ADAPTATION FUND

FULL PROPOSAL FOR SINGLE COUNTRY

PART I: PROJECT/PROGRAMME INFORMATION

Title of Project/Programme: Increasing Climate Change Resilience in the Agricultural sector of Bosnia and Herzegovina - STAZA

Country: Bosnia and Herzegovina (BiH)

Thematic Focal Area: Agriculture

Type of Implementing Entity: Multilateral Implementing Entity

Implementing Entity: International Fund for Agricultural Development (IFAD)

Executing Entities: Ministry of Agriculture, Water Management and Forestry (MAWMF) in the Federation of Bosnia and Herzegovina and the Ministry of Agriculture Forestry and Water Management (MAFWM) of the Republika Srpska

Amount of Financing Requested: 10,000,000 (in U.S Dollars Equivalent)

Project Formulation Grant Request (available to NIEs only): Yes ☐ No ☒

Amount of Requested financing for PFG: (in U.S Dollars Equivalent)

Letter of Endorsement (LOE) signed: Yes ☒ No ☐

NOTE: LOEs should be signed by the Designated Authority (DA). The signatory DA must be on file with the Adaptation Fund. To find the DA currently on file check this page: https://www.adaptation-fund.org/apply-funding/designated-authorities

Stage of Submission:

☐ This proposal has been submitted before

☒ This is the first submission ever of the full proposal

In case of a resubmission, please indicate the last submission date: Click or tap to enter a date.

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Abbreviations and Acronyms

AE - Agroecology
APR - Annual Project Report
APCU - Agricultural Project Coordination Unit
ASAP - Adaptation for Smallholder Agriculture Programme
BD - Brčko District
BiH - Bosnia and Herzegovina
CAP - EU's Common Agricultural Policy
CC - Climate Change
CCKP - Climate Change Knowledge Portal of the World Bank
CRA – Climate Resilient Agriculture
CzDA - Czech Development Agency
ESA - Environmental and Social Assessment
ESCMP - Environmental, Social and Climate Management Plan
ESP - Environment and Social Principles
ESP - Environment and Social Policy
EIP-AGRI - European Innovation Partnership for Agricultural Productivity and Sustainability
EU - European Union
EU4AGRI - European Union Support to Agriculture Competitiveness and Rural Development in Bosnia and Herzegovina
FAO - Food and Agriculture Organisation of the United Nations
FBiH - Federation of Bosnia and Herzegovina
FIGAP - Financial Mechanism for the Implementation of the Gender Action Plan
GAWB - Green Agenda for the Western Balkan
GCF - Green Climate Fund
GDP - Gross Domestic Product
GEF - Global Environment Facility
GHG - Greenhouse Gas Emission
GIS - Geographic Information System
GMO - Genetically modified organisms
GRM - Grievance and Redress Mechanism
IFAD - International Fund for Agricultural Development
IPCC - Intergovernmental Panel on Climate Change
IPM - Integrated Pest Management
LCAS - Local Climate Adaptation Strategy
LDN - Land Degradation Neutrality
M&E - Monitoring & Evaluation
MAFWM - Ministry of Agriculture, Forestry and Water Management of RS
MAWMF - Ministry of Agriculture, Water Management and Forestry of FBiH
MoFTER - Ministry of Foreign Trade and Economic Relations of BiH
MOFT - Ministry of Finance and Treasury of BiH
MoU - Memorandum of Understanding
MTR - Mid-Term Review
NAP - National Adaptation Plan
NbS - Nature-based Solutions
NCCS - National Climate Change Strategy
NCSD - National Council for Sustainable Development
NDA - National Designated Authority
NDC - Nationally Determined Contribution
NTFP - Non-Timber Forest Products
NRM - Natural Resource Management
OECD - Organisation for Economic Co-operation and Development
PCU - Project Coordination Unit
PIM - Project Implementation Manual
PP - Procurement Plan
PPR - Project Performance Report

PSC - Project Steering Committee
RCDP - Rural Competitiveness Development Programme
READP - Rural Enterprises and Agricultural Development Project
RS - Republika Srpska
SDG - Sustainable Development Goal
SECAP - Social Environmental and Climate Assessment Procedures
SME - Small and Medium Enterprises
SPEI - Standardized Precipitation Evapotranspiration Index
FNC - Fourth National Communication
SWG - Standing Working Group
FNC - Fourth National Communication
UN - United Nations
UNDP - United Nations Development Programme
UNEP - United Nations Environment Programme
UNFCCC - United Nations Framework Convention on Climate Change
USAID - United States Agency for International Development
USP - Unidentified sub-project
WB - World Bank

A. Project/Programme Background and Context:

Introduction

1. Bosnia and Herzegovina (BiH) is located on the Balkan Peninsula, sharing borders with the Republic of Croatia in the north, northwest, and south, as well as the Republic of Serbia and the Republic of Montenegro in the east. The total area of BiH is 51,209.2 km², with 51,197 km² being land and 12.2 km² being sea. To the north, BiH has access to the Sava River, while in the south, it reaches the Adriatic Sea through Neum. Geographically, BiH falls within the basin of both the Adriatic and Black Seas. It is primarily a mountainous country covered with forests, with an average altitude of 500 meters and the highest peak being Mt. Maglić at 2,387 meters. The land composition of BiH includes 42% mountains, 24% hills, 29% karst areas, and 5% lowlands. Four distinct agroecological areas can be identified in BiH: the lower Herzegovina area (including the upper Neretva and karst fields), the high karst area with karst fields, the central hilly-cum-mountainous area with river valleys and the lowland hilly area (including serpentine and flysch zones).

2. The Western Balkans, characterized by its mountainous and plain terrains, stands as a climate change hotspot, anticipating a rise in climatic extremes[1]. Projections indicate a notable surge in extreme heat events, with winters witnessing heavier precipitation and summers becoming progressively drier. Bosnia and Herzegovina faces specific climate hazards such as diminishing snow cover, heightened risks of winter and spring flooding due to intense precipitation and accelerated snowmelt, an upswing in the frequency and intensity of wildfires, substantial snowfall, and cold extremes marked by late frosts. Additionally, concerns encompass the emergence of new disease vectors and a reduction in annual river discharge, leading to extended low-flow periods. These impacts extend beyond future scenarios, posing immediate challenges[2].

3. **Defining climate vulnerability**. As indicated above, BiH is a country that is particularly vulnerable to the impacts of climate change due to its geographical location, its topography, and its socio-economic characteristics. BiH has adopted the conceptual approach of the Intergovernmental Panel on Climate Change (IPCC), which defines that the level of vulnerability of human and natural systems to climate-related impacts is a result of the level of sensitivity and adaptive capacity to cope with climate change[3]. Both changes in the climate system and socio-economic processes are drivers of vulnerability, defined as the propensity of exposed elements to suffer adverse effects when impacted by hazard events. Climate vulnerability can be characterized as a function of exposure, sensitivity, and adaptive capacity:

- **Exposure** is typically conceptualized as the type and intensity of the hazard event affecting a system.
- **Sensitivity** is the predisposition of a system to suffer harm, loss, or damage as a consequence of a hazard event.
- **Adaptive capacity** is defined as “the ability of a system [human or natural] to adjust to climate change (including climate variability and extremes) to moderate potential damages, to take advantage of opportunities, or to cope with the consequences[4].

Sensitivity and adaptive capacity to climate change in BiH

Development context

1 Alfthan, B.; Krilasevic, E.; Venturini, S.; Bajrovic, S.; Jurek, M.; Schoolmeester, T., Sandei, P.C., Egerer, H, and Kurvits, T. 2015. Outlook on climate change adaptation in the Western Balkan Mountains. United Nations Environment Programme, GRID-Arendal and Environmental Innovations Association. Vienna, Arendal and Sarajevo. www.grida.no.
2 Djurdjevic V, Trbić G, Krzic A, Bozanic D (2019) Projected changes in multi-day extreme precipitation over the Western Balkan region. In: Leal Filho W, Trbic G, Filipovic D (eds) Climate change adaptation in Eastern Europe, climate change management. Springer
3 IPCC (2014)
4 IPCC, Working Group 2 (2001)

4. **Geography**. Before 1991, BiH was a republic within the Yugoslav Federation. After the Bosnian war from 1991 to 1995, it gained independence and became a sovereign country through the Dayton Peace Agreement in 1995. However, a complex system of governance was established, consisting of multiple tiers. The country's structure is deeply fragmented and thus often functions inefficiently. There are four tiers of governance: the state, entity, canton, and municipal levels. The two entities, "Republika Srpska" (RS) and the "Federation of Bosnia and Herzegovina" (FBiH), respectively represent 49% and 51 % of the country's surface. In 2000, a small separate autonomous district was created: the "Brčko District' (BD). It has many autonomous features similar to RS and FBiH , further complicating the country's governance. The FBiH has a unique third tier, composed of 10 cantons. The fourth tier consists of 143 municipalities, with 79 in the FBiH and 64 in the RS. These municipalities vary greatly in terms of socio-economic development, size, and population. BiH has a decentralized system with many public services provided at the municipality level.

5. **Development context**. In 2021, Bosnia and Herzegovina experienced a GDP growth rate of 7.55% (-3.12% in 2020 and 2.83% in 2019), reaching a total value of USD $51.244 billion. It was ranked 113th out of 229 countries in terms of GDP. Over the past decade, BiH has maintained macroeconomic stability, largely supported by the currency board system and the prospects of EU membership, which serve as the main economic pillars. However, despite achieving an average annual real Gross Domestic Product (GDP) growth of 3.2 percent from 2015 to 2019, and after the post-COVID positive growth rate, per capita GDP remains around one-third of the EU27 average5. This income disparity is notably higher compared to many other countries in the Western Balkans. The challenge of narrowing this gap and achieving stronger convergence with the EU27 average is further compounded by persistently low investment rates and an economy heavily reliant on private consumption. The country is dominated by industry (including mining, construction, electricity, water, and gas) which contributes 23.2% to GDP, agriculture (6.4%) and the export (35.4%) and import (52.3%) sectors. The highly decentralized government structure has led to frequent political obstructions, gridlocks, and hindered economic policy coordination and reform efforts. Additionally, excessive bureaucracy and a segmented market have discouraged foreign investment.

6. In BiH, poverty has a disproportionally large impact on rural populations where people are twice as likely to be poor as in urban areas (19% vs 9%).[6] This presents a particular challenge as BiH, which, unlike other emerging economies, remains majority rural (51% of the total population) and where only 5.2% of the GDP is estimated to come from agriculture, forestry and fishing combined[7]. There is a **need to have direct financing for adaptation to climate change for farmers depending on their own production for food security**. Economic uncertainty faced by the rural households may discourage experimentation and the uptake of new or alternative models of production, unless they are perceived as strongly proven by successful practical examples.

