2023 Country Exchange Indonesia

Nineteen National Implementing Entities experience firsthand ecosystem-based adaption projects in Indonesia

ADAPTATION FUND

Helping developing countries build resilience and adapt to climate change

Contents

Cover photo: Indonesia NIE scientist explains master plan for mangrove information center to NIEs in Pekalongan City – Adaptation Fund

Adaptation Fund country exchange strengthens capacity through direct engagement with Indonesia partners

The Adaptation Fund supports developing country Parties that are particularly vulnerable to the adverse impacts of climate change in meeting the costs of adaptation. Support includes financing concrete adaptation projects and programs that are country driven and based on the needs, views, and priorities of eligible Parties. As part of the Adaptation Fund's second Medium Term Strategy (2023-2027) and implementation plan approved by the Board in March 2023, an expanded Readiness Program is included for climate finance; through this program, the Adaptation Fund actively supports the use of its Direct Access modality by eligible developing countries and provides readiness and capacity-building support for project development and implementation. [1] The Readiness Program employs a variety of instruments and tools such as grants, seminars, workshops, and country exchanges to deliver support to accredited implementing entities and developing countries seeking to access funds from the Fund.

Country exchanges remain an important aspect of capacity-building to support individual gain of experience; skills and knowledge of the Fund's project life cycle through visual learning; and direct engagement with experts, project beneficiaries, and other project stakeholders.

The Adaptation Fund's country exchanges include field visits between National Implementing Entities (NIEs) with projects in the same sector or that use a similar model. These exchanges help to build capacity in project design, development, and implementation, plus explore lessons learned. To date, the Fund has facilitated four country exchanges in Chile, Senegal, India, and Indonesia. The exchange in Chile was hosted in person, whilst the exchanges in Senegal and India were held online due to the Covid-19 pandemic. The Indonesia exchange is only the second one to be held in person.

Satellite view of Indonesia with Kemitraan (Indonesia NIE) project area in Central Java outlined in red.

Indonesia is among the largest archipelagos in the world consisting of 18,000 islands (both populated and non-populated) with a population of around 230 million. Its vast coastline stretches over 18,000 km along which 60 percent of its population resides. Due to the population along the coastline, the country remains extremely vulnerable to impacts of sea level rise.

[1] *2023-2027 Medium Term Strategy and Implementation Strategy*

Indonesia Partnership for Governance Reform – Kemitraan – hosts fourth country exchange

The Adaptation Fund accredited NIE for Indonesia, the Indonesia Partnership for Governance Reform, or Kemitraan, hosted a Country Exchange from June 5-9, 2023, bringing together 19 NIEs from around the globe.[2] The Exchange took place in the coastal cities of Semarang and Pekalongan located in the Central Java Province, which is particularly vulnerable to the impacts of climate change. The province is in a low-lying area prone to flooding and sea level rise. It is also home to several important ecosystems, such as mangrove forests, which are threatened by climate change. Participants saw firsthand these impacts while visiting the affected areas.

The objective of the country exchange visit was to facilitate direct experience and cross learning of the full project life cycle based on the Kemitraan Ecosystem-based Adaptation project.[3] During the first two days, NIEs were able to interact with various institution representatives directly involved with the project ranging from the Director General of Climate Change Control at the Ministry of Environment and Forestry to the Central Java Provincial Government Secretary. They also heard lessons learned from Kemitraan along with innovative approaches to ecosystem-based adaptation.

Participants then spent two days in Pekalongan City where they saw the effects of sea level rise on a neighborhood bearing the impact of daily coastal flooding and land subsidence. [4] Participants were able to view firsthand, the progress of mangrove plantations used to reduce the impact of sea level rise, and they equally toured fish farms used to improve the economic outlook of impacted communities. The last day of the exchange consisted of a knowledge fair, during which NIEs shared challenges and lessons learned from their own projects.

Kemitraan Executive Director Mr. Laode Syarif addresses the press following the Information Exchange opening.

Key themes that emerged from the exchange included the importance of community-based planning and the use of data to improve national policies. The visit was especially timely as it highlighted Indonesia's efforts to adapt to climate change, including the country's efforts to reduce greenhouse gases by 31.89 percent on its own, or 43.2 percent with international support by 2030. Indonesia's Director General of Climate Change Control from the Ministry of Environment and Forestry noted how this ambitious target exceeds the original target proposed per the Paris Agreement and aims to achieve net-zero emissions by 2060. The Director General equally noted how climate change is integrated into the country's development plan via line

[2] *Antiqua and Barbuda, Argentina, Armenia, Bangladesh, Benin, Bhutan, Chile, Côte d'Ivoire, Dominican Republic, Honduras, India, Kenya, Micronesia, Panama, Peru, Senegal, Tanzania, Uganda, Zimbabwe,*

[3] *Safekeeping-Surviving-Sustaining towards Resilience: Three Stage Approach to Build Coastal City Resilience to Climate Change Impacts and Natural Disasters in Pekalongan City, Central Java Province.*

[4] *Land Subsidence - downward vertical movement of the Earth's surface, which can be caused by both natural processes and human induced water table reduction.*

ministries and includes strategies aimed at building climate resiliency, mainstreaming climate change in planning, promoting landscape and an ecosystem-based approach, and encouraging local initiatives.

Further challenges related to climate change adaptation were highlighted by the Provincial Secretary of the Central Java Provincial Government. He noted how land subsidence and sea level rise were huge challenges impacting Central Java. There are many challenges to address such as the exploitation of ground water used by the industrial facilities found in the area. In addition, he highlighted how water catchment areas cause damage to the environment upstream of the area's many dams. He noted that fortunately, Kemitraan and Adaptation Fund are supporting their efforts to deal with these challenges; collaboration from all sectors and stakeholders is key. The Kemitraan projects will help serve as pilots to be replicated throughout central Java.

