation</p> <p>Strengthened knowledge of adaptation and climate risk reduction processes and capacity</p>	<p>2.1. Comprehensive workshops for integrating the eco-human settlement strategies and plans (National, province, district and commune)</p> <p>2.1.1. Community action planning workshops to districts and communes for the development of climate resilient (integrated)</p>	<p>700,000 (14.6%)</p>

		<p>community plans (Utilizing the tools and facilitators developed under 1.1)</p> <p>2.1.1.1. Community level vulnerability and Risk Assessment</p> <p>2.1.1.2. Develop community level eco-human settlement planning based on the output 2.1.2</p>	
3. Sustainability built through small-scale protective and basic service infrastructure	3.1 Increased community adaptive capacity with climate resilient and development sectors, and increase ecosystem resilience in response to climate change	<p>3.1.1 Vulnerable assets strengthened, new sustainable assets constructed (Sectorial approach): Waste, climate-resilient infrastructure: i.e. bridge, housing, and ecosystem</p> <p>3.1.1.1. Small-scale water salination system built to provide clean and safe water for both living and agriculture (Water)</p> <p>3.1.1.2. Climate resilience infrastructure building and refurbishing (Infrastructure)</p> <p>3.1.1.3. Climate resilience housing upgrade (Housing)</p> <p>3.1.1.4. Enhancing ecosystem (Ecosystem)</p> <p>3.1.1.5. Small scale eco-friendly waste treatment and management facility built (Waste)</p>	3,100,000 (64.5%)
4. Awareness Raising and Knowledge Management	4.1 Project implementation is fully transparent. All stakeholders are informed of products and results and have	4.1.1. Lessons learned and best practices regarding resilient urban community development/housing are generated, captured and distributed to other	200,000 (4.2%)

	access for replication;	communities, civil society, and policy-makers in government appropriate mechanisms	
		4.1.2. Regional advocacy and replication	
5. Project Activities			4,800,000
6. Project/Programme Execution cost			504,000
7. Total Project/Programme Cost			5,304,000
8. Project/Programme Cycle Management Fee charged by the Implementing Entity (if appreciable)			450,840
Amount of Financing Requested			5,754,840

D. Project Calendar:

Table 13. Project Calendar

Milestones	Expected Dates
Start of Project/Programme Implementation	01-2020
Project/Programme Closing	01-2024
Terminal Evaluation	03-2023

PART II: PROJECT / PROGRAMME JUSTIFICATION

A. The Project Components

The target areas chosen for the project are characterised by high levels of exposure to severe climate change risks, especially sea-level rise, salinity intrusion, drought, land erosion and rainfall pattern change. Climate sensitivity is underpinned by rapid urbanization and population growth, underlying vulnerabilities (poverty, limited access to basic services, gender inequalities, weather dependent livelihoods, environmental and ecosystem degradation) and limited adaptive capacity at household, community and governance level.

In order to achieve the overall project objective, “to enhance the resilience, inclusive and sustainable eco-human settlement development through small scale infrastructure interventions in the coastal regions of the Mekong Delta in Vietnam”, the project takes a comprehensive and holistic approach, which combines a number of horizontally and vertically interrelated resilience approaches towards the strengthening of institutions, communities, ecosystems and physical, natural and social assets.. This supports the integrated approach to improving knowledge of climate resilience and strengthening basic service infrastructure through improved capacity, better local-level planning and community-level implementation in the coastal regions of the Mekong Delta in Vietnam.

The action taken by this project will be targeted to benefit the most vulnerable people in the coastal regions of the Mekong Delta in Vietnam. To do this, a combination of soft and hard measures is

proposed to ensure that resilience at the household and commune level is strengthened sustainably for resilience building that responds to current and future needs.

Soft measures include institutional and community capacity building and action plans, these are designed to target the most vulnerable settlements and to design and implement the most necessary actions, to improve capacity at commune and district level. It will also aim to sustain these actions and replicate them elsewhere through the development of better planning practices which will mobilise national and international finance. Hard measures will comprise of investments in small-scale protective and basic service infrastructure and natural assets designed to increase people's resilience. With a strong mix of soft and hard interventions, it is anticipated that local resilience at household, community and human settlement level will be sustainably strengthened.

Whilst the planned interventions are strongly rooted in national and local priorities the reshaped global development and climate change agenda provides further guidance. In particular, Sustainable Development Goal (SDG) 11 (and several of its targets); Make cities and human settlements inclusive, safe, resilient and sustainable, and Goal 6, (and its targets), Ensuring availability and sustainable management of water and sanitation for all will be addressed by the project. The New Urban Agenda which emerged as an outcome of the Third United Nations Conference on Housing and Sustainable Urban Development (Habitat III, in Quito, October 2016) will also be utilised as a framework to guide this the project.

The specific needs of women, people with disabilities and youths will be considered at all stages of the project. This will be achieved through engaging representatives of these vulnerable groups in community and stakeholder consultations in the planning process, through a community-based approach and through the people's process – where community groups are formed and sustained throughout all stages of the project and through which communities participate in project implementation and monitoring¹.

The project is developed with four interrelated components, which focus on the importance of institutional and community capacity strengthening within the human settlement plan and guideline development, integrated planning for human settlement and ecosystem, tangible actions, and knowledge management.

The components of the project are as follows:

Component 1: Institutional and community capacity building toward eco-human settlement development for supporting enhancement of local climate response actions

In line with AF outcome 1, 2 and 7 with national government priorities (See Section D) this component will focus on reducing the exposure and vulnerability to climate change risk through the development of holistic planning and strategies for eco-human settlement and institutional capacity building. This will be done by:

¹ Development driven by people/Support Paradigm: when people stays at the center of development planning process, the resource can be optimized with greater utility impacting larger number of people: <http://sopheapfocus.com/wp-content/uploads/2010/06/Picture-31.png> People's process of development can be witnessed through the evolve-ment of people's desire to improve their lives. Humans developed their settlement from living in caves, then build-ing shelters, and now home. Along this settlement evolution, they had also established certain norms, standards, and a mutual understanding surrounding their community. That is called the people's process of development.

- ❑ Guidance and training materials development for vulnerability and risk assessment at local levels
- ❑ Planning tools and training materials development for planning approach, strategy and action plan development, resilient infrastructure
- ❑ National training of facilitators workshop (national and provincial participants), enabling participants to set up eco-human settlement strategy and action plan development
- ❑ Province and District level workshops and trainings, enabling participants to set up eco-human settlement strategy and action plan development
- ❑ Community action planning workshops provided at commune level for the development of community resilience plans

The aim of the activities in Component 1 is to support the capacity building of government officials and practitioners in order to enable them to set up an eco-human settlement strategy and climate change action plan.

1. Existing tools for planning for eco-human settlement strategy and climate change action plan will be reviewed, and the guidance and training tools will be developed in English and Vietnamese. These guidance and training tools will be reviewed by governmental officials and practitioners. For effective implementation, the guidance and training tools will be applied in the pilot training workshop with practitioners.
2. In the implementation, the training workshop will initially be held at national and provincial levels. In these activities, talented practitioners and trainers will be identified and trained for the community level training and action-planning workshop at local level. The outcome of the national and provincial level workshops will be enhanced cross-sectorial coordination. This is a critical aspect of the eco-human settlement strategy and action plan development. Climate change is a crosscutting issue, thus horizontal and vertical coordination will be necessary. National and provincial levels' trainings and workshop will help to increase the coordination of eco-human settlement planning.
3. district and commune levels' trainings and workshops will be conducted. These will help local people understand the impacts of climate change and the importance of forward planning. 'Mainstreaming climate change adaptation into the human settlement planning' will be implemented with locals. Also, the demand for support will be identified and a sectorial approach can be applied to it.

This component has been included in the project because it means that the intervention implemented under Component 3 will be based on the integrated planning for resilience capacity building. UN-Habitat's P4CC² approach ensures that activities are feasible, effective and acceptable to communities, this ensures a solid framework for the participatory approach. The action-planning

² P4CC's principles are to be strategic; meaning implementation should make the best use of the resources (financial, human and time) available, values-based; meaning that actions should be based on what matters most to communities, participatory; that the project should engage as many different stakeholders as possible throughout the project cycle, and integrated; meaning it should align with other plans and policies insofar as possible.

phase also enhances the ability of UN-Habitat and the executing partner to ensure compliance with the Environmental and Social Policy of the Adaptation Fund. Further details of compliance with this are provided in Section K.

Component 2: Integrated planning with respect to the eco system-based climate change adaptation and building climate resilient capacity and action plan at local level

In line with AF outcome 1, 2, and 7 with national government priorities (See Section D) this component will focus on the development of the integrating human settlement and ecosystem into the planning. This will be done by:

- ❑ Comprehensive workshops for integrating the eco-human settlement strategies and plans (province, district and commune)
- ❑ Community action planning workshops to districts and communes for the development of climate resilient (integrated) community plans (Utilizing the tools and facilitators developed under 1.1)

Component 2 is integral to the success of the project. This component is required to execute Component 3 in a way that is efficient and sustainable. Component 2 will begin as the capacity building section of action planning under Component 1. The proposed intervention will be presented as part of the integrated planning for eco-human settlement strategy and action plan development. To ensure awareness and ownership over the project activities, stakeholders and targeted areas will participate in all steps (training, planning, implementation, monitoring, etc) of the project activities and trained to ensure a holistic and comprehensive integrated planning for green and blue networks.

The facilitation of local action planning coupled with bringing together local authorities and communities, will provide a comprehensive resilience framework. The prioritization of vulnerabilities related to the alignment of the ecosystem with human settlement focus of the project will also take place under this component. Furthermore, this component aims to promote the integration of the planning for eco-human settlement development strategy and climate change action plan.

For example, green networks will be assessed and will then be included into the human settlement (urban) planning, also blue networks will be examined mainstreamed into planning. Based on the data from the vulnerability and Risk assessment, 'Green and Blue networks' will be analysed and then discussed in the workshop at district and community levels.

More specifically; the role of the 'Green Network' is to protect green related ecosystems in order to protect them from the impact of flooding, land erosion, and sea-level rise. The 'Blue Network' is a part of planning for protecting water related impacts from climate change and natural hazards. These networks will be included in the planning for the integrated development strategies and climate change action plans. It will then result in the outcome of "mainstreaming climate change adaptation into the eco-human settlement planning".

To build the capacity of communities to climate resilience, training/workshops will be provided at the community level to develop local capacities to plan, construct and maintain climate and disaster resilient infrastructures. The capacity will be sustained through the development of guidelines in planning, construction and maintaining small-scale climate and disaster resilient infrastructure systems and through community agreements for executing component 3.

Component 3: Sustainability built through small-scale protective and basic service infrastructure

In line with AF outcome 4,5 and 6 with national government priorities (See Section D) this component will increase resilience through a mix of soft and hard measures that will include year-round water supply, flood/coastal flood protection, sanitation, ecosystem-based adaptation options including mangrove planting and rehabilitation and commune-level law enforcement of the marine protected area. This will be done by:

- ❑ Vulnerable assets strengthened, new sustainable assets constructed (Sectorial approach): Waste, climate-resilient infrastructure (i.e. bridge), housing, and ecosystem
 - Constructing new and restoring old infrastructure in highly affected locations (districts/communities): Improving climate resilient infrastructure and upgrading the protected areas. This will be done through improved drainage system, rainwater harvesting, capture and storage and improved filtration facilities.
 - Providing land and coastal area protection with improving coastal and river way ecosystems
- ❑ Participatory planning, construction and maintenance of resilient infrastructure

The component aims at enhancing climate and disaster resilient infrastructure systems in human settlements. Due to the projected climate change impacts and disasters already occurring in coastal areas, ecosystem and human settlement can only be protected through physical intervention (with the support of the soft interventions above). Interventions will be selected by assessing their adaptive capacity, the impact of climate change, cost-effectiveness, risks and sustainability, this will result in protection of the coastal region against, flooding, sea level rise, drought, and salinity intrusion (i.e mangroves, or other protective infrastructure). As the result of the subsequent and integrated development plans, community action plans will be developed with 'Green and Blue networks', which will result in increased resilience of water, sanitation, mangrove and land erosion related infrastructure systems, these will be constructed in the most vulnerable/at risk settlements. Where there is prioritised need, climate and disaster resilience of schools and other community infrastructure may be supported.

The project will be both innovative and efficient by using, where possible, the People's Process as a means to implement activities. The People's Process mobilises local people from the affected/target areas to take decisions regarding their resilience, to play an active role in the implementation of the measures and support them in implementing this process. Through this process communities/beneficiaries will have greater ownership of the process of building resilience, and will result in reduced implementation costs.

Component 4: Awareness Raising and Knowledge Management

In line with AF outcome 3 with national priorities (See Section D) this component will ensure that project implementation is fully transparent, that all stakeholders are informed of products and results and that they have access to these for replication. More-over, this component will also contain specific activities to further replicate and scale up the knowledge and awareness building component of this project. This will be done by:

- ❑ Lesson learned and best practices regarding resilient urban community development/housing are generated, captured and distributed to other communities, civil society, and policy-makers in government appropriate mechanisms

- ❑ Advocacy platform built at the national level, with other stakeholders working on local level climate change adaptation work
- ❑ Regional advocacy and replication

Lessons regarding increasing the flood resilience of communities need to be captured and municipal and district level government officials trained to ensure the sustainability of this project and effective replication of best practices.

All knowledge products generated will be made available on a digital format in English and Vietnamese, and uploaded to web portal and spatial database.

B. Economic, Social, and Environmental Benefits:

According to the consultations undertaken in the development of this concept note, locals face serious economic challenges due to the impact of climate change and natural hazards.

The consultation also identified that several climatic impacts and hazards cause resettlement of locals to other designated areas and have an impact on loss of livelihood strategy and resources. The designated resettlement areas have not been well structured for sustainable development of eco-human settlement. There are five challenges, which are water management, waste treatment, climate resilient infrastructure, housing, and livelihood strategy and resources.

A lack of basic infrastructure and service in terms of the five challenges, high exposure to the impact of climate change and natural hazards mean that people regularly lose assets and have less adaptive capacity against the impact of climate change. First, for resettlement areas, they are still suffering from lack of basic infrastructure and service, coupled with a severe lack of livelihood resources and strategy. This has resulted in many people returning to their original settlement areas for livelihood resources and strategy. Without intervention, they would suffer from the impact of climate change and natural hazards as there is no specific strategy and action plan for building resilience capacity. Second, for vulnerable areas, locals are suffering from a lack of protective and climate-resilient infrastructures, and high exposure to sea level rise, coastal flooding, drought, and storms. The capacity building for planning and vulnerability assessment is required to identify safe areas for development and for understanding remaining future climate change threats to which the activities should respond. In both areas, small scale infrastructure interventions will be implemented to enhance the adaptive capacity of communities and locals in terms of water, waste, infrastructure, housing and livelihoods.

By implementing a combination of soft and hard intervention, this project is expected to provide reductions in future climate related economic, household and livelihood losses, and reduction in vulnerabilities of women, indigenous people and youth and reduction in environmental degradation. Moreover, the project will bring numerous social benefits. Women and youth specifically will be involved in the planning, assessment and implementation of all components. In the consultation process focus group interviews will be conducted with women and youth unions in order to encourage them to fully participate in the project.

Given that communities, and especially vulnerable groups, will be involved throughout the project, they will have the opportunity to directly influence project activities and outcomes, thus influencing their direct project benefits. The project activities will be adapted to local impacts of climate change and natural hazards such as sea level rise, flooding, drought and storms, but also to exposure to environmental degradation.

Table 14. Overview of Economic, Social and Environmental Benefits

Type of Benefit	Baseline	With/After Project
Economic	<p>Climate change is already leading to economic and livelihood losses, especially caused by sea level rise and floods, but also by droughts.</p> <p>Less capacity for livelihood strategy and resources in the communities</p> <p>No planning (action plan and strategy) for livelihood strategy and resources</p> <p>Locals face high damage and financial losses as a result. The risks and vulnerability will be assessed under the project and baseline will be set after the capacity building and action on planning, and vulnerability and risk assessment before the proposed project interventions.</p>	<p>Reduction in economic and household losses due to increased resilience of institutions, communities and physical and natural assets, ecosystems and livelihoods and ecosystem.</p> <p>High economic costs of flooding caused by damage on infrastructure and assets can be mitigated; labour intensive works will bring temporary jobs for youths and women and reduce unemployment; flood risk reduction increases confidence of investors in the city;</p> <p>New climate resilience infrastructure and service contributes to economic benefits</p> <p>Community participation in infrastructure projects will benefit the community, livelihood strategy is also to primarily be sourced from the community. Additionally, resilient technologies will be imparted and may provide new livelihood opportunities.</p>
Social	<p>Poor quality housing and infrastructure in the target areas further drive vulnerability, and create additional challenges such as a lack of safety, while facilitating the spread of disease.</p> <p>Regular natural hazards can increasingly be considered as drivers of poverty and lead to financial losses, and compound social problems such as sanitation, food security, community safety issues. The lack of (resilient) houses/ infrastructure, high poverty incidences and density in resettlement areas lead to relative safety issues, especially for women, elderly, disabled people and youth</p> <p>Increasing inequality in the resettlement areas shows that the poorest are not sharing in the proceeds of the country's rapid economic growth</p>	<p>Reduction in climate induced poverty, fatality rates, diseases and food security and safety issues due to increased resilience of institutions, communities and physical and natural assets, ecosystems and livelihoods.</p> <p>Health benefits can be leveraged (stagnant waters are breeding grounds for mosquitoes and water borne diseases); community involvement brings ownership of the intervention and a higher probability of sustainability;</p> <p>Capacity development directs involvement in adaptation actions, increases the resilience capacity of the most disadvantaged in the provinces.</p> <p>Safe and resilient infrastructure will increase security of women and other vulnerable groups and will reduce climate-impacted issues.</p> <p>New climate resilience infrastructure and service contributes to social well-being.</p> <p>The project will use the vulnerability assessment and action planning process conducted in component 1 to ensure that actions target the poorest and most vulnerable, including women, youth and the elderly.</p>

		Alignment with the commune/district investment plans and increased capacity for officials at those levels to plan for and manage climate resilient investments will ensure that infrastructure and settlements are more resilient in the long term.
Environmental	<p>Severe environmental degradation has taken place throughout the coastal area of Viet Nam</p> <p>Climate change is already leading to negative environmental impacts, especially differences in temperature and precipitation, leading to floods and droughts, which in turn leads to above factors and erosion, deforestation, etc</p> <p>Ecosystem degradation and poor waste management lead to reduction of livelihood options and health issues and flood risks due to insufficient waste disposal.</p> <p>The often-informal nature of the target settlements creates environmental problems, especially in waste management</p>	<p>Reduction in climate induced environmental degradation and losses, waste production because of environmental/ecosystem protection, community-based waste reduction and recycling schemes and energy efficient building construction techniques.</p> <p>Reduced human impact through changes to land plans and regulations/zoning, waste e.g. community-based waste reduction and recycling schemes and energy efficient building construction techniques.</p> <p>Promotion of ecosystem-based adaptation in the communities, leading to environmental benefits</p> <p>Reduction of soil erosion and land degradation. Proper waste management will have benefits on the environment through reduced flow of leachates, and reduced air, water and soil pollution in general.</p>

C. Cost-Effectiveness of the Project:

The proposed project maximised cost effectiveness in a number of ways:

Cost effectiveness for the 'Hard' with 'Soft'

The design and implementation of the project focuses on maximizing the size of the hard/tangible component (64.5%) to directly benefit the most vulnerable populations. Where the project makes investments in soft activities, these will either a) directly support the hard investments (i.e training in installation or operation and maintenance), or b) invest in strengthening commune/district level planning – which will help to sustain and replicate the benefits of the project. This means that the 'Soft' component to those activities is required to support the appropriate implementation of the 'hard' component to ensure sustainability of the project.

Cost effective investment

When the project undertakes action planning; cost effectiveness, adaptation-cost effectiveness, 'time to adaptation benefits' and 'no-regret' will all be factors in prioritising investments. This is standard practice according to UN-Habitat's well-established Planning for Climate Change

methodology. This means that cost-effectiveness; adaptation effectiveness and development effectiveness are all part of the action planning process. UN-Habitat also has experience of conducting cost-benefit analysis of specific project options, where their immediate benefit is not clear³. The technical partner of KEITI will conduct feasibility study for environmental technology implementation, which is small-scale hard infrastructure intervention in Component 3. Thus, cost-benefit analysis will also be conducted with technical base.

Cost effective operation through community contribution

UN-Habitat will implement the hard components of the project through the People’s Process where possible. The project will be implemented in close partnership with communities and local government institutions. This implementation approach has been shown to reduce implementation costs by 20-30% over the life of the project by; using community labour instead of external contractors, procuring local materials where they are available.

All investments will be designed to be resilient. UN-Habitat will ensure that it does not select the cheapest options, but the most cost-effective. This means that if resilient infrastructure has a higher investment cost for a demonstrated longer lifespan and/or greater adaptation benefits it will be chosen over options with a lower initial cost.

The alternative implementation model to the People’s Process is to use external contractors, which, as highlighted above, is more expensive and less likely to foster local ownership.

Cost effectiveness of technical solution

General hardware/infrastructure investments have been pre-identified and need to be further developed during the development of the full project proposal. They will be technically finalized through community and expert consultations (as a result of the activities under component 2).

As for resilient design of basic infrastructure, the initial costs are estimated to be around 30-50 per cent higher than non-resilient design. However, the infrastructure is expected to last at least twice as long (thus is more sustainable and cost effective) as non-resilient designed infrastructure because it will still be accessible during and after every flood, storm, salinity intrusion and drought. As for the costs per infrastructure type, this will vary significantly depending on the location of such an intervention (i.e. remoteness, size, terrain, etc.) This is particularly relevant to Component 3 of the project, as US\$2.8m will be invested in resilient infrastructure.

Table 15 shows that to which extent would the proposed actions are more cost effective.

Table 15. Brief Cost Effectiveness Analysis of Proposed Adaptation Options

Proposed Action	Cost Effectiveness Criteria		Alternative Action	Cost Effectiveness Criteria	
Constructing new and restoring old water related system and infrastructure in highly drought	Future cost of climate change	✓	Building sea walls for protecting salinity intrusion and sea level rise, and water system	Future cost of climate change	✓
	Project efficiency	✓		Project efficiency	✗
	Community involvement	✓		Community involvement	✓

³ See for example this example for urban ecosystem-based adaptation options conducted in Fiji - http://www.fukuoka.unhabitat.org/projects/voices/pacific_islands/detail07_en.html

and salinity intrusion locations (Blue Network)	Cost/Feasibility	✓	for rainwater	Cost/Feasibility	✗
	Environmental and social safeguarding risks	✓		Environmental and social safeguarding risks	More Risk
Providing basic service, especially water supply, to drought location. With waster harvesting, capture and storage and improved filtration (Blue Network)	Future cost of climate change	✓	Extending the water supply network (piped water) and construct wells for underground water	Future cost of climate change	✗
	Project efficiency	✓		Project efficiency	✗
	Community involvement	✓		Community involvement	✓
	Cost/Feasibility	✓		Cost/Feasibility	✗
	Environmental and social safeguarding risks	Less Risk		Environmental and social safeguarding risks	More Risk
Improving coastal ecosystem for protecting land erosion and enhancing marine protected areas (Green Network)	Future cost of climate change	✓	Building sea wall and alternative livelihoods (i.e Shrimp cultivating)	Future cost of climate change	✗
	Project efficiency	✓		Project efficiency	✗
	Community involvement	✓		Community involvement	✗
	Cost/Feasibility	✓		Cost/Feasibility	✗
	Environmental and social safeguarding risks	Less Risk		Environmental and social safeguarding risks	More Risk
Expanding the green areas for protecting sea level rise and flooding (wetland) (Green Network)	Future cost of climate change	✓	Relocation / Building sea walls / alternative livelihoods	Future cost of climate change	✗
	Project efficiency	✓		Project efficiency	✗
	Community involvement	✓		Community involvement	✗
	Cost/Feasibility	✓		Cost/Feasibility	✗
	Environmental and social safeguarding risks	Less Risk		Environmental and social safeguarding risks	More Risk
Developing and improving waste treatment system for protecting ecosystem (Green Network)	Future cost of climate change	✓	Develop landfills areas	Future cost of climate change	✗
	Project efficiency	✓		Project efficiency	✗
	Community involvement	✓		Community involvement	✗
	Cost/Feasibility	✓		Cost/Feasibility	✗

	Environmental and social safeguarding risks	Less Risk		Environmental and social safeguarding risks	More Risk
Improving basic physical infrastructures (Bridge etc)	Future cost of climate change	✓	Resettlement	Future cost of climate change	✗
	Project efficiency	✓		Project efficiency	✗
	Community involvement	✓		Community involvement	✗
	Cost/Feasibility	✓		Cost/Feasibility	✗
	Environmental and social safeguarding risks	Less Risk		Environmental and social safeguarding risks	More Risk
Enhancing climate resilient housing	Future cost of climate change	✓	Resettlement /Alternative livelihoods	Future cost of climate change	✗
	Project efficiency	✓		Project efficiency	✓
	Community involvement	✓		Community involvement	✗
	Cost/Feasibility	✓		Cost/Feasibility	✗
	Environmental and social safeguarding risks	Less Risk		Environmental and social safeguarding risks	More Risk

D. Project Consistency with National or Sub-National Sustainable Development Strategies:

This project is consistent with national and sub-national development strategies of Vietnam on Socio Economic Development Plan, Climate Change Adaptation, and Sustainable Development.

In the 2016 -2020 Socio Economic Development Plan, there are two development plans for dealing with environmental issues and it addresses the response to climate change.1) Resource management, environment protection and response to climate change have been strengthened.

This focuses on the use and management of land, water and natural minerals, and environmentally friendly development. For integrating this component into the plan, Master Plans for provinces need to address issues regarding efficient resource use and management.

2) Actively responding to climate change, preventing natural disasters, enhancing natural resource management and environmental protection.

Improving resilience capacity to natural hazards and the efficient use of natural resources have been addressed in this plan. This plan has a specific sectorial approach to issues such as waste treatment, monitoring system for water, land use plan and environmental protection.

The Socio-Economic Development Plan (SEDP) is the main plan for socio-economic development in Viet Nam. Action plan and strategy need to be integrated into SEDP to obtain the support of national and provincial government. This helps all levels of society in Viet Nam to participate in the planning of their province, district and commune. This is a driving factor in reform of local planning which can include climate-related action.

Along with international climate policy grounded in the UNFCCC, Vietnam has developed its own strategies through government policies and strategies to achieve the Sustainable and Climate Change Adaptation goals. **Resolution 24/NQ/TW (2013) on Responding to Climate Change by Central Party Committee** has taken on the role of the mainstream agency on policies for climate change adaptation which includes the following tasks:

- ❑ Building capacity of early forecasting warning, actively preventing and mitigating natural disasters and adapting to climate change;
- ❑ Promoting measures to prevent, combat and limit the impact of surges, inundation and flooding, saline intrusion caused by sea level rise especially in the **Mekong Delta, Red River Delta, and Central Coast**;
- ❑ Mitigating greenhouse gas emission, protecting and developing natural ecosystems, enhancing the ability to absorb greenhouse gases

To align with the sustainable and climate change adaptation goal in Vietnam, the proposed project aims to enhance the resilience, inclusive and sustainable eco-human settlement development through small scale infrastructure interventions in the coastal regions of the Mekong Delta in Vietnam.

As shown in Figure 34, National Climate Change Strategy, National Green Growth Strategy are under **Resolution 24/NQ/TW (2013) on Responding to Climate Change by Central Party Committee** to support national policy in achieving the adaptation goal against climate change in Vietnam.

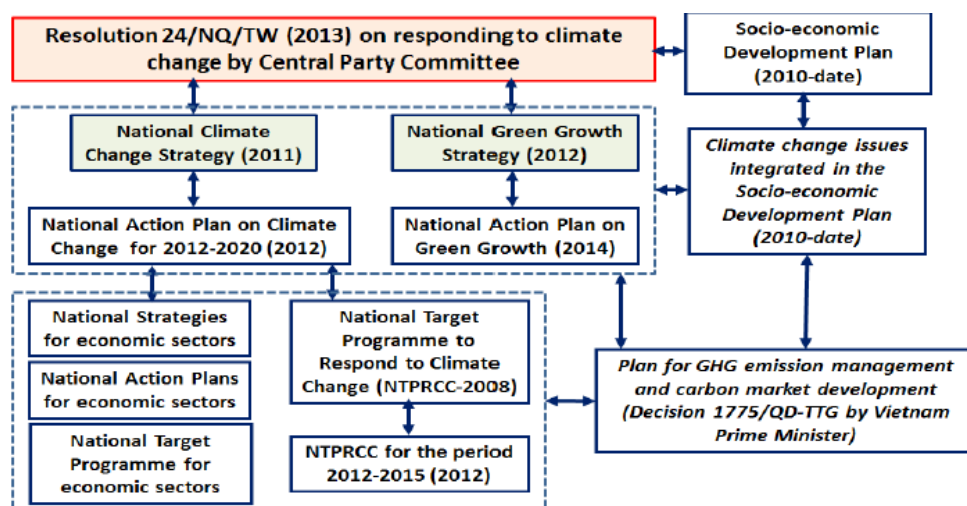


Figure 32. Evolution of Climate Change Policies in Vietnam

The National Climate Change Strategy (NCCS, 2011) states that Mekong Delta is one of the world's three most vulnerable deltas in the world (together with the Nile Delta in Egypt and the Ganges Delta in Bangladesh) to rising sea levels. According to climate change scenarios, in late 21st century, Vietnam's yearly mean temperature will go up by 2-3 degrees, the total yearly and seasonal rainfall

increases while the rainfall in dry seasons will decrease, while sea level is estimated to rise by 75 cm to 1 m compared to the 1980-1999 period. To cope with the challenges from climate change impact, Vietnam has been trying to:

- ❑ Improve public awareness and capacity of responding to climate change;
- ❑ Promote economic development in order to raise the country's economic competitiveness and national status on the international arena

NCCS has 3 phases of the progress, The first was Vietnam's government focused on imperative and non-delayable adaptation until 2012, with emphasis to be put on capacity building of science and technology sectors, adjustment and development of green growth mechanisms, climate change adaptation and GHG mitigation policies in line with the international situation. The second phase is to create a modern industrialised country, it is likely that after 2025 Vietnam will have to focus on GHG emission reduction to protect the earth's climate system. Climate change adaptation and GHG emission reduction must be carried out in parallel, in association with socio-economic development actives by 2025. Third, with Vietnam being an industrialised country, GHG emission reduction will become criteria of the socio-economic development processes between 2025 and 2050. The strategic tasks will be reviewed and adjusted to ensure the low-carbon economy and resilience to climate change impacts.

Based on NCCS, the National Target Program to Respond to Climate Change (NTP-RCC) is the umbrella program and guiding framework for the Government of Vietnam's efforts in adaptation and mitigation of climate change risk. The Ministry of Natural Resources and Environment developed the program and is responsible for its implementation. The current program, which covers the period from 2009 to 2015, has the global objectives of: (i) assessing potential impacts of climate change; (ii) ensuring that a climate change response action plan is developed by each sector; (iii) initiating efforts to move the country towards a low-carbon economy, and (iv) contributing to global efforts for the mitigation of GHGs.

The Vietnam Green Growth Strategies (VGGS, 2012) as a mean to achieve a low carbon economy and to enrich natural capital, will become the principal direction in sustainable economic development; While GGS suggested overall strategies to achieve sustainable development goals, some of the components related to climate change adaptation align with the aims of the proposed projects including:

- ❑ Communication, awareness raising and encouragement of support to implementation;
- ❑ Development of key sustainable infrastructure including transportation, energy, irrigation and urban works;
- ❑ Develop the new rural model with lifestyles in harmony with environment

In November 2017, the Government Resolution 120/NQ-CP on Sustainable and Climate-Resilient Development of the Mekong Delta of Vietnam was signed by PM Nguyen Xuan Phuc. The resolution was issued followed a conference on sustainable development in the Mekong Delta on adaptation to climate change that took place in Can Tho in September 2017. The principal solutions in Resolution 120 are well fit to the activities in the concept note.

- ❑ Establish ecological sub-zones to orient the development of economy, agriculture and infrastructure (floodplain, freshwater ecosystem, brackish water and saltwater ecological area, etc.)
- ❑ Formulate a master plan for sustainable and climate-resilient development of the Mekong delta which shall be conformable to the regional conditions according to uniform integration of the master plan for development of certain industries, areas and key products. Address overlapping

issues and settle interbranch, inter-regional and inter-provincial conflicts in a uniform manner. Develop potentials and comparative advantages of the region and turn the challenges into opportunities in the context of globalization and global economic integration, especially cooperation with ASEAN countries and Greater Mekong sub-region.

- ❑ Propose some inter-sectoral and inter-regional policies and strategies, master plans, plans, programs, schemes, projects and tasks for sustainable and climate-resilient development of the Mekong Delta.

Along with the strategies and policies highlighted above, implementation of the Paris Agreement (PIPA) tries to be suitable to development circumstances of Vietnam and the level of international support received; Needs to follow direction from Parties, Government and inherit viewpoints, undertaking activities for climate change response and green growth which have been and are being implemented, and take advantage of opportunities presented by the Paris Agreement. Adaptation continues to be the main focus of the implementation of the Paris agreement in Vietnam, with the main resources coming from the public budget and international support mechanisms such as the climate change fund. The following figure summarizes 22 priority tasks that are to be implemented until 2030 in order to fulfil climate change commitments in Vietnam. Overall national adaptation plans are described in Figure 35 below.

Based on the assessment of key three policies on Climate Change in Vietnam above and PIPA, current focus of policies and strategies is as follows:

- ❑ Upgrading monitoring and meteorological forecasting systems;
- ❑ Integrate disaster prevention and reduction in socio-economic development programs of sector, region and local, especially in agricultural areas;
- ❑ Raising public awareness of disaster prevention;
- ❑ Education, training, and guides of disaster prevention for poor households at coastal areas;
- ❑ Annual state budget for disaster prevention; prioritize for national target programs such as forestry, dam and water reservoir upgrading, land slide prevention; upgrade and construct irrigation systems;
- ❑ Local province arrange budget for disaster prevention and solve problems

In Vietnam adaptation policies and strategies have more of a focus on the coastal zones due to the greater impact on these regions from sea level rise. Investment in the construction of adaptive infrastructure, development agricultural techniques and elevation houses above flood levels are key components to minimize the losses in coastal zones.