7. **COVID-19 pandemic and Ukraine war**. The COVID-19 pandemic has had a significant impact on Bosnia and Herzegovina's economy, resulting in loss of lives, decreased welfare, and limited economic opportunities. All sectors of the economy and the population were affected by the COVID-19 pandemic, including the agriculture sector and the rural population. Given Bosnia and Herzegovina's high dependence on food imports, the initial reaction was the fear of hunger due to the interruption of international trade. Farmers responded by increasing sown areas, especially in 2020, encouraged by the ministries of agriculture (for example, in Republika Srpska, about 10,000 vegetable sowing packages were freely distributed to vulnerable rural populations to boost their food production). The agricultural sector, along with other economic sectors in Bosnia and Herzegovina, was significantly affected by the Ukrainian crisis. At the onset of the crisis, the fruit production sector was the most affected, being the sole sector with direct exports to the Russian Federation, facing challenges in transport and payment transactions. Other sectors (such as the production and processing of milk, meat, soft drinks, juices, beer,

[5] Eurostat: https://ec.europa.eu/eurostat/databrowser/view/tec00114/default/table?lang=en Accessed June 2023
[6] OECD (2021). Multi-dimensional Review of the Western Balkans: Assessing Opportunities and Constraints.
[7] World Bank Databank: Bosnia and Herzegovina country profile. Accessed May 2023.

and fruit and vegetable processing) suffered indirectly due to increased prices of input resources. Responding to the situation, the Ministry of Foreign Trade and Economic Relations of Bosnia and Herzegovina proposed and the Council of Ministers of Bosnia and Herzegovina adopted a decision to reduce customs duties on imported fertilizers by 5%. The customs duty rate is set at 0% for mineral fertilizers imported from third countries, enabling duty-free import of 100,000 tons of mineral fertilizers until December 31, 2022. Additionally, entity-level policies implemented various measures to mitigate the negative consequences of the COVID-19 pandemic and the Ukraine crisis.[8]

8. **Population.** BiH has a total population of 3.27 million. The population is in steady decline as youth migration in town and abroad is a major problem in the region, with a growth rate of -1.4% in 2021, and an average annual rate of -0.7% between 2000 and 2018. Many rural people, especially the young and educated, migrate abroad, mainly to EU countries, in response to growing unemployment, poverty, and social inequality. It has been projected that the population will decline at an average rate of -0.5% annually during the 2018 – 2030 period). With its Gross Domestic Product (GDP) growing from 4,53 billion in 2000 to 23.37 billion in 2021, BiH currently classifies as a upper middle-income country). However, with a GNI per capita of US$ 6,810 in 2021, the country stands at the lower end of upper-middle classification.

9. With a Gini coefficient of 0.33 (2021) and a Human Development Index (HDI) score of 0.78 (2021), economic inequalities remain prominent in BiH. In fact, inequality is on the rise, considering the 13.2% decline in the Inequality-adjusted HDI (IHDI) in 2021. An estimated average of 16.9% of the population were below the national poverty line from 2009 – 2019. Gender norms in BiH perpetuate stereotypes that hinder gender equality and women's empowerment. Despite women comprising 50.8% of the population, BiH ranks 92nd in the UNDP's Gender Inequality Index. Disparities exist between males and females in the Human Development Index scores. While laws prohibiting gender-based discrimination and promoting gender equality are in place, women's inclusion in the labor market remains low due to high unemployment rates, reliance on women in the care economy, and patriarchal norms. Women are underrepresented in politics, holding only a small percentage of parliamentary seats and ministerial positions. Gender-based violence is a significant issue, with almost half of women experiencing various forms of violence starting from the age of 15.

10. **Migration**. Internal migration between the two primary national entities of Bosnia and Herzegovina remains limited, with only a small number of individuals moving between the BiH Federation and the Republic Srpska. In 2021 and 2022, transfers were relatively modest, and there was a marginal movement of individuals between the multi-ethnic Brčko District and the national entities. Notably, young adults aged 20 to 39 comprised 44.8% of internal migrants, with women representing 59.2%. n addition to inter-entity migration, a discernible trend of rural-to-urban migration is observed, with approximately 1% of the population relocating annually from rural areas to major cities like Sarajevo, Banja Luka, or Tuzla. Job opportunities in urban centers seem to be the primary driving force, attracting individuals seeking employment. Moreover, emigration to high-income European countries remains a prevalent choice for young individuals, contributing to the Bosnian diaspora, which is one of the largest globally. As of 2020, about 34% of Bosnia and Herzegovina's population was living abroad, with estimates suggesting a total emigrant population ranging from 2 to 2.2 million people.[9]

11. Labor emigration from Bosnia and Herzegovina to the European Union has steadily increased, reaching 56,363 first residence permits granted in 2019. Although the number decreased to 35,158 in 2020 due to the Covid-19 pandemic, Bosnian emigrants are often highly qualified, with a higher percentage of females (51.4%) and a significant portion under the age of 35 (46%). The push factors for emigration include the country's socioeconomic challenges, personal reasons, and lingering post-conflict

8 United Nations, Bosnia and Herzegovina. "Strengthening Bosnia and Herzegovina's resilience to address the impact of the global multi-dimensional crisis on food security and incomes of most vulnerable groups. Project number: UNJP/BIH/017/UNJ. ASSESSMENT REPORT on the impact of effects of the global multi-dimensional crisis on agri-food sector in BiH. SUMMARY. December, 2022.
9 Integral Human Development. (2023). Country Profiles: Bosnia and Herzegovina.

issues. However, this emigration exacerbates the shortage of qualified labor, leading to brain drain and adverse effects on the country's socio-economic, cultural, and demographic landscape. Additionally, inward migration concentrating in urban areas further compounds challenges faced by rural regions.

12. **Biodiversity and forestry**. BiH is home to diverse forests, housing a wide range of tree species, including fruit trees such as cherry, apple, and pear. BiH is deemed to be one of the European countries that are extremely rich in forest resources in terms of their distribution and biological diversity. Around 53% of the total land area in BiH is covered by forests which provide multiple benefits for the community. However, the extent of protected areas in the country is relatively low, accounting for only about 2.28% of the total land area (3.24% in the FBiH and 1.30% in the RS) , despite the rich biodiversity present. Public forests constitute approximately 80% of the forest ownership, with the remaining 20% being privately owned. With its expansive forest cover, BiH plays a vital role in preserving biodiversity, preventing erosion, mitigating the impacts of climate change, and serving important functions for local communities, such as the collection of Non-Timber Forest Products (NTFPs).

13. Based on the Sixth National Report of BiH to the Convention on Biological Diversity (2019), approximately 1,800 species of endemic flora in the Balkans, which accounts for about 30%, can be found within the territory of BiH. BiH boasts a rich diversity of flora, fauna, and fungi, making it one of the most biodiverse regions in Europe. The significant presence of endemic species and relics also contributes to its global importance in terms of biological diversity. Under the current nature protection laws in the entities and the Brčko District (BD), it is mandatory for these entities and the district to establish environmental information systems to ensure the protection of nature.

14. The remarkable diversity of ecosystems in BiH is accompanied by a wide range of services they provide, including food production, raw materials, potable water, medicinal and vitamin resources, regulation of local, regional, and global climate, carbon absorption and storage, prevention and mitigation of natural disasters, wastewater treatment, soil erosion control, disease regulation and control, organic matter production, pollination, material circulation, recreation, mental and physical health, tourism, aesthetic value, cultural and artistic inspiration, spiritual experience, learning, and many other resources. Forest ecosystems, water ecosystems, and agricultural ecosystems play a vital role in providing these ecosystem services.

15. Regrettably, the agricultural ecosystem is experiencing a decline in biodiversity, mirroring the worldwide trend towards monoculture, the utilization of hybrid plants, and the increased reliance on inorganic inputs. In BiH, this shift in the agricultural industry can be attributed to global anthropogenic pressures, including population growth, urbanization, unplanned construction, unregulated use of pesticides and fertilizers, the introduction of invasive and non-native species without proper oversight, as well as the unregulated introduction and manipulation of genetically modified organisms (GMOs). In the post-war period, activities to preserve indigenous genetic resources (primarily plants) have intensified; gene banks have been established within both entities. BiH has great potential for the development of organic agriculture and organic food production (particularly regarding production of plums and blackthorn). Of the three decentralized administrative units, the RS is the only one to date to have adopted a Law on Organic Food Production. Studies indicate that around 160-170 species of medicinal plants in the country are collected and 15-20 species traded commercially.

16. **Water resources**. Bosnia and Herzegovina boasts the highest water potential in the region and ranks fourth in Europe, characterized by a dense river network in the Sava River Basin and a less developed network in the Adriatic Sea Basin, alongside significant groundwater reserves. The country benefits from a total annual rainwater resource of 63.9 km3, with an average annual precipitation of 1250mm/year. The Sava River Basin contributes an average annual runoff of 722 m3/s, accounting for 62.5 percent, while the Adriatic Sea Basin contributes 433 m3/s, comprising 37.5 percent, resulting in an average annual runoff coefficient of approximately 0.5727. This high runoff coefficient indicates that even larger rivers experience torrential flow with rapid concentration. Indeed, despite the abundance of water, many rivers and streams in Bosnia and Herzegovina exhibit torrential characteristics, with elevated water

levels during rainfall and snowmelt, leading to frequent flooding. While floods are natural occurrences, their increased frequency is often attributed to human negligence and irresponsible environmental practices. Good practice measures include anti-flooding initiatives such as the organized arrangement of watercourses, effective drainage systems, afforestation efforts, and the consistent maintenance of plant cover.

17. Additionally, BiH faces the challenge of an unfavorable temporal and spatial distribution of water made worse by climate change, further highlighting the unique characteristics of its natural hydrological regime. The implementation of measures to preserve the quality of surface and underground water is necessary in the country. Some of the main pressures on water bodies in BiH are related to the increased content of nutrients in some surface and underground water bodies, which consequently leads to the acceleration of eutrophication processes. The assumption is that the increased nitrogen content is the result of the use of nutrient fertilizers in agriculture. The country aims at establishing permanent monitoring of water bodies and soil in the county for nutrient salts and conductivity, in order to determine the exact state and sources of pollution and accordingly define appropriate measures, as well as implement measures of good agricultural practice through the wider implementation of the Nitrate Directive in existing water management plans and agricultural plans.

Land degradation and soil erosion.

18. Shallow soils, predominant across the country with deeper occurrences in alluvial areas and the northern region, contribute to limitations in root development and water retention. This characteristic, combined with excess water issues affecting 14% of the territory, creates a complex dynamic that requires careful management to balance water availability and drainage.

19. Over 80% of the country's territory, characterized by slopes greater than 13%, is highly susceptible to water erosion. This erosion is stimulated by various factors, including forest logging, deforestation, intensive and irregular tillage, and increased rainfall. Water erosion, particularly on sloping land, emerges as a significant challenge for sustainable land use in BiH. The erosion not only affects the soil structure and fertility but also contributes to downstream issues such as sedimentation in water bodies, compromising water quality and aquatic ecosystems.The looming issue of soil erosion is anticipated to intensify by the end of the 21st century due to heightened soil erodibility resulting from prolonged droughts, increased precipitation intensity, and changes in land use patterns.

20. Unfortunately, there is a lack of official data on the specific areas affected by erosion, and Bosnia and Herzegovina currently lacks a comprehensive erosion monitoring system. The available data are typically of a partial nature, often collected at the municipality level through various project activities. The figure below illustrates the Revised Universal Soil Loss Equation (RUSLE) for BiH in 2023. This model was developed to comprehend the erosion dynamics within BiH and integrate it into the vulnerability assessment. The findings align with comparable studies conducted by the Joint Research Centre of the European Union (JRC EU) [10]. According to the RUSLE analysis, the land in BiH is estimated to have a significant proportion with a high to extreme erosion rate (around 60%).

[10] Fendrich, A.N., Ciais, P., Lugato, E., Carozzi, M., Guenet, B., Borrelli, P., Naipal, V., McGrath, M., Martin, P. and Panagos, P., 2022. Matrix representation of lateral soil movements: scaling and calibrating CE-DYNAM (v2) at a continental level. *Geoscientific Model Development*, **15**, pp.7835–7857.