Adaptation Fund Manager Mikko Ollikainen addresses the plenary in Semarang

Thus, in the spirit of the exchange, this report highlights key project successes and lessons learned from the Kemitraan project. It also offers additional challenges and lessons learned from the NIEs who participated in the country exchange.

Kemitraan Exchange and Project Background

The Adaptation Fund and Kemitraan facilitated this fourth country exchange in Indonesia, bringing in NIEs from around the globe. Kemitraan is Indonesia's only accredited NIE, and currently implements five Adaptation Funded projects totaling over US$9.7 million. The projects range from adapting to climate change through sustainable watershed governance to enhancing the adaptation capability of coastal communities. The project focus for this exchange was the "Safekeeping-Surviving-Sustaining towards Resilience: 3S Approach to Build Coastal City Resilience to Climate Change Impacts and Natural Disasters in Pekalongan City, Central Java Province" project [5], totaling US$5.97 million of which US$2.52 million has already been transferred.

The project is classified under the Adaptation Fund ecosystem-based adaptation sector and is implemented in Pekalongan City, one of the coastal cities of Central Java Province. Pekalongan City has a history of recurring coastal flooding and flash floods. Combined with extreme weather events and prolonged drought, Pekalongan's population has suffered significant damage from climate-disaster events ranging from physical structure damage (homes, businesses, and ocean barriers) to inundated agricultural land. This damage has imposed significant socio-economic costs to the region, which the NIEs saw firsthand during last two days of the exchange.

[5] Indonesia 3S approach *Project document*

Pekalongan City has been 35 percent inundated since 2009 due to sea level rise and land subsidence; sea level rise is 4mm annually and land subsidence is 5-25mm annually. The impact of coastal flooding will not only affect coastal-related sectors such as fisheries and tourism but create a domino effect to other development sectors posing an imminent threat to the sustainability of the city.

Proceedings in Semarang

During the plenary part of the exchange in the city of Semarang (the first three days of the exchange), the Pekalongan City Secretary, Head of the Center for Climate Change Control, and Director of Kemitraan highlighted how land subsidence remains one of the biggest issues due to the exploitation of ground water. Furthermore, damage is being caused to marine resources from seawater intrusion and creating worsening coastal floods. These floods occur frequently, especially during the monsoon period. As a result, residents are forced to alter how they use the land and many households have had to raise their floors yearly to help reduce the impact of flooding. With worsening flooding, ponds normally used for fisheries have become too deep and unmanageable. Mangrove areas are also heavily impacted and are being reduced based on the stronger currents created by the seawater intrusion.

Adaptation measures taken in Pekalongan City to address climate change issues are somewhat lacking and there is no specific regulation for climate change. The current project aims to bridge policy and coordination gaps by implementing a comprehensive ecosystems and community-based approach, which includes a technical assessment, planning, intervention, and monitoring and evaluation; this approach is supported by a framework and measures to fortify institutional mechanisms on climate adaptation and resilience. The project components are designed to build capacity and advocate climate resilient policies.

Head of the Center for Climate Change Control Haryo Pambudi leads NIEs through adaptation practices and challenges in Central Java.

Interventions include physical infrastructure improvement, such as stronger sea barriers, and building socio-economic and institutional capacity. The NIEs were able to visit the areas and see firsthand the seawater intrusion, plus meet with residents impacted by coastal flooding. Even though the exchange focused on Pekalongan City, the plenary in Semarang was used to highlight climate adaption measures being undertaken across Indonesia.

Site visit to Pekalongan City

At the very heart of information exchanges, are the site visits. Participants spent two days in Pekalongan City where they saw the effects of sea level rise on a neighborhood bearing the impact of daily coastal flooding and land subsidence. Participants were also able to view the progress of mangrove plantations and constructed sea barriers, which are used to reduce the impact of sea level rise; they equally toured fish farms

used to improve the economic outlook of impacted communities. The last day of the exchange consisted of a knowledge fair, during which NIEs shared challenges and lessons learned from their projects.

Mangrove information center

As part of Pekalongan City's knowledge management and outreach efforts, Kemitraan and the Pekalongan City Government helped establish the sea level intrusion site as a mangrove information center, which is run by the city government along with the Ministry of Environment and Forestry and the Environmental Office of Pekalongan. Due to sea level rise and water intrusion, only 40 percent of the original mangrove forests remain. To help combat this intrusion, offshore surge barriers are being constructed and will help reduce the influx of the sea and encourage the build-up of sediment. The sediment build-up will foster an environment safe for new mangrove saplings.

Using a combination of funding sources including from the Adaptation Fund, the current plan is to construct two barriers starting from the east side 100m from the coastline. The design will be "geo-textile" using rocks and natural materials that lock together, many of which come from the surrounding mountains. Inundated rice paddies will also be converted into fishponds. Former efforts at a sea wall have failed therefore, more extreme and costly measures are needed. The mangrove visitor center is partially submerged each day at high tide and newly planted mangrove saplings enjoy a barely 40 percent success rate. Currently, resources are only available for two barriers and current water depths make it difficult to plant mangroves in much of the area.

Pekalongan City Mayor addresses NIEs at the coastal site experiencing sea level rise.

Kemitraan scientist explains the impact of flooding on this house and the level water reached during severe periods.

A Kemitraan scientist noted that the entire area will be made a conservation zone and computer simulations show that the new barriers will indeed work to produce more sediment, thus filling in areas of the coastal front washed away from the sea water intrusion. Additionally, the scientist noted the goal of promoting ecosystem-based adaptation tourism in the area. The community is heavily involved with the project and a youth volunteer noted her optimism. The volunteer comes to the area once a month to maintain the information center. She has a vested interest in rehabilitating the coastal front, since she is originally from Pekalongan. This community-based approach matches well Kemitraan's socio-economic and institutional capacity building approach to the project.