Figure 33. National Adaptation Plans (UN-Habitat retrieve)

Table 16 shows how the proposed project aligns with policies, strategies and plans of Vietnamese government. The main objective of the proposed project is to ***enhance the resilience, inclusive and sustainable eco-human settlement development through small scale infrastructure interventions in the coastal regions of the Mekong Delta in Vietnam***. To achieve its main objective, the project consists of four components as follows:

1. Institutional and community capacity building toward eco-human settlement development for supporting to enhance local climate response actions: Development of the environmental and ecological detailed plan for human settlement, design guideline for eco-human settlement development, and institutional strengthening to enhance local climate response actions (*align with GGS, NDC, NTP and PIPA*)
2. Integrated planning with respects of eco system-based climate change adaptation and building climate resilient capacity and action plan at local level for resilience strengthening (*align with SDS*)
3. Sustainability built through small-scale protective and basic service infrastructure (align with Resolution 24/NQ/TW, GGS, NCCS, NDC and SDS)
4. Awareness Raising and Knowledge Management (*align with Resolution 24/NQ/TW, GGS, NCCS, NTP and PIPA*)

Accomplishing main four components above, the proposed project will support national development goal based on the assessment of national strategies of Vietnam and also provide additional support on the other components related to climate change adaptation.

Table 16. Project Alignment with Government Priorities

Measure	Resolution 24/NQ/TW (2013) on Responding to Climate Change by Central Party Committee	Green Growth Strategy (GGS)	National Climate Change Strategy (NCCS)	National Determined Contribution (NDC)	National Target Program to Climate Change (NTP)	National Action Plan on Climate Change in 2012-2020	Sustainable Development Strategy (SDS) for 2011-2020	Plan for Implementation of the Paris Agreement (PIPA)
<input type="checkbox"/> Institutional and community capacity building toward eco-human settlement development for supporting to enhance local climate response actions		△		✓	✓			✓
<input type="checkbox"/> 2. Integrated planning with respects of eco system-based climate change adaptation and building climate resilient capacity and action plan at local level		✓	✓		✓	✓	✓	
<input type="checkbox"/> Sustainability built through small-scale protective and basic service infrastructure	✓	△	✓	✓			△	
<input type="checkbox"/> Awareness Raising and Knowledge Management	✓	△	✓		✓			✓
✓: sufficient support △: need more support /: no support								

E. Compliance with Relevant National Technical Standards:

All project activities are in compliance with existing rules, regulations, standards and procedures endorsed by the government, as shown in the following table. In addition, compliance with tools are discussed below:

Table 17. Project Compliance

Expected Concrete Outputs / Intervention	Relevant rules, Regulations, Standards and Procedure	Compliance, Procedure and Authorizing Offices
<p>1.1. Capacity building support provided to national government and local authorities to increase the resilience of human settlement and ecosystem</p>	<p>Res. 120 2c: Encourage participation of all relevant parties to ensure intra-regional organic connectivity and close connection between Southern key economic region and Greater Mekong Sub-region.</p> <p>Res 120 3d Top priority should be given to necessary works serving people's life. Attach importance to and mainly apply non-structural measures.</p> <p>Res 120 3e: Improve cultural and social levels equivalent to the national average level. Combine economic development and social development, reduce poverty, create jobs, ensure social security and protect the environment.</p> <p>Res 120 6a: The Ministry of Natural Resources and Environment shall take charge and cooperate with the National Committee on Climate Change and relevant authorities in periodically reviewing and assessing the implementation of the Resolution.</p> <p>Ordinance 34/2007/PL-UBTVQH11, Implementation of Democracy in Communes, Wards and Townships</p>	<p>National Commission on Climate Change, The Ministry of Natural Resources and Environment, the Ministry of Agriculture and Rural Development, ministries and relevant local authorities, People's Committees, The Ministry of Construction</p> <p>The project will train government officials in eco-human settlement strategy and action plan. It will also encourage them to discuss and propose new strategic orientations and solutions with results and deadlines at the request of the Prime Minister or the Government.</p>
<p>1.1.1. Guidance and training materials development for vulnerability and risk assessment at local levels</p>	<p>UN-Habitat Planning for Climate Change</p> <p>Res 120 3a: The Mekong Delta development model must be human-centered, serve people and narrow the gap between the</p>	<p>The project will maximize use of existing VA tools/guidelines to minimize tool fatigue and to build on experiences in-country, where possible</p> <p>Ministry of Planning and</p>

	<p>rich and the poor; focus on quality rather than quantity, shift breadth to depth, have proactive and flexible approach in the context of accelerated and increasingly extreme climate change and the impact of extraction and use of water on a large scale and in high-intensity on the Mekong River upstream.</p> <p>SEA: Article 13: Objects to implement Strategic Environmental Assessment: including several new types of plan; Article 14: implementation of Strategic Environmental Assessment: when preparing strategy, planning and plan, the final result of Strategic Environmental Assessment must be checked and incorporated into the strategy, planning and plan</p> <p>MONRE 27 EIA/SEA guidelines for project types such as Urban Development, Socio-economic development planning, Land-use planning (...).</p> <p>MONRE circular No. 27/2015/TT-BTNMT - on strategic environmental assessment, environmental impact assessment and environmental protection plans.</p> <p>Law No. 52/2005/QH11 on environmental protection Article 5.4. Article 5.7. To increase human resource training...</p> <p>Circular No. 27/2015/TT-BTNMT MONRE on strategic environmental assessment, environmental impact assessment and environmental protection plans.</p> <p>Ordinance 34/2007/PL-UBTVQH1, Implementation of Democracy in Communes, Wards and Townships</p>	<p>Investment, National Commission on Climate Change, Ministry of Natural Resources and Environment, the Ministry of Agriculture and Rural Development, ministries and relevant local authorities, People's Committees.</p> <p>The project will develop the guidance and training materials in compliance with the policy, laws, guidelines and draft strategy, but simplified to be used at local levels. It will also have the focus described in resolution 120 3a. In addition, the project will engage the Ministry of Natural Resources and Environment to identify the most vulnerable communities and conduct assessments.</p>
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<p>1.1.2. Planning tools and training materials for development for comprising of planning approach, strategy and action plan development, resilient infrastructure</p>	<p>Decree No. 19/2015/ND-CP of the Government on detail guiding the implementation of some articles in Law on Environmental Protection 55/2014/QH13</p> <p>Decree No. 18/2015/ND-CP of the Government concerns Environment protection planning, Strategic environmental assessments, environmental impact reports and environmental protection program</p> <p>Circular No. 27/2015/TT-BTNMT MONRE on strategic environmental assessment, environmental impact assessment and environmental protection plans.</p> <p>Res 120 4d: Formulate a master plan for sustainable and climate-resilient development of the Mekong delta which shall be conformable to the regional conditions according to uniform integration of the master plan for development of certain industries, areas and key products.</p> <p>Res 120 5b: Review, complete and prepare the planning for land use, use of water resources, environmental protection, extraction and sustainable use of bank natural resources of the Mekong Delta.</p>	<p>Ministry of Planning and Investment, National Commission on Climate Change, The Ministry of Construction, Ministry of Agriculture and Rural Development, Mekong River Commission</p> <p>The project will provide planning tools and training materials for a comprehensive and holistic climate change adaptation strategy according to the environmental protection law and in compliance with Government development planning approach.</p>
<p>1.1.3. Project team orientation/training</p>	<p>N/A</p>	<p>N/A</p>
<p>1.1.4. National Induction Workshop (National and provincial participants)</p>	<p>Res 120 3d: Coordinate investment activities in a uniform, inter-regional, inter-sectoral and targeted manner and an appropriate road map must be available.</p>	<p>Prime Minister, Ministry of Planning and Investment, Ministry of Construction, National Commission on Climate Change, Ministry of Foreign Affairs, People's Committee, Ministry of Agriculture and Rural Development, Ministry of Natural Resources and Environment, Mekong River Commission</p> <p>The project will engage</p>

		government officials to share knowledge and will train them in eco-human settlement strategy and action plan.
1.1.5. National training of facilitators workshop (national and provincial participants), enabling them to set up eco-human settlement strategy and action plan development	<p>Res 120 3d</p> <p>Ordinance 34/2007/PL-UBTVQH1, Implementation of Democracy in Communes, Wards and Townships</p> <p>Prime Ministers Decision No. 1393/QĐ-TTg Establishment of Green Growth Strategy for Vietnam</p>	<p>Ministry of Construction, National Commission on Climate Change, People’s Committee, Ministry of Agriculture and Rural Development, Ministry of Planning and Investment, Ministry of Natural Resources and Environment, Mekong River Commission</p> <p>The project will engage government officials to disseminate UN Habitats experience in the field and share knowledge and train them in eco-human settlement strategy and action plan.</p>
1.1.6. Province and District level workshops and trainings, enabling them to set up eco-human settlement strategy and action plan development	<p>Res 120 3d</p> <p>Res 120 4d: Continue to complete the mechanism for coordinating the development of the region and ecological sub-region so as to enhance effectiveness and essence towards focal point reduction. The focus shall be given to smart management of water resources and climate change resilience in conformity with practical conditions of Vietnam and the Mekong Delta.</p> <p>Prime Ministers Decision No. 1393/QĐ-TTg Establishment of Green Growth Strategy for Vietnam</p> <p>III 3. Solutions.1</p> <p>- Promote and support communities to develop models of eco-city, green rural areas, green housing, sorting wastes at source through the approach reduce- reuse-recycle (3R), and improve energy efficiency.</p> <p>12. Encourage replication of green housing solutions under models of eco-houses and eco-villages in accordance with local customs, traditions, lifestyle for each region and ethnic group.</p>	<p>The Ministry of Construction, People’s Committee, Ministry of Natural Resources and Environment, Mekong River Commission</p> <p>The activities set to achieve this output is aligned to the Government’s priority of boosting region’s economy as well as strengthening climate change resilience. MONRE will organize the consultation workshop at local level.</p>

	Ordinance 34/2007/PL-UBTVQH1, Implementation of Democracy in Communes, Wards and Townships	
1.1.7. Community action planning workshops provided to commune level for the development of climate resilient community plans	<p>Res 120 2d: Encourage and mobilize all social classes, international partners and enterprises to participate in the development.</p> <p>Res 120 3c: combine modern technology with traditional knowledge and experience, ensure the stability and livelihood of the people. The people and enterprises should play a central role and the State should play a role in the direction.</p> <p>Ordinance 34/2007/PL-UBTVQH1, Implementation of Democracy in Communes, Wards and Townships</p> <p>Prime Ministers Decision No. 1393/QĐ-TTg Establishment of Green Growth Strategy for Vietnam</p>	<p>National Commission on Climate Change, People’s Committee, Mekong River Commission</p> <p>The project will contribute towards the development and strengthening of local action to climate change adaptation by community planning, while local people have a central role and their actions are guided according to government’s goals in terms of climate change resilience.</p>
2.1 Comprehensive workshops for integrating the eco-human settlement strategies and plans (National, province, district and commune)	<p>Res 120 3g: Promote international integration and cooperation with the Greater Mekong Sub-region countries on a mutual beneficially basis through regional cooperation initiatives and promote bilateral cooperation in order to effectively and sustainably use water resources and relevant natural resources in the Mekong basin together.</p> <p>3D: Enhance development cooperation among areas in the region, between the region and Ho Chi Minh City, Southeast provinces and other regions nationwide, between Southwest and Southeast, between Vietnam and other countries, firstly the Greater Mekong Sub-region countries.</p>	<p>Ministry of Construction, National Commission on Climate Change, Ministry of Foreign Affairs, People’s Committee, Ministry of Agriculture and Rural Development, Ministry of Natural Resources and Environment, Mekong River Commission</p> <p>The project will encourage cooperation among Mekong Delta with national and province authorities as well as the target communities.</p>

	<p>5a: National Commission on Climate Change will propose some inter-sectoral and inter-regional policies and strategies, master plans, plans, programs, schemes, projects and tasks for sustainable and climate-resilient development of the Mekong Delta.</p> <p>Decree No: 16/2003/QH11 Construction Law. All Relevant procedures will be adhered to with special consideration given to: Chapter 2: Construction Planning. Section 1: General Planning. Section 3: Urban Construction Planning. Article 11. International cooperation in planning activities covers experience sharing, application of scientific and technological advances, and training and attraction of human resources for planning work.</p> <p>Ordinance 34/2007/PL-UBTVQH1, Implementation of Democracy in Communes, Wards and Townships</p> <p>Resolution No. 51/2001/QH10; Law on Urban Planning Article 8.3. Agencies and organizations responsible for urban planning activities shall create conditions for commenting on and supervising urban planning activities. Article 13.7. Conducting international cooperation in urban planning activities. Article 72.1 People's Committees of rural districts, urban districts, towns and provincial cities shall manage according to planning the development of new urban centers within the administrative boundaries under their management.</p> <p>SEA: environmental protect in planning article 8 to article 12. Environmental Protection</p>	
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	<p>Planning at the central level is a single, and at the local level is a single or the integrated in a master planning of socio-economic development for province or city under the central government.</p>	
<p>2.1.1 Community action planning workshops to districts and communes for the development of climate resilient (integrated) community plans (Utilizing the tools and facilitators developed under 1.1)</p> <p>2.1.1.1 Community level vulnerability and Risk Assessment</p>	<p>Res 120 2d</p> <p>Ordinance 34/2007/PL-UBTVQH1, Implementation of Democracy in Communes, Wards and Townships</p> <p>UN-Habitat Planning for Climate Change</p>	<p>The project will maximize use of existing VA tools/guidelines to minimize tool fatigue and to build on experiences in-country, where possible</p>
<p>2.1.1.2 Develop community level eco-human settlement planning based on the output 2.1.2</p>	<p>Res 120 5g: - Review, amend and implement the planning for regional construction planning, urban planning and rural planning in conformity with regional natural ecological characteristics, rearrangement of population and relocation of houses along rivers, canals and ditches to minimize the risk of erosion. Continue to execute the smart urban development program and safe water supply project in the Mekong Delta. - Continue to implement current programs and formulate new mechanisms and projects according to specific conditions of the Mekong Delta, keep houses safe from floods, droughts, storms, thunderstorms, whirlwinds and sea level rise. - Research into creation of new substitute materials serving leveling and construction (limit removal of riverbed sand for foundation bed heave). Plan and invest in stationary and modern wastewater and waste treatment stations; promote recycling, reuse and production of energy from waste.</p>	<p>The Ministry of Construction, People’s Committee, Ministry of Planning and Investment, Ministry of Natural Resources and Environment</p> <p>The Project will full comply with all urban planning laws, while paying special attention to Article 8</p> <p>While also aiming to develop local capacity through involvement in the planning process, allowing better local understanding of how to benefit from project implementation in the long term.</p>

	<p>Ordinance 34/2007/PL-UBTVQH1, Implementation of Democracy in Communes, Wards and Townships</p> <p>Decree No: 16/2003/QH11 Construction Law. All Relevant procedures will be adhered to with special consideration given to: Chapter 2: Construction Planning. Section 1: General Planning. Section 3: Urban Construction Planning. Article 11. International cooperation in planning activities covers experience sharing, application of scientific and technological advances, and training and attraction of human resources for planning work.</p> <p>Resolution No. 51/2001/QH10; Law on Urban Planning Article 8: Article 13.7. Conducting international cooperation in urban planning activities. Article 72.1: People's Committees of rural districts, urban districts, towns and provincial cities shall manage according to planning the development of new urban centers within the administrative boundaries under their management.</p> <p>Prime Ministers Decision No. 1393/QĐ-TTg Establishment of Green Growth Strategy for Vietnam</p>	
<p>2.1.2 Training and community action planning workshops to district and commune for the development of community resilience plans and to plan, construct and maintain green and blue networks (Utilizing the tolls and facilitators developed</p>	<p>Res 120 2d</p> <p>Res 120 3c: Switch the development model according to the ecosystems to ensure suitability for natural conditions, biodiversity, culture, people and natural laws</p> <p>Res 120 5b Ordinance 34/2007/PL-UBTVQH1, Implementation of Democracy in Communes, Wards</p>	<p>Ministry of Agriculture and Rural Development, National Commission on Climate Change, People's Committee, Ministry of Natural Resources and Environment</p> <p>The project will build resilient communities by holding workshops to improve community actions to climate change adaptation. MONRE will support these workshops.</p>

under 1.1)	<p>and Townships</p> <p>Prime Ministers Decision No. 1393/QĐ-TTg Establishment of Green Growth Strategy for Vietnam</p> <p>Law on Water Resources (LWR) Order No. 15/2012/L-CTN of July 2, 2012, on the promulgation of law</p>	
3.1.1 Increased community adaptive capacity with climate resilient and development sectors, and increase ecosystem resilience in response to climate change	<p>Res 120 2d</p> <p>Res 120 3c</p>	<p>National Commission on Climate Change, People’s Committee</p> <p>The project will improve community knowledge and awareness of climate change adaptation</p>
3.1.1.1 Built small-scale of water salination system to provide clean and safe water for both living and agriculture (Water)	<p>Res 120 3b</p> <p>Res 120 3c</p> <p>Prime Ministers Decision No. 1393/QĐ-TTg Establishment of Green Growth Strategy for Vietnam. Development of key sustainable infrastructure including irrigation and water infrastructure.</p> <p>Decree No. 201/2013/ND-CP Detail regulations for implementing some articles of the Water Resources Law</p>	<p>Ministry of Construction, Ministry of Agriculture and Rural Development, Ministry of Planning and Investment, Ministry of Natural Resources and Environment Department of Natural Resources and Environment, Department of Planning and Investment, Department of Agriculture and Rural Development, People’s committee</p> <p>The project will improve structure for water management in compliance with Government resolution of water as a core element for regional development.</p>
3.1.1.2 Climate resilience infrastructure building and refurbishing (Infrastructure)	<p>Res 120 5g</p> <p>Decree No: 16/2003/QH11 Construction Law. All Relevant procedures will be adhered to with special consideration given to: Chapter 2: Construction Planning. Section 1: General Planning. Section 3: Urban Construction Planning. Article 11. International cooperation in planning activities covers experience sharing, application of scientific and technological advances, and</p>	<p>Ministry of Construction, Ministry of Planning and Investment, Ministry of Natural Resources and Environment Department of Natural Resources and Environment, Department of Planning and Investment, Department of Agriculture and Rural Development, People’s committee</p> <p>The project will improve climate resilience infrastructure according to national policy and law on land, and in compliance with Government resolution of</p>

	<p>training and attraction of human resources for planning work.</p> <p>Resolution No. 51/2001/QH10; Law on Urban Planning. Article 13.7. Conducting international cooperation in urban planning activities.</p> <p>Decree No. 43/2014/ND-CP detailing the implementation of some articles of the Law on Land</p> <p>Law on Water Resources (LWR) Order No. 15/2012/L-CTN of July 2, 2012, on the promulgation of law</p>	<p>keeping houses safe from floods, droughts, storms and sea level rise.</p> <p>Project will respect all prohibited actions under LWR and will consult with governing bodies for water use MONRE and PPC to ensure compliance on any actions undertaken with regards with waterways, water and wastewater management.</p>
3.1.1.3 Climate resilience housing upgrade (Housing)	<p>Resolution No. 51/2001/QH10; Law on Urban Planning. Article 13.7. Article 72. Management of development of new urban centers and urban quarters</p> <p>Decree No: 16/2003/QH11 Construction Law. Section 4: Planning on Construction of Rural Population Quarters</p> <p>Decree No. 47/2014/ND-CP on compensation, support and resettlement when the State recovers land</p>	<p>Ministry of Construction, Ministry of Planning and Investment, Ministry of Natural Resources and Environment</p> <p>Department of Construction, Department of Natural Resources and Environment, Department of Planning and Investment, Department of Agriculture and Rural Development, People's committee</p> <p>The project will improve climate resilience infrastructure according to national policy and law on land, and in compliance with Government resolution of keeping houses safe from floods, droughts, storms and sea level rise.</p>
3.1.1.4 Enhancing ecosystem (Ecosystem)	<p>Res 120 2c: Respect natural laws and avoid violent interference with nature; select development models adaptive to natural conditions and friendly to the environment and develop sustainably with the motto "living with floods, brackish water and saltwater";</p> <p>Res 120 3c: Promote innovation, creativity and start-up support, speed up the application of scientific and technological advances, especially the achievements of the fourth industrial revolution. The</p>	<p>Ministry of Natural Resources and Environment, Vietnam Environment Administration, Vietnam Administration on Sea and Island</p> <p>Ministry of Construction, Ministry of Agriculture and Rural Development, Ministry of Planning and Investment Department of Natural Resources and Environment, Department of Planning and Investment, Department of Agriculture and Rural Development, People's committee</p>

	<p>switching process requires a long-term vision. Priority shall be given to climate change resilience and opportunities shall also be grasped for the development of low-carbon economy and green economy, and protection of natural ecosystems.</p> <p>Circular No.16/2009/TT-BTNMT Regulations of environmental national technical for ambient air quality and toxic substances in the ambient air.</p> <p>Decree No. 179/2013/ND-CP On sanctions against administrative violations in the field of environmental protection</p> <p>Law on Water Resources (LWR) Order No. 15/2012/L-CTN of July 2, 2012, on the promulgation of law</p>	<p>The project will enhance ecosystem according to the Government motto “living with floods, brackish water and saltwater” and giving priority to the protection of natural ecosystems. It will follow the national regulations on environment protection.</p> <p>Project will respect all prohibited actions under LWR and will consult with governing bodies for water use MONRE and PPC to ensure compliance on any actions undertaken with regards with waterways, water and wastewater management.</p>
3.1.1.5 Built small scale of eco-friendly waste treatment and management facility (Waste)	<p>Res 120 2c</p> <p>Res 120 3c</p> <p>Circular No.16/2009/TT-BTNMT Regulations of environmental national technical for ambient air quality and toxic substances in the ambient air.</p> <p>Decree No. 179/2013/ND-CP On sanctions against administrative violations in the field of environmental protection</p> <p>Law on Water Resources (LWR) Order No. 15/2012/L-CTN of July 2, 2012, on the promulgation of law</p>	<p>Ministry of Construction, Ministry of Planning and Investment, Ministry of Natural Resources and Environment Department of Construction Department of Natural Resources and Environment, Department of Planning and Investment, Department of Agriculture and Rural Development, People’s committee</p> <p>The project will improve waste management system against natural hazards impact, in compliance with Government policy and regulations on waste management.</p> <p>Project will respect all prohibited actions under LWR and will consult with governing bodies for water use MONRE and PPC to ensure compliance on any actions undertaken with regards with waterways, water and wastewater management.</p>
4.1.1 Lesson learned and best practices regarding resilient urban	N/A	N/A

	community development/housing are generated, captured and distributed to other communities, civil society, and policy-makers in government appropriate mechanisms		
4.1.2	Regional advocacy and replication	N/A	N/A

F. Other Funding Sources:

One of the selection criteria of the targeted towns and informal settlements is to avoid overlapped projects on the same region. The table below lists relevant projects that are either recently completed, ongoing or about to start in the Mekong Region. They have been identified based on in-depth consultations with the national and local government from targeted region and through online research.

UN-Habitat also has expressed its long-standing commitment to Vietnam through its many projects in country where it has used its in-depth experience to help shape sustainable human settlements and urban development.

Considering the high-risk and transnational nature of the Mekong Delta Subregion (GMS) there are many projects being undertaken in the region. These transnational projects focus primarily on policy and strategies for increased cooperation in water management and economic development between both national and international stakeholders. An example of one of these projects is GIZ's transnational projects in the region focus on water management and land management. A recent study conducted with the support of AFD concluded that sediment loss in the lower delta was having a detrimental effect on erosion levels and biodiversity in the lower Mekong. GIZ's project has addressed this issue by facilitating the development of regional policy to try and ensure that dam and hydroelectrical projects throughout the GMS have as little negative effect as possible on the waterways and in turn the livelihoods of those who depend on them.

Other projects such as SECO's Mekong Region Land Governance Project (MRLG) has assisted families and small holder farmers who have had their livelihoods impacted by government concessions to large scale industrial producers by ensuring equal access to land with a heightened focus on gender issues to reduce conflict between local stakeholders while also creating a quick disbursement fund and innovation fund to support local business with these endeavours.

Other projects from ADB and SECO in the GMS have invested in projects to enhance economic ties through the creation of transport infrastructure connecting major industrial hubs in the region. While these projects have made massive advancements towards the goals of strengthening livelihoods and dealing with the ecological impacts of large-scale industrial development throughout the GMS, their regional focus and the massive geographical scale of the affected region leaves many gaps at commune and small stakeholder level.

In the Vietnamese Lower Delta projects focused on addressing some of these gaps, primarily through waterways management, strengthening flood and coastal defences and the development of sustainable agriculture and aquaculture. Projects dealing with waterways and flood and coastal defences have provided hard intervention outputs to increase capacity and improve infrastructure in a more localised context. The most notable of these is the Mekong Delta Plan (MDP). The MDP contains guidelines for government, donors and international financial institutions on moving from planning to implementation and placing investment projects in a long-term context, through the creation of the Mekong Delta Alliance it has also facilitated further studies into the subcategories of the SEDP's to identify the actual problems and constraints specific to waterways management in the Vietnamese area of the Mekong Delta. In line with the aims of the MDP is the World Bank, "Mekong Delta Integrated Climate Resilience and Sustainable Livelihoods Project" which is working to strengthen coastal and riverbank defences and support local aquaculture and agriculture throughout the region. These projects are significant developments for the region but the 90-year duration of the MDP highlights how much is still to be done in the region to prepare for the effects of advanced climate change in this highly sensitive ecosystem.

The table below has been broken down further by the geographical focus of the projects aims. Projects in Urban locations main priorities are; flood control, public transportation and social protection. Linking in with these are projects focusing on waterways management through mitigation of the damage caused by urban populations such as the wastewater treatment facility being development in Ben Tre by JICA. While Projects such as this will have a big impact on water quality in general and vector control in times of flooding the lack of infrastructure in rural areas of the province will not be covered and are still in need of WATSAN interventions.

Water quality is also an issue in coastal regions where salinity intrusion has become a source of conflict between local agriculture and aquaculture producers, many projects in Bac Lieu have tried to address this issue through education on more resistant rice crops and seasonal rotation of produce. The capacity of these interventions at province level have been supported by the development of Early Warning Systems and other developments to help local farmers such as the Salinity Monitoring System installed by IFAD in Tra Vinh province. This system has already proven its effectiveness in assisting local farmers to better manage their produce and increase their yields. It is part of a larger IFAD project aiming to increase community involvement at planning level in 29 communes in these two regions through soft interventions. It is also facilitating adaptive change through sustainable rural financial services and strategic government co-financing for investing in climate resilient livelihoods at household and community levels. This project will finish in 2019, recent reports have identified both a need for synergy with other projects in the target area to help develop and further scale up their project outputs.

Meetings with GIZ identified several areas for potential cooperation, including GIZ's ability to support the project as their history of development in the region has led to strong networks with local government and well-developed institutional arrangements. It has been noted that UN Habitat could would along-side GIZ's Integrated Coastal Management Program to potentially up-scale their infrastructure project using the guidelines and data provided through AF fund. Consultation with GIZ has also identified a need for mitigation of riverbank erosion; informal settlements along the rivers edges have greatly increased the rate of man-made erosion in the region making resettlement a pressing matter for the government.

After this review of other regional projects UN Habitat has opted to address a need for more sustained climate change planning and development at household and commune level to increase both local capacities to adapt to climate change and increase the quality of life for local populations.

In the interest of clarity, the table has been broken down, first into regional headings where the soft projects mentioned above can primarily be found. Then into coastal, waterways and urban settings where the focus tends to be more on hard projects at the local level.

Table 19. Relevant Projects and their Complimentary Potential

Implementor	Relevant Project/ Programme	Lessons Learned	Complimentary Potential	Project Timeline and Budget
Greater Mekong Subregion				
GIZ	Supporting the Mekong River Commission with Trans-boundary Water Management in the Mekong River Basin	<p>Linking with universities has seen best practice integrated into regional university curriculums.</p> <p>MRC range of studies, tools and guidelines to support sustainable development consider avoidance/mitigation.</p> <p>Based on the scientific inputs and policy analysis, the Mekong Adaptation Strategy and Action Plan (MASAP) has been developed through a highly participative process</p>	<p>Assessments of climate change impacts with specific methodologies on water and water-related resources (hydrology, flood, drought, ecosystems, food security, socio-economics and hydropower) have been carried out.</p>	2016-2018
GIZ	Improved Land Management in the Mekong Region	<p>Project is a contribution to the overarching Mekong Region Land Governance Project (MRLG) of the Swiss Agency for Development and Cooperation (SDC). The larger programme addresses land access issues. Programme activities are geared particularly towards the interests of ethnic minorities and women.</p> <p>Improved practices in recognising women's land rights as provided under the 2013 Viet Nam Land Law.</p> <p>Nine legal aid events were organised successfully in nine communes attended by 1,354 community members (mostly women). Through these events, legal</p>	<p>GIZ contributes to a Quick Disbursement Fund and an Innovation Fund.</p> <p>Quick Disbursement Fund for short notice urgent actions.</p> <p>Innovation Fund for development and piloting, analysis and sharing of experiences from sub-projects managed by stakeholders, each with a longer-term perspective of up to two years.</p>	2015 - 2019

		specialists and communal land officers supported 245 clients and their cases.		
SECO	Mekong Region Land Governance (MRLG)	<p>The various stakeholders and their competing interests make land governance a highly sensitive and politically important topic that is at the very centre of development challenges in the Mekong region.</p> <p>Concessions for agricultural land have led to a reduction in land area available for family agriculture, played a major role in deforestation and reduced access to forests by communities.</p> <p>Communities, in particular ethnic minorities, are often facing resettlement, and are sometimes driven out of agriculture altogether, with limited prospects of finding alternative employment.</p>	<p>The project also supports advocacy for victims and humanitarian principles and provides information about the situation of victims.</p> <p>The project also supports partner organisation improvements.</p> <p>Successful deployment of Grants Funding of a total of USD 5.8 million. 65 organisations in the Mekong.</p> <p>80 different Reform Actors across the CLMV have improved their methods of addressing farmer tenure security, either through rights awareness and training, improved conflict resolution and mediation techniques to solve land conflict cases, development of responsible community-business partnerships, or through policy advocacy on laws and policies to recognise customary and community land rights in protected/conservation areas and forests.</p>	<p>01-Mar-2012 –</p> <p>30-Sept-2022</p> <p>CHF 21,000,000</p>
SECO	Regional and Local Economic Development in the East West Corridor	<p>The East-West economic corridor has been the most disadvantaged of the three regional corridors and is home of a majority of ethnic groups with high poverty rates</p> <p>The challenge currently facing the Lower Mekong Basin countries is how to support local people's livelihoods in an changed water use regime. Equitable development, which benefits all water users, will require coordinated responses and cross-border collaboration</p>	<p>Implementation of basin-wide integrated water resources management approaches in national policies and programs, leading to sustainable and equitable development of the river basin.</p> <p>In Vietnam, the Quadripartite Cooperation Model, a mechanism to improve the access to commercial loans for appropriate fertilizer, has been successfully implemented among the farmer groups. The Dutch</p>	<p>01-Sept-2011 –</p> <p>30-July-2017</p> <p>CHF 3'955'000</p>

		by all of these countries.	INGO SNV has taken up the model for replication.	
ADB	Greater Mekong Subregion Ben Luc-Long Thanh Expressway	Construction of 57.1km expressway between Ben Luc and Long Thanh. Short link of GMS Southern Economic Corridor Good environmental and resettling policies.	Project expressway is part of national N-S expressway that links into the Mekong Delta. Will be used for heavy freight. Ranked C for protection of indigenous Tay and Chinese population	20-May-2016 – 30-June -2020 Ordinary Capital: USD \$286,000,000.00 JICA Capital USD \$305,520,000 Project estimated at USD \$1.608 billion at time of appraisal
ADB	Second Northern Greater Mekong Subregion Transport Network Improvement Project	Maximising economic potential of GMS North-eastern Corridor		USD \$71,300,000.00
ADB	Greater Mekong Subregion Biodiversity Conservation Corridors Project	Climate resilient sustainable forest ecosystems in the Central Annamites benefiting local livelihoods and downstream users. Addressing the ongoing fragmentation of the forest landscape and its ability to provide critical ecosystem services such as carbon storage, sustainable biodiversity and local livelihoods.	Developed village conservation plan which prioritized project interventions for sustainable forest management and use and livelihood improvement linked to conservation outcomes; outlining responsibilities and commitments of each stakeholder and a framework for monitoring their commitments; and a plan for meeting the technical support and capacity development needs of the community in achieving their targets.	24-June-2015 – 30-Sept-2019 USD \$3,790,000.00
ADB	Greater Mekong Subregion Tourism	Increased tourism employment for people living in underdeveloped		26-Sept-2014 – 30-June-

	Infrastructure for Inclusive Growth Project	<p>segments of the GMS corridors in Viet Nam.</p> <p>Delayed Government's approval in 2015 ODA budget and no ODA budget allocation for 2016 led to delay in implementing project activities.</p>		<p>2020</p> <p>USD \$50,000,000</p>
USAID	USAID Mekong ARCC Climate Change Impact and Adaptation Study for the Lower Mekong Basin	<p>Natural coastal protection from inundation needs to be strengthened through community-based rehabilitation and protection programs, particularly for mangrove ecosystems. Degradation of mangrove ecosystems is a major factor in the exposure of coastal zone livelihoods to climate change.</p> <p>Low-elevation areas should be protected from inundation and from the more intense flooding identified in climate change projections. Some current responses to inundation threats may in the longer term constitute maladaptation. The construction of sea dykes using structural engineering methods, for example, may prevent a natural recession of mangroves and exacerbate coastal erosion in the longer term. Traditional and bioengineering approaches may be cheaper and more resilient. The costs involved in protection may eventually outweigh the benefits. IPCC (2007) points out that a staged and managed retreat of infrastructure and communities from the coast may, in some cases, be a more efficient allocation of resources.</p> <p>This is an important consideration and any</p>	<p>It highlighted ways of applying scientific findings at a community level that are helping to raise awareness as many farmers in rural, under-resourced communities are unaware of how climate change will affect them.</p> <p>The project worked with 20 communities and released a report that highlights the lessons learned from applying a "community adaptation decision-making method." It is intended to help government planners, donors, researchers and practitioners understand how scientific knowledge can be merged with local knowledge. Villagers can share their experiences and struggles while learning to collaborate and develop adaptation plans. In addition, resilience-strengthening livelihood solutions are being tested in target communities.</p>	<p>2011–2016</p> <p>\$9.4 million</p>