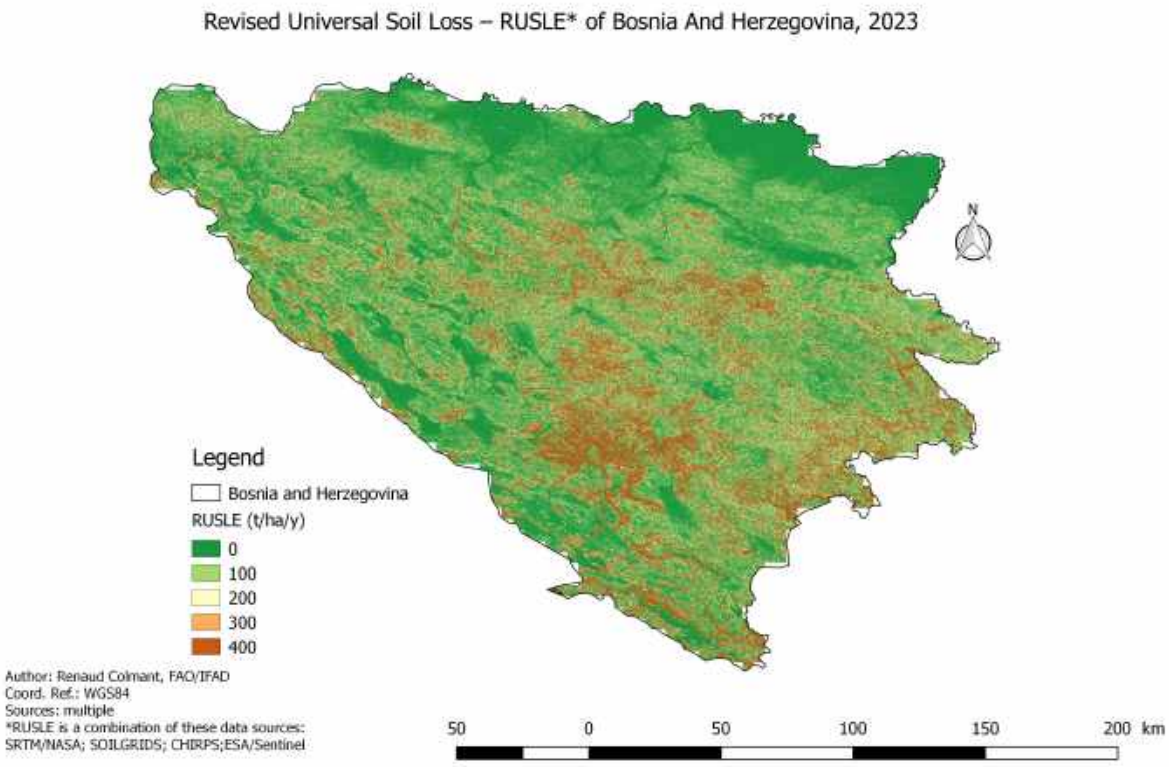


Figure 1: Revised Universal Soil Loss Equation (RUSLE) in BiH in 2023. Sources: ESA Sentinel (NDVI), Gridsoils (Soil), CHIRPS (Prec), NASA SRTM (Altitude).

Table 1: Level of Erosion in BiH based on RUSLE (2023)

Erosion (t/ha/y)	Percentage of land (%)
Very Low (x<1)	30.4
Low (1<x<10)	5.4
Medium (10<x<20)	4.7
High (20<x<50)	11.2
Very High (50<x<100)	12.3
Extreme (x>100)	36.0

21. The prevalence of acid soils covering approximately one-third of the total land poses challenges for various crops, affecting their growth and productivity. Acidic conditions can limit nutrient availability and impact soil structure, further exacerbating the existing issues of low humus content and insufficient essential nutrients. Studies[11] suggest that the organic carbon content in soils is generally at a moderate level. Agricultural land in BiH in general has poor fertility. Therefore, in almost all parts of Bosnia and Herzegovina, the fertility of agricultural land is improved by adding organic or synthetic fertilizers. According to FAOSTAT data for 2020, 72.8 kg of nitrogen, 10.45 kg of phosphorus and 28.24 kg of potassium are used per ha of arable land in BiH (national average), which is below the EU average.

[11] Jones, R.J.A., Hiederer, R., Rusco, E., Loveland, P.J. and Montanarella, L. (2004). The map of organic carbon in topsoils in Europe, Version 1.2, September 2003: Explanation of Special Publication Ispra 2004 No.72 (S.P.I.04.72). European Soil Bureau Research Report No.17, EUR 21209 EN, 26pp. and 1 map in ISO B1 format. Office for Official Publications of the European Communities, Luxembourg.

However, localized analysis[12] show that the use of mineral fertilizer by hectare far exceed the the EU average in specific production, specifically in vegetables production.

22. The inadequacy of soil fertility management practices underscores **the need for targeted interventions and sustainable agricultural practices**. Effective strategies may involve **training sessions of farmers on the optimal timing and method for application of different type of fertilizers, precision farming techniques, self-production of organic fertilisers and the use of appropriate fertilizers and practices to enhance soil fertility.**

23. **Agriculture and food security.** Rural areas dominate the landscape of BiH, encompassing 85% of the territory in the FBiH, 95% in the RS) and 95% in the BD. Agriculture plays a central role in these areas, serving as the primary economic activity[13]. At national level, according to data from the Agency for Statistics of Bosnia and Herzegovina in 2016, cereals constituted 58.9% of the total sown areas, industrial plants 2.3%, vegetables 13.9%, and fodder plants 24.9%. The hilly terrain (45% of agricultural land) is suitable for semi-intensive cattle breeding, while mountainous regions (35%) have limited use due to high altitude and reduced fertility. Less than 20% of land, mainly in lowland areas, supports intensive agriculture. Despite abundant natural water resources, water supply remains a limiting factor in various regions. Irrigation covers only about 0.65% of agriculturally suitable areas.[14] In the FBiH, there are 57,943 registered farms, covering a total of 93,095 hectares, of which 54,600 are family farms. Similarly, the RS has 42,000 farms, spanning 129,137 hectares, with 24,504 of them being family-run. Across Bosnia and Herzegovina, family farms have an average size of 2 hectares, accounting for 50% of the total farms. Furthermore, approximately 80% of all farms in the country are smaller than 5 hectares[15].

24. Food insecurity is on the rise in BiH, and has been even before the COVID-19 pandemic. In 2017, 8.7% of the population were either moderately or severely food insecure, rising to 12.6% in 2020.[16] Accordingly, the prevalence of stunting in children under 5 years stood at 9.1% in 2020, representing little progress since 2012 when the same was 9.3%.

25. According to the OECD-FAO Agricultural Outlook 2020-2029 report, the pandemic was expected to depress and complicate demand for export goods in the next few years and could further undermine food security. The official rural development and economic policy responses in these countries do not foresee any change with respect to the current corporate food regime. This means a **worsening of the position of domestic small-scale food producers and farmers is inevitable if no steps are taken to put human rights and people's needs in the center of policies**. Some opportunities are emerging that are favorable for the introduction of food sovereignty (e.g. the activities of the National Networks for Rural Development).

26. **Vulnerabilities in the national strategy to tackle climate change**. In 2021, Bosnia and Herzegovina updated its Nationally Determined Contributions (NDC) to the UNFCCC and, in 2021, published its Fourth National Communication (FNC) and Second Biennial Update Report on Greenhouse Gas Emissions. The Ministry of Foreign Trade and Economic Relations is entrusted with the coordination of climate change adaptation and mitigation activities, fostering collaboration with governmental bodies, and engaging with international institutions to fulfill climate change commitments and environmental protections.[17] This effort aligns with the country's application, submitted in February 2016, for EU membership, indicating its commitment to harmonizing adaptation plans with EU standards. Bosnia and

[12] Under the IFAD READ project's Environmental and Social Management Plan.
[13] FAO (Food and Agriculture Organization of the United Nations), 2021. Family Farming Knowledge Platform: Bosnia and Herzegovina. http://www.fao.org/ family-farming/countries/BIH/en/ (retrieved May 2023) & https://www.fao.org/ family-farming/countries/en/ (retrieved May 2023).
[14] Fourth National Communication of Bosnia and Herzegovina under the UNFCCC, 2021.
[15] Idem
[16] World Bank Databank: Bosnia and Herzegovina country profile. Accessed May 2023.
[17] Bosnia and Herzegovina (2021). Updated Nationally Determined Contributions. URL: https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Bosnia-Herzegovina%20First/NDC%20BiH_November%202020%20FINAL%20DRAFT%2005%20Nov%20ENG%20LR.pdf

Herzegovina aspires to establish a green economy by 2025, aligning with its EU membership objectives.[18] Despite these aspirations, the country faces significant challenges in formulating and implementing strategies, plans, and programs to address climate change. The federal government is actively working to strengthen institutional and legislative frameworks, aiming to provide comprehensive support across various sectors in tackling the complexities posed by climate change.

27. Understanding and monitoring localized variations in climate patterns at territorial level (i.e. cantons and municipalities) is vital for effective water resource management, agricultural planning, and the implementation of adaptation strategies in BiH. Despite the availability of recent documentation on the situation analysis of agriculture and water management in the context of climate change at the national level (NAP and NDC, 2021), the strategies and investments at the cantonal and municipal levels (i.e. territorial planning) are not adequately addressing the specific climate threats. Instead, there is a tendency to focus on short-term strategies rather than medium to long-term planning. Regrettably, **the clarity of local strategies and the alignment of investments with the evolving climate challenges are still lacking**.[19] This gap hinders the effective implementation of measures that could enhance resilience and adaptability in the agricultural and water sectors. To effectively address the impacts of climate change, it is crucial to assess threats at these levels, prioritize medium to long-term strategies and allocate investments accordingly. Climate data monitoring, assessment, and targeted interventions at farm and landscape level are necessary to address these challenges and enhance the resilience of affected areas.

28. The NAP recognizes the need for suitable strategies in response to shifting precipitation patterns. These strategies encompass various aspects of water resource management, flood prevention, and disaster risk reduction. Infrastructure planning plays a crucial role in this regard, including the enhancement of drainage systems, **implementation of flood protection measures**, and the establishment of **monitoring and early warning systems**. Furthermore, the plan emphasizes the importance of **water harvesting and storage** as a means to mitigate the impact of drought periods. By implementing these measures, the adverse effects of heavy precipitation events and prolonged dry spells can be effectively mitigated. Ongoing monitoring and assessment, along with comprehensive adaptation and resilience strategies and investments, are crucial to address these challenges and enhance the country's preparedness. Furthermore, according to the NAP, addressing recurrent long-term droughts requires a comprehensive approach, including **sustainable agriculture and water management practices, improved storage and distribution systems, and measures to enhance community and ecosystem resilience**.[20] Climate change adaptation measures are essential to minimize future drought occurrences and their severity in BiH.

29. In response to these shifting patterns, it is crucial for BiH to adopt and execute strategies that prioritize sustainable water management, agriculture, and overall resilience. To address these challenges, the current project, STAZA, proposes a transitional path that embraces an agroecological (AE) approach. This approach holds significant potential in adapting to the evolving climate conditions, while simultaneously fostering resilience and promoting long-term sustainability.