Adaptation Fund staff, NIEs, and the Mayor of Pekalongan City planted new mangrove saplings during a ceremony to acknowledge an existing mangrove forest, which is helping to reduce the impact of sea level intrusion. The planting of mangrove forests combined with sea barriers remain a key strategy for reducing coastal flooding.

Lavatory rehabilitation at local mosque plus household visits

In line with the community resilience component of the Adaptation Funded project, the NIEs visited one of several rehabilitated lavatories at a local mosque, which improve access to clean facilities. The lavatories are maintained by the community following training implemented by Kemitraan staff. The village office organizes volunteers from the community.

NIEs were also invited to enter several households surrounding the mosque and speak firsthand with residents impacted by coastal flooding. Many of the households experience flooding three to four times annually and have to raise the height of their floors frequently due to the sea level rise. As a result, the inner height of the house is reduced, negatively impacting living conditions. For example, in one six-member household visited, the appliances had to be placed on platforms to avoid electric shock. Additionally, moisture has infiltrated the wood frames of the home, causing warping and mold. Families interviewed said that despite the conditions, they did not want to leave as they have a family history in the area and would have no practical alternative for a new dwelling.

Mangrove plantation

As part of the safekeeping component of the Adaptation Funded project, the NIEs visited the Penanaman mangrove plantation in Kelurahan Degayu, which makes up the six-kilometer established ecosystem. The specific type of mangrove planted is the Rhizophora Mucronata. The plantation is unique in that saplings are planted in one meter of water using a customized bamboo shoot. This allows the saplings to take root in water normally too deep for them. After three years, the bamboo shoot breaks away on its own and the mangrove tree has strong enough roots to continue its growth.

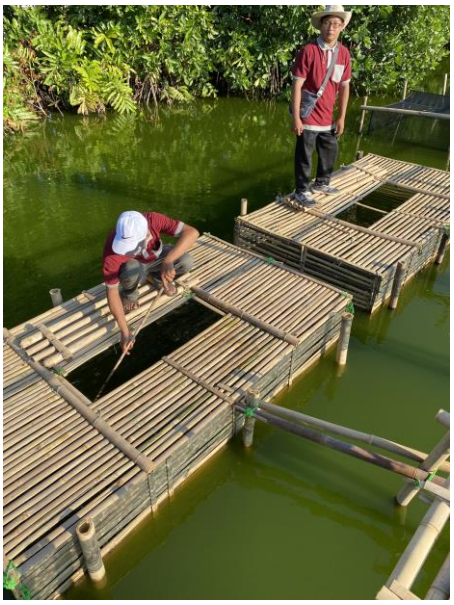
The site was formerly rice paddies and Jasmine fields but is now used for fishponds and mangroves. The site has been subjected to severe tidal flooding since 2005 and the local community was forced to change their livelihood to adapt. Therefore, they set up a mangrove plantation however, the first round got washed away thus the bamboo technique. This particular mangrove plantation is headed by the sub-district, which partnered with Kemitraan in 2022. The project is known for the large number of women's groups involved. Some of the groups process the mangrove fruit into syrup, which can be used for sweets and flavored chips. In addition, Kemitraan has integrated a youth component, which brings in local youth to help maintain the site. This is partly done by linking with local schools to teach about the environment and subsequently encourage participation in maintaining the mangroves. Milk Fish are also raised amongst the mangrove and thrive in the area. Kemitraan noted that the community has been active in this area for 25 years therefore, they simply had to channel that spirit of participation into the current project.

Mangrove plantation helping to reduce coastal erosion in Pekalongan City.

Silvofishery fish and crab ponds

The NIEs were able to visit a fish and crab pond faciality complete with nurseries. Kemitraan partners again with the sub-district for this project as well as local universities to conduct studies on the fishery. This fishery contains milk fish, tilapia, and crabs. Once the fish and crabs are mature, they are sold to the local community.

This nursery demonstrates Kemitraan's focus on the cyclical part of the project, which involves ecosystem-based adaptation, socio-economic reform, and implementing climate-smart initiatives. For example, the fishery acts as a pilot to be used by local government and equally benefits the local community. In addition, the latest techniques for raising fish and crabs are used to improve the yield and quality, without using harmful or wasteful methods.


Silvofishery in Pekalongan City – left to right: milk fish nursery, crab containers, walkway along fish and crab habitats.

It should also be noted that the NIEs were able to visit Batik making facilities, as the industry is highly integrated into the region's socio-economic prosperity. Pekalongan City is well-known in Indonesia and beyond as the city of "Batik", which is the process of traditionally dyeing fabric performed on cotton and silk. Pekalongan was recognized as a World Intangible Cultural Heritage site by UNESCO in October 2009 based on the resident's proficient use of this Batik technique.

Kemitraan stresses importance of synchronizing with district, regional, and national policies

The head of the Center for Climate Change Control from the Directorate General of Climate Change Adaptation presented to the NIEs Indonesia's commitment and long-term strategy adaptation policies. He stressed the importance of planning and offered a sobering reminder that the land surface temperature across the entire archipelago is expected to increase by 1.5 degrees Celsius by 2100. This increase will be accompanied by a sea surface temperature increase of .25 degrees Celsius in the more immediate future (2040), a rise in sea level, increase in wave height, and decrease in sea surface salinity. Additionally, daily rainfall predictions across Indonesia are actually expected to increase except for Java. This predicted change in climate, in additional to what has already changed, means the need to implement aggressive adaptation policies remains more pertinent than ever.

Kemitraan began as a platform for government reform therefore, they are experienced in connecting government and civil society with international development partners. A key component of the Adaptation Funded project is, in fact, strengthening vertical coordination and collaboration between national and local government in the climate adaptation context and enriching knowledge, toolkits, and methodologies related

to coastal resilience for the national government. Kemitraan ensures that all of its projects align with national policies.