		<p>decision would have to be informed by scientific evidence, as well as socio-economic analysis of the trade-offs involved.</p> <p>Improvements to canal networks including an emphasis on maintenance are required to cope with more intense flood events, particularly to ensure effective drainage of fields and waterways</p>		
USAID	SERVIR - Mekong	<p>The project supports governments, regional institutions and other key stakeholders in the Lower Mekong countries to use publicly available satellite imagery and geospatial technologies, such as mapping and related analyses, to prepare for and respond to disasters, manage natural resources and improve food security.</p>	<p>The SERVIR-Mekong project conducted a comprehensive regional geospatial needs assessment to set project priorities and worked with partners to develop and make available a Surface Water Mapping Tool, a Land Cover Monitoring System and a Drought and Crop Yield Information System. To increase awareness and access to geospatial information, the project has created a web-based geoportal where geospatial information and other tools are continually being uploaded for free access.</p>	2014-2019
USAID	Sustainable Infrastructure for the Mekong (SIM)	<p>Sustainable Infrastructure for the Mekong will provide Lower Mekong partner governments with rapidly deployable technical assistance from the U.S. Government's premier scientists and engineers to mitigate potential negative social and environmental consequences from large infrastructure projects. As part of the Lower Mekong Initiative, SIM will look to 21st Century innovations as alternatives to traditional infrastructure development in order to address sustainability challenges</p>	<p>SIM technical assistance offerings could include:</p> <p>Peer review consultations on infrastructure assessments such as environmental and social impact assessments, hydrological modelling, climate change vulnerability, siting proposals, etc.</p> <p>Technical training for decision makers on environmental and social impact assessments and public participation processes</p> <p>Analyses of innovative alternatives to traditional infrastructure development</p>	2016-2020

			designs Notable achievements include strengthening Vietnam's landmark Mekong Delta Study on the impact of hydropower developments	
USAID	Mekong Partnership for the Environment Project (MPE)	Works to advance informed multi-stakeholder dialogues in Lower Mekong countries of the anticipated social and environmental costs and benefits of regional development projects. By strengthening technical capacity and regional networking of stakeholders in infrastructure planning and investment, MPE aims to increase the social and environmental soundness of development projects in the region.	MPE objectives include: Increase the capacity of civil society to influence development decisions that have significant anticipated social and environmental impacts. Strengthen regional platforms for multi-stakeholder participation in development decision-making. Increase public access to quality, timely information on environmental and social costs and benefits of development projects	2016-2020
USAID	Improving Water and Sanitation Services in Asia	The Water Links Alliance seeks support from private sector and development partners to expand positive impacts to urban water services delivery through twinning partnerships and regional training. Through the Alliance, USAID and Water Links will collaborate with development partners including international development agencies, civil society groups, and national water associations to: increase access to water service to urban communities, including the underprivileged; build the capacities of water services providers to enhance and sustain operational efficiency improvements; and promote increased cooperation and sharing of information between urban	Twinning partnerships between urban water service providers can prove invaluable in expanding access to water and sanitation services and building climate resiliency. Partnerships drive peer-to-peer exchanges of innovative approaches to build capacities. Increased capabilities foster more efficient and effective management and operations of water services, ultimately leading to better delivery of water and sanitation services to urban residents.	2013 - 2015 Total Lifetime Investment USD \$ 4,745,985 .00 USG Investment USD \$ 1,399,757 .00 Non-USG Investment USD \$ 3,346,228 .00

		water service providers to address common challenges in their delivery of water and sanitation services		
DFAT	ASEAN and Mekong Program	<p>Australia's ASEAN and Mekong Program helps ASEAN implement a coordinated response to regional challenges such as constraints to trade, transboundary water management and human trafficking.</p> <p>Enabling regional economic cooperation and inclusive growth. Australia directly supports the ASEAN Secretariat by providing high quality economic research and policy advice in priority sectors. Including but not limited to:</p> <ul style="list-style-type: none"> (i) Greater Mekong Water Resources Program (ii) Women's Economic Leadership and Empowerment (iii) Mekong Business Initiative (MBI) 		2018-19 ASEAN and Mekong Program Bilateral Budget Estimate \$32.6 million
IUCN	Mekong WET: Building Resilience of Wetlands in the Lower Mekong Region through a Ramsar Regional Initiative	<p>Through its focus on wetland ecosystems, the project also supports governments in implementing their National Biodiversity Strategies and Action Plans (NBSAPs) under the Convention on Biological Diversity and pursuing their commitments on climate change adaptation and mitigation under the United Nations Framework Convention on Climate Change</p> <p>The overarching goal is the establishment of an effective and replicable framework</p>	<p>Develop management plans in ten selected Ramsar sites, with a focus on climate change adaptation and resilience building</p> <p>Improve regional collaboration on transboundary wetlands management.</p> <p>Share best practices and build capacity for 150 wetland management staff and 300 community representatives.</p> <p>Share lessons and approaches with a further 18 Ramsar sites, as well as a number of potential or proposed new sites in the</p>	1-Jan-2017 – 31-Dec-2020

		for delivery of ecosystem-based adaptation and mitigation benefits from existing and planned Ramsar sites (or wetlands of international importance) in the region, including through transboundary collaboration	four Mekong WET countries.	
IUCN	Building Resilience to Climate Change Impacts-Coastal Southeast Asia [Ben Tre]	<p>Although this is a transnational project the focus in the Mekong delta is on Thanh Hai and Thanh Phong communes</p> <p>community working groups developed through the BCR project had contributed to the improvement of natural-resource management and use.</p> <p>Workshop teams discussed alternative solutions and methods of community involvement, which IUCN will use as valuable feedback for its work in the future</p> <p>However, there were requests for additional support, such training on finance.</p>	Further assistance on exploring soft and hard engineering solutions to combat climate change was also needed.	<p>Jan-2011 - Dec-2014</p> <p>EU Funding € 2,450,000</p>
Vietnam Delta Region				
Netherlands Embassy (PPP)	Climate Change and Water Supply in the Mekong Delta, Vietnam	<p>This public private partnership (PPP) will improve drinking water supply by increasing availability and reducing climate change effects on three water companies in or adjacent to the Mekong Delta: Saigon Water Corporation (SAWACO), Soc Trang Water Supply Company, and Tra Vinh Water Supply and Drainage Company.</p> <p>Providing access to water for low-income households and minorities (i.e. network extensions in Ho Chi Minh City, Soc Trang and Tra</p>	<p>Academic Climate Change course curriculum developed & 10 student theses on this subject</p> <p>Water consumption reduction plans drafted with 5 participating industries in Mekong Delta</p>	<p>Apr-2013 – Mar-2017</p>

		Vinh) Reduction of water consumption of industries (in the Mekong Delta provinces of Soc Trang and Tra Vinh)		
IUCN	Flood-based Livelihoods in Mekong Delta, Vietnam	The project will train and assist farmers in the delta's Đồng Tháp, Long An and An Giang provinces to adopt financially attractive, low-risk, flood-based livelihoods as alternatives to unsustainable third rice crops.	At a local level, Đồng Tháp is working on a feasibility report for a project to improve flood drainage, develop stable livelihoods and adapt to climate change	2018 - 2021 Total cost: USD \$29.1 million Multiple funding sources.
SECO	Strengthening Decentralized Trade Support Services for Small/Medium Enterprises	The program will strengthen decentralized trade support services for Small and Medium-sized Enterprises (SMEs) through strengthening the service capacities of trade promotion organisations and trade support institutions. the program will work at provincial level (North, Centre, South) and be executed nationally by Vie trade.	Three regional trade support networks established and operational Regional Export Development Plans implemented An Export Development Consultative Group is established Strengthened functional technical capacities of Vie trade in trade promotion and technical support to trade promotion organisations and trade support institutions	01.01.2012 - 31.05.2018 CHF 3'320'000
USAID	Mekong Vitality Expanded Alliance	Mekong Vitality Expanded Alliance supports women's microenterprise development and business leadership in Vietnam's Mekong Delta region. The project delivers business skills training, improves linkages to trade and markets and uses mobile technology training to support women-led savings and loan groups that empower female entrepreneurs. Mobile technology solutions provided by the activity help women increase their access to market information and more easily identify additional business opportunities. With smart phones, select women entrepreneurs are able to access advanced business	As of July 2017, 400 women have received advanced business skills training. 60% of these women have started small businesses. Going forward, the Alliance aims to support women with microenterprise development and further improve women's socio-economic empowerment and enhance their leadership role in their families and communities. Through regular group activities, training courses and conversations with project empowerment workers, women create social networks that help them find ways to support one another. Increasing social networks not only strengthens their businesses, but it leads to	JULY 2014 - DECEMBER 2017 PLANNED BUDGET: \$600,000

		<p>training courses and market information, enabling them to make more informed decisions to grow their businesses.</p> <p>Primary focus in Vinh Long province</p>	<p>social empowerment by raising their awareness of social issues such as domestic violence, women's voice in the family and the role of women in modern society</p>	
GIZ	Macroeconomic Reforms/ Green Growth	<p>Five provinces in the Mekong Delta outlined options for local green growth measures by developing green growth action plans.</p> <p>The Programme focuses on capacity development, trainings and e-learning courses to enable its partner organizations and key stakeholders to implement reforms in an independent and sustainable manner.</p> <p>Provides technical advisory and capacity development services to the key government agencies implementing the VGGS: The Ministry of Planning and Investment (MPI), the Central Institute for Economic Management (CIEM), the Ministry of Finance (MOF), the State Bank of Viet Nam (SBV), and the State Securities Commission (SSC).</p>	<p>The State Bank of Viet Nam introduced a green credit programme providing access to 240 Million US-dollars for green investments in Viet Nam. The State Bank of Viet Nam also introduced social and environmental risk assessments in the lending activities of the banking sector.</p> <p>The Ho Chi Minh Stock Exchange launched the Green Index (Vietnam Sustainability Index - VNSI). The VNSI is expected to become an important driver of sustainable investment and corporate sustainable development in Viet Nam.</p>	2014 - 2018
The World Bank	Mekong Delta Integrated Climate Resilience and Sustainable Livelihoods Project	<p>The project implementation has been slower than expected due to various reasons, key among which is the finalization of the on-lending arrangements to provinces. The setting up of the monitoring and evaluation (M&E) system has been slow due to the delays in setting up the on-lending arrangements.</p> <p>The M&E system is being put in place, and some of the baseline information remains to be determined.</p>	<p>Component 1: enhancing monitoring, analytics, and information systems to ensure the capacity to undertake 'smart investments.'</p> <p>Component 2: managing upper delta flood risk. Protecting and/or reclaiming the benefits of controlled flooding measures while increasing rural incomes and protecting high-value assets in An Giang, Kien Giang, and Dong Thap provinces.</p>	<p>10-Jun-2016 – 31-Dec-2022.</p> <p>Total Project Cost - USD \$387,000,000.00</p> <p>Commitment Amount - USD \$310,000,000.00</p>

		<p>The Bank and the implementing agency are working jointly to refine the measurement methodologies and also to determine how the impact of the livelihoods interventions/demonstration can be best measured to show how they contribute to the intended project impacts.</p>	<p>Component 3 aims to address the challenges related to salinity intrusion, coastal erosion, sustainable aquaculture, and improved livelihoods for communities living in the coastal areas of Ben Tre, Tra Vinh, and Soc Trang provinces.</p> <p>Component 4, aims to address the challenges related to coastal erosion, groundwater management, sustainable aquaculture, and improved livelihoods for communities living in the coastal areas of Ca Mau, Bac Lieu, and Kien Giang provinces.</p>	
Netherlands Embassy	The Mekong Delta Plan	<p>The Delta Plan contains guidelines for government, donors and international financial institutions on moving from planning to implementation and placing investment projects in a long-term context.</p> <p>Taken from Dutch Delta planning, aims to create 90-year programme, currently in "no regrets" stage 0-15 years, measures of investments and policy making, adoption of the vision and the strategy as laid down in the MDP requires reviewing the next national socio-economic development plan, sectoral master plans and related provincial development plans</p>	<p>Integrated long-term vision (2100) and strategy for a safe, prosperous and sustainable development of the Mekong Delta in view of plausible socio-economic and climatic developments.</p> <p>Recommendations on strengthening intergovernmental cooperation and institutional arrangements, legislation and financing options in order to create a transition in agriculture policy, adequate land and water management and rationalising sector investments by integrated planning and cost benefit analyses.</p> <p>Coherent view on short term (2015-2025) priority and 'no-regret' measures.</p> <p>The major donor agencies have already indicated that the MDP constitutes a coherent approach for the delta and support this strategy</p>	<p>2010 - 2013 Mekong Delta Plan 2014 - 2100 Mekong Delta Programme</p>
Coastal				

<p>USAID</p>	<p>Vietnam Forests and Deltas (VFD) program</p>	<p>VFD’s goal is to accelerate Vietnam’s transition to climate-resilient, low-emission sustainable development.</p> <p>The program assists the Government of Vietnam (GVN) to implement recently enacted national policies and legislation on climate change adaptation and green growth at the provincial and local levels. VFD focuses on adaptation activity in two coastal delta provinces, and on sustainable landscapes/mitigation activity in two upland forest provinces.</p> <p>In Mekong focus on Long An Province (Mekong Delta): Reducing vulnerability to climate change, conducting disaster risk reduction, climate-smart agriculture (rice) and animal husbandry.</p> <p>VFD has three main areas of activity: 1) sustainable landscapes; 2) climate change adaptation; and 3) coordination and national policy support, which was recently added at the GVN’s request. VFD also features crosscutting themes on livelihood support, gender integration and institutional capacity building.</p> <p>VFD has achieved notable progress in the sustainable landscapes component.</p> <p>Among 73 people who participated in the assessment for CBDRM training, 59 (80 percent) applied what they learned from the training in field practice,</p>	<p>VFD livelihood models have achieved mixed results. Some models seem to have increased productivity such as smart rice in Long An. VFD’s work with climate smart rice in Long An appears to enjoy government support and should be considered for expanded support.</p> <p>Provided assistance at commune level, which included:</p> <ol style="list-style-type: none"> 1) Capacity building on community-based disaster risk management (CBDRM) with community-based disaster risk assessment (CBDRA) as an entry point, and the development of community disaster preparedness and climate change adaptation plans; 2) Assistance to implement school-based disaster risk management activities; 3) Assistance to implement Program Enhancement of Emergency Responses (PEER); and 4) Assessment and upgrading of early warning systems (EWS). <p>Supported capacity building for provincial hydro-meteorological forecast station in Long An. Also provided additional assistance to DONRE to upgrade the provincial climate change adaptation action plan.</p>	<p>September 25, 2012 - 2017</p> <p>\$26.5 million</p>
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		indicating its usefulness and effectiveness.		
USAID	Enhanced Capacity of the Vietnam Red Cross	Project expected to benefit 13,700 people directly and 30,000 people indirectly in the three targeted provinces of Bac Lieu, Hoa Binh, and Quang Tri.	Project utilized a community-based approach to help communes better prepare for and increase their resilience against disasters. Project activities include developing hazard risk reduction and disaster preparedness plans; providing training to teachers and students on water use, sanitation, and hygiene in emergencies; organizing “train the trainer” courses for Provincial Disaster Response teams; developing and adapting Health Emergency Response Guides; and providing first aid and epidemic-prevention training.	\$800,000 Phase 2: 2017 - 2019
GIZ	Bac Lieu Wind Farm - Phase 1&2	Supply chain and financing challenges experienced	The larger project focuses on identifying the environmental, economic, and social effects of climate change in the Lower Mekong Basin (LMB), and on assisting highly exposed and vulnerable rural populations in ecologically sensitive areas adapt to climate change impacts on agriculture, fisheries, livestock, ecosystems, and livelihood options.	USD 260 million
GIZ	Climate Change Adaptation Through Biodiversity Promotion in Bac Lieu Province	Around 100 hectares of mangrove forest have been rehabilitated (in addition to the 100 hectares of mangroves that were already restored in the previous project on 'Sustainable Development of Coastal Forests in Bac Lieu Province') Field trials and training for farmers on improved rice cultivation systems were conducted in cooperation with the International Rice Research Institute (IRRI);	Advisory support to the provincial government towards developing a land-use plan adapted to climate change impacts has been implemented. Broad-based awareness-raising has been realised through environmental education programmes at schools. The materials have since been modified further and introduced in the surrounding provinces.	Dec 2010 - Dec 2014 BMU Grant: € 3,528,706.2 9

		<p>propagation of salt-tolerant rice varieties was tested</p> <p>Rotational farming systems that are more ecologically friendly (mixed mangrove aquaculture, like shrimp/mangrove, crab/mangrove) have been developed, shared throughout the province, and integrated into state structures; results have indicated an average increase in income of 30%</p>		
GIZ	Sustainable Development of Coastal Protected Forests (Wetlands) in Bac Lieu Province	<p>Activities to restore coastal forests have been supported, including the afforestation of 100 hectares of coastal strip incorporating biodiversity considerations; about five hectares were planted with rare endemic mangrove species</p> <p>Alternative sources of income, such as mussel or snail farming, have been trialled</p>	The project generated alternative sources of income for coastal communities, which do not damage the coastal forests. This made people less dependent on the coastal forests with the result that they can use them more sustainably. The project also trained local government employees and relevant institutions in the management of coastal areas.	<p>Oct 2008 - Oct 2011</p> <p>BMU Grant: € 1,619,433.02</p>
UNDP	Expanding models of rice-shrimp cultivation for efficient management and sustainable use of alkaline lands in Bac Lieu	<p>In the Mekong Delta coastal region, freshwater shortage and freshwater/saline-water conflict in the rice-shrimp farming areas are frequently observed towards the end of MBD crop season. Freshwater shortage could severely reduce rice yield while closing sluices to prevent saline water could affect shrimp farming.</p> <p>Community awareness raising and capacity building to manage land as well as water resources; effective exploitation of saline-alkaline lands for rice cultivation; development and expansion of rice-shrimp farming model using MBD rice variety, all of which contribute to poverty reduction and new rural</p>	<p>The rice-shrimp rotation model has been confirmed to be suitable with the production capacity of the majority of farmers in the area, bringing high efficiency and sustainability, having fewer negative impacts on the surrounding environment due to its closed production, mutual support, contributing to ecological stability, suitable in current climate change conditions. In fact, many households followed this farming model have brought high economic efficiency and low risk.</p> <p>Investigation, data collection, comparison and evaluation of the model effectiveness on acid sulphate soils in four</p>	<p>June 2015 - June 2018</p> <p>Grant Amount: USD \$48,000.00</p> <p>Co-Financing Cash: USD \$18,212.00</p> <p>Co-Financing in-Kind: USD \$184,288.00</p>

		<p>development of the region.</p> <p>b) Specific objectives:</p> <ol style="list-style-type: none"> 1. Raise community awareness and understanding on the impacts of climate change and the urgency of applying management as well as technical measures for effective use of land, water and biodiversity resources in rice-shrimp farming. 2. Expand and develop model of sustainable rice-shrimp farming in saline-alkaline and freshwater/saline-water conflict lands of the Mekong Delta coastal region. 3. Review and evaluate results of the model, draw lessons learned for sharing with relevant stakeholders, and propose measures for model replication and transfer. 	<p>hamlets of Phuoc Long commune. 129 households self-financed shrimp seed valued over VND 400 million as the counterpart fund.</p> <p>In collaboration with the Agriculture-Aquaculture Seed Breeding Centre, the FFS training on transferring the prototype rice seed production procedure and certification organized, certificates granted to 50 farmers in Phuoc Tho hamlet.</p>	
GIZ	<p>Integrated coastal and mangrove forest protection Mekong provinces to adapt to climate change</p>	<p>At the operational level, the scope of the interventions and the cooperation system are well defined and aimed at achieving the impact identified at the results level as well as by the programme objective indicators. The monitoring system developed by the programme is excellent.</p> <p>The gender issue was particularly addressed by supporting provincial Departments of Labour, Invalids and Social Affairs (DOLISAs) in integrating provincial Climate Change Action Plans into provincial Gender Action Plans</p>	<p>The programme worked towards a systematic change, focusing on developing climate-resilient integrated coastal protection and management. First phase delivered technical and managerial innovations that were translated into policies, thus becoming binding and ready for application on a greater scale during the programme's second phase.</p> <p>The programme has leveraged funds from other development partners for joint activities. EUR 300,000 from the Embassy of the Netherlands on coastal protection; EUR 233,000 from (UNEP) on coastal spatial planning; EUR 190,000 from the United Nations Development Programme (UNDP) on regional coordination</p>	<p>June 2011- July 2018 EUR 23,570,000</p>

JICA	Ben Tre Water Management Project	The project will provide saline water intrusion control facilities in Ben Tre Province in southern Vietnam, where saline water intrusion is damaging crops.	<p>This will improve the agricultural productivity by providing agricultural water with low salinity.</p> <p>The agricultural sector of Ben Tre drives the economy of the province, and the ratio of the agricultural sector to the gross domestic product (44 percent) greatly exceeds that of the average of the country.</p>	<p>JPY 24,257</p> <p>Completion Date: October 2022</p>
GGGI	Vietnam Wastewater Management System (Ben Tre)	Has demonstrated project feasibility and sub sovereign lending approved for USD \$30m approved.	Supports adaptation to floods, droughts, and salinity intrusion through the increase of sewerage coverage and improvement of wastewater treatment process, and mitigation through implementation of low energy/low carbon technologies and the increase of sewerage coverage.	<p>Start Date: Q4 2015</p> <p>End Date: Unknown</p> <p>Approved Budget: USD \$30,000,000.00</p>
Waterways				
The World Bank	VN-Mekong Delta Water Management for Rural Dev	<p>Institutional Support and Sustainability - continuous long-term institutional support mechanisms are limited for the water users' associations, and that poses a risk to effectively manage irrigation infrastructures. Safe management or disposal of faecal sludge is important otherwise it can become a health hazard.</p> <p>Financial Sustainability - although O&M arrangements were made both for irrigation and water supply structures through user fees, they were reportedly still under moderate risk particularly the ones that required additional financial support from provinces.</p> <p>Ownership and Commitment - scaling up of soft activities may not go as planned; approval of plans may be</p>	<p>An integrated database, rather than the interlinked Excel and Word documents that were used, would have made the M&E system more user-friendly and accessible.</p> <p>The M&E system was mainly used as a system to report progress against targets rather than an integrated management tool and a tool to support evidence-based learning.</p> <p>While water resource management in delta regions requires an integrated approach to address all water related issues, including agriculture, irrigation, sanitation, and climate change adaptation, project success can be attained through a strong results framework, and implementation</p>	<p>7-June-2011 - 15-Sep-2017</p> <p>Total Project Cost: USD \$134,289,842.21</p> <p>Commitment Amount: USD \$160,000,000.00</p>

		<p>delayed at the provincial levels and scaling up of pilot projects might be partial.</p> <p>Climate change and upstream development - increasing saline intrusion and intensification of rice cultivation pose additional risks.</p> <p>Measures to mitigate negative impacts on Physical Cultural Resources (PCRs), such as relocating normal graves or chance finds of graves, were adequately incorporated into subproject ESMPs.</p> <p>The project had a lofty vision, which tried to integrate 'water for agriculture' and 'water for people', and introduced 'climate change adaptation' as a cross-cutting element. This was associated with additional technical complexity, sensitivities to changing environment, and the need for multi-sectoral solutions. In such a scenario, a stronger results framework, close monitoring and supervision, as well as sound implementation arrangements with sufficient capacity building support are key to project success.</p>	arrangements with sufficient capacity building.	
The World Bank	Northern Delta Transport Development Project Additional Financing	Alleviation of physical and institutional bottlenecks, in two major waterway corridors in the Northern Delta Region. This additional credit will be used to help finance construction of a canal to connect two rivers with a navigational lock, known as the Day-Ninh Co interconnecting canal.	Failure to adequately implement a performance-based contract as originally intended. It is expected that construction of the canal will reduce transport and logistics costs, including the cost of environmental externalities, along a major waterway corridor in the Red River Delta region.	05-May-2017 - n/a Total Project Cost - USD \$107,000,000.00 Commitment Amount - USD

				\$78,000,00 0.00
Netherlands Embassy	Water Treatment Project	<p>The project will deliver sanitation for residents and industries whose wastewater is currently discharged untreated, resulting in high levels of environmental pollution. The Dutch Government is financing the project as part of its Facility for Infrastructure Development (ORIO programme) in developing countries.</p> <p>The project also includes the construction of four pumping stations, over 100km of pipeline network and the connection of 15,000 households and over 1,000 small-and medium-sized enterprises</p>	<p>The environmental benefits will be visible in a significantly improved water quality in the area's lakes, canals and Thi Vai river and will result in better living conditions for residents. It will also help small and medium enterprises to protect the quality of the environment around their businesses.</p>	<p>July - 2017 - Dec-2019</p> <p>Royal Harkening in Vietnam has signed a € 9.5 million contract with the Ba Ria Vung Tau</p>
Urban				
GIZ/SECO	Mekong Urban Flood Proofing and Drainage Programme (FPP)	<p>The project aims, through a multi-level approach (national, provincial and city level), to improve the capacity of public institutions and communities to adapt to more frequent and severe urban flooding in the wake of climate change, by implementing awareness and adaptation measures.</p> <p>Under the FPP, this consulting contract supports three cities in the Mekong Delta (Ca Mau, Rach Gia and Long Xuyen. in developing flood risk sensitive urban planning, particularly land-use planning and drainage planning. Moreover, the project will develop flood risk models and update urban drainage master plans to follow climate change resiliency guidelines for the above-mentioned cities in</p>	<p>Flood risk models and flood risk model management systems are important tools to communicate flood risk to different target groups as they provide an evidence-based foundation for decision making purposes to public authorities for flood control and disaster mitigation operations, land-use planning and flood evacuation planning</p>	

		order to help public authorities to improve disaster risk management in urban areas.		
The World Bank	Can Tho Urban Development and Resilience	<p>There are still bottlenecks related to institutional and technical capacity, project management issues, slow procurement and slow resettlement.</p> <p>No measurable results are expected until Year 3 of implementation except for some minor training in Year 2 (2017).</p>	<p>Component 1: structural and non-structural measures to help the city manage urban flood risk. It consists of three sub-components: priority flood control investments in urban core; drainage and waste water systems; and operation of the city integrated flood risk management system and early warning system.</p> <p>Component 2: urban corridor development. Increase intra-city connectivity and encourage compact, mixed-use, pedestrian, and public transport oriented urban development in the less flood prone area of Cai Rang. It consists of three sub-components: road and bridge links; construction of the residential area for resettlement; and effective transport systems management and equipment.</p> <p>Component 3: spatial planning platform and financial and social protection instruments. Building management systems to improve spatial planning, data and information management, post-disaster budget execution, and responsiveness of safety nets to flood events. It consists of two sub-components: risk informed spatial planning platform; and disaster responsive social assistance system.</p>	<p>24-Mar-2016 - 30-Jun-2022.</p> <p>Total Project Cost – USD \$322,000,000.00</p> <p>Commitment Amount – USD \$250,000,000.00</p>
The World Bank	Scaling-Up Urban Upgrading Project	Improving access to infrastructure in priority city areas and improve urban	Living and income generating activities of Khmer people will be	Approval Date: 30 May 2017

		<p>planning in the participating cities.</p> <p>The first component will support tertiary investments in approximately 30 LIAs including, improvements to environmental sanitation by rehabilitating or constructing public sewers, constructing septic tanks, providing access to septic management services, and house connections to public sewers.</p> <p>The second component provides support to improve priority networked infrastructure in line with the broader city development agenda, focus on social infrastructure facilities such as markets, community halls, public places, schools and green spaces.</p> <p>The third component will include the construction of resettlement areas for affected persons.</p> <p>The fourth component will provide implementation support as well as enhance the cities' capacity to manage urban development in a risk informed manner.</p>	<p>affected by land acquisition, possibility that project design may change to mitigate this, for example upgrading the current canal and drainage system, construction works on public land and also providing technical support for Khmer households to upgrade their households.</p> <p>The task team has also initiated discussions with SECO to seek bilateral grant support for the project, given that the objectives of the project are fully aligned with the Pillar 4 for SECO's 2017-2021 prioritization plan.</p>	<p>Closing Date: 31 Dec 2023</p> <p>Total Project Cost: USD \$330,000,000.00 million</p>
ADB	Second Lower Secondary Education for the Most Disadvantaged Areas Project	<p>The project funds new school facilities, teacher training, textbooks, community outreach activities and the creation of school cluster groups to boost enrolment and retention of disadvantaged students. The project targets areas with large ethnic minorities and those prone to typhoons.</p>	<p>Strong grievance redress mechanism established.</p> <p>Introduced new initiatives to equip the schools and communities with knowledge and facilities to effectively deal with disasters caused by typhoons and other natural calamities as part of climate change adaptation measures and new programs and curriculum for lifelong skills, including vocational orientation for ethnic</p>	<p>24-Oct-2016 to 31-Dec-2020</p> <p>Total Project Cost: USD \$93,000,000.00</p> <p>ADB Commitment: USD \$80,000,000.00</p>

			minority students.	
SECO	Mekong Urban Flood Proofing and Drainage Project in Three Mekong Delta Cities	There is a lack of procedures and capacities at national and subnational level to implement measures to deal with these risks effectively and in a sustainable way.	Development of a urban master plan for the three cities. The gaps or inconsistencies in the overall framework of national regulations and guidelines for urban drainage will be eliminated. Better coordination amongst relevant stakeholders in the three cities.	26-May-2016 - 31-Dec-2019 Total Project Cost: CHF 5'250'000
Local Capacity Building Projects				
IFAD	Rural Development: Project for Adaption to Climate Change in the Mekong Delta in Ben Tre and Tra Vinh Provinces	<p>The AMD approach involves building evidence and knowledge for improving participatory planning, policy formulation and facilitating adaptive change through sustainable rural financial services and strategic government co-financing for investing in climate resilient livelihoods at household and community levels.</p> <p>In this regard, the AMD will provide a counterpoint to the GoV's and Ministry of Agriculture and Rural Development's (MARD) emphasis on structural adaptation (infrastructure oriented), by articulating a number of non-structural or "soft" adaptation responses, which, considering the sensitive and uncertain hydrological dynamics of delta ecosystems, provide a more dynamic response without prejudicing future options, or risk of maladaptation. By working along a salinity gradient that extends from the coast inland, the AMD will enable the testing and deployment of alternative rural livelihoods in the context of changing salinity</p>	Thirty communes have been selected in each province based on their poverty ranking, vulnerability to climate change and overlap with communes covered by the government's National Target Programme on New Rural Development in partnership with Tra Vinh University (TVU), regional research institutes and international collaboration, the project will evaluate climate adaptation technologies and approaches that show potential for scaling up.	11- Dec-2013 - 30-Mar-2020 Total Project Cost: USD \$49,340,000.00

		<p>concentrations, and heat and water stress.</p> <p>The project proposes the development of a real-time salinity monitoring and forecasting system comprising of a network of 60 automated salinity monitoring stations, a network of up to 2000 CIG manual monitoring points</p> <p>There are concerns with respect to (i) allocation of adequate resources to the implementation of the Annual Work Plan and Budget (AWPB); (ii) establishment of the Automated Salinity and Water Quality Monitoring System (ASWQMS) and (iii) compliance by the Women's Development Fund (WDF) of Tra Vinh to the criteria of the State Bank of Vietnam (SBV) for full registration as a Micro-Finance Institution (MFI).</p>		
New Zealand's Aid/Oxfam	Building Resilience to Disaster and Climate Risks of Men and Women in Ben Tre Province	<p>Through the project a Disaster Risk Reduction Fund has also been set up. The fund provides financing for (DRR) and (CCA) activities that local communities have identified as important.</p> <p>To support the promotion of alternative livelihoods, Oxfam has introduced goat and cow breeding in the target communes.</p> <p>In addition, more than 2,500 poor households have been provided with 2,000 litre water containers, which can store enough drinking water to last six months during the dry season.</p> <p>In 2013, it provided the 15</p>	<p>The emergency relief responds to urgent needs of children, women, and men in 15 most affected communes in districts of Binh Dai, Ba Tri, and Thanh Phu.</p> <p>Oxfam and the provincial Department of Planning and Investment have developed a guideline for integrating disaster risk reduction (DRR), climate change adaptation (CCA), and gender equality into socio-economic development plans (SEDPs).</p> <p>Local authorities are now better able to conduct participatory vulnerability and capacity assessments and to integrate the results of these into the annual</p>	<p>June-2012 - Oct-2017</p> <p>US\$50,000</p>

		<p>communities with early warning disaster equipment and other machines worth over 1.4 billion VND while training courses on community-based disaster management and disaster risk reduction were also opened.</p> <p>Besides encouraging the adoption of environmentally friendly behaviours, the project has also built four livelihood models to support poor women, one in making eco-bags in Bao Thanh commune and three in raising cows in Ba Tri and Thanh Phu communes.</p>	<p>SEDP. As a result, women's specific needs and capabilities are now taken into consideration in the SEDP, and about 42 percent of local women participate in local government consultations and planning meetings to develop the SEDP.</p>	
ICCG	<p>Strengthening capacity of Khmer women in adapting to climate changes in Tra Vinh province, Vietnam</p>	<p>The goal is to strengthen quality of human resources of Khmer women in the Tra Vinh province, to mitigate and adapt to climate change impacts. The outcome of this project will be increased adaptive capacity of community in the Tra Vinh province to climate change</p>	<p>A network of capable women in the project will be useful for other government development programs and future rural and community development projects in the Mekong Delta</p>	<p>20-Apr-2017 - 20-Dec-2017</p> <p>Total Cost: EU 3000</p>
MCNV	<p>Climate Change Adaptation for the Poor Coastal Community in Ben Tre</p>	<p>Loans from MCNV microfinance project in Binh Dai district allow poor family to build high capacity water container of about 3m³ each.</p> <p>With financial support from Jumpstart Foundation, MCNV collaborates with the Ben Tre provincial Women's Union to establish women cooperatives, which provide stable jobs and income for poor women.</p> <p>MCNV would like to establish a livelihood adaptation knowledge website to share our field experience to help poor communities to improve their livelihoods by adapting to climate change.</p>	<p>At the same time, MCNV also looks for Corporate Social Responsibility programs to supply water containers to kindergartens, commune health centers and friendship houses for extreme poor people in Ben Tre.</p> <p>Creative trainings on adapted livelihoods should be provided widely to raise awareness for everyone to better prepare them for unavoidable climate change.</p> <p>MCNV expects to find additional development partners to do practical field research and bring innovative methods that could help poor communities to stabilise their lives and overcome the</p>	

			additional challenges from climate change	
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Table 20 shows the summary of the projects in Mekong Delta Regions. As shown in the table, most of the projects in Mekong Delta Regions have focused on community level capacity building or else policy and institutional level capacity building.