30. **Agroecology in BiH.** In recent years, agroecology has gained significant traction worldwide as an innovative approach capable of bringing about transformative shifts in agricultural production and food systems. Its merits have been prominently emphasized in influential publications and policy discussions at the global level.[21] Notably, private sector entities investing in the agrifood sector are increasingly acknowledging the significance of agroecology in promoting sustainable and responsible investments

[18] BiH Fourth National Communication to the UNFCCC (2021).: https://unfccc.int/sites/default/files/resource/FNC%20BiH_ENG%20fin.pdf
[19] Interview with Herzegovina-Neretva Canton and Una-Sana Canton.
[20] The NAP also presents budgets needs related to the activities.
[21] E.g. indicators to achieve the Sustainable Development Goals (SDGs), the United Nations Framework Convention on Climate Change (UNFCCC), the United Nations Convention on Biological Diversity (CBD), United Nations Convention to Combat Desertification (UNCCD), and the Committee for World Food Security (CFS).

which are responding to the climate crisis. Recognizing its potential, they are actively working to expedite the transition towards agroecology as a fundamental solution for the future of food.[22]

31. Agroecology is not widely recognized or integrated across sectors in BiH, making its presence relatively weak as of today. However, studies[23,24] demonstrate that several sectors are already addressing diverse challenges that could be viewed as forming a basis for the future emergence of agroecology on different levels, ranging from individual farms to policy frameworks. These challenges encompass aspects such as organic farming, environmental conservation, direct connections between producers and consumers, market access, circular economies, equitable economic practices, and social inclusivity. They provide potential entry points for the emergence and advancement of agroecology in BiH. By meeting with several stakeholders in the country, the full project design acknowledged that agroecology in BiH is gaining recognition as both a science and a social movement, offering a sustainable approach to agriculture and a promising tool for adaptation to climate change.

Exposure to climate change: current climate, observed and projected changes and hazards

32. BiH is particularly vulnerable to climate change due to its geographical position, economic importance of the agriculture, water management and forestry sectors, especially rural population, as well as due to its limited capacity for climate change adaptation. The Global Climate Risk Index (2021) ranked BiH 14 out of 181 countries in terms of Average loss per unit GDP in (%) for the period 2000-2019. The ND-GAIN Country Index score places BiH at the 80th position, with the lowest scores observed in terms of "Agriculture capacity" in Vulnerability, and "Education" and "Innovation" in Readiness.[25] According to the Nationally Determined Contribution (2021), the most vulnerable sectors to climate change are agriculture and water resources management. Specifically, smallholder farmers are hard hit by increasing risks and vulnerabilities associated with climate-related events, such as droughts, hail, floods, and late frosts and this affects their capacity to keep agriculture produce as primary source of income. Smallholder farmers in BiH are particularly susceptible to these extreme weather events, which have become more frequent and intense due to climate change.

Current climate

33. Due to its size, varied topography, and unique landscape, BiH exhibits multiple distinct climate types. The northern and central areas experience a temperate continental climate, while sub-mountainous and mountainous areas have colder climates. Along the coast, there is an Adriatic climate, and the Herzegovina region in the south and southeast has a modified Adriatic climate. These climate characteristics are influenced by the Adriatic Sea and the local topography, particularly the Dinarides Mountains that run parallel to the coast. BiH benefits from ample sunshine in the southern area and possesses a rich biodiversity, attributed to three distinct geological and climatic regions: the Mediterranean, Euro Siberian-Boreal American, and Alpine-Nordic regions. Historically, winter temperatures range from -6.0°C to 6.2°C, while summer temperatures range from 9.8°C to 24.7°C.[26] Rainfall is relatively consistent throughout the year with an annual average rainfall of 553.3 mm, although disruptions in the seasonal onset and distribution of rainfall have been observed in the past two decades, leading to unexpected flooding, drought periods, and elevated temperatures.

Historical climate trends

34. In BiH, there is a notable and concerning upward trend in maximum annual temperatures. Over the years, there has been a consistent increase in the highest recorded temperatures, indicating a changing

[22] Global Alliance for the Future of Food : https://futureoffood.org/
[23] Mapping the Development of Agroecology in Europe Country Reports Series volume 1 (2023). Wezel A. - Grard B. - Gkisakis V. Agroecology for Europe (AE4EU).
[24] Transition from Conventional to Agroecological Systems, Case Study of Bosnia and Herzegovina (2022). G. Mićić, G. R. Knežić, G. Đurić, D. Markovic. Economics of Agriculture, Year 69, No. 1, 2022, (pp. 269-279), doi:10.5937/ekoPolj2201269M
[25] ND-GAIN Country Index: https://gain-new.crc.nd.edu/country/bosnia-herzegovina#vulnerability - The ND-GAIN Country Index captures a country's Vulnerability to climate change and other global challenges, and its Readiness to improve resilience.
[26] Climate Risk Profile: Bosnia and Herzegovina (2021): The World Bank Group.

climate (figure 1, left). This rise in maximum temperatures has implications for various sectors, including agriculture, water resources, and public health. Additionally, there has been a significant decrease in the number of days per year with the minimum temperature (Tmin) falling below the freezing point of 0°C (figure 1, right). This shift in temperature patterns affects snow cover dynamics, resulting in a shorter duration of snow cover and faster snowmelt.[27]

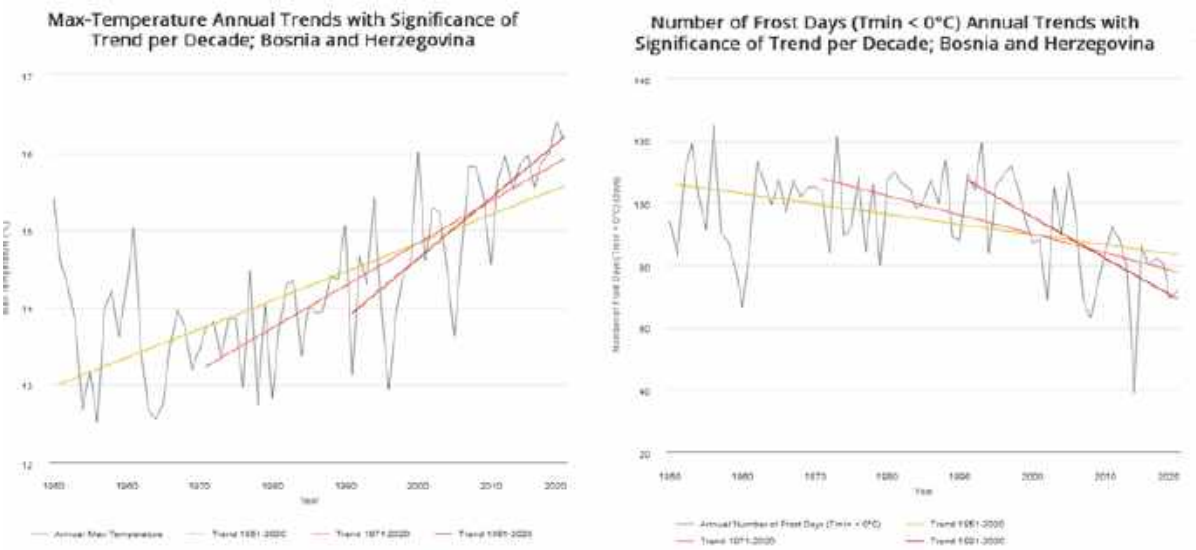


Figure 2: Max-Temperature (left) & Number of Frost Days (Tmin<0°C) (Right). Annual Trends with Significance of Trend per Decade in Bosnia and Herzegovina 1990-2020. Source: CCKP.

35. In BiH, there has been a slight upward trend in annual precipitation over the past few decades. However, this increase is not statistically significant at the national level. It is important to note that the distribution of precipitation throughout the year is not uniform across the country. Specifically, there is a concerning negative trend in precipitation during the months of March, April, June, and October. These months have experienced a decrease in rainfall over time, which raises concerns about water availability (figure 2).

[27] An analysis of the snow dynamic in BiH will be done during full design using the data from NASA MODIS MOD10A2 V.6

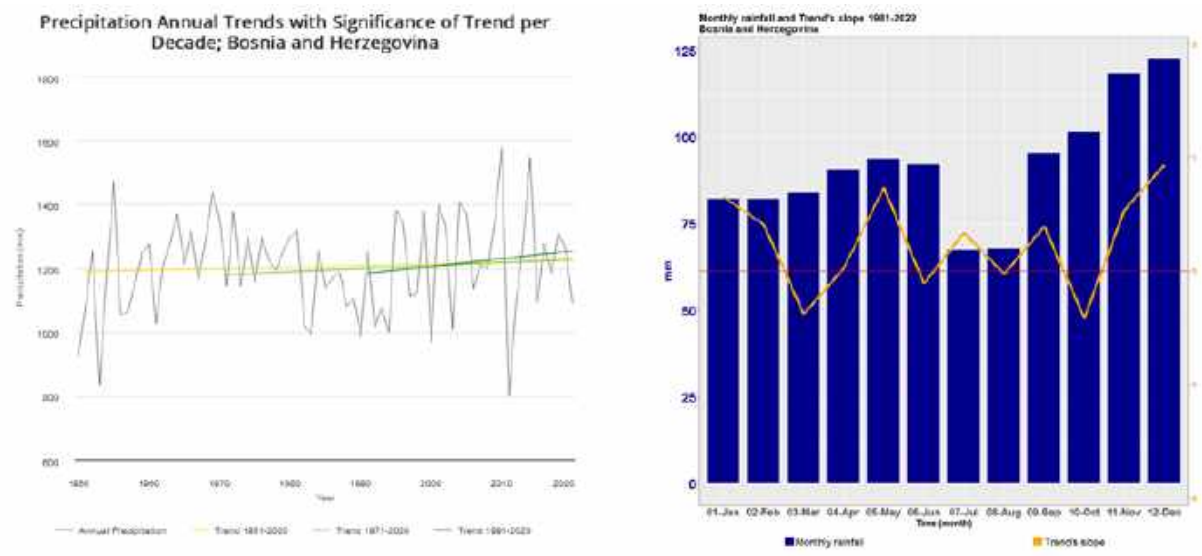


Figure 3: Precipitation Annual Trends with Significance of Trend per Decade in BiH 1990-2020 (left). Source: CCKP. Monthly rainfall and Trend's slope in BiH 1981-2022. Source: CHIRPS.

36. There has been a notable increase in the frequency of heavy precipitation events (20mm/d, figure 3) since 1981, particularly during the period from March to August. This trend is observed in most of FBiH and of RS. While there may not be a significant change in the overall annual precipitation levels, there is a change in the distribution of precipitation.[28] Furthermore, there is a concentration of precipitation during that specific periods of the year.

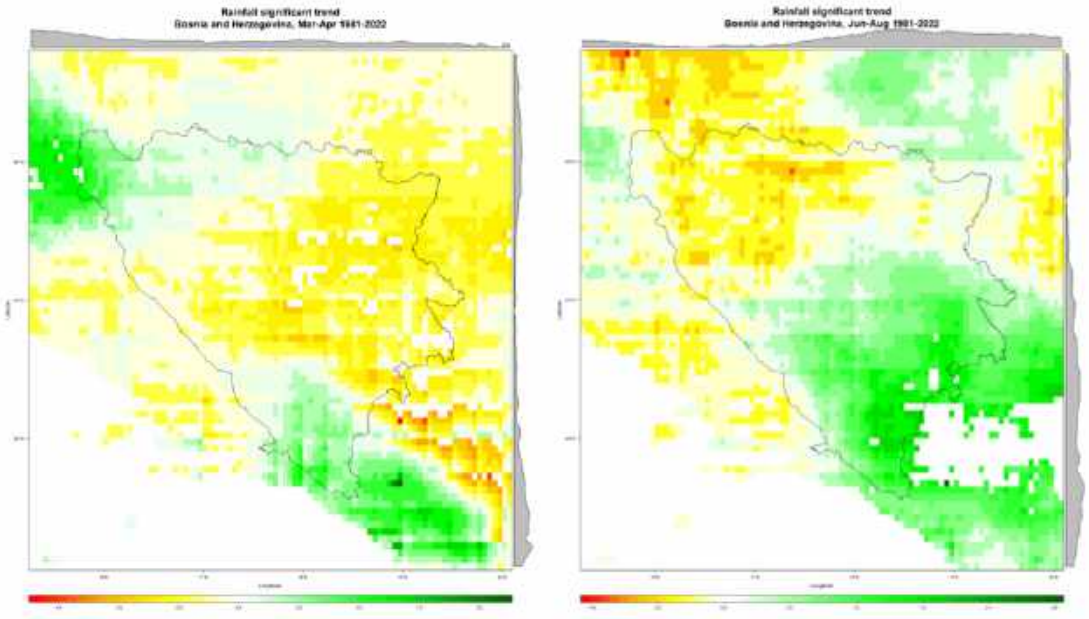


Figure 4: Precipitation significant trend in Mar-Apr (left) and Jun-Aug (right) in BiH, 1981-2022. Source: CHIRPS.