Several national policies have been created based on the Paris Agreement, which has equally been codified into law. Following Indonesia's ratification of the Paris Agreement, the country submitted its first nationally determined contributions (NDCs) to the United Nations Framework Convention on Climate Change (UNFCCC) in 2016 followed by the issuance of a Presidential declaration (Implementation of Carbon Pricing to Achieve NDC targets) in 2021. Also in 2021, the country submitted its enhanced NDCs to the UNFCCC along with its newly adopted long-term strategy entitled, "Low carbon and climate resilience 2050." The Strategy outlines the NDC targets, NDC roadmaps, a climate action plan, and integration into national and sectoral development planning.

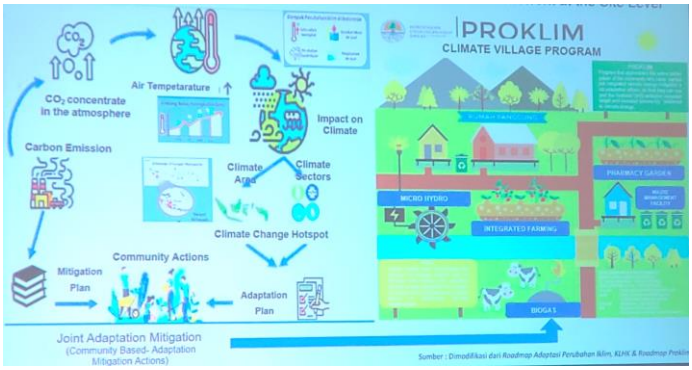
Indonesia's climate change adaptation goals are integrated into its development planning and include the reduction of risks, enhancement of adaptive capacity, strengthening of resilience, and the reduction in the vulnerability to climate change within all sectors. As part of its NDC and more related to resilience, Indonesia focuses on three areas:

1. Economic resilience,
2. Social and Livelihood resilience,
3. Ecosystem and landscape resilience.

Even with ambitious adaptation goals, the plans are not consistent across Indonesia. The Head emphasized that improvement is needed for national resilience, but human resources remain limited, and the landscape varies significantly. With the given policies in place, on-the-ground, science-based action is needed. These actions must be demonstrable and include monitoring and quantifying.

National implementation framework combines extensive data gathering with village-level program

Fortunately, Indonesia uses their web-based Information System of Vulnerability Index Data System (SIDIK)[6] to provide data and information on the vulnerability and risks at the administrative level. This data is used to develop the adaptation action plans and as a monitoring and evaluation tool of climate resilience policy efficacy. Even with the challenges of gathering data, especially during the height of the COVID-19 pandemic, SIDIK offered index data, which was used to create climate change adaption indicators at the local level, including a village vulnerability index.



Visual representation of PROKLIM climate village program

Based on the climate change hotspots identified through SIDIK, plans are formulated accordingly. The NIEs were able to view results gathered from SIDIK and how that data was applied to the Climate Village Program known as PROKLIM.

[6] *System developed by the Ministry of Environment and Forestry since 2014*

PROKLIM is a nationwide program developed and managed by the Ministry of Environment and Forestry; the program is aimed at increasing the involvement of the community and other stakeholders to increase adaptation capacity and improve human welfare. PROKLIM is an extensive program with a legal basis for implementation via the Ministry and is regulated by the Director General of Climate Change. The President of Indonesia backs the program and has committed to achieving climate resilience in 20,000 villages by 2024.

To achieve this goal, PROKIM is being implemented via eight key initiatives:

1. Strengthening Government capacity,
2. Strengthening community capacity,
3. Forging partnerships,
4. Encouraging leadership at the local level,
5. Encouraging stakeholder commitment,
6. Spreading success,
7. Improving the development and application of technology,
8. Optimizing sources of funding.

The villages are chosen using data from SIDIK and the most vulnerable receive priority. In addition, a system of electronic tagging from SIDIK, combined with a national registry, identifies ministries and institutions to support PROKLIM.

Moving forward, the Center for Climate Change Control and its stakeholders plan to accelerate PROKLIM and consider opportunities for renewable energy. The current development roadmap (2018-2050) is being incorporated into the Central Java regional management plan and the region is currently exceeding their renewable energy target incorporating a 15.76 percent use of renewable energy. 700 villages are already using renewable energy devices in the region including solar panels and natural waste management products.

The NIE participants were especially interested in learning about Indonesia's data gathering capabilities, as this remains a challenge in many of their countries. Even with the challenges, Indonesia's data gathering and organization using an information system like SIDIK corresponds well to Kemitraan's project specific information system known as BASKARA[7] (a database containing analyses, data, and information from Adaptation Fund Projects).

Kemitraan executes projects and builds partner capacity

Kemitraan clarified its various roles to the NIEs during the exchange and one area that stood out was its role as executing entity for their projects. Kemitraan acts as the executing entity due to the limited capacity of local organizations that are unable to meet international standards of accounting and monitoring. Local organizations are equally unable to manage larger funding amounts, so depend on Kemitraan for guidance. Therefore, project management units follow Kemitraan administrative regulations which, in turn, helps local organizations achieve better compliance and build their capacity. However, Kemitraan still uses local organizations to execute activities at the local level, which they also term as executing entities. These entities remain under the direct supervision of Kemitraan.