Even over the last 8 years there have been 44 projects in the Mekong Delta region, this analysis of exiting projects aims to find gaps in programming and create synergy with them to help facilitate the implementation of this project. Based on this assessment the proposed project and would like to focus on providing hard environmental-related infrastructure in small scale with suitable capacity building for the ownership of the community.

Table 20. Brief Summary of the projects in MDR

Geographic Characteristics	Total project	Policy/ Institutional Capacity Building	Hard Environmental-Related Infrastructure	Hard Economic-Related Infrastructure	Community level Capacity Building
Greater Mekong Subregion	16	9 (56.25%)	0 (0.00%)	2 (12.50%)	5 (31.25%)
Vietnam Delta Region	7	3 (42.85%)	2 (28.57%)	0 (0.00%)	2 (28.57%)
Coastal	9	2 (22.22%)	4 (44.44%)	1 (11.11%)	2 (22.22%)
Waterways	3	0 (0.00%)	1 (33.33%)	1 (33.33%)	1 (33.33%)
Urban	5	0 (0.00%)	2 (40.00%)	0 (0.00%)	3 (60.00%)
Small scale local	4	0 (0.00%)	1 (25.00%)	0 (0.00%)	3 (75.00%)
SUM	44	14 (31.85%)	10 (22.72%)	4 (9.09%)	16 (36.36%)

G. Capturing and Disseminating Lessons Learned:

A dedicated component (4) addresses awareness raising, knowledge management and communication. While this provides the cornerstone for capturing and disseminating lessons learned, other project components directly contribute to knowledge management mechanisms and dissemination of lessons learned from local to national and to international levels.

At the local level, a participatory approach involving communities, local authorities and will lead to increased local knowledge on planning, constructing and maintaining resilient infrastructure. Project demonstration sites will contribute to sharing lessons and training through local disseminators and tools and guidelines, this will take place from the beginning of the project and throughout its implementation. The project will also use a participatory monitoring process, which will enable the beneficiary communities under component 4.

At the national level, this project will allow other vulnerable regions in Vietnam to draw on this framework and lessons learned through replication and scale-up of good practice. Information obtained through this project will be consolidated in reports, then tools and guidelines will be

developed for resilient and sustainable urban communities for developing and upgrading human settlement. The partnering departments of the various ministries at the regional level will directly link with the ministries at the national level to facilitate national wide dissemination.

As part of the sustainability/exit strategy, the project will develop participatory monitoring processes, which will trigger institutional learning processes, participation from local groups, knowledge exchange and replication and scale-up of good practices.

At the international level, projects related to climate change, especially for eco-human settlement, and resilient housing and community level infrastructure may benefit from the proposed project. UN-Habitat is plugged into a number of international mechanisms. The Knowledge Centre on Cities and Climate Change (K4C) provides a knowledge management platform for Climate Change Adaptation and Human Settlement Interventions. It is proposed to use this platform, accessible at UN-Habitat's website, to disseminate the lessons learned from this project. UN-Habitat has also been working on integrating knowledge generated from the project with the knowledge management component of CCCA programme, and through the 'camclimate' website⁴

Table 21. Project Outputs and Related Learning Objectives, Indicators and Products

Expected Concrete Outputs / Intervention	Learning Objectives (LO) And Indicators (I)	Knowledge Products
1.1 Capacity building support provided to national government and local authorities to increase the resilience of human settlement and ecosystem	(LO): Improved Climate Change awareness and knowledge of mainstreaming climate change adaptation into the planning of government officials at all levels (National, province, district and commune), specific focus on District and commune levels (I) Guidance and materials for trainings Number of training workshop and participants	<i>Training materials, guidelines comprising of planning approach, resilient infrastructure, and technical standards, environmental and social safeguards and community action planning</i>
1.1.1 Guidance and training materials development for vulnerability and risk assessment at local levels	(LO) Develop the guidance and training materials for mainstreaming climate change adaptation into the planning Integrate local climate action into community planning (I) Number of guidance and training materials Quality of participants on the development of materials Pilot workshop with practitioners	<i>Training materials, guidelines comprising of planning approach, resilient infrastructure, and technical standards, environmental and social safeguards and community action planning Pilot training workshop with practitioners</i>

⁴ <http://www.camclimate.org.kh>

1.1.2	Planning tools and training materials development for comprising of planning approach, strategy and action plan development, resilient infrastructure	(LO) See 1.1.1 and guidance and training materials will be included planning approach, strategy, and action plan for comprehensive and holistic climate change adaptation (I) Number of guidance and training materials Quality of participants on the development of materials Pilot workshop with practitioners	<i>Training materials, guidelines comprising of planning approach, resilient infrastructure, and technical standards, environmental and social safeguards and community action planning</i>
1.1.3	Project team orientation/training	(LO): Improved Climate Change Adaptation tool and planning approach (I): Training guidance materials Number of plans (LO): Improved awareness and local vulnerability (I): Number of participating government officials	<i>Planning tool for community vulnerability Training materials Guidance for training Workshop report and documentation (Concept note, Agenda and List of Participants)</i>
1.1.4	National Induction Workshop (National and provincial participants)	(LO): Improved knowledge and strategies sharing (I): Number of participating government officials, Number of strategies shared Number of local plans reflecting climate change adaptation/resilience	<i>Training report and training materials Eco-human settlement strategy and action plans</i>
1.1.5	National training of facilitators workshop (national and provincial participants), enabling them to set up eco-human settlement strategy and action plan development	(LO): Improved Climate Change awareness of government officials (I): Number of participating national and local government officials Number of local plans reflecting climate change adaptation/resilience	<i>Training report and training materials Eco-human settlement strategy and action plans</i>
1.1.6	Province and District level workshops and trainings, enabling them to set up eco-human settlement strategy and action plan development	(LO): Improved Climate Change awareness of government officials (I): Number of participating local government officials Number of local plans reflecting climate change adaptation/resilience	<i>Training report and training materials Eco-human settlement strategy and action plans</i>

<p>1.1.7 Community action planning workshops provided to commune level for the development of climate resilient community plans</p>	<p>(LO): Improved Climate Change Adaptation plan (community level) (I): Project tools for planning approach and guidance Number of workshops Number of community-based plan /strategies (developed and/or revised)</p>	<p><i>Project tool / guidelines comprising of assessment and planning approach, resilient infrastructure, and technical standards, environmental and social safeguards and community action planning Task report for workshop Eco-human settlement action plans and strategies</i></p>
<p>2.1 Comprehensive workshops for integrating the eco-human settlement strategies and plans (province, district and commune)</p>	<p>(LO): Improve the local's knowledge and awareness of climate change adaptation and planning (I): Number of workshops Number of local plans reflecting climate change adaptation / resilience</p>	<p><i>Workshop and feedback report Revised action plan and strategy for climate change adaptation Revised community planning</i></p>
<p>2.1.1 Community action planning workshops to districts and communes for the development of climate resilient (integrated) community plans (Utilizing the tools and facilitators developed under 1.1)</p>	<p>(LO): Improve local action for climate change adaptation and planning Integrate climate change action plan and strategy into community planning (I): Number of local action workshop Number of local plans reflecting climate change adaptation / resilience</p>	<p><i>Workshop and feedback report Revised action plan and strategy for climate change adaptation Revised community planning</i></p>
<p>2.1.1.1 Community level vulnerability and Risk Assessment</p>	<p>(LO) Based on participatory approach, locals can participate in the vulnerability and risk assessment for their communities. Locals can improve their knowledge and awareness of climate change adaptation and action plan (I) Vulnerability and risk assessment report Community mapping for assessment Number of workshops at local level</p>	<p><i>Community base vulnerability and risk assessment report Workshop and feedback report Mapping based on vulnerability and risk assessment</i></p>
<p>2.1.1.2 Develop community level eco-human settlement planning based on the output 2.1.2</p>	<p>(LO) Develop community based eco-human settlement planning and strategy Revise the climate change adaptation action plan through the workshop (I) Number of action plan work shop Number of eco-human settlement strategies and action plans</p>	<p><i>Community based eco-human settlement strategy and planning Revised action plan and strategies for climate change adaptation</i></p>

<p>3.1.1 Vulnerable assets strengthened, new sustainable assets constructed (Sectorial approach): Waste, climate-resilient infrastructure: i.e. bridge, housing, and ecosystem</p>	<p>(LO): Improved knowledge and awareness of climate resilient infrastructure Enhanced local ownership for hard infrastructures Encourage locals to join the project of climate change adaptation and action plans</p> <p>(I): Number of workshops for understanding about hard infrastructure intervention Number of training workshop for maintenance and operation</p>	<p><i>Local operation and management framework and manuals</i> <i>Guidance for maintenance and operation</i></p>
<p>3.1.1.1 Built small-scale of water salination system to provide clean and safe water for both living and agriculture (Water)</p>	<p>(LO) Improve the physical infrastructure for water management</p> <p>(I) Number of hard infrastructures in communities Number of training workshop for maintenance and operation</p>	<p><i>Design and technology for water management system</i> <i>Implementation plan and report</i></p>
<p>3.1.1.2 Climate resilience infrastructure building and refurbishing (Infrastructure)</p>	<p>(LO) Improve the physical and climate resilient infrastructure</p> <p>(I) Number of hard infrastructures in communities Number of training workshop for maintenance and operation</p>	<p><i>Design and technology for climate resilience infrastructures</i> <i>Implementation plan and report</i></p>
<p>3.1.1.3 Climate resilience housing upgrade (Housing)</p>	<p>(LO) Improve the physical condition for house and implement climate resilient housing design</p> <p>(I) Number of improved houses Number of climate resilient housing design implemented house Number of training workshop for maintenance and operation</p>	<p><i>Design and technology for climate resilience housing</i> <i>Implementation plan and report</i></p>
<p>3.1.1.4 Enhancing ecosystem (Ecosystem)</p>	<p>(LO) Improved the ecosystem against the impact of climate change and natural hazards</p> <p>(I) Number of eco-friendly technologies implemented Number of training workshop for maintenance and operation</p>	<p><i>Design and technology for climate resilience ecosystem</i> <i>Implementation plan and report</i></p>

3.1.1.5 Built small scale of eco-friendly waste treatment and management facility (Waste)	(LO) Improved waste management system against the impact of natural hazards (I) Number of eco-friendly technologies implemented Number of training workshop for maintenance and operation	<i>Design and technology for climate resilience and eco-friendly waste management system</i> <i>Implementation plan and report</i>
4.1.1. Lesson learned and best practices regarding resilient urban community development/housing are generated, captured and distributed to other communities, civil society, and policy-makers in government appropriate mechanisms	(LO): Sharing of lessons learned and best practices (I): Number of platforms used for sharing Number of workshops for sharing experience and best practices	<i>Dissemination through regional organizations and websites</i> <i>Sharing experience and best practice materials</i> <i>Workshop and feedback report0</i>
4.1.2. Regional advocacy and replication	(LO): Scaling up the good practices to the policy level at provincial level (I) Number of knowledge sharing workshop at local level	<i>Reports of dialogue and knowledge sharing workshop</i>

The Integrated knowledge management approach as demonstrated in Table 21 will result in the tools, guidance, training materials, guidelines, trained officials, developed and revised action plan and strategies for climate change adaptation and demonstration sites. In particular the close collaboration with key stakeholders at national and local levels will take a role in building code and producing the guidelines and tools that can be used autonomously by other stakeholders as well in order to ensure the sustainability of the proposed project.

H. The Consultation Process:

The idea of the project has been started from the field mission to the coastal region of the Mekong Delta between 10 and 14 September 2018. In the field mission, the impact of climate change was specifically identified at provincial and district level. In the meetings with provincial level government officials, general and current status of the impact of climate change was discussed, and economic, social and environmental related issues were also considered. For more detailed information and analysis, data collection was requested to relevant government agencies.

The first meeting with focal point, which is the Ministry of Natural Resources and Environment, focused on showing the interest of the project development and find out the demand of Vietnams government and national priorities for climate change adaptation.

The additional meetings at the national level focused primarily on alignment with national priorities (as identified in Section D), coordination (and avoiding duplication) with other development partner initiatives (outlined in Section F), the thematic and geographic focus, and the pre-identified target communities.

National level consultation meeting was held in 7 November with various stakeholders and experts. Community level consultation was held in December with rapid vulnerability and risk assessment. In the community consultations women, indigenous people, elderly, youth and people with disability have been part of the consultation process.

In November, project related agencies were contacted and consultation meetings were held. The consultation focused on synergizing with other projects, avoiding overlaps and identifying lessons learned from other projects. In Vietnam, there is the Mekong Delta Working Group that facilitates discussion about projects and policy.

In December, community consultation took place. The objective was to understand the local climate change impact/effects per community, individual communities adaptive capacity, the demand for resilience capacity building and barriers to building resilience, specific resilience building needs and interests and concerns regarding the propose project in general. For the full project proposal, the in-depth consultation with communities will take place where we'll discuss and select possible activities and hard interventions with communities by considering:

- Alternative options for increasing resilience
- Costs (also for maintenance), also looking at alternative options
- Potential environmental and social risks and impacts of intervention (identified by through initial screening)

Table 22 shows about the overview of stakeholders consulted and the outcome of these consultations.

Table 22. Stakeholder Consultation Meeting Held

Agency	Consultation objective	Outcome	Conclusion
MONRE	Show the interest of AF project development and implementation / RE-confirm focal point willingness/ Establish preferred target areas/Ensure coordination with other ongoing adaptation activities and policy alignment	MONRE coordinated for consultation meeting and supports UN-Habitat for administration MONRE will support UN-Habitat to organize the consultation workshop at local level MONRE also supports to find the most vulnerable communities for the AF project development	Set up the consultation meeting on 7 November 2018 Sharing the experience that MONRE support UNEP's AF project development UN-Habitat receives the full support of MONRE for project development
MONRE	To collect the feedback of the project from governmental officials and experts To discuss about the potential project sites for the project To find the gap between existing and UN-Habitat projects	Various departments in MONRE and experts participated in the consultation meeting Sharing the experience and knowledge about the current local situation Reviewed the developing project and its draft of the concept note	Narrow down for the project locations: Bac Lieu and/or Ben Tre Potential project site: An Giang, Ca Mau. The project site will be decided by 16 November Components and activities in the draft will be revised Collected the data about

			ongoing and planned projects in the Mekong Delta Collected data for identifying the gap between existing and UN-Habitat projects
Province officials in three provinces	Agree target sites/Understanding climate change vulnerability, integrating climate change action into urban planning/highlight possible adaptation investments	Data collection, possible project sites were introduced and visited, understanding of current status of the impact of climate change, provincial priorities for climate change adaptation, the level of awareness of climate change	Getting the feedback from the locals about the project and identifying the needs of locals Providing socio-economic and environmental data for districts and communes Discussing about implementation
Commune officials in three provinces	Agree target sites/Understanding climate change vulnerability, integrating climate change action into urban planning/highlight possible adaptation investments/understanding community coping mechanisms/Barriers to building resilience	Data collection, possible project sites were introduced and visited, understanding of current status of the impact of climate change, district and commune levels priorities for climate change adaptation, the level of awareness of climate change	Locals understood about the project and benefits from the implementation Identifying the real needs from locals and obtaining the feedback about the projects Also recognizing the challenges what locals face because of the impact of climate change Also checking the knowledge about the impact of climate change and climate change adaptation
GIZ	Ensure synchronicity with the GIZ integrated Coastal Management Project in the Mekong Delta	For site selection process, GIZ supports their new information system from ICMP Their ICMP did not be implemented in Ban Tre and Tra Vinh, thus AF project can fill the gap. Small-scale infrastructure will be added as pilot project, which could be the common area between to agencies. GIZ could provide concrete evidence and data in MD when UN-Habitat develop its concept note for Adaptation Fund.	Project site could be overlapped, but we should focus on how we make the synergy within the same project site through proper cooperation GIZ suggested also focus on river erosion since the informal settlement along the river accelerate the river bank erosion; the resettlement of the informal sector along the river is urgent issue for the government
JICA	Ensure synchronicity with the JICA Ben Tre Water Management Project and share the	Identified the gap between JICA's and UN-Habitat's AF project in terms of geography and context: JICA	JICA is focusing on overall Ben Tre in province level while UN-Habitat is constructing small-scale

	data from JICA's Feasibility study, vulnerability assessment, and climate change projection	project mainly focuses on hard infrastructure, and not including planning component. JICA's project is big scale infrastructure construction project, thus they cannot cover all the region. Thus, they only can cover the around of Ben Tre City and upper area of the province. Data collection	infrastructure in commune level; combination of diverse level could make synergy for both project Ben Tre Water Management Project only covers upper part of Ben Tre; TP. BEN TRE; the project cannot cover overall Ben Tre province so UN-Habitat might be able to fill the gap also geographically in the same province JICA and UN-Habitat could also work together on developing master plan for Ben Tre since planning is not included in Ben Tre Water Management Project
SECO	Gain experience from SECO on the implementing modality for multi-lateral climate finance projects Synergize with other projects, avoiding overlaps and identify lessons learned	Have suitable institutional arrangement for implementation of the project is the key; To succeed on developing the project in MDR, reflection of the local needs is important; Identifying local's demand and vulnerability and risk assessment are the key aspects for small-scale infrastructure intervention project;	SECO suggested the projects relevant to the proposed project: WB project in urban climate resilient project in Can Tho could be good reference for developing the small-scale infrastructure; GIZ project in Anh Giang, Kien Giang, and Cau Mau on sustainable drainage system link to green infrastructure
NISTPASS	Gain knowledge and practices for environmental technology application at local level	Data collection Possible project sites were introduced and potential environment related technology would be introduced with understanding of current status of the impact of climate change, district and commune levels Priorities for climate change adaptation, the level of awareness of climate change	Will clarity of how to transform outputs to outcomes is essential to ensure a real change Will have a dialogue events for integration needs to be apply at local level
ISPONRE	To find the gap in the Vietnamese context and seek advice for project site selection	Notes that there is also a need to proof more resilience for activities. Adds that the component of knowledge sharing the model should be scalable for the implementation.	Will revise the planned activities Considering about ecosystem approach with agricultural base

		With the ecosystem approach it is necessary to ensure the house supply chain in the market of flooding rice	
IFAD	Review AMD Project and Adaptation Fund Project, and discuss possible synergy.	Notes the agencies challenges, such as the lack of details. Offers to share useful of IFAD reports for the project implementation. Notes the need of communication with PPC for further details.	The gaps perceived in Ben Tre and Tra Vinh are being filled by IFAD. Will contact IFAD for details of PPC.

In Vietnam, UN-Habitat has been implementing projects in support and strengthening policy interventions, institutional capacity building, climate change adaptation and mitigation and disaster risk management, youth development, housing and urban planning at both national and subnational level. UN-Habitat has been a longstanding partner with Vietnam at national and provincial level and has also supported the development of cities in Vietnam. It is the agency with the best expertise in dealing with human settlement planning at local level with the highest capacity to implement adaptation projects on a significant scale, as is recognized and valued by all partners.

I. Justification of Funding Request:

The proposed project components, outcomes and outputs fully align with national and local government/institutional priorities/ identified gaps and with the needs of the target communities and vulnerable groups as identified through project analysis. It will also align with the Adaptation Fund’s seven outcomes as stated in the Adaptation Fund results framework. This alignment has resulted in the design of a comprehensive approach in which the different components strengthen each other and in which outputs and activities are expected to fill identified gaps of Vietnam’s climate change response. UN-Habitat is well placed to execute the proposed project based in its human settlements related climate change work in the Asia-Pacific Region and its strong presence in Vietnam; it has a history of strong partnerships with national and sub-national government agencies, a wide range of other stakeholders and most importantly communities with vulnerabilities.

The project strongly addresses the climate resilience of the most vulnerable communities in the coastal region of the Mekong Delta in Vietnam where numerous underlying vulnerabilities predispose communities to climate vulnerability. The project aims to maximizing the funding amount for the local investment component (component 3); funding allocation of the ‘soft’ components is required for complementarity/support for Component 3 in order to achieve sustainability and quality assurance of the project.

The table below provides justification for funding requested, focusing on the full cost of adaptation reasoning, by showing the impact of AF funding compared to no funding (baseline) related to expected project outcomes.

Table 23. Overview of Impact of AF funding compared to no funding (baseline) related to expected project outcomes

Project Objectives	Baseline (without AF)	Additional (with AF)	Comment / Alternative Adaptation Scenario
Institutional and community capacity building toward eco-human settlement development for supporting to enhance local climate response actions	There are no detailed plans for human settlement and ecosystem. No awareness of the linkage between human settlement and ecosystem. No support plans for local climate response actions in terms of human settlement and ecosystem.	There will be detailed plans for human settlement and ecosystem. Public can understand about the correlation between human settlement and ecosystem. Develop the plans for local climate actions in terms of human settlement and ecosystem	Local people will adapt to the impact of climate change and they could transform by themselves. However, it would not be the well-structured adaptation and will be not efficient and effective. Without the intervention, the enhancement of adaptive capacity will be limited in terms of eco-human settlement planning
Integrated planning with respects of eco system-based climate change adaptation and building climate resilient capacity and action plan at local level	Detailed plans for human settlement and ecosystem would not be integrated into the provincial, district and commune level plans. Lack of integration of climate action plans and strategies. Community level demand will not be reflected into the plans	Identifying the demand from community level. This demand can be developed to local climate response actions. This action plans will be integrated into the socio-economic development plans. Green and Blue network can be set up and support to local to strengthen climate resilience.	Planning will be developed, but it would not be the comprehensive one. No holistic approach will be implemented for responding the climate change. Without the intervention, the opportunity that planning for responding the climate change at local level into provincial and national level planning will be limited, and the actual challenges and financing mechanism for climate change related projects will not be captured
Sustainability built through small-scale protective and basic service infrastructure	National government and local authorities will not be able to respond to climate change impacts because local development plans do not include specific action plans and there is insufficient financial capacity to invest climate resilient infrastructures	Locals can have physical infrastructure to prevent from the impact of climate change. Locals can understand exact challenges from the impact of climate change and they can utilize the infrastructures for strengthening climate resilience. Locals will be able to have basic service for water management and waste treatment.	Without undertaking actions through the People's Process, adaptation actions would not be participatory or generate the levels of local ownership achieved by this project.
Awareness Raising and Knowledge Management	Local levels (district and communes) have limited	Locals have capacity building for knowledge	Without these interventions, the

	<p>knowledge of resilient planning and protection of human settlement Less coordination of vertical governance and knowledge management</p>	<p>management. Well-structured and coordinated governance ensures that local participation enhances climate resilience. Local government is aware of climate change and its impact. Knowledge will increase and the likelihood of follow up finance for additional investment will be increased</p>	<p>chances of wider knowledge generation and follow-up financing would be severely limited.</p>
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J. Sustainability of the Project:

Institutional Sustainability

The project will pave the way for the national government and local authorities in Vietnam to sustain and up-scale the project to vulnerable settlements in other regions, by utilising the planning tool equipped through the proposed project and sharing lessons learned from the project. Trained government officials at different levels will guide the process in combination with technical and financial support from the government. At the same time, the project will also strengthen the strategies and plans to cope with Climate Change Adaptation in Vietnam.

Social Sustainability

By implementing the project through the People’s Process methodology, whereby people take ownership for the design and construction of the infrastructure that they will ultimately be beneficiaries of, there will be greater social sustainability as people will take ownership of their adaptation infrastructure. In implementing the project, communities will gain greater awareness of climate change and adaptation, and vocational skills to build and maintain infrastructure.

Economic Sustainability

Adaptation is a highly important economic activity in the targeted areas. In most of the targeted settlements, people rely on tanker-supplied or bottled water, which is expensive. This project will enable people to access water in a sustainable manner at much lower cost. This frees-up household income for other purposes.

Environmental Sustainability

The project will make use of local materials, where possible. The project will be implemented in the Mekong Delta and as such, activities undertaken in this area will make special consideration of the delicate environment. The part of the project is also implemented in the coast; a sensitive environmental location. The rest of the project is also implemented in coastal areas; a sensitive environmental location. The project will also make provisions for the protection of the environment through its safeguarding procedures. As shown in Section K, below, the project will ensure the

protection of natural habitats, conservation of biological diversity, prevention of emissions that cause climate change, and prevent pollution and promote resource efficiency

K. Environmental and Social Risk and Impacts:

The proposed project seeks to fully align with the Adaptation Fund’s Environmental and Social Policy (ESP). Outlined below is a summary of the findings of the preliminary screening and assessment process that has been carried out to evaluate the environmental and social impacts and risks of the entire project. There is also a categorization of the project and a completed risks and impacts checklist.

UN-Habitat conducted a preliminary project screening of environmental and social risks according to the 15 principles outlined in the AF’s Environmental and Social Policy based on analyzing information available at the project design stage. The potential risks identified and preventive or mitigation measures planned are presented below (Table 24).

The project has been and will be further designed to generate positive economic, social and environmental impacts. It will achieve this by using inputs from local authorities and by incorporating best practices from other projects, while also placing specific priority on inputs from women and marginalized and vulnerable groups in target communities. The adaptation measures proposed in the full proposal will be selected together by the communities and local authorities, making sure they are culturally and locally appropriate

The community and vulnerable groups consultations that are planned to contribute to the design of the full proposal will aim at getting as much detail as possible to further identify / concretize the current unidentified sub-projects, including identifying possible environmental and social risks. However, to get a comprehensive understanding of all needs of the target population and risks related to specific groups and interventions, further screening of the 15 AF principles will be incorporated in-the in-depth climate change vulnerability and disaster risk assessments and planning processes as part of project implementation.

Table 24. Overview of the Environmental and Social Impacts and Risk Identified

Checklist of environmental and social principles	No further assessment required for compliance	Potential impacts and risks - further assessment and management required for compliance
<i>Compliance with the Law</i>		X
<i>Access and Equity</i>		X
<i>Marginalized and Vulnerable Groups</i>		X
<i>Human Rights</i>		X
<i>Gender Equity and Women’s Empowerment</i>		X
<i>Core Labor Rights</i>		X
<i>Indigenous Peoples</i>		X
<i>Involuntary Resettlement</i>		X
<i>Protection of Natural Habitats</i>		X
<i>Conservation of Biological Diversity</i>		X
<i>Climate Change</i>	X	
<i>Pollution Prevention and Resource Efficiency</i>		X

<i>Public Health</i>		X
<i>Physical and Cultural Heritage</i>	X	
<i>Lands and Soil Conservation</i>		X

As shown in Table 24 the project seeks full alignment with Adaptation Fund’s Environmental and Social Policy (ESP) and will also be screened according to UN-Habitat’s new Environmental and Social Safeguards policy. This section briefly describes the initial analysis of environmental and social impacts of the project based on the ESP.

Activities under Component 1, 2 and 4 have been categorized as low risk (Category C). De-spite this, steps will be taken to ensure that no environmental or social impacts can occur. This includes the use of quota systems for involving women and marginalized and vulnerable groups in the planning processes and ensuring transparency of the execution of all activities, such as posting attendance lists and outcomes of meetings and trainings.

The activities under Component 3 are currently being regarded as unidentified sub-projects, and as such, some activities have the potential, without an environmental and social safeguarding system, including mitigation measures, to create negative environmental and social impacts.

As such, the activities under component 3 are to fit into medium risk (Category B) or low risk (Category C). This is due to the scope of the proposed numerous interventions; they are characterised by their small scale and very localized nature, they will be proposed and co-managed by communities where possible, who have a stake in avoiding environmental and social impacts.

In Component 3, small-scale water salination system built to provide clean and safe water for both living and agriculture (Water), climate resilience infrastructure building and refurbishing (Infrastructure), climate resilience housing upgrade (Housing), enhancing ecosystem (Ecosystem), and small scale eco-friendly waste treatment and management facility built (Waste) will be considered for hard infrastructure intervention, and these aspects are currently being explored through community and stakeholder engagement, and for social and environmental risk impact, further safeguard analysis will be implemented with feasibility studies.

This means that the potential for direct impacts is small and localized, that there can be few indirect impacts, and that transboundary impacts are highly unlikely. Given this, cumulative impacts are also unlikely.

Because of the nature of activities under components 3 the entire project is regarded as a medium risk (Category B) project.

Table 25. Possible risks and mitigation measures

Adaptation Fund environmental and social principles	Possible Risks	Possible Mitigation Measures
<i>Compliance with the Law</i>	<p>Possible conflicts over land ownership</p> <p>Failure to comply with laws relating to procurement procedures</p>	<p>Only citing infrastructure on public land. Engagement with Department of Natural Resources and Environmental for land use and Department of Construction for approval</p>

		Integrating legal compliance into all training
<i>Access and Equity</i>	That certain groups are denied access to infrastructure, or that preferential access is given to others	Community management with rules ensuring that equal access is guaranteed
<i>Marginalized and Vulnerable Groups</i>	There would be small number of vulnerable groups to access to livelihood resources	Community management with rules ensuring that equal access is guaranteed
<i>Human Rights</i>	Human rights breaches can arise from denying access to water and other basic services, or from land conflicts, for example	at project proposal stage, and in line with UN-Habitat's Project Management Cycle and Work Flow policy, the project will further be screened for its adherence to three cross-cutting issues which are: gender, human rights and climate change. The Human Rights Officer of UN-Habitat will ensure that the project is designed to respect and adhere to the requirements of all relevant conventions on human rights.
<i>Gender Equity and Women's Empowerment</i>	Women could be denied access to infrastructure, or excluded from making critical decisions	The project design will ensure that gender considerations are included in all project interventions, with a specific focus on capacity building on the all levels as well as activities on the ground. During the development of the full project proposal, the Gender Officer of UN-Habitat will be consulted to ensure that the project follows best-practice guidelines.
<i>Core Labor Rights</i>	Labour rights may not be respected when contracting communities	All community contracts must be scrutinized to ensure they comply with both Vietnamese law and international standards. The activities under Component 3 will create employment enabling some marginalized and vulnerable groups including unemployed youth and women to access employment. The relevant national labour laws guided by the ILO labour standards will be followed throughout project implementation.
<i>Indigenous Peoples</i>	The certain minority group can be denied to access to infrastructures and excluded from the process of decision	Community management with rules ensuring that equal access is guaranteed and participating in the process of decision making

	making	
<i>Involuntary Resettlement</i>	Possible eviction arising from conflicts over land ownership	Tenure security is part of UN-Habitat's core mandate. In the event that resettlement is necessary to protect life in case of an urban area in high risk, the due process as laid out in national and international laws will be followed. UN-Habitat has a long experience in participatory planning in high risk area avoiding systematically involuntary resettlement
<i>Protection of Natural Habitats</i>	While damage to natural habitats and threats to biological diversity are unlikely, there is a possibility that construction work undertaken or reforestation measures may adversely impact on local biodiversity	Environmental Impact Assessment will be conducted and the damage will also be investigated at full project stage.
<i>Conservation of Biological Diversity</i>		
<i>Climate Change</i>	N/A	This project is inherently an adaptation project and as such no maladaptation is foreseen. The project will not provide or install infrastructure or appliances that result in increased emissions
<i>Pollution Prevention and Resource Efficiency</i>	Construction of infrastructure generates waste	Incorporating waste management and disposal into design.
<i>Public Health</i>	N/A	No public health issues are foreseen, and improving public health is a secondary impact area of this project.
<i>Physical and Cultural Heritage</i>	N/A	No physical or cultural heritage impacts are foreseen; however, this will have to be reviewed when the activities are being developed in more detail at full proposal stage.
<i>Lands and Soil Conservation</i>	The physical demarcation of areas at risk for limiting urban development will seek to protect risk areas and critical natural habitats from urban development	Soil conservation will be enhanced through afforestation components as protective measures for land erosion control.

A thorough environmental and social impact assessment will be undertaken during full proposal stage, before submission to the Adaptation Fund. This assessment will identify the environmental and social impacts and will also develop a safeguards system for the implementation plan, outlining roles and responsibilities, budgetary requirements (if needed) and the timeline required to implement safeguarding actions.

The environmental and social impact assessment will consider all activities proposed by the project, event those that, at this stage, are considered 'soft' activities and have been placed in risk level

Category B or C. At this stage, the activities listed in bullet points below have been clustered together, as similar types and levels of environmental and social impacts (and thus safeguarding measures) are foreseen. However, these will be revisited during the full proposal development stage, when activities are detailed out further and when further information will be provided about the nature and extent of the environmental and social impact assessment that will be undertaken.

PART III: IMPLEMENTATION ARRANGEMENTS

Note:

According to Adaptation Fund Project/Programme Review Criteria (Review-Criteria-5.12),

“For regular projects/programmes using the two-step approval process, only the first four criteria will be applied when reviewing the 1st step for regular project/programme concept”.

Review Criteria as follows:

- 1. Country Eligibility***
- 2. Project Eligibility***
- 3. Resource Availability***
- 4. Eligibility of NIE/MIE***
- 5. Implementation Arrangement***

The following section (Part III: Implementation Arrangement) will be completed at a later stage of the project formulation and approval process.