37. The precipitation trend in BiH exhibits temporal and geographical variations across the country (figure 4). Different areas experience distinct impacts in terms of precipitation patterns. The central-eastern part of the country is particularly affected by a decrease in precipitation during the spring months

[28] Change in the standard deviation of the annually accumulated precipitation : World Bank Climate Change Knowledge Portal (CCKP): https://climateknowledgeportal.worldbank.org/country/bosnia-and-herzegovina/trends-variability-historical

of March and April. Conversely, the north-west part of BiH faces challenges during the summer months of June, July, and August when precipitation levels tend to decline.

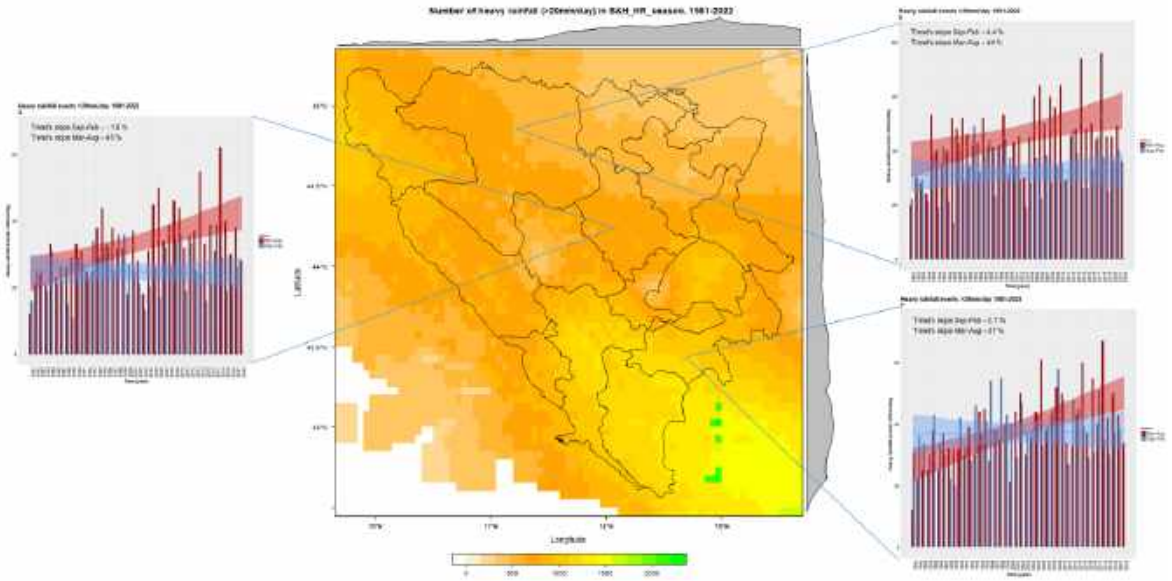


Figure 5: Number of heavy precipitation events (>20mm/day) accumulated (map, center) and seasonal trend Mar-Aug (red) and Sep-Feb (Blue) (graphs, left and right) in BiH, 1981-2022. Source: CHIRPS.

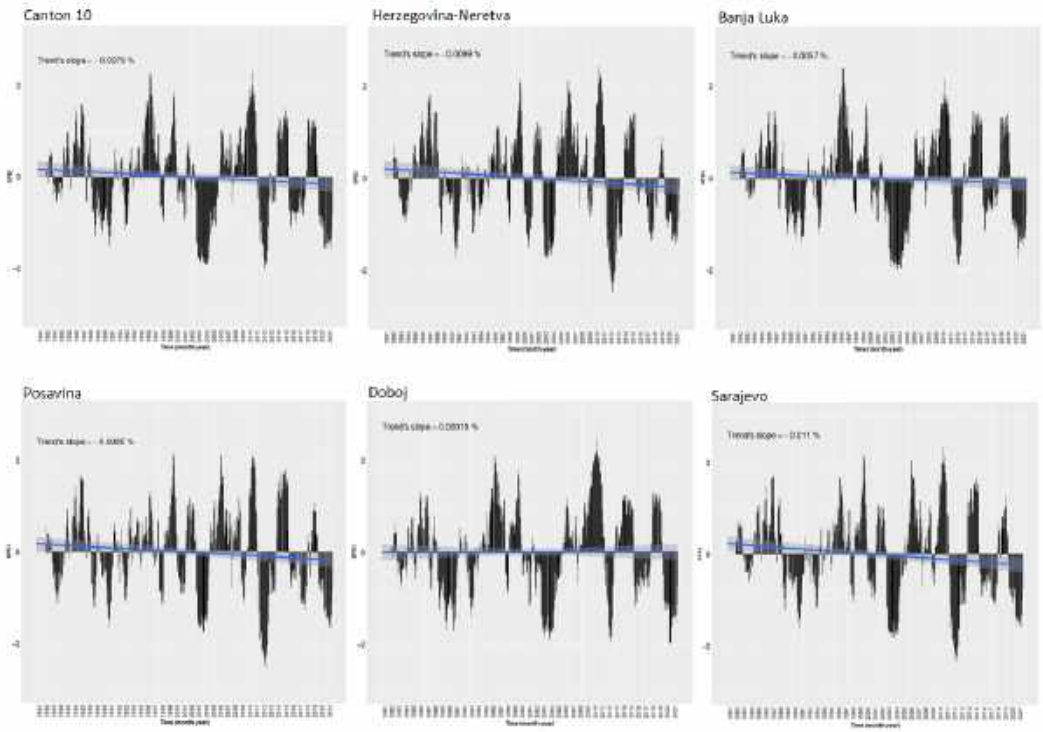


Figure 6: Monthly long term Drought index[29] (SPEI 18 months) for the Canton 10, Herzegovin-Nereta canton, Banja Luka region, Posavina canton, Doboj region and Sarajevo canton for the period 1981-2021. Source: CHIRPS, TerraClimate.

[29] SPEI categories: [+, -] 2.00 and above/below = extremely [wet, dry]; [+, -] 1.50 to 1.99 = severely [wet, dry]; [+, -] 1.00 to 1.4 = moderately [wet, dry] ; [+, -] 0.00 to 0.99 = Mildly [wet, dry] or near normal [wet, dry].

38. The analysis of the drought index (Standardized Precipitation Evapotranspiration Index or SPEI, for 4 and 18 months, figure 5) in BiH since 1981 reveals an alarming trend of increased frequency of drought occurrences, particularly noticeable since 2010. However, the impact of these droughts is not uniformly reflected at the national level, as certain regions bear a greater burden. A significant portion of the country faces the consequences of long-term drought, resulting in adverse effects on groundwater reserves and overall water availability. These prolonged drought periods pose a severe challenge to the affected areas. Among the most vulnerable cantons and regions that experience recurrent and prolonged drought conditions (SPEI 18 months) are Canton 10, Banja Luka, Doboj, Foca, Herzegovina-Neretva Canton, Posavina, West Herzegovina, and Sarajevo. These areas are particularly susceptible to the impacts of extended water scarcity, which can have cascading effects on agriculture, water supply for communities, and the overall socio-economic well-being of the population.

Future climate scenarios

39. Bosnia and Herzegovina is projected to experience a continuation of the climate trends observed during the past decades. According to climate change projections (figure 6), there will be a continuation trend of increasing average temperatures, particularly during the summer season, and, by the year 2050, there is a possibility of a temperature rise of approximately 3 degrees Celsius during the summer months compared to the reference period of 1995-2014. This projection takes into account the middle and high-emission scenarios, respectively SSP2-4.5 and SSP5-8.5, which represent future trajectories with medium and significant greenhouse gas emissions (multi-model ensemble).

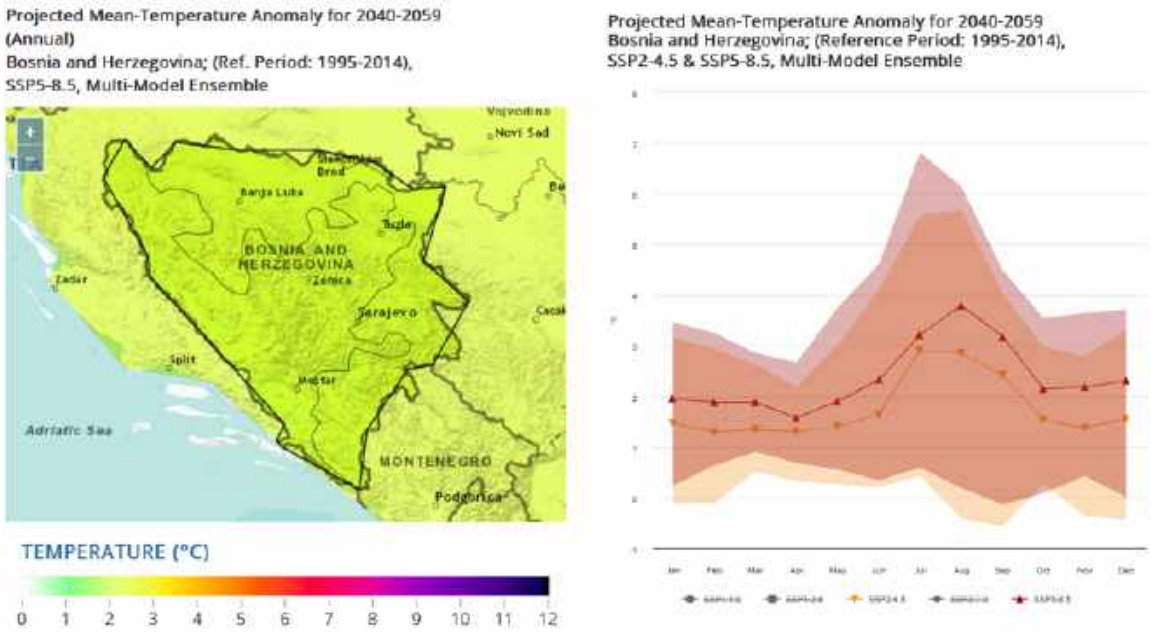


Figure 7: Projected Mean Temperature Anomaly for 2040-2059 in BiH compared to the reference period 1955-2014, SSP2-4.5 and SSP5-8.5, Multi-Model Ensemble. Source: CCKP.

40. Projections indicate that annual precipitation is anticipated to remain relatively similar throughout the country by 2050 (figure 7). However, significant changes are expected in the seasonal distribution of precipitation. Specifically, the spring and summer months are projected to become drier compared to the reference period of 1995-2014. Besides, the autumn and winter months are projected to experience increased rainfall compared to the reference period. These projected changes in precipitation patterns align with broader climate change trends observed worldwide, where shifts in seasonal rainfall distribution are becoming more prevalent.