Local project management units that implement at the village level comply to Kemitraan's two modalities: self-implementation and being a grantee. These modalities are used to manage the Adaptation Fund projects conducted by the executing entity. Based on the approach, an administrative system will be applied

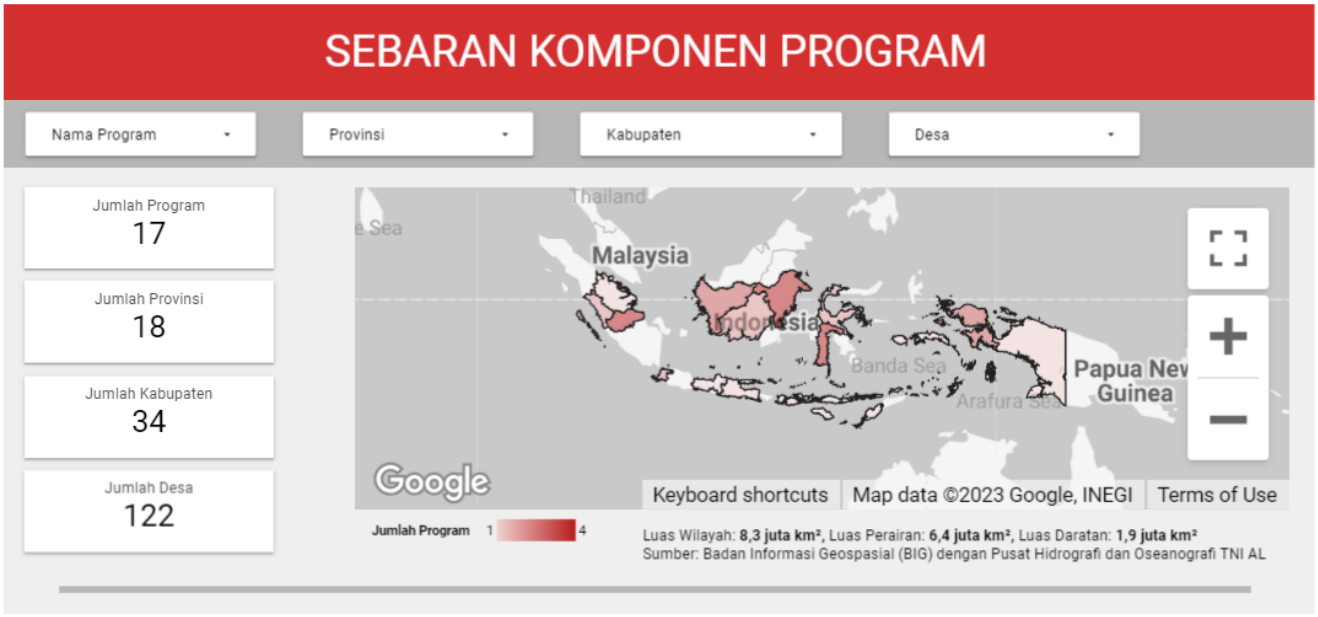
[7] *Basis Analisis Kerja SGS dalam Program & Angka*

accordingly, which includes procurement, finance, grievance mechanisms, program management, and monitoring and evaluation.

During the project life cycle, Kemitraan maintains a close coordination with the National Designated Authority in selecting, preparing, and assisting the executing entity to develop concept notes or even full proposals. The National Authority is involved at every stage, supporting Kemitraan's focus on improving government capacity.

To further the capacity of local organizations who wish to act as a local executing entity, Kemitraan issues a call for concept notes published on their website. The National Designated Authority selects proposals in coordination with Kemitraan using criteria based on development indicators. Kemitraan provides technical assistance to entities and offers support following an Adaptation Fund review. Kemitraan additionally holds local clinics and consultations for proposals, further extending their outreach into the community.

NIEs were interested in the selection criteria for local executing entities therefore, it was clarified that during the initial review of concept notes, Kemitraan conducts due diligence covering substantive finance and administrative issues. Part of the requirements from Kemitraan include the requirement for a logistics framework and safeguard mechanisms. Often, local organizations need help with fiduciary and operational management including procurement.



BASKARA produces visual images based on real-time data monitoring.

To help manage the large amount of financial and monitoring and evaluation data, Kemitraan uses the web-based BASKARA system. BASKARA offers output based on a target versus delivery approach. BASKARA aggregates data based on a wide variety of criteria including gender equality and financial data. The system allows for real-time data monitoring, and this was demonstrated during the exchange. Local governments also have access to BASKARA. Additionally, project evaluations are conducted every six months to help with project progress and executing entities are required to submit quarterly reports, which are reflected within BASKARA.

NIEs showed a large interest in Kemitraan's monitoring and evaluation approach along with their knowledge management and communications strategies. Knowledge capture is essential and Kemitraan develops guidelines to capture its project knowledge. Knowledge and communications products range from story features to professionally produced videos showing project progress and results. These products are stored in BASKARA and are available to the public.

Another topic often cited by the NIEs during the exchange was the challenge of procurement. Kemitraan highlighted how procurement systems must align with Kemitraan and international standards. Therefore, they have a procurement committee in charge of compliance. They also utilize a web-based accounting program called TRACY.

Kemitraan partners enter their financing data into TRACY, which is then tracked in real-time; TRACY is used for internal purposes and is not available to the public like BASKARA. Even though BASKARA features some financial data, detailed procurement and bid data is housed within TRACY. Kemitraan adheres to ISO standards regarding its financial tracking, and this is reflected within TRACY. Kemitraan also includes line ministries during the financial review process for transparency and to profit from their expertise. For ground-level monitoring, TRACY is equally used to compare indicators with achievements and is more detailed than BASKARA.

To help clarify, Kemitraan noted that BASKARA data is more general and contains knowledge management products. TRACY functions more like an operational system, in which project documents are uploaded to show proof of implementation. If monitoring and evaluation obligations are not met, TRACY will block next steps for the partner, which helps to ensure disciplined reporting. For some rural areas, cash transfers must be used, which causes difficulty in tracking.

Noting Kemitraan's huge scope of work across Indonesia, NIEs asked if the Adaptation Funding threshold of US$20 million was adequate. Kemitraan responded by noting the smaller, Adaptation Funded projects fit well with Kemitraan's local partner approach and reminded the NIEs that most of their partners are not equipped to handle large grants. When it comes to proposals from local partners, most are developed by universities or Non-Government Organizations (NGOs) in Java and Sulawesi.