PART IV: ENDORSEMENT BY GOVERNMENT AND CERTIFICATION BY THE IMPLEMENTING ENTITY

A. Record of endorsement on behalf of the government⁵ *Provide the name and position of the government official and indicate date of endorsement. If this is a regional project/programme, list the endorsing officials all the participating countries. The endorsement letter(s) should be attached as an annex to the project/programme proposal. Please attach the endorsement letter(s) with this template; add as many participating governments if a regional project/programme:*

<i>H.E Dr. Tran Hong Ha, Minister, Ministry of Natural Resources and Environment</i>	<i>Date: 24 December 2018</i>
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⁶ Each Party shall designate and communicate to the secretariat the authority that will endorse on behalf of the national government the projects and programmes proposed by the implementing entities.



SOCIALIST REPUBLIC OF VIET NAM
MINISTRY OF NATURAL RESOURCES AND ENVIRONMENT

Hanoi, 18 December 2018

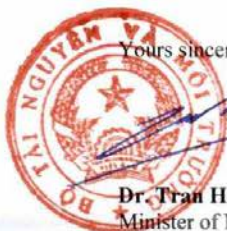
To: The Adaptation Fund Board
c/o Adaptation Fund Board Secretariat
Email: Secretariat@Adaptation-Fund.org
Fax: 202 522 3240/5

Subject: Endorsement for the Concept Proposal on “Enhancing the resilience, inclusive and sustainable eco-human settlement development through small scale infrastructure interventions in the coastal regions of the Mekong Delta”

In my capacity as designated authority for the Adaptation Fund in the Socialist Republic of Vietnam, I confirm that the above national concept project proposal is in accordance with the government’s priorities in implementing adaptation activities to reduce adverse impacts of, and risks, posed by climate change in the coastal region of the Mekong Delta, Socialist Republic of Vietnam.

Accordingly, I am pleased to endorse the above concept project proposal with support from the Adaptation Fund. If approved, the project will be implemented by United Nations Human Settlement Programme (UN-Habitat) and executed by Ministry of Natural Resources and Environment of Vietnam and national partners. ↴

Yours sincerely,



Dr. Tran Hong Ha
Minister of Natural Resources and Environment
Socialist Republic of Vietnam

Address: 10 Ton That Thuyet street, South Tu Liem district, Ha Noi, Viet Nam
Tel: +84 4 37956868, Fax: +84 4 38359221, E-mail: icd-monre@monre.gov.vn, Website: <http://www.monre.gov.vn>

B. Implementing Entity certification

I certify that this proposal has been prepared in accordance with guidelines provided by the Adaptation Fund Board, and prevailing National Development and Adaptation Plans including Socio Economic Development Plan (2016-2020), National Climate Change Strategy, National Green Growth Strategy, National Action Plan on Climate Change for (2012-2020), and National Action Plan on Green Growth and subject to the approval by the Adaptation Fund Board, commit to implementing the project/programme in compliance with the Environmental and Social Policy of the Adaptation Fund and on the understanding that the Implementing Entity will be fully (legally and financially) responsible for the implementation of this project/programme.

For Remying OIC.

Raf Tuts
Director, Programme Division
UN-Habitat

Date: January 3rd, 2019

Tel. and email:
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Project Contact Person:

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Appendices

LIST OF CONTENTS

Appendix1. Vulnerability and Risk Assessment Report

Appendix2. National level Consultation Meeting Report

Appendix3. Local level Consultation Meeting Report

Appendix4. Stakeholder Consultation Meeting Report



ADAPTATION FUND

Vulnerability and Risk Assessment Report

*Bac Lieu and Tra Vinh Province
In Mekong Delta, Vietnam*

Contents

Introduction.....	1
City Profile and Context.....	2
1. Project Site Location.....	2
2. Socio-economic and Environmental Context in Bac Lieu.....	3
3. Socio-economic and Environmental Context in Tra Vinh.....	4
Vulnerability and Risk Assessment.....	6
0. Assessment Framework.....	6
1. Climate Change Projections in Vietnam.....	6
2. Climate Change Projections in Mekong Delta.....	8
3. Vulnerability and Risk Assessment in Bac Lieu.....	9
4. Vulnerability and Risk Assessment in Tra Vinh.....	14
Findings, Recommendations, and Further steps.....	19
<i>Annex1. Questionnaire for the focus group interview.....</i>	<i>20</i>
<i>Annex2. Climate Vulnerability.....</i>	<i>21</i>
<i>Annex3. Detailed sociodemographic data of Tra Vinh.....</i>	<i>22</i>
<i>Annex4. Detailed sociodemographic data of Bac Lieu.....</i>	<i>24</i>
<i>Annex5. List of participants on the consultation workshop in Vinh Trach Dong district.....</i>	<i>25</i>
<i>Annex6. List of participants on the consultation workshop in Hoa Binh district.....</i>	<i>26</i>
<i>Annex7. List of participants on the consultation workshop in Chau Than district.....</i>	<i>28</i>

Introduction

Vietnam is one of the most hazard-prone countries in the East Asia and Pacific region, with droughts, severe storms, and flooding causing substantial economic and human losses. Over the past two decades, disasters in Vietnam have caused more than 13,000 deaths as well as property damage in excess of US\$6.4 billion. Climate change is projected to increase the impact of disasters, especially the timing, frequency, severity, and intensity of hydro-meteorological events.

The Mekong Delta is considered one of the world's three most vulnerable deltas (together with the Nile Delta in Egypt and the Ganges Delta in Bangladesh) to rising sea levels. In the Mekong Delta, river water and ground water levels are decreasing, while sea levels, flood tides and salt intrusion are on the rise, the demand for water has also increased in production and daily activities due to industrialisation, urbanisation and population growth. It produces 50% of Vietnam's overall food mainly rice, fruits, fish and shrimp, this sector accounts for 70% of the Mekong population's income and food security.

The vulnerability report will focus on 2 provinces in Mekong Delta Region in order to ensure that the project and related activities reduce the climate change vulnerability and disaster risks of targeted communities/ethnic groups. Understanding the needs and challenge of local people in the project site is the key for successful completion of the projects objectives.

Key Terminologies:

Exposure: nature and degree to which a system is exposed to significant climatic variations.

Sensitivity: responsiveness of a system to climatic influences (shaped by both socio-economic and environmental conditions).

Adaptive capacity: ability of communities to cope, reorganise and minimise losses from climate change impacts at different levels. The key determinant of adaptive capacity is access to resources and capital (natural, financial, social, human and physical).

Climate change: A change in climate that is attributed directly or indirectly to human activity, that alters the composition of the global atmosphere and is contrary to natural climate variability observed over comparable periods.

Vulnerability: Refers to the degree to which people, places, institutions and sectors are susceptible to, and unable to cope with, climate change impacts and hazards.

Sources:

IPCC, 2007. Climate Change 2007: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, Parry, M.L., Canziani, O.F., Palutikof, J.P., van der Linden, P.J., Hanson, C.E. (Eds.), Cambridge University Press: Cambridge, UK, 976 pp.

UN-Habitat planning for climate change guide, including vulnerability assessment methodology: <http://unhabitat.org/books/planning-for-climate-change-a-strategic-values-based-approach-for-urban-planners-cities-and-climate-change-initiative/>

City Profile and Context

0. Project Site Location

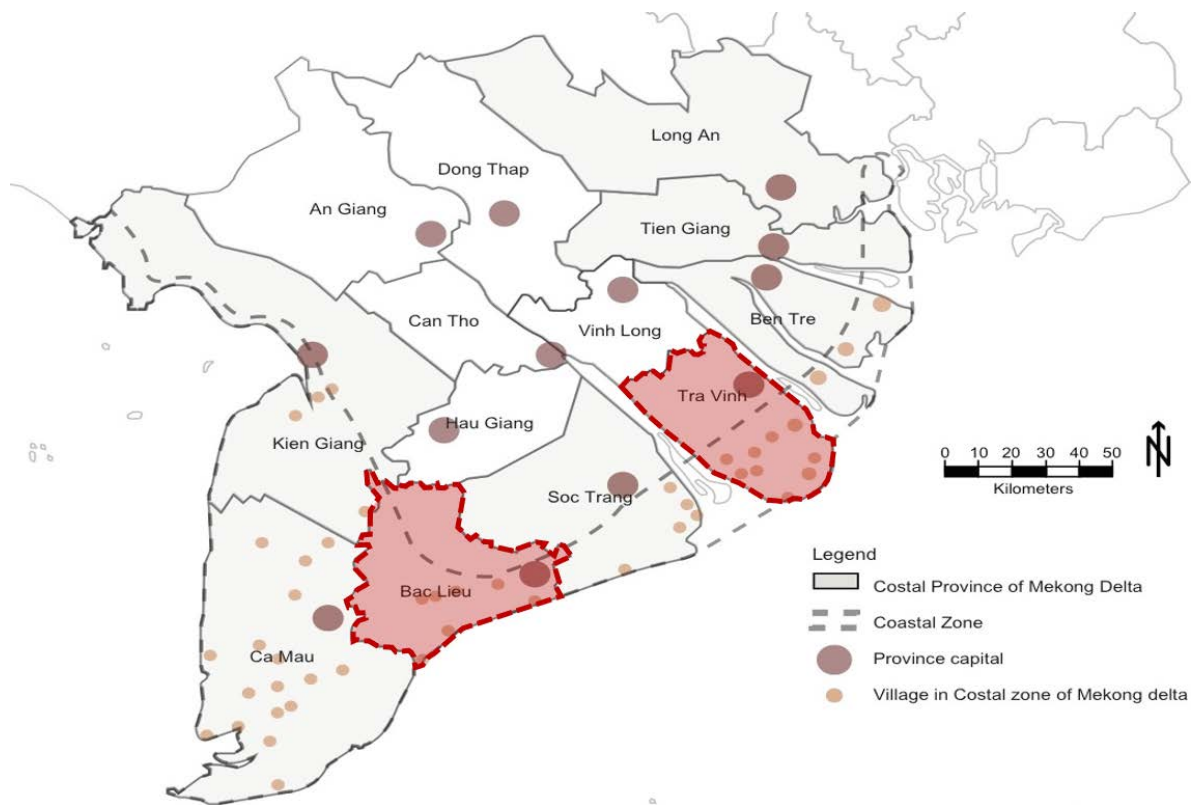


Figure 1. Project Site Location

Mekong Delta is southern part of the Vietnam with high risk from natural hazard and climate change impact. The Project site for the vulnerability and risk assessment report is Bac Lieu and Tra Vinh, located on the coastal line of Mekong Delta Region.

1. Socio-economic and Environmental Context in Bac Lieu

Bac Lieu province, located in the Mekong Delta, has an equatorial monsoon climate regime, with two distinct seasons: the rainy season, with average temperature of 25.2 - 29.1°C, and the dry season, with an average temperature of 24.3 and 29.7°C. The temperature amplitude between the months is not significant (1-2°C) but the temperature amplitude between day and night is quite large (dry season: 8-10°C, rainy season: 6-7°C), which is favorable for plant growth and development.

The rainy season starts from May to November, and the dry season lasts from December to April. The annual average rainfall is 1,801.5 mm, and average number of rainy days is about 110-120 days/year. The average air humidity is 82.6%, and around 76–80 % in the dry months.

Bac Lieu has numerous rivers, canals and ditches such as Bac Lieu river, Cau Xang Canal, that meets the water demand for agriculture, aquaculture and drainage in urban areas. Recently, the fairly complete maintenance of dikes and sluice gates prevents saltwater intrusion along Highway 1A and Bac Lieu river, and the saltwater – freshwater regulation is gradually being improved to serve agricultural and aquaculture practices.

Regarding the terrain characteristics, Bac Lieu is located in the region of the East Sea that is affected by a semi-irregular tide. Since the completion of the sluice gates that prevent saltwater and because the tidal acreage is shrunk, tidal levels are currently higher than previously observed in the region. This facilitates saltwater leaching into shrimp and salt production areas. To address this issue, it is necessary to dredge the irrigation and dike systems in order to regulate water resources so that can water be managed effectively to c serve both farming and aquaculture. While in the dry season the salinity in the rivers and shrimp ponds increases, during the rainy season the salinity decreases rapidly for both.

Natural resources in Bac Lieu are distributed as follows:

- Land is divided in 3 main groups: sandy soil (10.08 % of the natural area of the city), saline soil (62.25 %) and acid sulfate soil land (18.43 %).
- Water: salt water (comes from sea and is mixed with rainwater. It is not suitable for freshwater crops and livestock but is the valuable resource for aquaculture development), groundwater (4 hydrological formations), and surface water (in rainy season freshwater is dominant, but by the end of rainy season water is often acidic, where as in dry season water is affected by saltwater intrusion).

Bac Lieu is composed by 10 administrative units of wards (wards 1,2,3,5,7,8, and Nha Mat ward) and 3 communes (Hiep Thanh, Vinh Trach and Vinh Trach Dong). By the end of 2015 the population was 155,194 people, with a major percentage of Kinh people, followed by the Khmer and Chinese ethnic minorities. There is a relative equilibrium between female and male ratio. According to the People's Committee of Bac Lieu Province,

both genders have the right to give comments, make decisions and discuss problems.

Regarding health issues, the main diseases are related to environmental pollution (41.7 %), crowded housing (8.5 %), poor diet (11.2 %), flies and pests (30.0 %) and other causes (27.1 %), such as living habits, low community awareness on prevention, care and treatment.

Career opportunities are related directly to the educational background of the people. Most of the people (93.2%) had attended to school and university. However, there are still 6.7 % illiterate or uneducated, these are mostly concentrated in poor households in Nha Mat ward and ward 2. There is a clear gap between poor and rich households in the area. The income per capita of rich households (5,182,903VND/person/month) is 8.7 times higher than the income per capita of poor households (594,593VND/person/month). Poor household's main income source is typically from low-paid, instable and seasonal jobs, where as rich household's revenue generation comes mainly from salaries and business activities. The main form of employment in the region is labor force jobs (44.0%), but there are also people working in the service sector (15.4%), and in state-owned enterprises (13.0%). The rate of unemployment is approximately 7.5%.

According to the People's Committees of Bac Lieu province, the city reached an economic growth rate of 16.63% in 2015, which is quite a high rate in comparison with other cities in Vietnam. The economic structure of Bac Lieu city in the same year included 45.57% of services, 42.04% of industries and construction, and 12.39% of agriculture and fisheries. Industrial production and small handicraft of Bac Lieu city are being developed depending of the market's demand.

Agricultural production includes rice, fruits, vegetables, cattle and poultry. Aquaculture and fishery production increased gradually from 2012-2015. However, this sector faces problems such as asynchronous irrigation system, lack of investment funding for production and prolonged sunny and hot condition that have negative impacts in the shrimp farming due to the salinity.

The service sector continues to grow. Bac Lieu city has opened Bac Lieu shopping center and Hiep Thanh market in Hiep Thanh commune which maintain relatively stable prices for goods and good compliance of the sellers with regulations on price listing. Tourism has also increased resulting in higher demand for accommodation services.

2. Socio-economic and Environmental Context in Tra Vinh

Tra Vinh Province is located on the Mekong River Delta region, with Ben Tre, Vinh Long and Soc Trang provinces as borders. It also has 65km of seaside and is surrounded by Tien and Hau rivers. Tra Vinh has a total area of 2,341 square kilometres and a population of over one million people with 59% at working age and distributed through 7 districts: Cau Long, Cau Ke, Tieu Can, Chau Thanh, Tra Cu, Cau Ngang and Duyen Hai. Over 29% of the

population is ethnic Khmer. There are also a number of ethnic Chinese (5-6% of the population), and a small Cham population. The number of “poor” households earning less than 90,000d/person/month is 33,545, of which 11,525 households earn less than 60,000/person/month. There is a group of people who are considered the “static poor”, they are trapped in a type of poverty that will be difficult to reverse: many of them are landless and in debt to government lending programs and/or private moneylenders. As a result, they are not eligible for a new loan and they must repay interest.

The economy is predominantly based on agriculture, fish and shrimp breeding. Over 80% of the population are dependent on the agricultural sector. Đĩnh An is one of eight key marine economic areas nationwide, with favourable conditions to develop a sea-based economy, electricity, petrochemicals, shipbuilding, navigation services and tourism.

However, Tra Vinh faces challenges related to the low prices of items obtained from agriculture and aquaculture, such as shrimp, dried coconut, vegetables, and more. Although people have invested in the development of shrimp farming, particularly in the districts of Duyen Hai and Tra Cu, almost 100% of shrimp harvests failed completely. Most people survive through small-scale subsistence farming, handicrafts, and services, but recently have to find other income generating activities. However, demand for labor is limited even in the high season: on average a person can expect to work only 10-15 days in a month, for between 10,000 and 30,000 VND per day. The official unemployment rate is around 10%. In addition, disbursement of capital for infrastructure development is slow and the progress of many licensed investment projects have been delayed.

Tra Vinh province is a tropical monsoon region. Dry season is from December to April and the rainy season is between May and November. The annual average temperature is 26C. In this area, ground-water is pumped to irrigate farms with upland crops due to the rapid exhaustion of freshwater in ponds. A proof of how severe is the drought is the wilting of bamboo plants. Irrigation was previously done at midday without measuring the amount of water used, hence a large portion of the water evaporated before entering the soil.

The soil in the province, however, is becoming increasingly poor in terms of water-holding capacity and nutrients, and is severely affected by acidity and salinity intrusion. Recently, the salinity level of the canal system was reported to be as high as 25%, while the optimum salinity level for shrimp is between 12-15%. Indeed, the production and growth of shrimp has been heavily reduced, with dead shrimp accounting for 25-30% of the total production. To monitor this situation, the farmers measure the pH and base levels every day and district extension workers also monitor salinity levels from 11 salinity monitoring stations.

Vulnerability and Risk Assessment

0. Assessment Framework

In order to select the target communes for the project, vulnerability and risk assessment against climate change impact, problem analysis, should be analysed in advance. Figure5 shows the matrix to assess the vulnerability to climate change.

As shown in Figure5, Vulnerability could be measured by subtracting the ‘adaptive capacity’ from the sum of ‘exposure’ and ‘sensitivity’. Since exposure and sensitivity cannot be enhanced by human intervention, increasing ‘adaptive capacity’ is key to achieving sustainable development. Several sectorial approach could be defined in climate change risk;

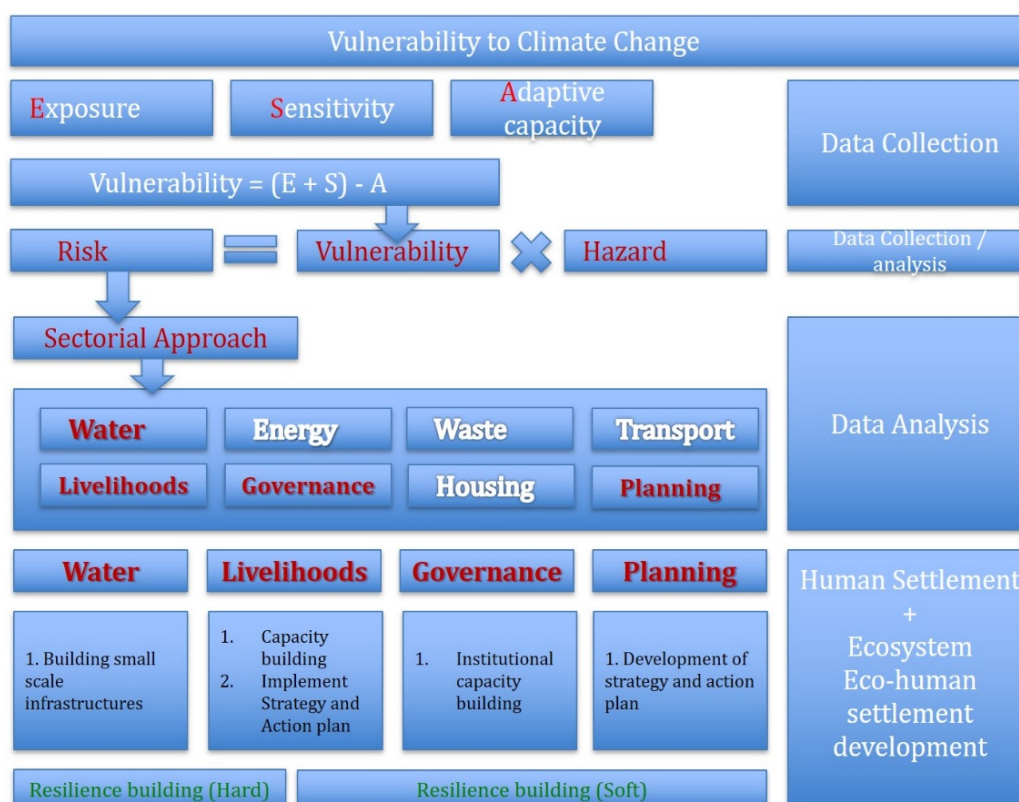


Figure 1. Problem Analysis Framework

1. Climate Change Projections in Vietnam

The results suggest that areas of the Northern Mountains and the Mekong Delta contain districts with high flood risk and high poverty levels (darkest shade of brown in Map 12). The results are slightly different when comparing relative and absolute numbers. When using absolute figures (the number of poor and number exposed to flooding) more areas of high flood and poverty are visible in the Mekong and Red River Delta, as well as along the eastern coasts.

However, even though not all of the poorest districts face a higher exposure risk to flooding, it is important to remember that poor households and poor individuals within high exposure areas generally have a higher vulnerability to the impact of flooding. Further, it is very likely that within a district or city, the poorest are the most exposed to flood risk.

According to IPCC (2013), climate change projections for Vietnam include:

- ❑ Annual mean temperatures will continue to rise by 0.1-0.3°C per decade, and the number of days with temperatures above 33°C will increase;
- ❑ The number of cooler days with temperatures below 15°C will drop by two to three per year;
- ❑ The dry season will get longer;
- ❑ There will be more intense rainfall events, and more frequent and severe droughts and floods; and,
- ❑ Maximum monthly flows in the Mekong Basin will increase by 35-41%, while minimum monthly flows will drop by 17-24% by 2100, further exacerbating flood and drought risks.

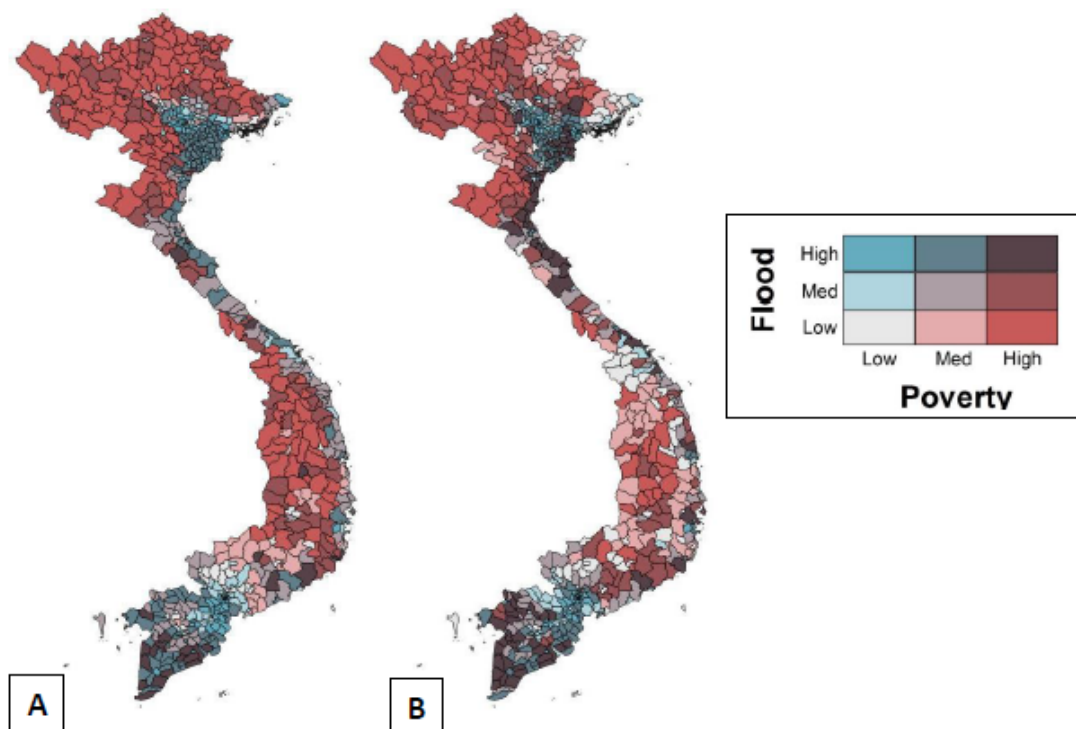


Figure 2. Overlay of poverty and flood at the district level for the 25 year-return period floods with climate change. Map A shows relative exposure, overlaying the % of poor and % of population flooded, Map B shows the absolute exposure, overlaying the # of poor and # of population flooded.

2. Climate Projections in Mekong Delta

Climate change projections for Vietnam from an IPCC report (2013) show that the southernmost provinces, especially the Mekong Delta Region in particular, will experience more droughts in the dry season and a slight increase in rain during the wet season due to climate change related increases in temperature. On the other hand, rainfall from the central or northern provinces will lead to increased flood risks in the southern provinces.

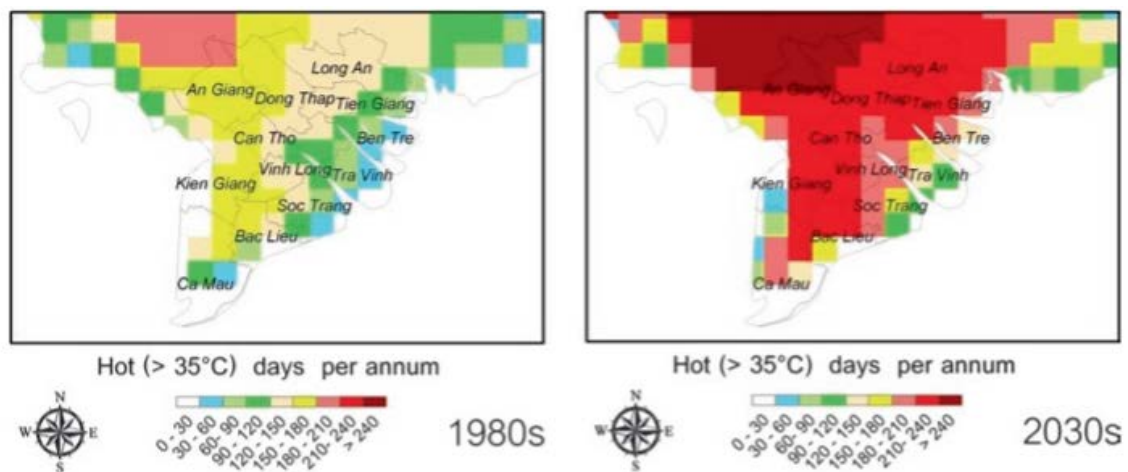


Figure 3. Hot period (number of hot days in a year) in the Mekong River Delta in the 1980s and 2030s (simulated)

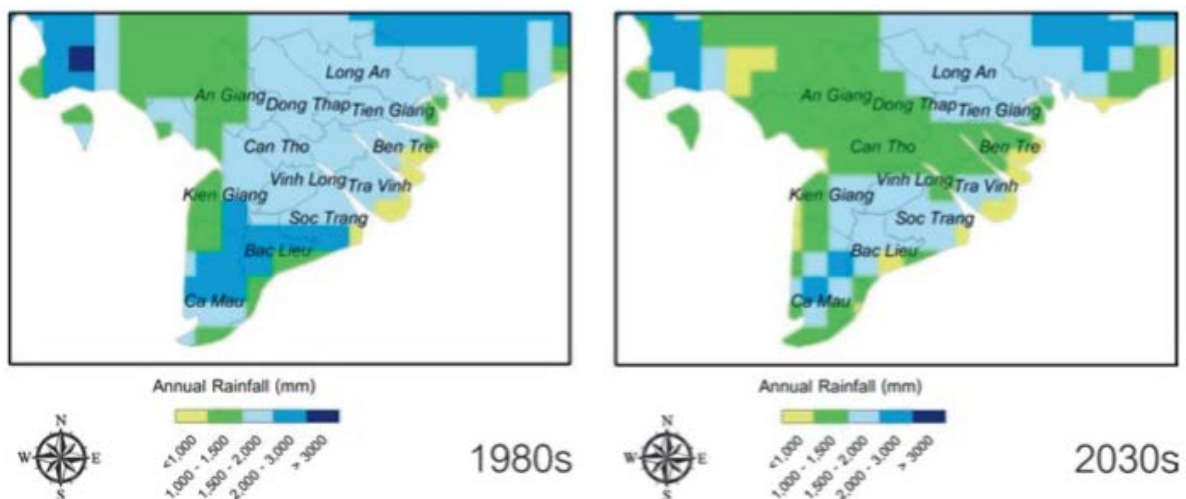


Figure 4. Annual precipitation in the Mekong River Delta in the 1980s and 2030s (simulated)

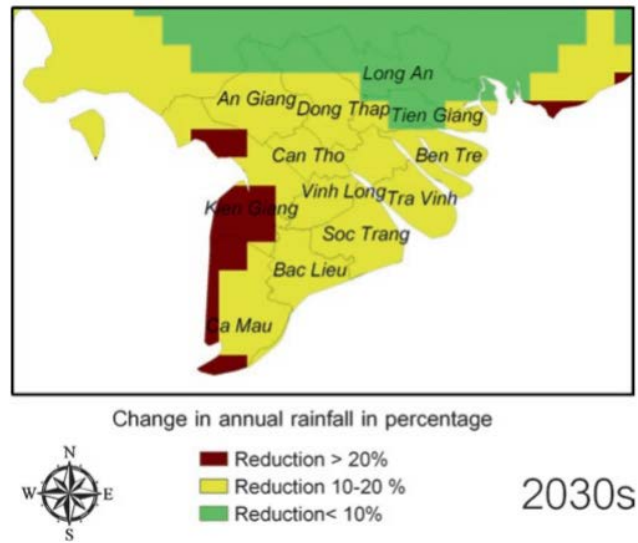


Figure 5. Comparison of change in annual precipitation in the Mekong River Delta between the 1980 and 2030 (simulated)

3. Vulnerability and Risk Assessment in Bac Lieu

Bac Lieu is one of the most vulnerable provinces in Mekong Delta Region to climate change impact. The vulnerability and risk assessment conducted in Bac Lieu has focused on Vinh Trach Dong and Vinh Hau districts. The following information has been compiled through a combination of desk research and consultation workshops in the local area.

0) Project location and basic information

Huu Nghi, Vinh Trach Dong District

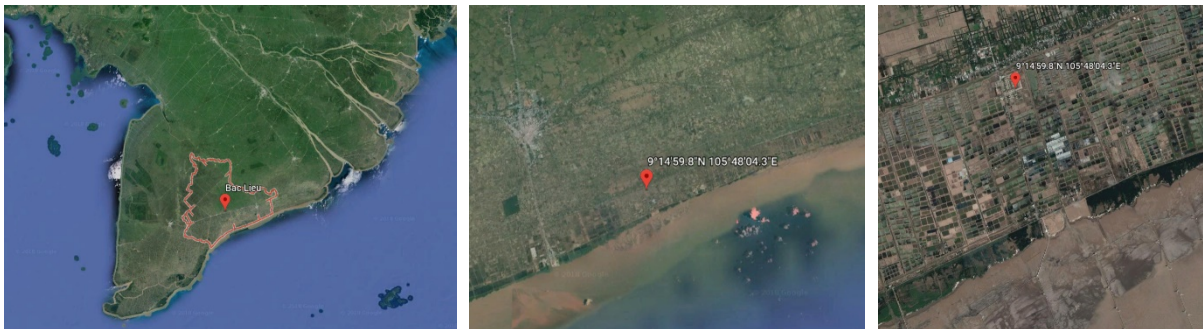


Figure 6. Location of Huu Nghi commune in Bac Lieu

Direct Beneficiary (number of household): 4-500people (80-100 households)

Minority group: Majority of population is Khmer (Ethnic minority)

Infrastructure level: low, detailed in the contents

Livelihood Resources: fishing, haunting, aquaculture (failed)

Income level: low

Education level: elementary school or secondary school

Feature: Huu Nghi commune is newly built commune in 2013 for migrants from the coastal region due to climate change impact. The government has provided social housing for the migrants but the infrastructure and condition of the housing is still low.

Vinh Hau District

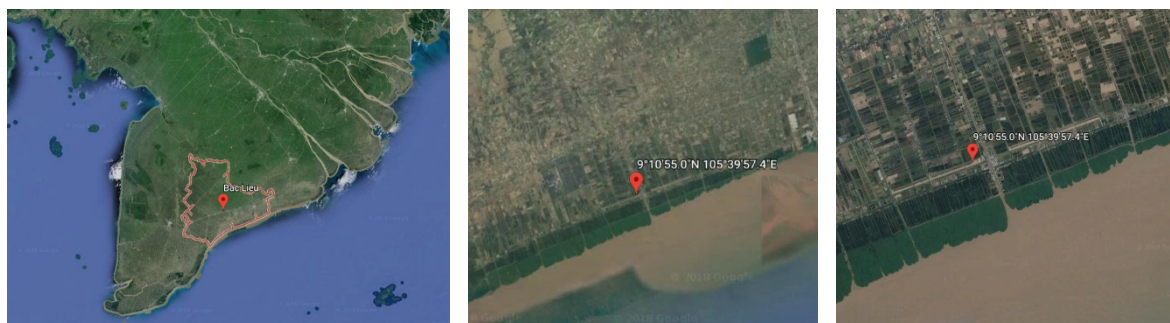


Figure 7. Location of Vinh Hau District in Bac Lieu

Potential Direct Beneficiary: around 400 people (will be settled in early 2019)

Infrastructure level: none

Feature: Former residential area has been affected by climate change impact, especially sea level rise, around 400 people are planned to move to Commune 14 in early 2019. The government will provide social housing just like in Huu Nghi commune above.

Expected Challenges: may face similar challenges that Huu Nghi has faced since 2013, including insufficient planning for commune, lack of livelihood resources, water security, and waste management systems.