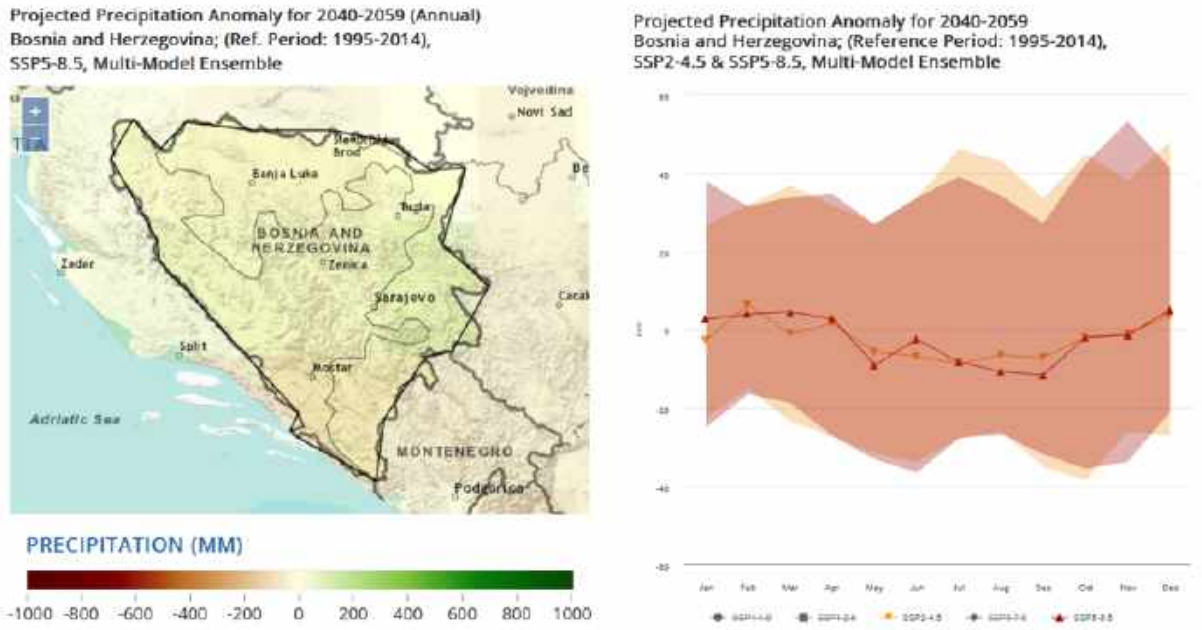


Figure 8: Projected Precipitation Anomaly for 2040-2059 in BiH compared to the reference period 1955-2014, SSP2-4.5 and SSP5-8.5, Multi-Model Ensemble. Source: CCKP.

41. The drought index, as measured by the SPEI (figure 8, left), is projected to decrease nationally, decreasing by a value of -0.5 (based on the SSP5-8.5 scenario) in several areas of the country compared with the current values of the index. This indicates an increase in the severity and frequency of drought events over time, posing challenges to water resources and agricultural productivity.

42. Furthermore, the number of frost days is expected to decline during autumn and summer compared to the reference period of 1995-2014. By 2050, it is projected that the average number of frost days will be reduced to 65 days (based on the SSP5-8.5 scenario), while in 2014, there were 86 frost days (figure 8, right).

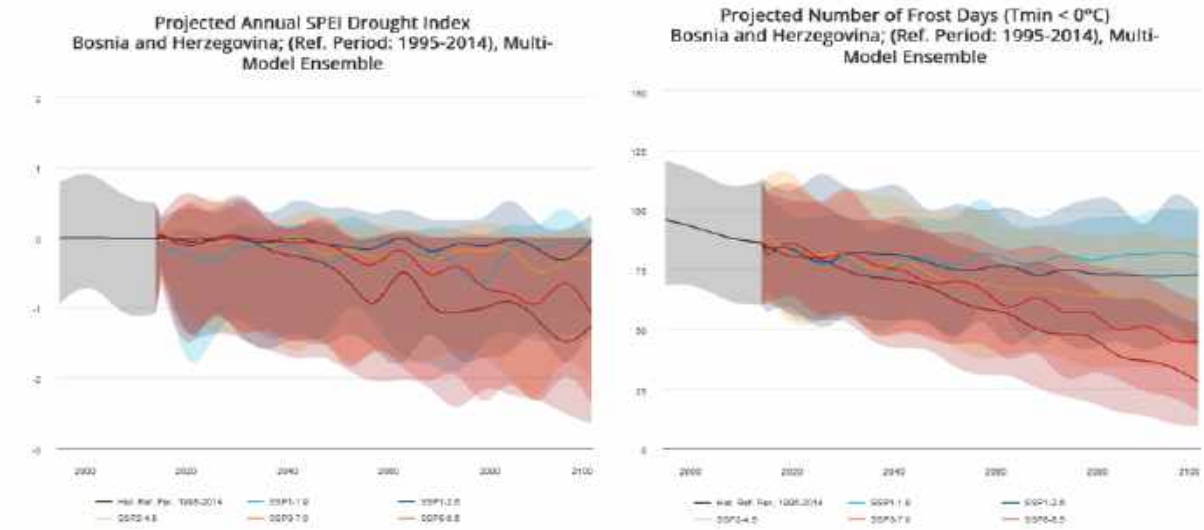


Figure 9: Projected Annual SPEI Drought Index and Number of Frost Days (Tmin<0°C) in BiH (Reference period 1995-2014), Multi-Model Ensemble. Source: CCKP.

Vulnerability to climate change impacts

43. According to the Nationally Determined Contribution (NDC) of BiH to the UNFCCC (2021), the most vulnerable sectors to climate change are agriculture and water resources management. The agricultural sector is increasingly feeling the impacts of climate change, with notable effects becoming more pronounced in the 21st century. These impacts include rising air temperatures, extended heat waves, which, when combined with inadequate rainfall, result in droughts. Additionally, there has been an increase in the occurrence of hail clouds and hailstorms, a decrease in summer precipitation, fewer snow days, and reduced snow cover retention time.

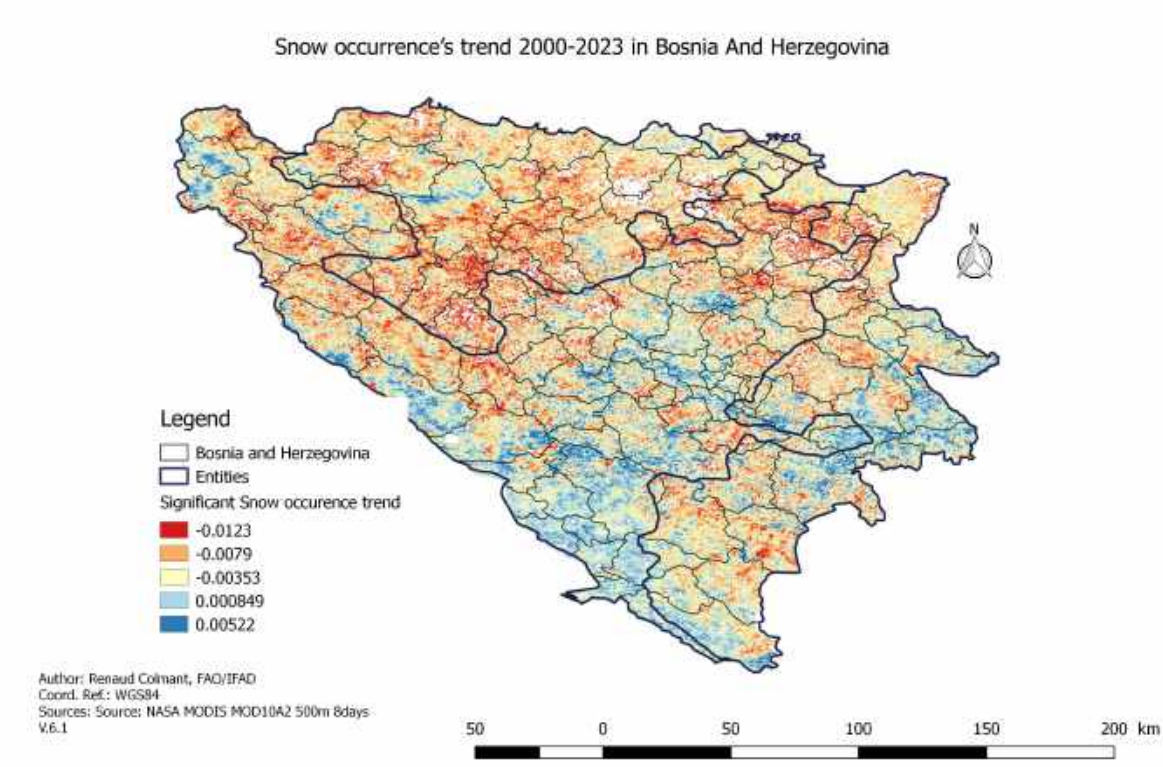


Figure 10: Snow occurrence's trend 2000-2023 in BiH. Source: NASA MODIS MOD10A2 500m 8days V.6 & IFAD

44. The analysis of the snow extent at national level shows that the total snow cover extent has decreased by around 35 square kilometres (0.41% of average snow extent) for the period 2000-2023 (see figure X).

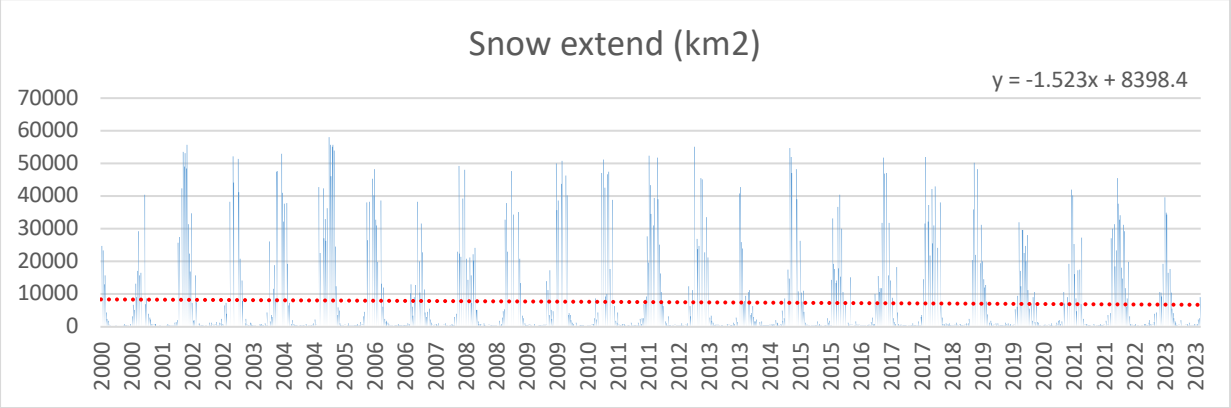


Figure 11: Snow extent in square kilometres at national level in BiH 2000-2021. Sources: NASA MODIS MOD10A2 V.6 & IFAD

45. Climate extremes, such as strong and storm-force winds affecting fruit production and farming, and heavy precipitation leading to floods and erosions, further exacerbate the situation. The consequences of climate change on the agricultural sector are predominantly negative, with neighboring countries like Serbia and Croatia witnessing yield reductions of up to 10 percent.[30] Besides, climate change-induced land degradation has become extreme in BIH, as a consequence of more frequent floods, drought and wildfires in recent decades.[31]

46. Over the past decade, the country has experienced a notable frequency of extreme weather events. Specifically, within the last ten years, six years have been categorized as very dry to extremely dry, while five years have been marked by extreme floods. From 2009 to 2019, nearly every year witnessed significant weather phenomena, contributing to a period of exceptional weather conditions. During this period, the country faced a series of challenges, including devastating floods in 2009, 2010, 2014, 2018, and 2019, which caused widespread damage and displacement. In May 2023, Bosnia and Herzegovina experienced severe flooding in its northern region due to heavy rainfall. A state of emergency has been declared in numerous cities and municipalities. Communities along the Sana and Una rivers witnessed widespread flooding, resulting in the inundation of buildings and homes. The heavy rains triggered landslides in various areas. The overflow of water disrupted traffic on multiple roadways. [32]

47. Additionally, prolonged periods of drought and heat waves affected the region in 2011, 2012, 2013, 2015, 2016, 2017, 2020, 2021 and 2022[33] impacting agricultural production, water resources, and posing risks to human health. Based on the report from the Ministry of Foreign Trade and Economic Relations of Bosnia and Herzegovina (MOFTER), fruit production experienced a significant decline of 35% in 2017 compared to the previous year. This sharp reduction was attributed to the severe drought conditions during that period.[34] Depletion of the groundwater table and decrease of the springs discharge are some aspects influenced by the recent climate change.[35] In early 2012, cold waves brought extreme low temperatures, while in mid-2012 and late 2017, strong winds battered the area. Furthermore, an unusually high number of hail days were recorded in 2018, posing risks to crops and infrastructure.