Kemitraan promotes "champions"

As noted previously, national and sub-national policy support is key. Therefore, Kemitraan stresses support from "champions" they have within the Indonesia legislative branch (such as agencies, policymakers, or members of parliament). Once project outputs are outlined, someone is needed to implement at the policy level and champion livelihood improvement.

Champions participate in rallying the youth community and helping to establish a project exit strategy. They help achieve this through consensus and responding to the sustainability of activities. Champions also help organize development planning forums, which include stakeholders ranging from community participants to provincial representatives.

These efforts would be fruitless without community understanding and awareness. Using qualitative methods, Kemitraan measures how the community treats the project areas during and after the projects and what they continue to do to keep their livelihoods going. When the community no longer feels limited by land availability, this is measured as a success. Each project site has eight facilitators to link with the community and as a result, littering has been reduced and non-sustainable agriculture behaviors have changed.

Direct access modality facilitates Kemitraan projects

The Direct Access approach aims to ensure that projects and programs are more nationally relevant and better connected to the development plans and climate change strategies of each country. Kemitraan takes full advantage of Direct Access to finance its five Adaptation Fund projects. Through direct access, Kemitraan is able to directly access financing and manage all aspects of climate adaptation and resilience projects, from design through implementation to monitoring and evaluation.

Kemitraan's ISO certified financing mechanisms highlight the high accounting standards needed for the Direct Access modality. Global financing for effective climate change adaptation (and mitigation) has been recognized as inadequate to meet the enormity of the challenges facing the global community. Readiness and capacity building support are situated within this landscape and suffer also from the paucity of funds. Fortunately, the financing mechanisms of the United Nations Framework Convention on Climate Change (UNFCCC), including the Adaptation Fund; Green Climate Fund; and Global Environment Facility, have developed readiness and capacity building programs that are providing diverse, complementary support. The Adaptation Fund has already committed more than US$180 million to NIEs through Direct Access.

Lessons Learned and Recommendations from the Kemitraan Projects

A major theme of the Indonesia exchange was the importance of sharing lessons learned and recommendations with the NIEs who, in turn, shared their experiences. As noted previously in this report, Kemitraan shared firsthand many of their experiences with the NIEs. The following lessons learned were highlighted during the exchange as part of the plenary and on-site visits:

A youth volunteer supports Kemitraan's emphasis on involving local schools, universities, and communities.

1) **Vulnerability of coastal cities:** Pekalongan serves as an example of a highly vulnerable city to the adverse effects of climate change due to its location on the coast. This highlights the need for targeted adaptation measures in coastal areas.
2) **Pillars of Resilience:** Every adaptation project in Indonesia contributes to the three pillars of resilience: economic resilience, social resilience and livelihoods, ecosystem and landscape resilience. Adaptation Funded projects are linked to these pillars.
3) **Multiple impacts of climate change:** Indonesia is facing a range of climate change impacts, including sea level rise, increased flooding, and extreme weather events. This emphasizes the importance of comprehensive and multi-faceted strategies to address these challenges. Kemitraan addresses this using their cyclical approach linked to PROKLIM.
4) **Central Java climate and harvests:** Planning for projects can no longer rely on normal harvest schedules (usually three times per year) due to inconsistent rainfall. Ecosystem based adaptation techniques are worked into the planning to compensate.
5) **Innovation in mangrove plantation management:** Due to strong ocean currents resulting in sea-level rise, established mangrove forests are being washed away and newly established forests have

difficulty being maintained. Adaptive measures such as the use of extended bamboo shoots helps to address this issue.

6) **Adaptive implementation:** Changes in national designated authorities and other implementing partners create delays in project implementation. Additionally, the bio-spheric condition of some regions changed during the project planning, prompting interventions to be changed. Kemitraan has built adaptation measures into their project planning to address these changes.
7) **Fiduciary and reporting requirements:** Kemitraan highlighted the challenge many local organizations face when meeting fiduciary requirements to implement project components. This is why Kemitraan acts as the executing entity in most cases and helps to improve the quality of their partners' proposals.
8) **Vertical collaboration:** Coordination between the central and local government works well however, a limited national budget allocated to climate change means it needs to be better leveraged to empower communities.
9) **Communication with partners:** Online meetings help improve communication and monitoring of projects. Combined with the online tracking systems, project progress can be monitored in real time. Role sharing and teamwork are essential to complement partner tasks. Collaboration is key across all levels.
10) **Sustainability of projects:** Agreements with regional governments are built into the project proposals for the maintenance of sites once the project has ended. It is essential that the community perceives the benefit of the project in order to feel they are making a type of "profit."

Kemitraan recommendations to address climate change in similar ecosystem-based adaptation projects:

1) **Strengthen mitigation efforts:** While Indonesia has set a goal to reduce greenhouse gas emissions, further actions and policies are needed to achieve this target. The country plans to explore renewable energy sources, promote energy efficiency, and incentivize sustainable practices across sectors.
2) **Enhance coastal resilience:** Given the vulnerability of coastal areas, investing in infrastructure, such as the sea barriers in Pekalongan, provides immediate protection against flooding. Additionally, restoring and preserving natural coastal ecosystems, such as mangroves, acts as natural barriers against erosion and storm surges.
3) **Promote climate-resilient aquaculture:** Developing aquaculture practices that are resilient to climate change, such as the conversion of former rice paddies into fishponds, helps ensure food security and reduce the impact of extreme weather events on farmers.
4) **Strengthen governance and collaboration:** Effective coordination between national, regional, and local governments, as well as collaboration with international partners and non-governmental organizations, is crucial for implementing climate change strategies and accessing financial resources.

NIEs view firsthand progress made at a large mangrove plantation.

5) **Invest in research and data collection:** Enhancing the availability and accuracy of climate data is essential for evidence-based decision-making. Investing in research institutions and data collection efforts can support the development of climate-resilient policies and adaptation strategies.