1) Exposure to Natural Hazard and Climate Change Scenario in Bac Lieu:

In Bac Lieu, the most affected natural hazards are river flood, urban flood, coastal flood, cyclone, wild fire. Extreme heat is classified as medium level hazard while earthquake, Tsunami and water scarcity are defined as low level hazards. Each district shows slightly different level of exposure for each natural hazard as follows:

Table 1. Exposure to Natural Hazard in Bac Lieu

River Flood	Urban Flood	Coastal Flood	Earthquake	Tsunami
Volcano	Cyclone	Water Scarcity	Extreme Heat	Wild Fire

Climate change projections in Bac Lieu are stated in the table 2 with the change in average annual temperature and the change in annual rainfall along with the spring and winter conditions. As shown in the table, even the RCP 4.5 scenario, change in average annual temperature in Bac Lieu reaches almost 2 degree in 60 years which is over 1.5 degree, IPCC set up for the limit for the global warming goal recently. Change in rainfall is more severe in spring, dry season, which leads to the situation that could increase the shortage of fresh water in the province.

Table 2. Climate Change Projections in Bac Lieu

Province	Climate Change	RCP 4.5 scenario			RCP 8.5 scenario		
		2016-2035	2046-2065	2080-2099	2016-2035	2046-2065	2080-2099
Bac Lieu	Change in average annual Temperature	0.7	1.4	1.8	0.8	1.8	3.3
	Change in annual rainfall (%)	9.6	11.0	13.6	11.8	16.5	18.0
	Change in spring rainfall (%)	8.4	-5.8	9.9	-0.5	-0.1	2.0
	Change in winter rainfall (%)	2.2	3.8	7.8	5.7	9.6	12.7

2) Huu Nghi, Vinh Trach Dong district

① Exposure

According to the comments, the most severe exposure to a natural hazard in Vinh Trach Dong is salinity intrusion at 27.78%. Flood, drought, and storm follow after salinity intrusion, this also relates to the water issue. Due to the geographic characteristics of the province, local people and their livelihood resource are highly exposure to the impact of climate change.

② Sensitivity

Sensitivity in this report was composed of the damage to human life and economic losses including the reduced productivity from agriculture and aquaculture. Since the main livelihood resources in Vinh Trach Dong district are agriculture and aquaculture, the local people have been suffering from economic losses due to salinity intrusion and drought. Some answered that there has also been damage to human life due to climate change impact.

③ Adaptive Capacity

For the adaptive capacity, the report only focused on the awareness of people on climate change impact and climate change adaptation. The majority of the participants on the consultation workshop in Vinh Trach Dong district were not aware of both climate change impact and climate change adaptation. Very few answered that he/she was aware of the terminology of climate change impact and climate change adaptation.

④ *Improvement Needs*

For the improvement needs in Vinh Trach Dong district, the provision of fresh water with a water management system is in high demand. As was already mentioned in *Exposure*, the major exposure and biggest challenge in this province is salinity intrusion. Along with the exposure, the needs from the local people are primarily related to water issues.

⑤ *Estimated Beneficiary from the improvements*

Based on the assessment of improvement needs from the local people, the number of beneficiaries for each hard intervention has been estimated. Around 235 people will get benefit from the water management system by supporting clean water in town. Along with the water system, eco-friendly infrastructure will improve the quality of life of 221 from the total population with 44% of people in town. Lastly, from the improvement of waste management system 29 people will get benefit from the project.

⑥ *Focus group Interview*

A focus group interview was conducted with the women's union in Huu Nghi. During the interview, the questionnaire divided into three parts to find out the exposure, sensitivity, adaptive capacity, and improvement needs in more details. To summarise the major findings from the interview, women in Vin Trach Dong do not consider climate change to impact them more as women than it would other genders. The key findings from the focus group interview could be summarized as follows:

- The impact of climate change leads to a decrease in the average income in the district;
- In the dry season, the impact to the productivity of shrimp and rice cultivation is more intense than at other times;
- Children cannot go to school as they need to support their family with livelihood resources;
- A number of women have to travel far from their house; and
- Most people do not want to move to the new settlement area without proper basic infrastructure;



Figure 8. focus group interview

3) Vinh Hau district

① *Exposure*

From the comments of the consultation workshop, 27.27% of the participants consider the largest threat from natural hazards in Vinh Hau district to be flooding and sea level rise. Storms were next considered the next biggest threat following on from these two issues. Generally, most people have suffered from issues related to water security which has also led to economic losses.

② *Sensitivity*

For sensitivity in this report the report focused on the damage to human life and economic losses. Based on the comments from the province, the local people have suffered more from economic losses rather than damage to human life. It could be stated that the main livelihood resource from the district could easily be affected by the impact of climate change.

③ *Adaptive Capacity*

For the adaptive capacity, the report only focused on the awareness of people on climate change impact and climate change adaptation. The local people in Vinh Hau are more familiar with the term of climate change adaptation rather than climate change impact. The general awareness of climate change in the province is around 10%.

④ *Improvement Needs*

Based on the comments from the consultation workshop, the most urgent improvement in Vinh Hau was defined as eco-friendly environment protection with 30.16%. Since the location of Vinh Hau province is between both Mekong Delta river and the sea, the damage and effect from sea level rise and flood is intense.

⑤ *Estimated Beneficiary from the improvements*

Based on the assessment of improvement needs from the local people, the number of beneficiaries for each hard intervention has been calculated. Approximately 121 people will get benefit from the water management system by constructing water supply infrastructure in town. Along with the water system, eco-friendly infrastructure including sea dyke will improve the quality of life of 230 from the total population covering 58% of people in town. Lastly, from the improvement of waste management system 61 people will get benefit.

⑥ *Focus group Interview*

In order to delve deeper into needs assessment and gather more information from the more vulnerable groups present, a focus group interview was conducted with only the

women's union in the province. The women in the district have felt that they are not treated well because the men in the household do not take care of their family. Thus, most of the women in the district are in charge of taking care of everything including the expense. Rather than the gender issues in the district, the key findings from the focus group interview are as follows:

- The impact of climate change leads to decrease of the average income in the district, it also creates fluctuations in the productivity of agriculture and aquaculture;
- Most of the children in the district are not educated due to the fluctuation in their household income;
- From the view of the local people, the geographical location is also seen as part of the threat from climate change impact as it is more prone to sea level rise and flood;
- Ethnic minorities account for 60% of population and they have lost land from climate change impact and have had difficulty finding another livelihood resource;



Figure 9. focus group interview

4) Vulnerability and Risk Summary in Bac Lieu

To summarize the vulnerability in Bac Lieu, from the comments of the local people the most severe challenge from exposure to natural hazards in the province is considered to be sea level rise and salinity intrusion. As the team went to the local area for the field trip to the project site, it was observed that the basic infrastructure including bridges and roads are not sufficiently provided throughout the province.

4. Vulnerability and Risk Assessment in Tra Vinh

Tra Vinh is one of the most vulnerable provinces in Mekong Delta Region against climate change impact. The vulnerability and risk assessment in Tra Vinh focused on the two communes in Chau Thanh district. The following information has been complied through desk research and consultation workshops in the local area.

0) Project location and basic information

Long Hoa, Chau Thanh District



Figure 10. Location of Long Hoa

Direct Beneficiary (number of household): 10,280 people (2,547 households)

Infrastructure level: low, detailed in the contents

Livelihood Resources: Agriculture-aquaculture 81.26%

Income level: 37.5 million VND/year per capita

Poverty rate: 12.21%

Households lacking access to clean water: 2,182 (85.67%)

Feature: 136 households in Con Phung village need resettlements; 2 houses destroyed and 5 houses have lost their roofs because of tornadoes; sea level rise, combined with tide has destroyed 69 shrimp ponds, and 650m of dyke is in risk of land erosion;

Hoa Minh, Chau Thanh District



Figure 11. Location of Hoa Minh

Direct Beneficiary (number of household): 14,919 people (3,309 households)

Infrastructure level: low, detailed in the contents

Livelihood Resources: Agriculture - aquaculture (82%)

Income level: 41.8 million VND/year per capita

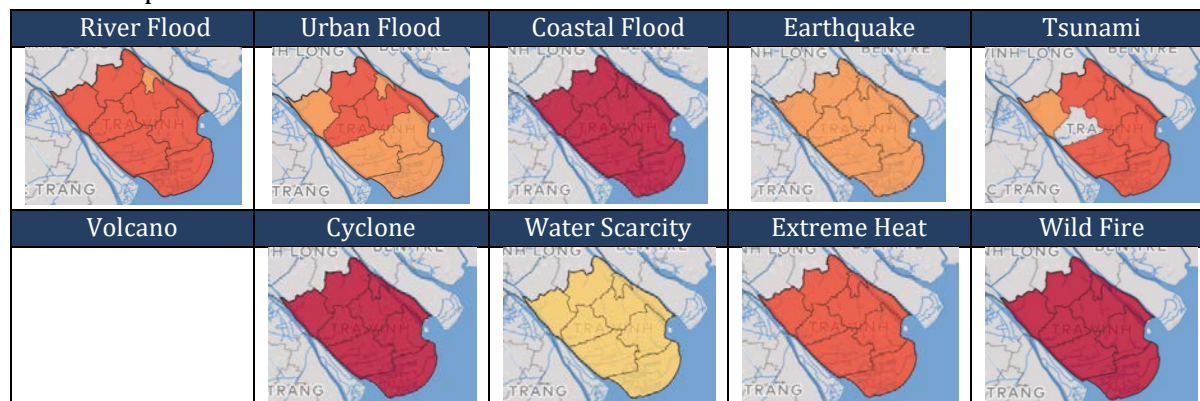
Feature: High tide (sea level rise); combined with rain and storms will affect 100% of households in Hoa Minh commune; particularly through property loss and damage; the first areas to be affected will be Con Chim village, Ta and Huu dyke;

1) Exposure to Natural Hazards and Climate Change Projections in Tra Vinh

In Tra Vinh, the most affected natural hazards are coastal flood, cyclone, wild fire. River

Flood, Urban Flood, Tsunami and extreme heat are classified as medium level hazard while earthquake and water scarcity are defined as low level hazard. Each district shows slightly different level of exposure for each natural hazard as follows:

Table 5. Exposure to Natural Hazard in Tra Vinh



In Tra Vinh, the climate change projection for the temperature and the change in annual rain fall is stated in the table 6. Annual change in average temperature is over 1.5 degree with RCP 4.5 scenario which can be the threat to the province with global warming effect. The annual change in rainfall in Tra Vinh is almost 20% over 60 years. With RCP 4.5 scenario, Tra Vinh is likely to suffer from lack of fresh water for drinking, living, and even for agriculture.

Table 6. Climate Change Projections in Tra Vinh

Province	Climate Change	RCP 4.5 scenario			RCP 8.5 scenario		
		2016-2035	2046-2065	2080-2099	2016-2035	2046-2065	2080-2099
Tra Vinh	Change in average annual Temperature	0.7	1.4	1.8	0.8	1.9	3.4
	Change in annual rainfall (%)	10.9	15.7	17.7	11.4	14.6	18.2
	Change in spring rainfall (%)	10.9	0.9	7.9	4.9	1.6	2.0
	Change in winter rainfall (%)	4.2	3.6	5.2	6.8	8.5	11.2

2) Long Hoa, Chau Thanh District

① Exposure

Due to the geographical characteristics of Long Hoa, the most severe natural hazard in the commune are sea level rise, as was recognized in 31.58% of the comments. Land erosion due to sea level rise was also found to be a serious issue during the field mission. Mangrove forest has also been completely depleted in some coastal areas.

② Sensitivity

For the sensitivity assessment, the report had focused on damage to human life and economic loss. Similar to the other districts, the local people in Chau Thanh district also have suffered from economic losses as opposed to damage to human life.

③ Adaptive Capacity

For the adaptive capacity, the report only focused on the awareness of people on climate change impact and climate change adaptation. Awareness checking from the district has been conducted with the two communes simultaneously in the consultation workshop. Compared to the awareness on climate change in Bac Lieu, people in Tra Vinh, Chau Thanh district have deeper understanding of climate change in terms of climate change impact and climate change adaptation.

④ Improvement Needs

The needs for the improvement on the Long Hoa commune are mainly water management and eco-friendly environmental protection as was mentioned in 29.55% of the total comments. As stated above given the unique location of the Chan Thanh district, people are eager to enhance their security from the threat of sea level rise.

⑤ Estimated Beneficiary from the improvements

Based on the assessment of improvement needs from the local people, the number of beneficiaries for each hard intervention has been calculated. Around 4,176 people could get benefit from the water management system by constructing water supply infrastructure in town. Eco-friendly infrastructure will also benefit 4,176 people from providing sustainable sea dyke covering 41% of total population in Commune. Lastly, from the improvement of waste management system 964 people will get benefit.

⑥ Focus group interview

For the adaptive capacity, the report only focused on the awareness of people on climate change impact and climate change adaptation. The woman's union pointed out that in an emergency situation such as, a heavy storm or the cyclone, the women and children should be provided with their own shelters and additional supplies. The key findings from the focus group interview could be summarized as follows:

- One of the major issues that came out of the interview was on water management system;
- Support on children for their education is urgent; and
- Training for the awareness on climate change to the local people needed;

3) Hoa Minh, Chau Thanh District

① Exposure

The most severe exposure to natural hazard in Chau Thanh district from the comments is sea level rise. It was mentioned in 42.11% of the total comments from the consultation workshop. Sea level rise, the heavy storm followed after as the next biggest concerns.

② Sensitivity

For the sensitivity assessment, the report had focused on damage to human life and the economic loss. Similar to the other districts, the local people in Chau Thanh district have also suffered more from economic losses than they have to damage to human life.

③ Adaptive Capacity

For the adaptive capacity, the report only focused on the awareness of people on climate change impact and climate change adaptation. Awareness checking from the district has been conducted with the two communes simultaneously in the consultation workshop. Compared to the awareness on climate change in Bac Lieu, people in Tra Vinh, Chau Thanh district have deeper understanding of climate change in terms of climate change impact and climate change adaptation.

④ Improvement Needs

Eco-friendly environmental protection including sea dyke ranked 1st from the 6 other options including water management, waste management, housing, basic infrastructure, and awareness training. Due to the lack of proper environmental protection along the waterway and seaside, people are desperate for improvements on coastal and riverbank defense.

⑤ Estimated Beneficiary from the improvements

Based on the assessment of improvement needs from the local people, the number of beneficiaries for each hard intervention has been estimated. Around 4,662 people could get benefit from the water management system by constructing water supply infrastructure in town. Eco-friendly infrastructure will benefit the most in down with 5,128 people from providing sustainable sea dyke covering 34% of total population in Commune. Lastly, from the improvement of waste management system 1,865 people will get benefit.

4) Vulnerability and Risk Summary in Tra Vinh

In Tra Vinh, based on the comments from the local people, the priority issue against the impact of climate change is sea level rise, since both commune in Chau Thanh district are located on islands. Along with the information from the local consultation workshop, the vulnerability and risk assessment team conducted the field visit to each commune to check the overall condition in Chau Than district. As stated from the local people, the basic

infrastructure in terms of fresh water provision in Chau Thanh district appeared to be insufficient for the whole population of the commune.

As part of the needs assessment for improvements within the commune, providing the water management system and eco-friendly environmental protection was in high demand due to the geographical characteristics of the district.

Findings, Recommendation, and Further steps

Given its socio-economic and environmental conditions, Vietnam can be classified as highly vulnerable to climate change impacts. The country's vulnerability to climate change is attributed to observed trends in increasing mean annual and maximum temperature, increase in mean rainfall, occurrence of extreme weather events including heavy storms and observations on sea level rise. Mekong delta region is one of the most vulnerable regions in Vietnam especially from the impact of climate change. We focused on two provinces in Mekong Delta which is Bac Lieu and Tra Vinh.

According to the local consultation workshop and the field visit to the project site, the most severe exposure in both Bac Lieu and Tra Vinh appears to be sea level rise which results in a lack of fresh water for living, drinking, and cultivating. Among the 6 hard interventions that the project proposal suggested in this context, the most urgent facilities required in each province is be water management systems. To give ownership to the province and raise awareness on climate change impact and adaptation, knowledge management, in both national and local level should be provided alongside the hard intervention.

There is a big opportunity to enhance the climate change adaptive capacity of the project sites in Bac Lieu and Tra Vinh through following components in the project proposal.

With regard to the proposed project to AF, the steps will be conducted as follows:

- *Component 1: Institutional and community capacity building toward eco-human settlement development for supporting enhancement of local climate response actions*
- *Component 2: Integrated planning with respects of eco system-based climate change adaptation and building climate resilient capacity and action plan at local level*
- *Component3: Sustainability built through small-scale protective and basic service infrastructure*
- *Component4: Awareness Raising and Knowledge Management*

Annex1. Questionnaire for the focus-group interview

I. Engagement Questions:

- What do you think about the topic that has brought us here today (Climate Change)?
- Asking their brief feedback about the consultation workshop, if there is anything unclear or any concerns

II. Exploration Questions:

Poverty

- What is the average income in your household? Is it sustainable or there is fluctuation by season?
 - If there is a fluctuation, what is the main reason? Do you think it is related to climate change impact?
- Have you experienced income loss from climate change impact?
 - If yes, was there any support from government or other agency?
 - If support provided, was it enough or was/is there anything more that you needed?

Challenges

- When flood or drought happens, what problems do you see as a woman (youth)?
- Where do you go for help when you need it as a woman (youth)?
 - If there is a facility, what do you feel about the program/facilities?
 - If there is no facility, what do you suggest?

Livelihoods

- What are the main livelihood resources?
- Is there any situation where you have to change your resources due to climate change impact?
 - If yes, does it also affect the income?

Ecosystem

- Do you know ways in which the ecosystem can help you prevent the impacts of climate change?
 - If yes, is there any improvement needed?
 - If no, please give the suggestion to prevent the impact of climate change

1. Resettlement and Migration

- Do you think you need resettlement or migration? / or your migration or resettlement was necessary?
 - If yes or no, why?
- What challenges do you see when you move to the new place, especially as a woman (youth)?

III. Closing Questions:

- In this community, what are the best ways to inform people about the topic today (Climate Change)?
- Asking if there is anything they need, but was not presented during the workshop

Annex2. Climate Vulnerability

Issue		Vinh Trach Dong		Vinh Hau		Chau Thanh			
						Long Hoa		Hoa Minh	
Exposure	Flood	7	19.44%	15	27.27%	2	5.26%	1	5.26%
	Sea level rise	4	11.11%	15	27.27%	12	31.58%	8	42.11%
	Land erosion	1	2.78%	6	10.91%	9	23.68%	1	5.26%
	Salinity Intrusion	10	27.78%	5	9.09%	9	23.68%	2	10.53%
	Drought	7	19.44%	6	10.91%	2	5.26%	1	5.26%
	Storm	7	19.44%	8	14.55%	4	10.53%	6	31.58%
Total Comments		36		55		38		19	
Sensitivity	Damage of human life	6	31.58%	6	40.00%	0	0.00%	1	33.33%
	Economic loss (mainly livelihood)	13	68.42%	9	60.00%	3	100.00%	2	66.67%
Total Comments		19		15		3		3	
Adaptation Capacity	Awareness of Climate Change Impact	1	2.94%	5	15.15%	5	15.63%	5	15.63%
	Awareness of Climate Change Adaptation	0	0.00%	3	9.09%	7	21.88%	7	21.88%
Total participants		34		33		32			
Improvement Needs	Water Management	16	29.63%	10	15.87%	13	29.55%	10	29.41%
	Waste Management	2	3.70%	5	7.94%	3	6.82%	4	11.76%
	Housing	4	7.41%	11	17.46%	6	13.64%	4	11.76%
	Basic Infrastructure	9	16.67%	12	19.05%	6	13.64%	4	11.76%
	Eco-Friendly Environmental Protection	15	27.78%	19	30.16%	13	29.55%	11	32.35%
	Awareness Training	8	14.81%	6	9.52%	3	6.82%	1	2.94%
Total participants		54		63		44		34	

Annex3. Detailed sociodemographic data of Tra Vinh

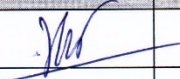
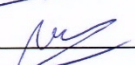
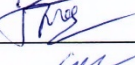
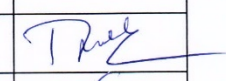
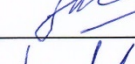
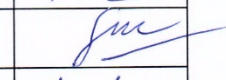

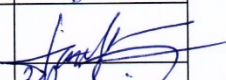
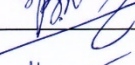
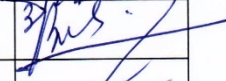
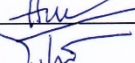
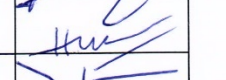
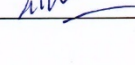
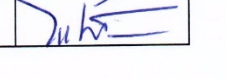
NO.	District	Chau Than					
	Commune	Long Hoa			Hoa Minh		
		Population	Household	Feature	Population	Household	Feature
1	Total population	10,280			14,191		
2	Number of households		2,547			3,309	
3	Female rate	5,097		49.58%	6,385		44.99%
4	Under 17-year-old population	2,986		29.05%	3,027		21.33%
5	Working group population	6,417		62.42%	8,310		58.56%
	Male				4,586		18-60
	Female rate				3,724		18-55
6	Disabled, invalid and lost ability to work population	314		3.05%	256		1.80%
	Disabled	150			149		
	Invalid	52			36		
	Lost ability to work	112			71		
7	Indigenous population	-				55	
8	immigrant population				142		
9	Ethnic minority population	49	15	Khmer	56	16	sKhmer
10	Population, number of households in need for resettlement		136	in Con Phung village	1,544	386	
					419	103	Huu dyke
					924	231	Ta dyke
					201	52	Con Chim village
11	Population, number of households lacking access to clean water		2182	85.67%		1,166	35.24%
12	Rate of poor and near-poor households		311	12.21%		191	5.77%
	Poor		144	5.65%		72	2.18%
	near-poor		167	6.56%		119	3.60%

13	Income per capita			37.5 million VND/ year			41.8 million VND/ year
14	Main income source			Agriculture-Aquaculture (81.26%)			Agriculture-Aquaculture (82%)
15	Sectorial structure and household rate by sector						
	Agriculture		625	24.54%			
	Aquaculture		1,531	60.11%			
	Industry		67	2.63%			
	Construction		62	2.43%			
	Trade		96	3.77%			
	Transportation		28	1.11%			
	Other Sectors		138	5.42%			
16	Loss and damage caused by natural disaster and climate change			* 2 houses destroyed and 5 housed lost the roof because of tornadoes * water level rise, combined with tide destroyed the shore of 69 shrimp ponds, and 650m of dyke is in risk of land erosion			High tide (sea level rise), combined with rain and storm will affect 100% of households in Hoa Minh commune, particularly human - property loss and damage; the first areas to be affected will be Con Chim village, Ta and Huu dyke

Annex4. Detailed sociodemographic data of Bac Lieu

NO.	District	Vinh Hau District		
		population	household	feature
1	Total Population	12,106		
2	# of household		2,835	
3	Number of Female	6,040		49.89%
4	# of age 0-17	2,808		23.20%
5	# of age 18-60	8,198		67.72%
6	# of age > 60	1,100		9.09%
7	# of local people	11,653		96.26%
8	# of disabled population	109		0.90%
9	# of immigrants	453		3.74%
10	# of people living in informal settlements	-		
11	# of people suffering from shortage of water	-		
12	# of minority (ethnic) group	3,818		31.54%
	Khmer	3,814	960	31.51%
	Hoa	1	1	0.01%
	Cao Lang	1	4	0.01%
	Tay	1	4	0.01%
	Thai	1	1	0.01%
13	Poverty Rate (%)		546	19.26%
	Poor		387	13.65%
	near-poor		159	5.61%
14	Livelihood resource			Fishery, Agriculture, Aquaculture, and small-scale trading

Annex5. List of Participants on the consultation workshop in Vinh Trach Dong district

DANH SÁCH ĐẠI BIỂU NHẬN TÀI LIỆU VÀ HỖ TRỢ THAM DỰ TỌA ĐÀM THAM VẤN CÁC BÊN LIÊN QUAN							
Tên tổ chức	Số lượng	Ông/Bà	Họ và tên	Chức danh	Tài liệu/Email	Hỗ trợ tham dự tham vấn	Ký nhận
UN-HABITAT							
	1	Ông	Jay Nam Jonghyo	Chuyên gia Phát triển Đô thị			
	1	Bà	Hyemi Yang				
	1	Bà	Nguyễn Phương Ngân				
	1	Ông	Adam Keegen				
Các đơn vị							
P. TNMT P	1	Đ	Vũ Công Hải	Đại Phó phòng TNMT TPBL			
SỞ TNMT	1	Ông	Hồ Văn Linh	Phó Giám đốc Sở			
	1	Bà	Nguyễn Thủy Trung	Chuyên viên			
	1	Ông	Sơn Văn Lân	Chủ tịch thị trấn xã			
	1	Ông	Lâm Văn	Chủ tịch ấp Bình Đông A			
	1	Ông	Nguyễn Minh Bình	Chủ tịch ấp Bình Đông A			
	1	Bà	Nguyễn Thị Hiền	Chủ tịch ấp Bình Đông B			
	1	Bà	Sơn Thị Kim Liên	Chủ tịch thị trấn xã			

	1	Bà	Chị Chu Hồng	H. Chi tích thị phụ nữ X.ô	Thy	Thy
	1	Ông	Lý Quý	Đ. dân ủy Miền Đông A	Thy	Thy
	1	Bà	Chị Chí Cầu Hồng	Đ. dân ủy Miền Đông A	Thy	Thy
	1	Ông	Trần Hiệp	Truyền cấp.	Thy	Thy
	1		Lý Thanh Phong	Hạ cấp áp A.	Thy	Thy
	1		Lý Kim Chung	Biển Tây A.	Chau	Chau
	1		Trần Bông	Biển Tây B.	Thy	Thy
	1		Quách Hòa Ngã	Đông giữa B	Thy	Thy
	1		Đào Thanh Phong	PCT. huyện Nông Đức.	Thy	Thy
	1		Lưu Chí Hòa	P. Tài chính.	Thy	Thy
	1		Cao Thanh	P. Quản lý đô thị	Thy	Thy
	1		Trần Đông Khoa	P. Kinh tế + P. Bảo Liễn	Thy	Thy
	1		Trương Thanh Phương	Công chức NN xã Vĩnh Phước Đông	Thy	Thy
	1		Lưu Chí Nguyệt Mai	PCT. HĐND xã Vĩnh Phước Đông	Thy	Thy
	1		Trần Văn Hậu	Công chức VH - XH	Thy	Thy
	1		Mai Hưng	CC VP - TK	Thy	Thy

	1	Sơn Phước Tâm	Vườn Tây B	<u>U</u>	<u>U</u>
	1	Lâm Thuý Hằng Thuý	Đông B	<u>U</u>	<u>U</u>
	1	Thạch Sĩ Riêng	"	<u>U</u>	<u>U</u>
	1	THẠCH HOÀNG THUYỀN	"	<u>U</u>	<u>U</u>
	1	Trần Thị Hà Linh	Vườn Đông A	<u>U</u>	<u>U</u>
	1	Lê Quốc Cường	Đông B	<u>U</u>	<u>U</u>
	1	Long Thiý Thanh	Đông B	<u>U</u>	<u>U</u>
	1	Điền Quang Vinh	V-PK	<u>U</u>	<u>U</u>
	1	Lê Quỳnh Hương	Chỉ tịch UBND xã	<u>U</u>	<u>U</u>
	1	Kim Văn Bình	Phó Chủ nhiệm UBND	<u>U</u>	<u>U</u>
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Annex6. List of Participants on the consultation workshop in Vinh Hau district

DANH SÁCH ĐẠI BIỂU NHẬN TÀI LIỆU VÀ HỖ TRỢ THAM DỰ TỌA ĐÀM THAM VẤN CÁC BÊN LIÊN QUAN							
Tên tổ chức	Số lượng	Ông/Bà	Họ và tên	Chức danh	Email	Hỗ trợ tham dự tham vấn	Ký nhận
UN-HABITAT							
	1	Ông	Jay Nam Jonghyo	Chuyên gia Phát triển Đô thị			
	1	Bà	Hyemi Yang				
	1	Bà	Nguyễn Phương Ngân				
	1	Ông	Adam Keegen				
Các đơn vị							
	1		Ngã Duy Hân	Trưởng Ủy ban dân sự	<i>Flas</i>		<i>Flas</i>
	1		Ngã Ngọc Phụng	Đoàn tác nghiệp và M&E	<i>Ngh</i>		<i>Ngh</i>
	1		Phan Hoàng Anh	CBĐC chính - môi trường	<i>Pha</i>		<i>Pha</i>
	1		Hoàng Văn Dũng	ấp 14	<i>Hoàng</i>		<i>Hoàng</i>
	1		Lê Vũ Đào	Cán bộ KS	<i>Lê</i>		<i>Lê</i>
	1		Phạm Minh Tuấn	ấp 14	<i>Phạm</i>		<i>Phạm</i>
	1		Nguyễn Văn Thuận	ấp 14	<i>Nguyễn</i>		<i>Nguyễn</i>
	1		Nguyễn Văn Thới	11	<i>Nguyễn</i>		<i>Nguyễn</i>

1	1	Phạm Minh Hải	11		Minh	Minh
1	1	Lưu Thành Kiên	11		Kim	Kim
1	1	Thúc Tâm Nguyễn	"		Thúc Tâm	Thúc Tâm
1	1	Đào Anh Thi	UBND Xã		Anh Thi	Anh Thi
1	1	Châu Huỳnh Quốc Nam	Phòng kinh tế & Ho. tổng huyện		Nam	Nam
1	1	Nguyễn Thị Mỹ Duyên	phụ nữ ấp 141		Mỹ Duyên	Mỹ Duyên
1	1	Nguyễn Ngọc Chánh	Trưởng ấp 141		Chánh	Chánh
1	1	Đỗ Quốc Nghĩa	UBND xã		Nghĩa	Nghĩa
1	1	Nguyễn Trung Phái	UBND xã		Phái	Phái
1	1	Huyền Nguyễn Tú Như	UBND xã		Thu	Thu
1	1	Ninh Văn Trung	UBND xã		Trung	Trung
1	1	Lâm Chánh	UBND xã		Chánh	Chánh
1	1	Le Hoàng Tuấn	Phòng Tài Chính - NS		Tuấn	Tuấn
1	1	Trần Văn Linh	Chủ tịch UBND xã V. K. K.		Linh	Linh
1	1	Le Ngọc Yên	UBND xã		Yên	Yên
1	1	Đông Thị Lan	UBND xã		Lan	Lan

	1	Trần Văn Thuận	UBND xã Vĩnh Hậu	<u>Tran</u>		<u>Tran</u>
	1	Hương Thị Minh Thủy	VP UBND xã Vĩnh Hậu	<u>HT</u>		<u>HT</u>
	1	Trần Văn Năm	ấp 14 xã Vĩnh Hậu	<u>Tran</u>		<u>Tran</u>
	1	Võ Xuân Cường	ấp 14 xã Vĩnh Hậu	<u>Wu</u>		<u>Wu</u>
	1	Vũ Thành Dã	ấp 13, xã Vĩnh Hậu	<u>Wu</u>		<u>Wu</u>
	1	Trần Trung Hiếu	Ban CHQS xã	<u>Tran</u>		<u>Tran</u>
	1	Trần Văn Lập	UBND xã	<u>Tran</u>		<u>Tran</u>
	1	Sơn Trường	ấp 14 xã Vĩnh Hậu	<u>Son</u>		<u>Son</u>
	1	Trần Văn Nội	ấp 14 xã Vĩnh Hậu	<u>Tran</u>		<u>Tran</u>
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TỔNG			33			

Annex7. List of Participants on the consultation workshop in Chau Thanh District

DANH SÁCH ĐẠI BIỂU NHẬN TÀI LIỆU VÀ HỖ TRỢ THAM DỰ TỌA ĐÀM THAM VẤN CÁC BÊN LIÊN QUAN							
Tên tổ chức	Số lượng	Ông/Bà	Họ và tên	Chức danh	Email	Hỗ trợ tham dự tham vấn	Ký nhận
UN-HABITAT							
	1	Ông	Jay Nam Jonghyo	Chuyên gia Phát triển Đô thị			
	1	Bà	Hyemi Yang				
	1	Bà	Nguyễn Phương Ngân				
	1	Ông	Adam Keegen				
Các đơn vị							
HM	1		Ngã Thị Bích Vân	ấp - Cồn Chim			
HM	1		Nguyễn Hữu Hưng	ấp Long Hưng 1			
HM	1		Võ Thị Kiều	ấp Long Hưng 1			
LH	1		Phạm Văn Quyền	ấp: Rạch Giảng			
LH	1		Nguyễn Văn Kiên	ấp Cồn Phụng			
LH	1		Phạm Công Minh	P. Chủ tịch UBND xã			
LH	1		Nguyễn Văn Toàn	Ấp UBND ấp Cồn Phụng			
LH	1		Nguyễn Văn Toàn	T. B. N. ấp Cồn Phụng			

LH	1		Ng. Trung Vinh	PER. HCCB xã LH	<u>TC</u>		<u>TC</u>
LH	1		Nguyễn Văn Lũ	ấp Rạch Sâu	<u>TC</u>		<u>TC</u>
LH	1		Đoàn Văn Côn	ấp Hai Thửa	<u>TC</u>	<u>TC</u>	
LH	1		Huỳnh Văn Dũng	ấp Rạch Ngựa	<u>TC</u>		<u>TC</u>
LH	1		Đinh Văn Thuận	ấp Xẻo Râu	<u>TC</u>		<u>TC</u>
HM	1		Phạm Văn Chanh	ấp Bà Liền	<u>TC</u>		<u>TC</u>
HM	1		Nguyễn Minh Triều	ấp Long Hưng 2	<u>TC</u>		<u>TC</u>
HM	1		Nguyễn Thị Chơn	ấp Đại Thôn B	<u>TC</u>		<u>TC</u>
HM	1		Phạm Văn Hải	ấp Giồng Giã	<u>TC</u>		<u>TC</u>
LH	1		Huỳnh Thị Cẩm Loan	chủ tịch ấp Thủ Mủ Long Trì	<u>TC</u>		<u>TC</u>
LH	1		Võ Thị Thủy Linh	P. BT ấp Long Trì	<u>TC</u>		<u>TC</u>
LH	1		Ngân Thị Cẩm Thủy	P. BT chi bộ ấp Thôn Vạn	<u>TC</u>		<u>TC</u>
HM	1		Đỗ Hữu Hòa	D. CS. UBND TG	<u>TC</u>		<u>TC</u>
HM	1		Kê Trung Nghĩa	CE DE - XD	<u>TC</u>		<u>TC</u>
HM	1		Nguyễn Văn Quốc	T. BND ấp Bãi Chanh	<u>TC</u>		<u>TC</u>
LH	1		Nguyễn Văn Công	T. BND ấp 2 Cầu	<u>TC</u>		<u>TC</u>

ctt m.	1		Ngô Thành Sáng	Ấp Đại Hữu A	<u>Sauk</u>		<u>Sauk</u>
LH	1		Trương Vũ Thành	Ấp Rạch Gióc	<u>Thanh</u>		<u>Thanh</u>
LH	1		Ung Văn UTRANG	Ấp Bưng Bịch	<u>Ung</u>		<u>Ung</u>
Dương Văn Hợp	1		Dương Văn Hợp	Chợ Cuo Bảo và mố' hững	<u>Duyet</u>		<u>Duyet</u>
	1		Nguyễn Thị Đoàn Duyên	phong 011 Khắp đên m' biếu	<u>Phong</u>		<u>Phong</u>
	1		Nguyễn Trọng Kiên	phong 011 Cầu Thôn	<u>Kien</u>		<u>Kien</u>
HM	1		Trần Trung Kha	UBND xã Hòa Ninh	<u>Tran</u>		<u>Tran</u>
LH	1		Nguyễn Thanh Trường	UBND xã Long Hòa	<u>Truong</u>		<u>Truong</u>
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ADAPTATION FUND

National level Consultation Meeting Report

Introduction

The consultation meeting on Adaptation Fund took place on November 7th 2018 at the Ministry of Natural Resources and Environment. The participants were Dr. Nguyen Quang, Jay Nam, Hyemi Yang, Daniela Suarez and Adam Keegan from UN-Habitat; Phan Tuan Hung (Director General), Nguyen Ngoc Anh, Dr. Nguyen Sy Linh, Prof. Tran Thuc, Pham Thi Thuy Hanh and Dr. Michael Parsons (Senior Advisor to Minister) from MONRE; Prof. Truong Quang Hoc from Hanoi National University; Ly Minh Dang from GIZ; Nguyen Anh Quynh from NISTPS; and Nguyen Phuong Nam from Clitech.