30 National Adaptation Plan (NAP) of Bosnia and Herzegovina (2021)
31 Reversing land degradation neutrality with sustainable land management and sustainable forest management practices, UN Bosnia and Herzegovina, Press release (December 2022).
https://bosniaherzegovina.un.org/en/211435-reversing-land-degradation-neutrality-sustainable-land-management-and-sustainable-forest
32 European Commission, Joint Research Centre (JRC) (2023): Flood in Bosnia and Herzegovina (2023-05-17). European Commission, Joint Research Centre (JRC) [Dataset] PID: http://data.europa.eu/89h/c3cf9504-f45d-4dc2-a4df-4c3dcdf00550
33 Copernicus: https://climate.copernicus.eu/all-content (retrieved June 2023)
34 MOFTER. Godišnji Izvještaj iz Oblasti Poljoprivrede, Ishrane i Ruralnog Razvoja Bosne i Hercegovine za 2017. Sarajevo, BiH. 2018.
35Nistor, Mărgărit-Mircea. Geo-Spatial Information Science; Wuhan Vol. 22, Iss. 4, (Dec 2019): 345-358. DOI:10.1080/10095020.2019.1613776

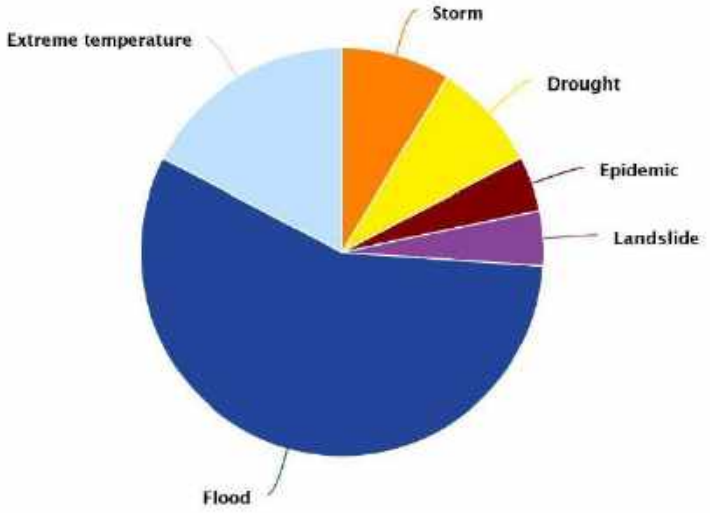


Figure 12: Average annual natural hazard occurrence in B&H for the period 1900–2018. Source: World Bank CCKP.

48. The climate change analysis presented in this document aligns with the observed impacts within the country, which is consistent with the feedback received during the design mission from various stakeholders, including farmers, cooperatives, private companies, faculties, and ministries. The insights gathered from these interactions corroborate the findings and reinforce the understanding of the climate-related challenges faced by BiH.

49. The observed and predicted changes in temperature patterns highlight the ongoing climate shifts in the country. The decline in frosty days impacts the winter dormancy of certain plant species, disrupts the natural life cycles of organisms, and poses challenges to cold-dependent crops and horticultural activities. Furthermore, water storage in the soil is affected by shorter duration of snow cover and faster snowmelt, making the ecosystem more prone to droughts and floods.

50. The changing precipitation patterns in spring and summer may have implications for the agricultural sector, as they coincide with critical periods for crop growth, plant development, and water requirements. Decreased precipitation during these months could lead to water stress, reduced crop yields, and increased vulnerability to drought conditions. Additionally, the declining precipitation trend in June raises concerns for water resources management, as this month is typically associated with increased water demand due to higher temperatures. The negative trend observed during October is also significant, as it coincides with the transition period from autumn to winter, when precipitation plays a crucial role in replenishing groundwater and ensuring sufficient water availability for the following months.

51. This shift in precipitation patterns has implications for the hydrological cycle and water resource management in BiH. The increase in heavy precipitation events during the spring and summer months can lead to heightened risks of flash floods and water-related hazards. These events can pose challenges to infrastructure, agriculture, and human settlements, particularly in areas that are prone to flooding. These fluctuations in precipitation distribution have implications for various sectors and ecosystems in BiH. The decreased precipitation during spring in the central region can affect agricultural activities, including crop growth and water availability for irrigation purposes. It may also impact natural ecosystems and their associated flora and fauna, which rely on sufficient water supply during this critical period. Similarly, the reduced precipitation observed during the summer months in the northern part of BiH can have significant consequences for agriculture, as this period coincides with peak agricultural activities and the growing season for many crops. Insufficient rainfall during June to August can lead to water stress for crops, potentially affecting yields and agricultural productivity. It can also impact freshwater resources and contribute to a higher risk of wildfires, particularly in forested areas.

52. Droughts pose a significant threat to agricultural productivity, as they result in reduced water availability, soil moisture depletion, and crop failures. Smallholder farmers heavily rely on rain-fed agriculture in BiH (0.02% of agricultural land is irrigated[36]), making them highly vulnerable to prolonged dry spells. Similarly, floods have devastating consequences for smallholder farmers, leading to soil erosion, infrastructure damage, and crop losses. With climate change intensifying precipitation patterns, the risk of flash floods and river overflow is on the rise. Late frosts pose another significant challenge for smallholder farmers, as they can severely damage crops and impair agricultural productivity. Climate change has disrupted traditional weather patterns, leading to unpredictable extreme climate events occurring outside their usual season.

53. The table below is summarizing the main drivers and impacts of climate change on agriculture and water resources in Bosnia and Herzegovina:

Table 2: Main drivers and Main impacts of CC in BiH

Main Drivers	Main Impacts
Rising air temperatures	Droughts, reduced water availability, and soil moisture depletion
Extended heat waves	Increased risk of wildfires, water stress, and crop failures
Increased occurrence of hailstorms	Crop damage and reduced agricultural productivity
Climate extremes (strong winds, storms)	Infrastructure damage, soil erosion, and crop losses
Heavy precipitation events	Flash floods, water-related hazards, and risks to agriculture and human settlements, Soil erosion, infrastructure damage, and crop losses
Decline in frosty days	Impact on winter dormancy of certain plant species and disruption of natural life cycles
Late frosts	Severe damage to crops and impaired agricultural productivity
Shorter duration of snow cover and faster snowmelt	Increased vulnerability to droughts and floods, affecting water storage in the soil
Changing precipitation patterns in spring and summer	Water stress, reduced crop yields, and increased vulnerability to drought conditions. Reduced water availability, soil moisture depletion, and crop failures.
Decreased precipitation in June	Challenges for water resources management due to increased demand and higher temperatures
Decreased precipitation in October	Impact on groundwater replenishment and water availability for the following months

54. The National Adaptation Plan (NAP, 2021) highlights that climate change will have varying impacts on the four distinct agroecological areas of BiH:

- High karst area with karst fields: This region is projected to experience heavier precipitation, leading to increased erosion and a higher risk of forest fires.

- Lower Herzegovina area (including the upper Neretva and karst fields): This region is expected to face a more intense increase in temperature, higher water demand, decreased precipitation, and an increase in extreme weather events such as heavy rainfall and hailstorms.

- Central hilly-cum-mountainous area with river valleys: This region is relatively less threatened by climate change, but it may experience intense erosion and floods due to heavy precipitation and face higher temperatures and reduced precipitation in valleys, leading to the occurrence of droughts.

[36] FAO AQUASTAT: https://www.fao.org/aquastat/en/geospatial-information/global-maps-irrigated-areas/irrigation-by-country/country/BIH

- Lowland hilly area, including serpentine and flysch zones: This region is significantly impacted by climate change, with increased heavy precipitation causing floods and waterlogging, as well as more frequent heat waves, droughts, windstorms, and hailstorms. Warm winters negatively affect fruit production, and late spring frosts can damage blooming fruit trees. Under the RCP8.5 climate scenario, these climate extremes are expected to occur more frequently by the end of the 21st century.

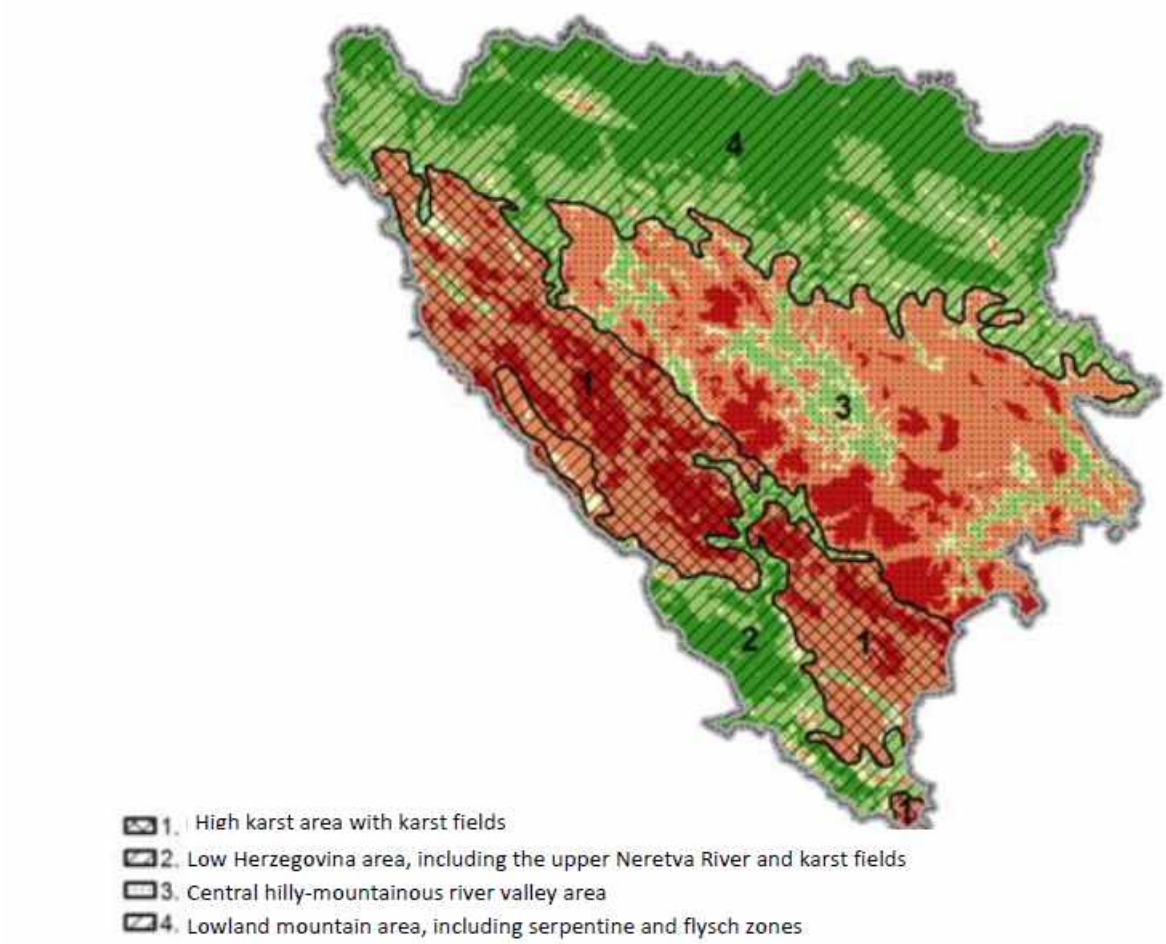


Figure 13: Agro ecological zones of Bosnia and Herzegovina. Source: BiH 4th National Communication to the UNFCCC (2021)

Theory of Change and Approach

55. BiH grapples with a complex landscape of challenges, encompassing climate change, social dynamics, and agricultural sustainability. As presented in the above sections, the country experiences climate variability, marked by prolonged droughts, intensified precipitation, and shifts in precipitation patterns. With over 80% of the territory situated on slopes greater than 13%, water erosion poses a significant threat, particularly on sloping lands. Soil degradation compounds these issues, with acid soils covering about one-third of the land, low humus content, and insufficient essential nutrients, painting a multifaceted picture for sustainable agriculture.