6) **Engage communities and stakeholders:** Encouraging active participation and involvement of local communities, businesses, and civil society organizations is key to building resilience. Stakeholder engagement, as witnessed firsthand by the Exchange participants in Pekalongan, fosters ownership, innovation, and inclusivity in climate change adaptation and mitigation efforts.
7) **Replicate programs:** Many of the projects act as pilots therefore, to make an impact on climate change, replication of the programs is key. The government organizations are on board with replication, but it must be done by leveraging a small national budget. Multiple sources of international financing remain important.
8) **Show results:** As demonstrated by Kemitraan during the exchange, results gained from the project are used for future planning. The more results attained, the more likely funding will increase for longer term planning. Fortunately, BASKARA remains a publicly visible resource highlighting successes and results.

Participating NIEs Use Country Exchange to Add Value to Their Own Projects

During the Indonesia Country Exchange, a Knowledge Fair was held on the last day in Pekalongan City. NIEs shared experiences and lessons learned from various projects related to climate change adaptation and resilience in different countries. It was the largest in-person gathering of NIEs at an exchange (19). The fair aimed to promote the sharing of knowledge and lessons learned from NIE projects and identify effective strategies for addressing climate change impacts. As part of the learning and sharing experience, the NIEs will further communicate to the Adaptation Fund Secretariat how the experience and knowledge gained from the exchange is applied to their own projects.

Representative from Armenia highlights land-based adaptation capacity in that country.

Due to the large number of NIEs present, some regions elected to highlight one project per region resulting in 13 total presentations. Three of the presentations were from projects that have not yet received approval from the Adaptation Fund and are not included in this list. The following is a summary of shared experiences:

1) **Antiqua and Barbuda** – *An integrated approach to physical adaptation and community resilience in Antigua and Barbuda's northwest McKinnon's watershed. NIE - Department of Environment Ministry of Health and the Environment*: The main challenge with this project is the limited finance options by the government for recovery efforts after natural disasters. The goal is to implement cost-effective adaptation measures, including upgrading urban waterways and drainage, to increase ecosystem resilience.

   The challenges faced include the passage of Hurricane Irma in 2017 and the impacts of COVID-19. Adaptive actions include altering engineering designs after flooding, incorporating new plans into

drainage codes and building plans, and supporting vector control efforts through employment programs. The project also provides concessional loans, which address the issue of increased lumber prices.

2) **India** – *Conservation and Management of Coastal Resources as a Potential Adaptation Strategy for Sea Level Rise. NIE - National Bank for Agriculture and Rural Development:* This project focuses on the conservation and management of coastal resources in India based on the expected rise in sea levels. Challenges include stakeholder coordination (more than 1,500 people) across an area containing more than 4.5 million people and identifying suitable mangrove species for planting areas. An additional challenge is coordinating with ministries to improve the representation of women at the project sites. Lessons learned include the importance of establishing mangrove nurseries, conducting orientation programs on climate change and sea-level rise with local communities, promoting livelihood creation, and the use of tidally fed fishponds. The project aims for replication and collaboration with NGOs and bilateral institutions.

   Following the exchange, the India NIE plans to explore further the strategy witnessed at the mangrove plantation of using bamboo chutes to support mangrove saplings.

3) **Kenya** -- *Integrated Program To Build Resilience To Climate Change & Adaptive Capacity Of Vulnerable Communities In Kenya. NIE – National Environment Management Authority:* The project in Kenya focuses on various components ranging from disaster risk management at the community level to coral reef restoration and mangrove forest conservation. The project partly achieves its goals using innovative approaches, such as establishing innovation villages with solar powered bore holes and sanitation facilities. They also use a community training center to demonstrate best practices for other villages nearby.

   The challenges faced include aligning with Kenya's finance policy while equally aligning with the funding policy from the Adaptation Fund. Lessons learned emphasized the importance of long-term community resilience design, continuous learning, and stakeholder engagement at all phases of the project. The project also highlighted the need for proper project cycle management and coordination with sub-executing entities.

4) **Uganda** -- *Enhancing Community Adaptation to Climate Change through Climate Resilient Flood Early Warning, Catchment Management and Wash Technologies in Mpologoma Catchment. NIE – Ministry of Water and Environment of Uganda* - The project in Uganda involves catchment-based integrated management of water and related resources. Key achievements include revising catchment plans for climate change aspects, establishing tree nurseries, and restoring degraded land (2,199ha restored).

   Challenges include delays in the project start due to late disbursements and time-consuming baseline assessments. Lessons learned emphasize the importance of continuous stakeholder engagement, the need for long-term community-based resilience, and effective coordination across ministerial levels.

5) **Armenia** - *Strengthening land-based adaptation capacity in communities adjacent to protected areas in Armenia. NIE – Environmental Project Implementation Unit*: The project in Armenia focuses on building the adaptation capacity of communities adjacent to protected areas. Key lessons learned

include the importance of community engagement, flexibility in beneficiary selection systems, market price considerations, and the establishment of field schools and non-formal associations for efficient knowledge management. The project emphasizes community ownership and sustainability through the maintenance of structures and collaboration with local organizations.

One project site that reclaimed degraded land was even able to produce packaged dried fruit. Samples were distributed to the NIEs. To help generate power at the sites, solar-powered pumps are used and also aid with moving water for irrigation.

6) **Senegal** -- *Adaptation to Coastal Erosion in Vulnerable Areas. NIE – Centre de Suivi Écologique:* The project in Senegal aims to address coastal erosion and restore mangroves in vulnerable zones. Challenges include working on an island where facilities are limited, ensuring alternative options and adapted materials when constructing physical structures, addressing water sources under severe climate change impacts, and land tenure issues.