Objectives

- To revise draft of Adaptation Fund concept note from UN-Habitat
- To discuss the potential project site for the project

Findings

Mr. Hung (MONRE) explains the process for project selection: Minister of MONRE must sign off and Technical board will then approve before World Bank signs contract. He also discusses 3 models of project implementation, highlights that for this project it is proposed to use 3rd approach through a multilateral agency and says that the features of adaption fund must be capacity for adaption and knowledge sharing built into the project, no overlap of projects. He explains that the maximum fund for country 10 million USD for multilateral 50% of this and speaks about the need for high quality concept note, which includes close consultation with local community. Addressing needs of people and compatibility with Government frameworks is a must. 3 sets of meeting with local communities have already been undertaken, AF requires at least one more round of meetings. Last year a UNESCO project was rejected by the fund, therefore careful planning is a must.

Mr. Quang (UN-Habitat) explains the concept of Adaptation Fund, notes that submission day is in January or else in July but time is need for revision. We need to work close to beneficiary group to develop a good plan.

Jay Nam (UN-Habitat) explains that community base project and hard infrastructure, focused on innovation, adaptation and knowledge share are key for our project. He also stated than 70% will be invested in hard infrastructure. Then showed the key outputs and talked about how the implementation is going to be. However, project is flexible and open to changes depending on the conversation with other agencies. Then discusses why the project is situated in the Mekong Delta, followed by analysis of other projects in the region, highlighting that most of them are related to the land issue and soft infrastructure. To finish, he opens the topic of project location for discussion.

Mr. Hoc (HNU) explains the complimentary potential of his current project in Red River, which is currently developing criteria for assessing vulnerability to climate change based in system resiliency and livelihood and assessment on integrated approach. He recognizes that project components from concept note are logical and comprehensive and suggests some revisions to document format as follows: the second column should

talk about detailed components, outputs also reflected in the third column; second component integrate climate issues and ecosystem into development project. For the project location he is happy that adequate consultation has led to a good location in Mekong Delta and suggests linking the project with other active hard interventions in the region.

Mr. Chiem (HNU) highly appreciates the concept note, agrees that MONRE will be focal body to orchestrate, but desires to strictly adhere to or shorten the timeline. Also notes changes to structure as follows: name of component, objective, activities, outcome. He says that financial resource and time are needed and recognizes a need to align with other local projects. He also notes that Government policy to improve productivity of aquaculture may affect activities and outcomes and that local migration patterns into the Mekong region make it very important to take care with beneficiary selection. Later he states the possible need to cooperate with universities or other institutions for project implementation. For location he suggests the possibility of An Giang province as hydropower has increased flooding. He suggests separation of project components based on regional needs as follows:

- Component 1: All Mekong delta provinces suffer from salinity intrusion. Should cover all region
- Component 2 & 3: select one province only, give households enterprise
- Referral to resolution 120 in planning process as next year planning will become regional rather than provincial.

Mr. Dang (GIZ) thinks that the document has a standard model and components are ambitious but it is up to UN to decide about it. He discusses a gap in river erosion. Erosions have direct connections with the settlement of the people. In Ben Tre province there are thousands of projects working on coastal erosion. The local government of Ben Tre is struggling to find solutions for the people living next to the river. Therefore, he suggests to develop a Comprehensive review/research on erosion and why it happens because according to him the project should focus on river side erosions. He also suggests to check what other organizations have done in the area. For component 3 he suggests conducting assessments and provide visible solutions such as constructing water storage supply. As the project use an ecosystem approach, it is worth noting that there's a Flooding rice system that save a lot of water and provide great conditions for aquaculture. He adds that farmers need support in terms of settlement, houses and other basic facilities for living. Indeed, he suggests to have a sub component to support farmers that cultivate rice, maybe to invest in 100 households. Even if it looks like a small number, it's really helpful and it will bring change. From his experience, the cooperation with local government, people and PPC is a key of success. They are willing to share experiences because they have been working during the last 10 years in the Mekong Delta river.

Ms. Hanh (GDLA) outlines the need to stay up to date with land planning procedures and suggests that project team should have meeting with land admin authority to ensure compliance. Component 1: land planning with integration of climate change, no provincial planning, district planning from 2020, project approved Aug 2019.

Mr. Linh (ISPONRE) says that in order to have a successful approach to the adaption fund we need to meet certain criteria: the project should be clearer about how the housing/settlement is enhancing the resilience to climate change and should proof more resilience for activities. For the introduction of the project he thinks that small infrastructure is important but priority should be on water storage due to lack of access to fresh water. With the ecosystem approach it is necessary to ensure the house supply chain in the market of flooding rice. He adds that the component of knowledge sharing model should be scalable for the implementation and that the project location will be found after clarifying the best areas of intervention.

Mr. Than (VEA) highlights the potential for crossovers with other big projects in the area and suggests to review other projects in MK, especially the World Bank project on urban resettlement. He states that main climate change issue for local people is that they're ill prepared in terms of skill and information. Many lose their livelihoods due to lack of preparedness. He also notes conflict in terms of livelihood between seawater and fresh water livelihood people and suggests more participatory tools that involve local people. He notes that with solution 120 the government is encouraging more inter-regional projects and he suggest to target a certain beneficiary group from the river basin instead of a geographical location.

Mr. Nam (Clietch) notes that structure proposed is good and that components align with the overall structure. However legal basis is a priority. The project needs to be in line with current legal documents in Vietnam. Component 1 needs to be more specific in this context. Selection of location following IPCC, depends primarily on local condition. Also notes that whether government decides to centralize or scatter the project location, and beneficiary group will have a big impact on activities. Assessment methodology needs to be finalized. Notes that high density areas normally have higher vulnerability, recommends prefeasibility study to identify this. However due to budget constrictions he recommends field trips with survey and practical observation to some selected provinces. Adds that climate change is interregional issue, location is not within boundary of one province, but it may reach out which will involve working with multi-location authorities. Capacity building is a priority. Should clarify and identify target group for training whether government staff, local people, etc. They are eager to train but may have difficulty getting to training centers. However, they should also think about methodology for training. For feasibility of hard intervention, he suggests considering 3 dimensions: implementation, sustainability and representativeness to community. States that resettlement would have big impact on rural people and there may be a need to differentiate the solutions for rural/urban peoples, ie rural on water processing, urban on wastewater. Also adds that in terms of water quality aspect of the project there is another project related to land and water management, national program for climate change response which plans to build 2 large water reserve tanks in Mekong river.

Michael (MONRE) feels that the project should build on strengths on UN Habitat, with a focus on human settlement and that onus should be on commune-capital, district-capital or both. It is necessary to get the idea of bounded human settlement size and make up both urban and rural. He agrees on GIZ suggestion about river erosion and adds that a human settlement version of VAC model would be preferable as there is no community model that self-replicates in this way. He notes that focus should be on

livelihood options, branded marketing, flooding raise, etc. This model will provide more certainty about target population in terms of their natural environment. He discusses ecological constraints and how man-made activities are exacerbating climate change issues. Therefore, he suggests to approach the target behavioral change in response. He believes that this is an opportunity for UN-Habitat to foster a model of a sustainable human settlement adapted to climate change focusing on a specific community and based on selected communities willingness to be part of such a project

Ms. Quynh (NISTPS) says that component 1 and 2 overlap content related to planning. If possible, she suggests to ensure better and more sustainable outcomes, and notes a need for dialogue for integration needs to be apply at local level. Related to column 2, she suggests a vulnerability assessment and to develop a small-scale model clarifying how to transform outputs to outcomes in order to ensure a real change.

Mr. Quang (UN-Habitat) appreciates participants inputs and strongly agrees on role of community, harmony and role of private sectors in the project. The shortage and excessive water issues are big problem in Mekong Delta. UN-Habitat has leveraged technology to climate change response, and completely agrees with Michael about building a resilient community. Moving forward he would like detailed activity: models, policy guidelines and qualified targets of training whether for leadership or community resilience.

Summary

Mr. Hung (MONRE) explains the process for project selection and discusses 3 models of project implementation, highlights that for this project it is proposed to use 3rd approach through a multilateral agency. For him, adaption fund must build capacity for adaption and knowledge sharing. He suggests to address the needs of people and compatibility with Government frameworks.

Jay Nam (UN-Habitat) explains that the project has community base and hard infrastructure approach, focused on innovation, adaptation and knowledge sharing. Then showed the key outputs and how the implementation is going to be. Then discusses why the project is situated in the Mekong Delta and opens the discussion for project location.

Mr. Hoc (HNU) explains the complimentary potential of his current project in Red River, suggests some revisions to the document format and suggests to link the project with other active hard interventions in the region.

Mr. Chiem (HNU) suggests changes to the structure and talks about the need of cooperation with universities for implementation. He also notes that Government policy to improve productivity of aquaculture may affect activities and outcomes for location he suggests the possibility of A Giang province and suggests separation of project components based on regional needs.

Mr. Dang (GIZ) discusses about gaps in river erosion and how it affects people in Ben Tre province. He suggests to develop a Comprehensive review/research on erosion and

why it happens. He makes recommendations to component 3 and adds that farmers need support in terms of settlement, houses and other basic facilities for living.

Ms. Hanh (GDLA) outlines the need to stay up to date with land planning procedures and suggests a meeting with land admin authority to ensure compliance. She makes recommendations to component 1.

Mr. Linh (ISPONRE) recommended to meet certain criteria and adds that the component of knowledge sharing model should be scalable for the implementation and that the project location will be found after clarifying the best areas of intervention.

Mr. Than (VEA) highlights that many people in MK lose their livelihoods due to lack of preparedness and that there are conflicts to get access to fresh water. He suggests to use more participatory tools and to target a certain beneficiary group from the river basin instead of a geographical location.

Mr. Nam (Clitech) notes that legal basis is a priority and makes suggestions about component 1 and selection of project site. He recommends to do pre-feasibility study to identify vulnerability in highly density areas and as capacity building is a priority he calls on a training for it. He states that resettlement would have big impact on rural people and there may be a need to differentiate the solutions for rural/urban peoples.

Michael (MONRE) agrees on river erosion and adds that a human settlement version of VAC model would be preferable. He notes that focus should be on livelihood options, branded marketing, flooding raise, etc. And suggests to approach the target behavioral change in response. He believes that this is an opportunity for UN-Habitat to foster a model of a sustainable human settlement adapted to climate change focusing on a specific community.

Ms. Quynh (NISTPS) makes recommendations on column 2 and suggests to ensure the outcomes.

Adaptation Fund Project Development Consultation Meeting

9:00 -12:00 7 November 2018

Room 1101, MONRE

English-Vietnamese Interpreter

I. Background

The United Nations Human Settlements Programme (hereinafter referred to as “UN-Habitat”) is the agency for human settlements. It is mandated by the UN General Assembly to promote socially and environmentally sustainable towns and cities with the goal of providing adequate shelter for all. UN-Habitat has been working with the government of Viet Nam since 1990 and established its country office in 2007.

To promote sustainable and inclusive urban development in Viet Nam, UN-Habitat Viet Nam office has been working with Viet Nam government and key stakeholders through a programme of work focused on:

- (i) designing and developing new project and programme for mainstreaming **climate change into urban development;**
- (ii) **providing technical assistance and supporting capacity development;**
- (iii) strengthening intergovernmental processes; and
- (iv) networking and partnership development, among others.

As an implementing entity of Adaptation Fund (hereinafter referred to as “AF”), UN-Habitat Viet Nam office is developing the full-size proposal for sustainable eco-human settlement development along with small-scale infrastructure intervention that includes technical support such as water purification system in consultation with the Government of Vietnam. UN-Habitat Viet Nam office is aiming to submit the full-size project proposal to Adaptation Fund Board by August 2019.

II. Objectives

1. To introduce the climate change adaptation project for accessing global climate financing, especially Adaptation Fund
2. To find out the gap between existing and developing projects
3. To identify the appropriate project location for the project
4. To discuss about the project components for identifying the proper actions

III. Agenda

09:00-09:10	Opening	MONRE
09:10-09:20	Introduction of Adaptation Fund	UN-Habitat
09:20-09:40	Introduction of Project Concept	UN-Habitat
09:40-10:10	Discussion about the challenges of existing climate change adaptation projects in Viet Nam <ul style="list-style-type: none">- Define the adaptation requirement- Define the national priority about the climate change adaptation- Data → CC information →	Moderator: MONRE

	Vulnerability and risk assessment → Current Action → Priority	
10:10-10:50	Discussion about the project I: Project location II: Project Component	Moderator: UN-Habitat
10:50-11:00	Closing	MONRE

VI. List of Participants

#	Agency	Name	Note/Contact
1.	UN-Habitat	Dr.Nguyen Quang Jay Nam Hyemi Yang Laid Cea Maria	
2.	MONRE-Department of Climate Change	Mr. Tang The Cuong Director General	
3.	MONRE –Department of Legal Affairs	Phan Tuan Hung Director General	
4.	MONRE- Department of Science and Technology		
5.	MONRE- Vietnam Environment Egency	Department of Biodiversity	
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9.	Hanoi National University	Prof.Truong Quang Hoc	
10.	DONRE of Ben Tre		DONRE
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12.	WB		
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Bộ Tài nguyên và Môi trường


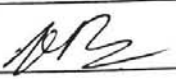




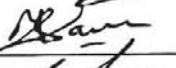
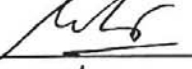

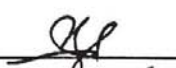


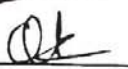
DANH SÁCH ĐẠI BIỂU

Nội dung: Hội thảo tham vấn đề xuất kế án Quy hoạch vùng

Thời gian: 01/11/2018

Địa điểm: P. 1107 - Nhà A - B. 7. NAM

Đơn vị chủ trì:

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14	Nguyễn Duy Anh	NCY	Viện CLCS KHCU		

Appendix 3. Local level Consultation Meeting Report



ADAPTATION FUND

**Local level Consultation
Meeting Report**



UNITED NATIONS HUMAN SETTLEMENTS PROGRAMME

Chương Trình Định Cư Con Người Liên Hợp Quốc

VIETNAM COUNTRY OFFICE

FIELD MISSION REPORT UN-Habitat Viet Nam

PLACE VISITED: Bac Lieu and Tra Vinh

DATES: 6th to 11th December 2018 (6 days)

RELATED PROJECT: Support Project Development for accessing Global Climate Financing (Adaptation Fund)

PARTICIPATION AGENCY: UN-Habitat and MONRE

DATE OF REPORT: December 2018

Introduction:

1. UN-Habitat team visited two coastal provinces: Tra Vinh and Bac Lieu for organizing Adaptation Fund consultation workshops and meetings with local government and locals.
2. Tra Vinh DONRE organized the consultation meeting with DORNE and District and commune leaders for UN-Habitat
3. Bac Lieu DONRE supported UN-Habitat organizing consultation workshops in two communes: 1) Vinh Trach Dong district and Vinh Hau commune
4. Tra Vinh DONRE supported UN-Habitat organizing a consultation workshop with two communes: Long Hoa and Hoa Minh in Chau Thanh District
5. The mission accomplished by Jay Nam, Hyemi Yang, Ms. Ngan and Mr. Adam Keegan from UN-Habitat, and Mr. Thi and Ms. Uyen from MONRE. The present report contains the findings and recommendations of the team's visit to Mekong Delta Region for the project implementation
6. The team combined visits to the potential project sites of Mekong Delta region and had consultation meetings and workshops with the Government (PPC and DONRE), local government (District) representatives and locals in Tra Vinh and Bac Lieu.

Principal purpose of the field mission:

The main purpose of this field mission was to collect the data of vulnerability and risk, and locals' needs from multiple-levels at local through organizing consultation meetings and workshops at local level.

Schedule:

Date	From	To	Activity
Wednesday 5 December	Hanoi Airport		Meet @ 17:00
	Hanoi	Can Tho	18:50 - 21:00
	Can Tho	Tra Vinh	21:30 – 11:30
Thursday 6 December	Tra Vinh	District	8h30-10h30 AM: Meeting with DONRE/District (at DONRE)
	Tra Vinh	Bac Lieu	Moving
	Bac Lieu	Bac Lieu	Preparation of the workshop
Friday 7 December	Bac Lieu	District	8AM: Consultation workshop (Huu Nghi Commune, Vinh Trach Dong District)
	Bac Lieu	District	2PM: Consultation Meeting (Commune 14, Vinh Hau District)
	Bac Lieu	Can Tho	Moving
Saturday 8 December	Can Tho		Mission Report/Workshop Report/Analysis/Drafting
Sunday 9 December	Can Tho		Mission Report/Workshop Report/Analysis/Drafting
Monday 10 December	Can Tho	Tra Vinh	7AM: Moving
	Tra Vinh	District	Field Visit
	Tra Vinh	District	2 PM: Consultation Workshop with Long Hoa and Hoa Minh
	Tra Vinh	Can Tho	Moving
Tuesday 11, December	Can Tho	Hanoi	13:25 - 15:40

Role of assignment

- UN-Habitat: Organizing consultation workshops and meeting with logistics and leading consultation
- MONRE: Coordination with local governments
- Local Government: DONRE- focal point with MONRE for coordination
- District and commune government: support UN-Habitat to organize the workshops and meetings

1. Consultation meeting with DONRE of Tra Vinh Province and leaders of district and communes

On Thursday 6 December, UN-Habitat, leaders of DONRE in Tra Vinh, and district and commune leaders had the consultation meeting for Adaptation Fund project development.

1	Dang Van Dien	Deputy Director of DONRE
2	Ms. Nguyen Thi My Hoa	Head of Natural Resource and Sea Management
3	Mr. Nguyen Quoc Tuan	Official of DONRE
4	Mr. Tran Van Thanh	Deputy Head of Natural Resource division at district
5	Mr. Tran Trung Kha	Vice Chairman of Hoa Minh Commune
6	Mr. Nguyen Thanh Thuong	Vice Chairman of Long Hoa Commune
7	Ms. Nguyen Thi Doan Diem	Specialist of Natural Resource and Sea Management Division

Discussion points:

- Introduction of UN-Habitat and Adaptation Fund
- Introduction of project development and progress including project activities
- DONRE provided comments on the project
 - Tra Vinh DONRE recommended two communes in Chau Thanh District as the most vulnerable communities in the province
 - Can be supportive if the project could address the challenges of locals in two communes in Chau Thanh district
 - Approved the field visit and the consultation workshop on Monday 10 December 2019

- District and commune leaders provided more detailed data for their district and communes: Attached as Annex 2
- The leaders explained about the needs of communities and challenges against the impact of climate change
 - Water management is the most challenge for the locals
 - Waste can be one of challenges
 - Infrastructures: road, bridge, river bank and etc
 - Ecosystem: Mangrove etc
- The leaders of district and communes provided the feedback about the project
 - They are interesting in Component 3, which is small-scale infrastructure intervention
 - They also consider the necessity of capacity building for the development of planning, action plans and strategies against the impact of climate change.



Figure 1. Meeting with Tra Vinh DONRE and leaders of district and communes



Figure 2. Meeting with DONRE and leaders of district and communes in Tra Vinh

The leaders of Long Hoa and Hoa Minh communes claimed that locals who live in climate change affected areas do not want resettlement, because of the concern of the loss of their livelihood strategy and resource.

2. Consultation workshop in Vinh Trach Dong District in Bac Lieu Province



Figure 3. Consultation workshop in Vinh Trach Dong District

Total 30 Persons from district and commune level participated in the consultation workshop. UN-Habitat provided the information about UN-Habitat and Adaptation Fund Project. MONRE also supported us to make local understand about the activities in the project.

For obtaining the detailed feedback about the project, the team developed and provided three questions to the participants. The first question is “what is the most challenges against the impact of climate change in your communities?” Second question is “Do you think the UN-Habitat’s project will help your communities enhance adaptive capacity? And How?”. The final question is “what kind of solution for climate change adaption is necessary in your communities?”.

We also conducted focus group discussion (Interview) with Women’s Union in the communities (See Figure 4). The discussion questionnaires will be attached as Annex.



Figure 4. Focus group interview (Women Union)

Focus group interview has conducted with only women and it took 30 to 40 minutes. The purpose of focus group discussion is to identify and clarify about gender issues in human settlement of the Mekong Delta coastal region. The main issues of the group was that many women have to work away from home, due to the livelihood strategy, thus They need vocational training support for diversifying livelihood strategies and resources.

Current status: Salinity Intrusion and high tides, high temperature and no raining in wet season, Lack of clean water, and environmental pollution from waste and other human activities. They suggested that UN-Habitat would be able to support the implementation of resettlement, and develop and maintain the planning in the productive manner.

Also, they suggested

- 1) The investment to hard infrastructures such as roads, dykes and etc
- 2) The investment on the efficient use of underground water for drinking and agriculture
- 3) Support for development livelihood strategy
- 4) Support the improvement of basic service and infrastructures

Le Truong Han (Chairman of Vinh Trach Dong Commune) addressed that,

- a. It is an extremely difficult commune with an area of 4000 ha, 14,000 households and more than 3,000 households
- b. Main production: shrimp, fruit, rice
- c. Offer:
 - i. Training to improve the capacity of commune officials
 - ii. Raise awareness of local people
 - iii. Create sustainable livelihoods
 - iv. Regarding investment: to make coastal roads, embankments against saline intrusion (40Km)
 - v. Clean water only meets 65% of the remaining water shortages in 4 coastal hamlets
 - vi. Investment in retail locations such as schools (toilets, classrooms)
 - vii. Collect garbage: currently only trolley, trash; Vehicle collection assistance is required
 - viii. Livelihood: many households have no land for production, land for rice is about 480 hectares low efficiency; lack of employment (support for business but not sustainable)
 - ix. Housing: big demand: in 2017, 100 houses was be supported. Currently, we need 100 houses more to be built for relocation for the households who lives along the river and dykes

Vinh Trach Dong

1. What is the most challenges against the impact of climate change in your communities?

- Vietnam is also affected by climate change. Recently, in Vinh Trach Dong commune, it's very hot in sunny days, and when it's rain, it usually associates with heavy wind, which causes the trees to fall, and make transportation impossible
- Lack water for production due to drought, salinity intrusion and flood
- Water level rise during rainy season (2)
- Salinity intrusion (2)
- Environmental protection
- Lack of clean water
- Climate change means significant changes on climate, associated with a lot of risks, affecting people's health, causing floods which damage the crops of farmers. In Vinh Trach Dong, there are houses in coastal area, and they are the most vulnerable against climate change risks (salinity intrusion)
- Unusual pattern of weather.
- Sea level rise, salinity intrusion and floods that happen frequently have affected people
- Salinity intrusion causes damage on the shrimp pond and kills the trees
- Heavy storms cause damage and loss on human, property and housing
- Climate change affects people's health
- The biggest challenges against the impact of climate change in locality are unusual pattern of weather and increased salinity intrusion which affected production and economic development at household level (2), the disease caused by climate affected the crops and animals. In addition, people were also affected from waste, due to slow and improper waste treatment
- Flood, caused by sea level rise affects agricultural production
- Proposal: change to new crops which adaptive to the area, build sea dyke and provide financial support for people
- Sea level rise, drought, flood, unpredictable weather pattern...
- Climate change causes unusual weather pattern, drought, which affects agricultural activities of people. In addition, sea level rise, associated with salinity intrusion also directly affects production activities and people's life.
- Unpredictable development of salinity intrusion, storms that occur more frequent, drought that is more extreme and increasing environmental pollution
- Reduction of agricultural productivity due to salinity intrusion
- Loss and damage on production and aquaculture
- Long-term dry season → drought, has affected production activities of people, and caused lack of water for agriculture
- Uneven distribution of rainfall, it usually focuses in a certain period of time, causing flood which affects production activities
- Unusual weather pattern, which affects people life and economic activities, particularly shrimp breeding and rice cultivation (2)

- Storms, hot weather, rains at unusual time, flood and drought

2. Do you think the UN-Habitat's project will help your communities enhance the adaptive capacity? And how?

- UN-Habitat project can support us by finding solutions on responding to climate change and improving climate change resilience, and those solutions should be locally appropriate
- UN-Habitat project can help locality to improve its climate change adaptive capacity, by focusing on building infrastructure in vulnerable areas, as well as improving people awareness and their capacity on climate change adaptation
- UN-Habitat can support by providing water drainage system and medical centers, and also provide knowledge for people on climate change. Infrastructure and resettlement areas should be invested
- UN-Habitat's support will be the best condition to help people to focus on production and doing business, without concerning about the climate change
- UN-Habitat project can help locality to enhance its adaptive capacity, by supporting in building dyke, to prevent salinity intrusion and sea level rise, as well as developing solutions to cope with heavy storms, building shelters for people when the storm comes
- UN-Habitat project can act as supplement for local's developing models (2), such as "self-manage residential area on environmental protection", and also provide financial support for operation, as well as provide equipment like trash bin, garbage truck... for highly populated areas or locations near residential areas, for instance, install 1 trash bin in every 0.5 km. UN-Habitat should invest more in irrigation system and field facilities, to help people to focus on production without having to concern, and also to respond to climate change. Build dyke and water drainage system

UN-Habitat's project can support locality to enhance the adaptive capacity, by:

- Support in building water station in rural areas
- Build residential areas for low income people, for poor and homeless people (housing, electricity, road, sewer, water treatment system...)
- Provide ecological infrastructure, such as mangrove, sea dyke.
- UN-Habitat's project will help locality to enhance its capacity, raise people awareness on climate change adaptation and environmental protection through their daily activities, reduce loss and damage. The project can also support people by means of physical and activities
- UN-Habitat's investment in Vinh Trach Dong commune will be a great support for the locality, particularly investment in local infrastructure, social security
- Forecast the scenario, develop plan for preventing salinity intrusion, and for infrastructure development
- UN-Habitat's project can support locality to build dyke system, to prevent salinity intrusion to rice production zones, as well dredge the canals, so farmers can do aquaculture with more convenient and higher productivity
- UN-Habitat's project can support in regulating the water, to keep fresh water in dry season and discharge water in rainy season, it will reduce losses in production activities

- UN-Habitat can support in building sewer system, to ensure water drain quickly, to prevent flood
- UN-Habitat's project can support in environmental treatment, building the dyke to prevent salinity intrusion, and dredging the canals
- Locality needs projects that can address the negative impacts caused by climate change
-

3. What kind of solution for climate change adaptation is necessary in your communities?

- This consultation workshop provided me knowledge about MONRE and DONRE programs. So far, they invested more than 30 billion VND for Bac Lieu province in general, and the commune in particular. The programs are in national level and have great significance. I would like to give UN-Habitat the following suggestions based on my working experience: The commune developed waste collection teams in its 6 villages. However, they have low efficiency, due to lack of equipment (trash bins, waste truck) and also human resources. In addition, people have low awareness on this matter. Currently, there are lots of waste in waste collection sites, and waste transportation and treatment have not been done properly, causing environmental pollution-→ the commune needs support.
- Build infrastructure in vulnerable areas
- Develop climate change adaptive capacity for locality
- Raise community awareness on climate change adaptation
- Dissemination on climate change, reduce resource exploitation and plant more trees, renovate the transportation, irrigation and dyke system
- UN-Habitat project should conduct site survey and build water drainage system along the seawall, and build the dyke to prevent landslide in the shoreline
- Should have a plan for dyke construction, protecting from sea level rise and salinity intrusion
- Raise people awareness on forest and greenery protection, to prevent storms and long-term drought
- All shrimp ponds and breeding facilities must have wastewater treatment system, to avoid water pollution which causes diseases to people.
- Build dyke to prevent salinity intrusion, especially in areas with short and long-terms crops (longan, annona, mango)
- Build permanent dyke system (2)
- Build water supply and drainage system
- Provide trash bins, garbage trucks, for promptly waste treatment (2)
- Provide fund for people for economic development (2), re-production and re-investment
- Build water drainage system
- Adjust and implement planning on water drainage system
- Move residential areas along coastal line to different areas, reinforce the sea dyke system to reduce salinity intrusion
- Forestation, prevent excessive forest exploitation

- Dissemination on forest protection, raise people awareness on climate change adaptation
- Develop vocational course on breeding and farming for people
- Develop supporting policies and build necessary facilities
- UN-Habitat's project can support in building dyke system, to prevent salinity intrusion and protect local rice production zone.
- Currently, there is a model of super-intensive shrimp breeding, UN-Habitat's project can support locality to develop this new production model, as well as monitoring the water environment for shrimp breeding, to prevent water pollution.
- Invest and expand longan and green asparagus cultivation model at local level
- Develop plans and solutions to prevent salinity intrusion
- Support farmers to switch from normal to adaptive crops (cultivation)
- Plant more trees to reduce environmental pollution, and reduce impacts from storms
- UN-Habitat's project should invest in water supply and drainage system to prevent flood in the case of climate change
- Support equipment for wastewater treatment, to facilitate a more green-clean-beautiful environment.
- Develop system that prevent salinity intrusion and keep fresh water
- Build water stations to regulate water
- Expand the road, to facilitate the operation of local garbage trucks (2)
- To facilitate the development of breeding and farming activities

3. Consultation workshop in Vinh Hau Commune in Bac Lieu Province

Total 35 participants attended to the consultation workshop and also had focus group interview with Women's union. We also had same questions to the participants as the previous consultation workshop in Vinh Trach Dong.



Figure 5. Consultation workshop in Vinh Hau Commune

Vinh Hau Commune is very interesting in the Adaptation Fund project and they would like to know more detailed information, thus we had several explanations about the project. Moreover, the Focus group discussion was conducted for 30 to 40 minutes with only women. Vinh Hau prepared for basic information about the commune, and provided it to us.



Figure 6. Focus group interview (Women Union)

For focused group interview, there were only 4 locals, thus there was some limitation to gather all data, but it could be more depth interview with small group.

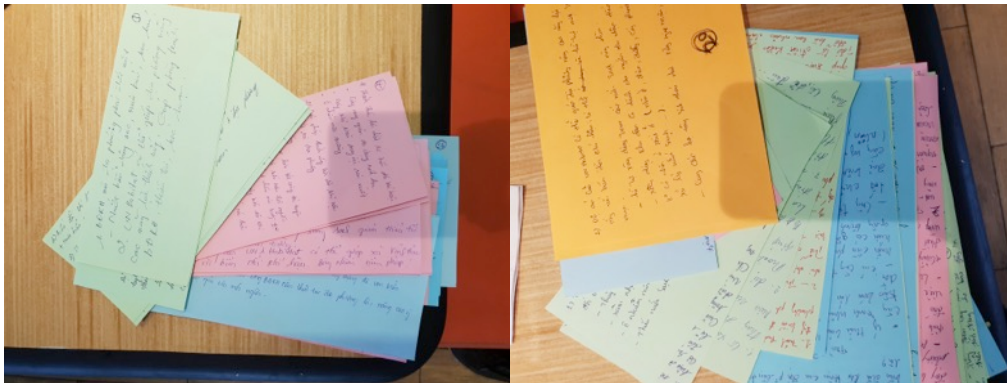


Figure 7. Feedback from locals

The feedback will be translated into English and the data will be used for 1) drafting the concept note and 2) vulnerability and risk assessment report.

Vinh Hau

1. What is the most challenges against the impact of climate change in your communities?

- Sea level rise, rains, storms, floods and droughts (3)
- Insufficient fund for responding to climate change
- Sea level rise happens every year, destroying houses and crops, aquaculture activities also affected by water pollution. Sea dyke is very weak and easy to break. People are in danger when storms happen
- Unusual pattern of sea level rise and storms happen frequently
- Reduction of biodiversity
- Climate change causes difficulties in production activities
- Environmental pollution
- High tide → flood in residential area
- Sea level rise causes flood and poses challenge in aquaculture activities
- Drought → insufficient water for aquaculture activities
- Unusual pattern of weather affects people and animal health
- High tide, landslide at dyke area, sea level rise
- Reduction of mangrove area → landslide at dyke area; Sea level rise, lack of clean water for daily activities
- Unusual pattern of weather affects agricultural productivity, particularly shrimp breeding: shrimp is infected by disease, causing reduction of quality
- Sea level rise affects transportation (flooding the road) and causes difficulties in aquaculture activities (as water flows into ponds) (2)
- Storms, floods, sea level rise, high tide, drought and unusual pattern of temperature
- Sea level rise, environmental pollution, people's health affected by climate change
- Unusual pattern of natural disasters, floods, and droughts, affects the climate system in Southern Viet Nam
- Higher sea level rise leads to higher cost for preventing and overcoming solutions, causing pressure on state budget, hindering economic development and people's life
- Long-term drought and salinity intrusion → affect people's life
- Sea level rise directly affects local production and people's living activities (2)
- Sea level rise causes flood during high tide, and together with salinity intrusion affects rice cultivation. Climate change pollutes water for aquaculture and people's living activities
- Landslide, water level rise, salinity intrusion, storms and floods
- Higher tide and more frequent storms
- Water level rise, hot weather, environmental pollution

2. Do you think the UN-Habitat's project will help your communities enhance the adaptive capacity? And how?

- UN-Habitat's project can support locality in responding to climate change and natural disaster

- UN-Habitat's project can support by organizing capacity building for locality, investing in essential infrastructure to respond to climate change; building dyke in areas in risk of flood, building road in rural area.
- UN-Habitat can develop projects that help locality to respond better to climate change
- Renovate the road and sewer system, move or resettle households affected by natural disasters and extreme weathers. Build strong and permanent sea dyke which can withstand big tides, heavy winds and storms. Reinforce houses to withstand impacts from extreme weathers
- Build industrial clusters, creating stable job for people
- Invest and build key infrastructure, especially in 30/4 residential area
- UN-Habitat can support infrastructure, housing...to help people adapt and improve living condition in case of climate change happening
- UN-Habitat's project can support locality in building water treatment plant and sea dyke
- UN-Habitat's project can support fund to address flood and high tide issues, which caused by climate change
- UN-Habitat's project can provide technical support in shrimp breeding (2), preventing disease, as well as build infrastructure to prevent salinity intrusion, to improve people's life
- Upgrade roads and sea dyke system
- Strengthen clean water system
- Locality doesn't have capacity on climate change adaptation, it needs support and investment from projects, particularly upgrading the dyke and sewer system, planning on resettlement areas for villagers, investing and building permanent houses to withstand climate change impacts
- Closed dyke system to respond to sea level rise
- Invest in waste and water treatment system
- UN-Habitat can support locality, but it will be a very long-term process, so UN-Habitat have to monitor it regularly, particularly in the form of site survey
- UN-Habitat's project can help locality in environmental renovation, upgrading roads, bridges, sewer system and dredging the canal, investing in clean water supply system and waste collection
- UN-Habitat's project can support locality in responding to sea level rise, drought, flood and landslide
- UN-Habitat's project can support fund for building infrastructure for climate change response and adaptation, building water treatment plants for people's living activities
- UN-Habitat's project can support locality in building dyke system to prevent landslide and floods
- UN-Habitat's project can support locality in building dyke

3. What kind of solution for climate change adaptation is necessary in your communities?

- Build climate change adaptive infrastructure, develop vocational training projects, create jobs and develop economic development models at household level
- Develop climate change adaptation projects at local level
- Support physical and spiritual life of people
- Build permanent and durable infrastructure, such as sea dyke, road, drainage system...

- Build strong dyke system; build dam and sewer system to respond with high tide.
- Build resettlement areas and develop plans to move people in there, provide knowledge for people on how to prevent and respond to climate change
- Forestation (protected forest) (2)
- Strengthen and improve dissemination on climate change to people, to prevent environmental pollution – one of the causes of climate change
- Build waste treatment system
- Build wind power plant
- Build sewer system in rivers nearby sea
- Provide fund to build modern and large-scale bridge and sewer system at riverbank, to respond to sea level rise
- Invest and build dyke system in residential areas, to prevent human and property loss
- Invest and build clean energy station, to reduce environmental pollution
- Strengthen the dyke system to prevent flood
- Move households living in areas prone to landslide to different areas
- Build resettlement areas
- Raise people awareness on climate change
- Provide land at high areas for people to build houses, so they can avoid being affected by high tide.
- Local authority must develop regulation on making high foundation when build house
- Renovate and upgrade roads in flooded areas.
- Dissemination on threats of climate change to people.
- Move households living in climate change affected areas to different ones
- Build local waste treatment plants (2), and provide equipment for waste collection
- Provide clean water for people
- Invest in medical facilities and equipment, to treat people affected by climate change
- Build dyke to prevent salinity intrusion
- Plant trees around sea dyke system, to block the tide
- Proper waste collection and treatment
- Develop settlement areas for people
- Provide and secure clean water for people's daily activities
- Disseminate and encourage people on environmental protection
- Develop regulations on waste dumping at regulated sites
- Strengthen the dyke system, build water drainage system and improve basic infrastructure, promoting sustainable development and reducing burden in life.
- Move households into areas far away from the sea, build dyke to block the tide, and plant trees to prevent storms and floods
- Move households into areas protected by dyke and far away from the sea
- UN-Habitat can disseminate people on climate change and its impact, then to develop solutions to negative impacts of climate change

4. Field Visit to Long Hoa and Hoa Minh communes in Chau Thanh District in Tra Vinh Province

- Water management and sanitation

Most households use rainwater and underground water for domestic use, however, for drinking water, locals need to spend money for buying drinking water. In the dry season, they experience lack of underground water and water became saline water due to salinity intrusion. In the commune, they have a water tank, but quality of water cannot be guaranteed. Moreover, during the focus group discussion with women group, they claimed that there are no proper toilets and sanitation system.



Figure 7. Water tank and treatment system in Hoa Minh and Long Hai



Figure 8. Domestic use water system in Hoa Minh and Long Hoa

- Waste treatment

There are no proper waste treatment system, each household burn their waste in their allotments and throw them away.



Figure 9. Waste management in Long Hoa and Hoa Minh

- Infrastructure

Basic physical infrastructures, which can be affected by the impact of climate change, were discovered. Bridges in the target areas were made by log and it seems not climate resilient infrastructure. Locals also agreed that due to poor infrastructures, their adaptive capacity become lower.



Figure 10. Infrastructure in Long Hoa and Hoa Minh

- Housing

Most houses were built by wood, not climate resilient materials. Some houses were located near by sea and riversides. Local wanted to resettle to the other areas in the commune, but due to lack of funding and livelihood strategies and resources, they cannot resettle to other areas. Thus their houses need the great improvement for protecting the impact of climate change.



Figure 11. Housing condition

- Ecosystem

On the riverside, there is huge land erosion around the target areas, and this makes protection forest (buffer zone) such as Mangrove was ruined gradually. Locals also commented about this in the workshop.



Figure 12. Rive bank erosion

5. Consultation workshop in Chau Thanh District for Long Hoa and Hoa Minh communes

Consultation workshop for Long Hoa and Hoa Minh communes has been conducted once because those communes are located in the same district.



Figure 13. Consultation workshop in Tra Vinh

In the consultation workshop in Tra Vinh, 34 participants attended and they gave comments on the project. The team tried to make locals understand about the projects and identify the needs and challenges against the impact of climate change. Locals face three challenges. The first challenge is lack of clean water and sanitation system. Second one is poor physical infrastructure and planning for climate change adaptation. One lady claimed that when cyclones and floods come, they have no ideas for evacuation and due to poor infrastructures; it is hard to escape to safe areas timely. Third challenge is land erosion. Locals also aware that land erosion on the river and seaside makes buffer zone being collapsed. Thus locals mentioned that the project would be very helpful to identify the challenges in the communes, and developing planning strategies and action plans for climate change adaptation is necessary for them, especially, building small scale infrastructures would be essential for themselves.

Hoa Minh

1. What is the most challenges against the impact of climate change in your communities?

- Sea level rise, long-term salinity intrusion and hot weather affect production and life of people (especially low-income people)
- Climate change poses great challenge, need to upgrade the surrounding dyke, as the area is surrounded by sea
- Sea level rise, flood, drought affect people activities, causing human and property losses and damages
- Sea level rise and storms (2)
- Sea level rise, associated with tide caused landslide
- Storms and tornadoes destroyed houses and roads
- Intensive salinity intrusion, sea level rise, heavy rains and erosion
- Storms and water level rise due to long-term rains
- Sea level rise, storms and landslide
- Global warming, unusual pattern of weather
- Sea level rise, storms and hot weather

2. Do you think the UN-Habitat's project will help your communities enhance the adaptive capacity? And how?

- UN-Habitat's project can help people to understand better on responding to natural disasters, as well as support locality to build dyke, to prevent landslide
- Facilitate forestation projects in riverbank areas to prevent landslide and to maintain the dyke around Hoa Minh and Long Hoa commune
- UN-Habitat's project can support locality in landslide prevention, providing clean water for people, building roads and canals, upgrading dyke system and supporting people living around the damaged dyke (by landslide)
- UN-Habitat's project can support locality in addressing negative impacts caused by climate change
- UN-Habitat's project can support locality in landslide prevention, providing clean water for people, developing housing projects, developing bio-organic and clean shrimp programs
- Support water treatment system (2), maintain and protect the forest and aquaculture resources.
- Develop wastewater treatment and clean water projects
- Support green production model, particularly bio-organic rice cultivation

3. What kind of solution for climate change adaptation is necessary in your communities?

- Build and strengthen the dyke system to prevent landslide
- Build sewer system to reduce flood
- Build shelters at high place, so people can go there when floods occur
- Build waste and water treatment plant
- Provide financial support for people living around the dyke, especially in the context of climate change
- Build protected forest in riverbank areas
- Build concentrated waste incinerators or landfills

- Build storm shelters so people can go there when storms happen
- Invest and build concreted road, which can withstand sea level rise
- Invest and build water treatment plants, to provide sufficient clean water for people
- Provide non-refundable capital for people to build biogas chamber in breeding activities
- Support clean water, housing and livelihood...
- Maintain environmental hygiene, reduce waste discharge to environment
- Build strong infrastructure
- Build concentrated resettlement areas for people living around rivers or seas
- Transformation of production model, which is locally appropriate
- Invest in clean technology and production
- Responsible exploitation of resources
- Waste separation and treatment, landslide prevention, in-place water treatment
- Upgrade the dyke (2); clean production; prevent water pollution; support resources; prevent landslide (addressing the issue of illegal sand exploitation)
- Develop clean rice and shrimp production projects
- Provide financial support for locality in upgrading the dyke system
- Upgrade transport infrastructure, particularly the dyke, roads, and electric power network, to support aquaculture activities of people

Long Hoa

1. What is the most challenges against the impact of climate change in your communities?

- Landslide, harvest loss, natural disaster, flood
- Rains and storms happen frequently, sea level rise occurs suddenly, destroying the shore of shrimp ponds
- Sea level rise and salinity intrusion (2)
- Long-term hot weather and drought; Sudden and more intense storms and rains
- Sea level rise → landslide at the shoreline (2)
- Land slide, unusual pattern of high tide and salinity intrusion
- Sea level rise, storms and long-term hot weather
- Sea level rise → landslide → water pollution and flooding the road
- Land slide, sea level rise, lack of clean water
- Unusual pattern of weather, causing difficulties in aquaculture activities
- How to address the issues of expanding salinity intrusion and increasing landslide, raising people awareness on how to respond to storm in case it happens
- Long-term salinity intrusion, landslide, high tide and untreated waste
- Salinity intrusion, landslide and sea level rise
- Drought, high tide and salinity intrusion
- Sea level rise, landslide (2) → affect the economy
- Salinity intrusion → affects local rice production
- Unusual pattern of salinity intrusion and sea level rise
- Complicated issues of hot weather and rain

2. Do you think the UN-Habitat's project will help your communities enhance the adaptive capacity? And how?

- Facilitate forestation at coastal areas to strengthen the dyke system
- Repair and rebuild the damaged dyke (because of landslide)
- Build clean water system for households live far away from water pipeline
- Build storm shelter for each village
- Build clean water and dyke system
- Capacity building for farmers in breeding, aquaculture and agriculture
- Support economic and road infrastructure
- Support organic rice production model, combined with shrimp breeding
- UN-Habitat's project can support locality in responding with negative impacts of climate change: landslide, sea level rise...
- Support people's livelihood, expand the area for shrimp breeding
- Support in building the septic tank
- Build dyke system, to respond to landslide issue
- Build clean water system in Con Phung village
- UN-Habitat's project can support locality by building resettlement areas, protected forest, providing clean water for people's living and production

- Upgrade the dyke system
- Plant trees and protected forests
- Financial support for construction of dyke and clean water system
- Build resettlement area in Con Phung village
- Support locality in economic development
- Build dyke and protect the dykes around the crop fields
- Build anti-storm houses, so people can take shelter there when the storms come

3. What kind of solution for climate change adaptation is necessary in your communities?

- Encourage people to plant trees in their land, plant coastal forest to maintain the land
- Repair the damaged roads and bridges in commune
- Support the tools for waste treatment, and organize trainings on climate change
- Build dyke system in areas affected by climate change (to prevent landslide which affects people's life)
- Upgrade and expand the water plant to serve people
- Finalize the irrigation system, renovate and repair the downgraded roads
- Build roads, electric power and clean water system, to serve people needs for production
- Expand and raise the road, to prevent flood
- Planning for waste treatment sites
- Build water treatment plant, to address the issue of clean water deficit
- Build water treatment system for people
- Support economic stability and development (aquaculture model) for people
- Forestation to prevent landslide
- Build resettlement areas for people affected by landslide
- Waste treatment without pollution
- Effective dissemination on responding to climate change
- UN-Habitat need to disseminate people about climate change, so they have better understanding, and also encouraging them to protect the environment
- Build dyke to prevent landslide
- Provide investment fund for people
- Invest and develop new crops toward climate change adaptation
- Build water treatment plant for people's living activities, but without using the ground water
- Build resettlement areas, prevent landslide, create clean water sources for people (2)



ADAPTATION FUND

Stakeholder Consultation Meeting Report

Contents

1. Meeting with MONRE on October 23rd	1
2. Meeting with GIZ on November 1st	3
3. Meeting with JICA on November 2nd	5
4. Meeting with MONRE on November 11th	7
5. Meeting with IFAD on November 19th	9
6. Meeting with MONRE on November 20th	11
7. Meeting with SECO on December 4th	13

Meeting with MONRE on October 23rd

Introduction

This meeting was about the Adaptation Fund Concept Note Development. It took place on October 23th 2018 at the Ministry of Natural Resources and Environment. The participants were Phan Tuan Hung (PH) from MONRE and Dr. Nguyen Quang (NQ), Jay Nam (JN) and Hyemi Yang (HY) from UN-Habitat.

Objectives

- To review proposed concept note
- To discuss tentative project sites for the project and further steps for developing concept note

Findings

PH explained that MONRE and UNEP are waiting for the final approval from AF on their concept note, that he is happy to share the concept note and since MONRE already worked with UNEP on developing AF concept note, he is well aware of the process and criteria of AF.

Then JN stated that concept note from UN-Habitat would be combination of Human Settlement and Eco System in Mekong Delta, while other agencies are mostly focused on DRR or only hard components. In this sense, NQ explained the key components of the concept note, such as land use planning, infrastructure, community resilience, government system, and capacity building for community level. Connection from the pilot study to policy implementation is also important. In addition, JN addressed the timeline for the concept note, pointing out that submission date will be January 2019 and therefore UN-Habitat needs full support from MONRE because there are only 2 months left until the submission.

PH explained the process of endorsement from MONRE as follows: consultation meeting with related department in MONRE. Then it has to be submitted to the minister, who will revise the concept note and sign it. He also said that MONRE can support UN-Habitat on working with local government and obtaining data from local government as well.

JN addressed the funding support from KEITI, so KEITI will take the part for F.S. in the concept note, will make the concept note more concrete and will support funding while UN-Habitat is developing the concept note.

When discussing about the project site, PH suggested Can Tho and NQ agreed on it. However, JN suggested Ben Tre based on his field mission experience and explained the conditions of the province. PH and NQ also agreed on JN's idea on site selection. PH mentioned MONRE has close relationship with Ben Tre and it will take around 2 weeks and he also mentioned hiring local expert for the assessment is urgent and he might have recommendations from Can Tho. All agreed that detailed data and plan for community will be key for approval from AF.

Regarding the process of developing concept note, technical meeting (consultation meeting) should be held ASAP and 2 workshops will be done after the consultation meeting. The first workshop will be held in project site and it will be also with consultation meeting with local government and data collecting. The second workshop will be in Hanoi with all the stakeholders and sharing the work done for the concept note development.

After the meeting, the work task are as follows: PH will share the concept note with UNEP and be the focal point from MONRE; JN will work on developing the concept note and organising 1 consultation meeting and 2 workshops, and he will be a focal point for country team.

Summary

UN Habitat explained that concept note from UN-Habitat would be combination of Human Settlement and Eco System in Mekong Delta, which includes land use planning, infrastructure, community resilience, government system, and capacity building for community level. Connection from the pilot study to policy implementation is also important. PH explained the process of endorsement from MONRE and said that MONRE can support UN-Habitat on working with local government and obtaining data from local government as well. KEITI will take the part for F.S. in the concept note, will make the concept note more concrete and will support funding while UN-Habitat is developing the concept note. After discussion, Ben Tre looks like a good option for project site, but Can Tho also does. MONRE has close relationship with Ben Tre and they offer recommendations to hire local an expert for the assessment in Can Tho. All agreed that detailed data and plan for community will be key for approval from AF. Some meetings and workshops have to held after the consultation meeting. After that, both MONRE and UN Habitat have work tasks to accomplish.

Meeting with GIZ on November 1st

Introduction

This meeting was about cooperation between GIZ and UN-Habitat in Mekong Delta. It took place on November 1st 2018 at ICMP office. The participants were Ly Minh Dang (LD), GIZ Programme Officer, and Jay Nam (JN) and Hyemi Yang (HY) from UN-Habitat.

Objectives

- To discuss the role of each agency in the afternoon session for the workshop
- To review the concept note from UN-Habitat
- To discuss how GIZ and UN-Habitat can cooperate in Mekong Delta

Findings

The afternoon session for the workshop will be focus on the coastal management in Mekong Delta, which is relevant from the morning session of VASI Marine Spatial Planning and for GIZ since ICMP has concrete output on this region.

GIZ and UN-Habitat might be able to work together on “Component 3: small-scale infrastructure” from the concept note. Since ICMP has been working in MD for around 10 years, GIZ has good network in local government, PMU, and also good institutional arrangement.

The new releasing project from GIZ, MCIP, will expand its project area from 5 to 8 provinces along the coastal line, including Ben Tre and Tra Vinh. Also, small-scale infrastructure will be added as pilot project, which could be the common area between to agencies.

ICMP and MCIP mainly focuses on Technical Advice with full package of supporting the process of financing and also chance of up-scaling the project with other donors such as WB, ADB, and so on. Therefore, GIZ could provide concrete evidence and data in MD when UN-Habitat develop its concept note for Adaptation Fund. In addition, UN-Habitat could also up-scale the infrastructure project from GIZ using the guideline and data provided with the fund from AF. LD suggested also to focus on river erosion since informal settlement along the river accelerate the river bank erosion. Indeed, it is an urgent issue for the government. However, project site could be overlapped, but focus should stay on how we make the synergy within the same project site through proper cooperation.

Upcoming event for GIZ for GIZ will be a consultation meeting on November 6th and UN-Habitat does as well on November either 7th or 8th. It would be good for both agencies to participate in consultation meetings for further cooperation.

Summary

The workshop afternoon will focus on coastal management in MD. About cooperation, GIZ and UN-Habitat will work together in component 3 and we will consider as an advantage the good network that GIZ has with local government. The project area will be in 8 provinces and it will include small-scale infrastructure intervention. On their side, GIZ will focus on technical advice and will provide data to UN-Habitat, which will scale -up infrastructure project from GIZ. To conclude, river erosion should be consider due to the informal settlements along the river.

Meeting with JICA on November 2nd

Introduction

This meeting was about cooperation between JICA and UN-Habitat in Mekong Delta. It took place on November 2nd 2018 at JICA office. The participants were Sho Tomita (ST) and Nguyen Thanh Ha (NH) from JICA, and Jay Nam (JN) and Hyemi Yang (HY) from UN-Habitat.

Objective

- To discuss 'Ben Tre Water Management Project' from JICA
- To discuss how JICA and UN-Habitat can cooperate in Mekong Delta

Findings

Since UN-Habitat potential site is Ben Tre and found 'Ben Tre Water Management Project' while developing concept note for AF in Mekong Delta, UN-Habitat asked whether the project is only focused on 'agricultural water' not 'drinking water'; if the project also includes planning for Ben Tre or not; and if it was possible to access to the Ben Tre vulnerability assessment data from JICA.

ST explained that Ben Tre Water Management Project is a big scale infrastructure construction project (building 8 sluice gates), that covers upper part of Ben Tre in order to protect the agriculture of crops that needs fresh water to grow. It mainly focuses on hard infrastructure, but it doesn't include a planning component

However, JICA is working with MARD for this project and ODA loan signed by prime minister; MARD already selected EE for the project and is about to start the consultation process, but the project has been postponed for about half a year and it might be started April next year.

JN pointed out that since AF board will look carefully of duplicate of project in Mekong Delta, it would be important not to overlap the contents. Therefore, UN-Habitat would like to fill the gap of weakness for 'Ben Tre Water Management Project' and ST agreed on that. He also suggested that a combination of diverse level could make synergy for both project since JICA is focusing on overall Ben Tre in province level while UN-Habitat is constructing small-scale infrastructure in commune level.

Also, as Ben Tre Water Management Project only covers upper part of Ben Tre, UN-Habitat might be able to fill the gap also geographically in the same province. Finally, JICA and UN-Habitat could also work together on developing a master plan for Ben Tre and JICA might be able to provide vulnerability assessment data on Ben Tre to UN-Habitat.

Summary

Ben Tre Water Management Project is a big scale infrastructure construction project, focused on hard infrastructure and that covers upper part of the province, but it doesn't include a planning component. ST suggested to make synergy for both projects since JICA is focusing on overall Ben Tre in province level while UN-Habitat is constructing small-scale infrastructure in commune level. Additionally, UN-Habitat could fill the geographical gap in the same province and they can work together on developing a master plan for Ben Tre.

Meeting with MONRE on November 11th

Introduction

This meeting on adaptation fund took place on November 9th 2018 at Ministry of Natural Resources and Environments. The participants were Phan Tuan Hung (PH) and Nguyễn Ngọc Anh (NA) from MONRE, and Jay Nam (JN) and Hyemi Yang (HY) from UN-Habitat.

Objectives

- To discuss and identify the potential project site and Mekong Delta Forum in early December
- To hire the local consultant

Findings

PH explains the priority to identify the project site must be as follows: to meet the requirement from AF is the key for identifying the project site, to **find the gap** between the existing project and to commit form PPC. However, MONRE and UN-Habitat could work on it through consultation meeting. Among the three options (Bac Lieu, Ben Tre, Tra Vinh), PH also prefers Bac Lieu, but if the gap could not be identified, project site should be the one that we can find the gap. He will also contact DONRE in Bac Lieu to get some recommendations on potential project site (district or commune level) and their needs

PH shared the process they went through with UNEP when developing the concept note and states that we should identify a specific location, district or commune level by the end of next week:

contact directly to district level → Involve DONRE on consultation meeting and DONRE will be the focal point → DONRE talks to PPC directly.

JN briefly explains the idea from UN-Habitat on identifying the project site. UN-Habitat also agrees the most priority key would be finding the gap from the current project in project site. However, we have not decided the district or commune where we have to focus so we need support from DONRE. Strong commitment of PPC will be one of keys according to Dr. Quang AND UN-Habitat will find the gap by the end of next week (16th of November) and share with MONRE

PH suggests to participate in Mekong Delta Forum in early December. Therefore, tentative schedule is December 3rd or 4th, and the forum will be two days. UN-Habitat can have small meeting or side events for the AF project development for introducing the project to PPCs in Mekong Delta and other experts from the whole nation. It would be good opportunity to have consultation meeting after the forum immediately. For example, 3-4 December for the Forum, and then 5-6 for the local consultation workshop with communities. MONRE will fix the schedule of this Forum after more discussion with WB and PH suggests we can go directly to the project site after the meeting

JN requests the recommendation for the local consultant and will work on ToR while PH is looking for potential candidates for the local consultant. PH mentions the professor in Can Tho University and states that selecting the right person for the local consultant will be very important since we do not have much time.

The work tasks are as follows. For UN-Habitat, to find the gap in Bac Lieu by end of next week (16th of November) and to develop ToR for the local consultant by end of next week (16th of November). For MONRE, to make recommendations of local consultant, to provide detailed information of Mekong Delta Forum in early December soon and to contact DONRE in Bac Lieu for more information.

Summary

PH says it is important to **find the gap** between the existing project and the commitment from PPC. PH also prefers Bac Lieu as project site, but if the gap could not be identified, project site can change. He will consult DONRE in Bac Lieu to get recommendations on potential project site. Finally, he suggests to identify a specific location by contacting them directly and involving DONRE on consultation meeting and as focal point. JN briefly explains the idea from UN-Habitat on identifying the project site and agrees on finding the gap from the current project in project site. PH suggests to participate in Mekong Delta Forum in early December so they can introduce the project to PPCs and other experts from the whole nation. It would be good opportunity to have consultation meeting after the forum immediately. JN will work on ToR while PH is looking for potential candidates for the local consultant. PH. Both UN-Habitat and MONRE have work tasks to accomplish after the meeting.

Meeting with IFAD on November 19th

Introduction

This meeting on adaptation fund took place on November 19th 2018 at IFAD. The participants were Thomas Rath (TR) from IFAD, and Jay Nam (JN), Hyemi Yang (HY) and Adam Keegan (AK) from UN-Habitat.

Objectives

- To review AMD Project and the Adaptation Fund Project
- To discuss possible synergy between projects

Findings

TR welcomed UN-Habitat and opened discussion with review of AMD project Summary Report 2018. TR discussed how IFAD is utilising USD \$49 million budget and he explained that the project works from province to commune level with focus on socio-economic development through market orientated planning process utilising a value chain action plan. The resource allocation is assigned through the establishment of 4 funds supporting: infrastructure, farmer groups (providing loans of CC activities), farmer/enterprise loans (stabilising value chain) and Women's Development Fund (micro financing). The project has also developed a salinity monitoring system and EWS system through PPP.

JN explained that the concept note from UN-Habitat would be combination of Human Settlement and Eco System in Mekong Delta and briefly explained the meetings with MONRE, GIZ and JICA and how they perceived a gap in SEDP in Ben Tre and Tra Vinh which IFAD is currently filling.

TR explained the implementing process for AMD:

- Works in a similar format to WorldBank funding process
- Implemented through partnership with DONRE
- Projects use community involvement in planning stage with DONRE
- Provincial Gov sets up Project Management Structure
- DONRE then presents project and funding is granted based on compliance with project aims

JN enquired further details of project activities, explained details of AF funding requirements % of hard infrastructure and detailed UN-Habitat's standard mandate for soft intervention/advocacy.

TR notes the agencies potential challenges, such as further details are not available yet. It is necessary to facilitate communication with PPC for further details and he offers to share Project Plan and latest Summary Report and suggests possible adaptation of IFAD project process for implementation of project. HY have to contact TR for details of PPC after the meeting.

Summary

TR discussed how the project and the resource allocation of IFAD works. He also explained the implementing process for AMD. JN explained the concept note from UN-Habitat and AF funding requirements and UN-Habitat mandate, the meetings with MONRE, GIZ and JICA and the gaps perceived in Ben Tre and Tra Vinh, which IFAD is currently filling. TR notes the agencies potential challenges and offers to share useful reports and possible adaptation of IFAD project process for the implementation of our project. HY will contact TR for details of PPC.

Meeting with MONRE on November 20th

Introduction

This meeting on adaptation fund took place on November 20th 2018 at Ministry of Natural Resources and Environments. The participants were Phan Tuan Hung (PH) and Nguyễn Ngọc Anh (NA) from MONRE, and Jay Nam (JN) and Hyemi Yang (HY) from UN-Habitat.

Objectives

- To discuss and identify the potential project site
- To discuss further steps for concept note development

Findings

UN-Habitat will try to cover all three provinces and 1-2 communes per province (Ben Tre, Tra Vinh, and Bac Lieu) and will visit the selected ones to have a consultation meeting. The rationale for the focus of the proposal are: Basic Vulnerability Assessment including social, economic, and environmental context from the province; Exposure to natural hazard; and filling the gap and making synergy with existing projects in the province. Part II – F includes detailed information and analysis on the relevant projects going on in MDR.

PH suggested that since focusing on three provinces could be complicated, it would be better to select the two provinces for project site, such as Bac Lieu and Tra Vinh due to the distance. However, PH will contact the three provinces to get the suggestions for the potential project site; vulnerable commune near from both waterway and sea. The process for the consultation meeting is as follows:

- MONRE contact DONRE for the cooperation
- DONRE will be the focal point on organising the workshop and ask PPC to invite the local groups, including woman union, youth union, and other social groups in commune
- If DONRE is the focal point, PPC and other commune-level government agency do not need to get the permission from DONRE
- MONRE will send the request letter and official with UN-Habitat so she/he could work with UN-Habitat on consultation meeting with local government in December

PH will also contact to the three provinces to get the suggestions for the vulnerable commune near from both waterway and sea; JN will get the confirmation of the funding from KEITI within this week and UN-Habitat and MONRE will set the concrete schedule for the consultation meeting with local government in project site and HY will prepare the list of the data needed for the in dept vulnerability assessment of commune before the workshop. Leaders in district level, commune level, DONRE, community, youth and women union will be invited with the purpose of: introduction of AF and our project, finding out the needs from local government and collecting data from the list that has been provided before the meeting.

The work tasks for UN-Habitat are: to send the agenda for the workshop to MONRE, to wrap up the final version of the AF concept note (14th of December) and to finish the list of the questions for the commune (end of November). MONRE has to contact DONRE to find out the potential project site in Ben Tre, Bac Lieu, and Tra Vinh.

Summary

UN-Habitat will try to cover all three provinces and 1-2 communes per province and will have a consultation meeting with the selected ones, guided by the rationale. PH suggested to focus on Bac Lieu and Tra Vinh, but still he will contact the three provinces to get the suggestions for the potential project site. PH explains the process for the consultation meeting and says he will contact to the three provinces to get the suggestions for the vulnerable commune near from both waterway and sea. JN will confirm the funding from KEITI, MONRE will set a schedule for the consultation meeting with local government in project site and HY will prepare data for vulnerability assessment. Leaders in district level, commune level, DONRE, community, youth and women union will be invited.

Meeting with SECO on December 4th

Agenda

- Discuss the gap and potential synergy with the projects in SECO
- Feedback from the concept note

Key Discussion Points

- IN briefly explained the components of the proposed project:
 - The proposed project has 4 main components as follows:
 - Institutional and community capacity building toward eco-human settlement development for supporting to enhance local climate response actions;
 - Integrated planning with respects of eco system-based climate change adaptation and building climate resilient capacity and action plan at local level;
 - Sustainability built through small-scale protective and basic service infrastructure; and
 - Awareness Raising and Knowledge Management;
 - UN-Habitat will submit the concept note in January 2019
- TP highlighted that it is important to have suitable institutional arrangement for implementation of the project:
 - Lastly, the suitable institutional arrangement would be the key for implementation;
 - To succeed on the project in Mekong Delta related to climate change, the project should reflect the local needs including political agenda and the components should be related to climate change;
 - Identifying local's demand and vulnerability and risk assessment are the key aspects for small-scale infrastructure intervention project;
 - For vulnerability and risk assessment, data collection and implementation process for small-scale infrastructure intervention, please see the GIZ project in three cities. GIZ applied the systematic framework for the assessment and it can be lesson learned for UN-Habitat;
- RM also recommended to look at the two relevant projects:
 - WB project in Mekong Delta (urban climate resilient Project in Can Tho) on developing the infrastructure against urban flooding;
 - GIZ project (pilot project) on sustainable drainage system link to green infrastructure in three cities: Anh Giang, Kien Giang, and Cau Mau



SOCIALIST REPUBLIC OF VIET NAM
MINISTRY OF NATURAL RESOURCES AND ENVIRONMENT

Hanoi, 18 December 2018

To: The Adaptation Fund Board
c/o Adaptation Fund Board Secretariat
Email: Secretariat@Adaptation-Fund.org
Fax: 202 522 3240/5

Subject: Endorsement for the Concept Proposal on “Enhancing the resilience, inclusive and sustainable eco-human settlement development through small scale infrastructure interventions in the coastal regions of the Mekong Delta”

In my capacity as designated authority for the Adaptation Fund in the Socialist Republic of Vietnam, I confirm that the above national concept project proposal is in accordance with the government’s priorities in implementing adaptation activities to reduce adverse impacts of, and risks, posed by climate change in the coastal region of the Mekong Delta, Socialist Republic of Vietnam.

Accordingly, I am pleased to endorse the above concept project proposal with support from the Adaptation Fund. If approved, the project will be implemented by United Nations Human Settlement Programme (UN-Habitat) and executed by Ministry of Natural Resources and Environment of Vietnam and national partners. ↓

Yours sincerely,



Dr. Tran Hong Ha
Minister of Natural Resources and Environment
Socialist Republic of Vietnam

B. Implementing Entity certification

I certify that this proposal has been prepared in accordance with guidelines provided by the Adaptation Fund Board, and prevailing National Development and Adaptation Plans including Socio Economic Development Plan (2016-2020), National Climate Change Strategy, National Green Growth Strategy, National Action Plan on Climate Change for (2012-2020), and National Action Plan on Green Growth and subject to the approval by the Adaptation Fund Board, commit to implementing the project/programme in compliance with the Environmental and Social Policy of the Adaptation Fund and on the understanding that the Implementing Entity will be fully (legally and financially) responsible for the implementation of this project/programme.

For Remying OIC.

Raf Tuts
Director, Programme Division
UN-Habitat

Date: January 3rd, 2019

Tel. and email:
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