   Lessons learned highlighted the importance of a strong community consensus, multi-stakeholder institutional setups, and continuous adaptation and planning updates. The project emphasizes the need for concrete actions on the ground and community mobilization.

7) Côte d'Ivoire -- *Strengthen the Resilience of Smallholder Farmers to the Effects of Climate Change through the Adoption of Proven Innovative Technologies and Practices. NIE – Interprofessional Fund for Agricultural Research:* Sea level rise and unpredictable rainfall is having a huge impact on Côte d'Ivoire. This project covers a vast area lacking in water resources. Using water retention strategies, beneficiaries are able to water their land up to five times per week, which has increased crop production by 30 percent. These actions have allowed for an increase in production cycles, quality of produce, and a reduction in the need for chemical fertilizer.

8) **Chile** -- *Enhancing resilience to climate change of the small agriculture in the Chilean region of O'Higgins. NIE – International Cooperation Agency of Chile:* Similar to the other NIEs, this project has the challenge of covering a large land area, which is experiencing a nearly 50 percent reduction in water capacity. Additionally, the desert region is shifting south and consuming previously fertile land. Some additional challenges encountered include unexpected fees when dealing with utility companies and the high political turnover of national officials.

   Lessons learned include the importance of holding information sessions at the community level, assisting households that did not hold legal titles to their land, ensuring constructed greenhouses could receive enough power through solar.

9) **Dominican Republic** -- *Enhancing Climate Resilience in San Cristóbal province, Dominican Republic Integrated Water Resources Management and Rural Development Program. NIE – Dominican Institute of Integral Development of Dominican Republic*: This NIE is in the re-accreditation process with the Adaptation Fund, and highlighted the Dominican Republic's vulnerability to climate change and natural disasters. Their project addresses all levels of government and the community. Their community work uses church organizations, community leaders, and household representatives; the

project has 1300 youth members. Some challenges encountered include ensuring access to clean water, addressing disputes related to water, and fulfilling training needs.

Lessons learned include the need to encourage women's participation in community groups, maintenance of water facilities, educating the community on climate change, constant repairs needed to infrastructure following frequent cyclone strikes, and managing knowledge resources.

10) **Panama** -- *Adapting to climate change through integrated water management in Panama – Nature Foundation:* This project places water management at the center of its adaptation efforts, promoting climate resilience and vulnerability reduction through enhancing food and energy security. This is done based on an integrated water resources management approach highlighting a water-energy-food-climate change adaptation nexus. The project focuses efforts on two river watersheds: Chiriquí Viejo and Santa María. This NIE emphasized the importance of starting at the community level and working up to the national. This, in turn, creates a cyclical approach similar to Kemitraan's. The project addresses six provinces within Panama

Conclusion

The Adaptation Fund is well underway in achieving its result area of strengthening NIE institutional capacity in ecosystem-based adaptation.

A community-based approach is vital – this was the major underlying theme that emerged from the Indonesia Exchange. Even with strong policies in place at all levels of government, the sustainability of ecosystem-based adaptation depends on support from communities directly impacted by climate change. A secondary theme emerged highlighting the importance of comprehensive policies across a nation (supported by strong data) and adapting to gaps found at certain ministry levels.

Many Adaptation-Funded projects practice a community-based approach but experiencing Kemitraan's integration into Indonesia's PROKLIM cyclical process was illustrative of how much must be done to achieve this. Integrating climate change adaptation into national policy is a challenge that many NIEs face; the NIEs left Indonesia with more tools to achieve policy integration and comprehensive methods to use their data to influence policy. Overall, this exchange helped the NIEs begin to further enhance capacity in project design, development, and implementation through Kemitraan's shared experiences and lessons learned.

An illustrative brochure highlighting how the participating NIEs have applied the lessons learned from this country exchange to their own projects will be released two months following this report.

ANNEXES

Annexes

Annex 1 – Adaptation Fund and NIE participants

Adaptation Fund Participants:

1. Mikko Ollikainen | Manager
2. Matt Pueschel | Communications Officer
3. Sophie Hans-Moevi | Senior Program Assistant
4. Martina Dorigo | Climate Change Specialist
5. Cristina Dengel | Knowledge Management Officer
6. Saliha Dobardzic | Senior Climate Change Specialist
7. Marc Neilson | Communications Consultant and Rapporteur

National Implementing Entity participants:

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Annex II

National Government and Ministry Representatives

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Haryo Pambudi, S.Hut., M.Sc.	**Head of the Center for Climate Change Control and Forest and Land Fires in Java, Bali, and Nusa Tenggara, Ministry of Environment and Forestry**
Nuraeni, S.Hut., MES.	**Deputy Director for Instrument Development of Climate Change Adaptation**

Central Java Provincial Government

Name	Institution
Sumarno, SE, MM	**Provincial Secretary of Central Java Province**
Dadang Somantri, ATD, MT	**ISDA Bureau Chief (Bureau of Infrastructure and Natural Resources)**
Dr.A.P.Ir. Sujarwanto Dwiatmoko, M.Si	**Economic and Development Assistant to Governor (equal to expert staff in ministries)**
Muhammad Arif Sambodo, SE, M.Si	**Administrative Assistant to Governor (equal to expert staff in ministries)**
Widi Hartanto, ST, MT	**Head of Environment and Forestry Service**

Sarworini, S.P., M.SI.	**Head of Environment, Forestry and Mineral Resource Energy, Bureau of Infrastructure and Natural Resources**
Eni Lestari, ST., MT	**Head of Renewable Energy Department**

Pekalongan City Government

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H. Achmad Afzan Arslan Djunaid, S.E.	**Mayor of Pekalongan City**
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Erli Nufiati, S.E.	**Assistant Economy and Development for Regional Secretary, Pekalongan City**
Cayekti Widigdo AP M.SI.	**Head of Regional Development Planning Agency, Pekalongan City**
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Joko Purnomo, S.T.	**Head of Environment Office**
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