56. In this context, small-scale producers emerge as particularly vulnerable entities facing the brunt of climate shocks. These producers often lack the means to anticipate and adapt to the accelerating changes brought about by climate change. The impacts extend beyond drought and heat cycles, encompassing challenges such as hail, late spring frost, and an increase in pests and diseases—each exacerbated by the evolving climate. Certain regions and demographic groups, including women, youth,

and marginalized farmers, find themselves particularly vulnerable to the impacts of climate change. The compounding factors of income instability, limited social capital, gaps in knowledge and awareness about climate change adaptation measures and deficient infrastructure, especially in water management and markets, further amplify the vulnerabilities of these producers in BiH.

57. STAZA aims to address these challenges through a multi-faceted approach. STAZA's comprehensive approach envisions empowering communities, especially vulnerable groups, by enhancing their adaptive capacity to climate change. The focus on participatory planning, sustainable farming practices, improved market access, and policy support ensures a holistic response to the complex challenges posed by climate change in Bosnia and Herzegovina.

58. Through **Enhanced Community Mobilization and Improved Knowledge for Climate Change Adaptation**, Component 1 of the STAZA project is strategically designed to enhance community mobilization and improve knowledge and exchange for climate change adaptation. Recognizing the multifaceted challenges posed by climate change, the emphasis is on addressing trade-offs associated with climate change and making informed decisions at the territorial level. In Component 1 of the STAZA project, the focus is on strengthening Clusters, collaborative platforms established in previous IFAD-supported interventions, which serve as Multi-Stakeholder Platforms (MSPs). These Clusters bring together diverse stakeholders, including cantons, municipalities, extension services, business leaders, cooperatives, and individual farmers. By supporting and enhancing these Clusters, STAZA establishes a robust structure for project implementation and information dissemination, ensuring long-term sustainability. Additionally, the project prioritizes gender-awareness training and youth involvement, aiming for gender-responsive and youth-engaged participatory methods. A comprehensive climate change analysis will be conducted at the Cluster level, leveraging partnerships with educational institutions and research centers. This collaboration will contributes to formulating Participatory Local Climate Adaptation Plans (LCAPs), providing a comprehensive framework for addressing climate change impacts. Furthermore, focuses on exchange visits, facilitating knowledge-sharing and empowering participants to incorporate effective actions into their LCAPs based on evidence, fostering the exchange of best practices and solutions to combat climate change at the local level.

59. Component 1 serves as the foundational pillar for the entire STAZA project. The Participatory Local Climate Adaptation Plans (LCAPs) developed under this component provide a crucial roadmap for subsequent actions in Components 2 and 3. The insights gained from the community-driven planning process inform the implementation of adaptive farming systems, grants for scaling up climate-adaptive initiatives, infrastructure development and policy support in later project stages, ensuring that subsequent activities are tailored to the specific needs and priorities identified at the territorial level.

60. Component 2 of the STAZA project is strategically designed to address the challenges faced by small-scale producers, who are disproportionately impacted by climate change in Bosnia and Herzegovina (BiH). Recognizing that these producers often lack the resources to adapt to evolving climatic conditions, the component focuses on enhancing their resilience through a combination of adaptive farming systems, improved market access, and targeted infrastructure development leading to **Enhanced resilience of smallholders' livelihoods to climate change** and **Improved resilience of ecosystems and infrastructure's assets.** Component 2 of the STAZA project employs a multi-level approach to enhance the resilience of small-scale producers in BiH against the impacts of climate change. Through the implementation of innovative adaptive farming systems, the project focuses on empowering farmers with the knowledge and skills necessary to navigate climate-related challenges. The introduction of grants for scaling up climate-adaptive initiatives will facilitate the broad adoption of innovative solutions among farmers, fostering sustainability and resilience. Strengthening market access is prioritized, with strategies like producer-consumer links and open calls for sustainable processing practices, promoting local markets and supporting small-scale producers. Additionally, biotechnical measures and rural adaptive infrastructure initiatives at the landscape level aim to safeguard ecosystems and infrastructure assets from climate-related impacts.

61. The adaptive farming systems developed under Component 2 align with the Local Climate Adaptation Plans (LCAPs) formulated in Component 1. The LCAPs provide the foundation for identifying and implementing specific strategies that integrate sustainable agricultural practices. The success of Component 2 is contingent on knowledge sharing and policy support, which are pivotal aspects of Component 3. By engaging in the dissemination of research findings and advocating for policy changes, Component 3 reinforces the adaptive capacity cultivated through Component 2 activities.

62. The third component aims at improving **knowledge and research for integrating adaptation strategies and mechanisms at cantonal/municipal and national policy levels, drawing on project approaches and implementation lessons.** The component recognizes that effective policies, informed by robust research and knowledge-sharing mechanisms, are fundamental to promoting sustainable practices and mitigating the impacts of climate change. In Component 3, the project will actively share knowledge and advocate for climate-resilient policies. This includes engaging with clusters as knowledge aggregators, conducting workshops, and disseminating gender and climate change studies. STAZA will contribute to curriculum development in educational institutions, ensuring that climate change and adaptive approaches are integrated into agricultural and other relevant courses. Moreover, the project will support agricultural research grants to bridge the gap between science and business sectors.

63. Component 3, with its emphasis on policy support and knowledge enhancement, acts as a linchpin that connects the localized efforts of Component 1 and the on-the-ground interventions of Component 2. By fostering a continuous feedback loop between local realities, regional expertise, and policy advocacy, the STAZA project aims to create a holistic and adaptive framework for sustainable agriculture in Bosnia and Herzegovina.

64. **Agroecology approach.** Adopted by the FAO Council in December 2019, the 10 Elements of Agroecology[37] present a comprehensive analytical framework to guide the transition to sustainable food and agriculture systems by providing holistic and long-term solutions. The 10 Elements are: (i) diversity; (ii) synergies; (iii) efficiency; (iv) resilience; (v) recycling; (vi) co-creation and sharing of knowledge; (vii) human and social values; (viii) culture and food traditions; (ix) responsible governance; and (x) circular and solidarity economy.

65. As part of the multi-agency Scaling Up Agroecology Initiative[38] – a process initiated by FAO in 2018 in conjunction with its Second International Symposium on Agroecology: Scaling up Agroecology to achieve the Sustainable Development Goals[39], IFAD undertook a stocktake covering 207 projects with completion dates between 2018-2023[40]. In order to do the analysis of the projects a number of AE activities at different levels were identified and projects were classified in four main categories, from AE-based projects to partially-AE (divided in two sub-categories) and non-AE projects.

66. The IFAD study revealed compelling findings regarding the incorporation of gender and climate change adaptation in different project types. AE-based projects consistently outperformed others, with the highest percentage of integration, followed by partially AE projects, while non-AE projects lagged significantly behind. An impressive 96% of AE-based projects successfully incorporated climate change considerations, while non-AE projects struggled at a mere 18%. Partially AE projects also demonstrated notable progress, with 60-83% of projects integrating adaptation to climate change into their activities.

[37] The 10 Elements have been elaborated following the international and regional symposiums on agroecology: http://www.fao.org/3/i9037en/i9037en.pdf.

[38] Including other partners such as the World Food Programme (WFP), the United Nations Secretariat of the Convention on Biological Diversity (SCBD), the United Nations Development Programme (UNDP), the United Nations Environment Programme (UNEP), and the World Bank, among others.

[39] See http://www.fao.org/about/meetings/second-international-agroecology-symposium/en/.

[40] Stock-take report on agroecology in IFAD operations: An integrated approach to sustainable food systems (2021) https://www.ifad.org/en/web/knowledge/-/stock-take-report-on-agroecology

67. The advantages of the agroecology approach extended beyond climate change adaptation to encompass youth and gender considerations. AE-based projects showcased their strength by incorporating specific youth activities in 81% of cases, while all projects prioritized gender inclusivity. In comparison, non-AE projects scored lower at 59% for youth activities and 89% for gender integration. Indigenous Peoples are also targeted in 62 per cent of AE-related projects, compared to the 29 per cent of non-AE projects. These results firmly confirmed the efficacy of the agroecology approach in fostering climate change resilience and gender and social inclusion through project implementation.

68. Moreover, AE-based projects demonstrate higher ratings across multiple dimensions (from IFAD's projects rating), including Gender Equality and Women's Empowerment, Food Security, Adaptation to Climate Change, Environment and Natural Resource Management, Human and Social Capital, Sustainability, and Effectiveness. These findings highlight the inherent comparative advantage of integrated agroecology approaches in attaining IFAD's development effectiveness targets. These targets are closely aligned with the AF mandate on Adaptation to Climate Change, the Gender policy, and the Environmental and Social Policy. By excelling in these areas, AE-based projects not only address climate change challenges but also foster gender equality, promote sustainable management of resources, and enhance overall project impact and effectiveness. They underscored the immense opportunity to leverage this approach in projects dedicated to adaptation to climate change, further enhancing their positive impact.

69. In the context of climate change adaptation, agroecology offers valuable strategies. By promoting diverse cropping systems, agroforestry, and agrobiodiversity, it enhances the resilience of agricultural ecosystems, enabling them to better withstand extreme weather events and changing climatic conditions already visible in BiH (as presented above). Additionally, agroecology promotes practices such as water conservation, soil conservation, and organic farming, which reduce greenhouse gas emissions and contribute to carbon sequestration.

70. STAZA faces several significant climate change barriers that hinder its progress towards building resilience in the agricultural sector. General barriers include a lack of capacity to effectively address climate change, limited market access for farmers, and an uncoordinated regulatory environment. Addressing capacity barriers is crucial, as there is a lack of capacity to offer formal high-level CC information and training to farmers, as well as limited access to agroecology approaches and resilient technologies. Additionally, farmers' ability to access highly profitable markets is limited, and insufficient data on climate scenarios' impact in agriculture impedes informed decision-making. Market barriers persist, with investments not aligning with local strategies and a lack of Nature-based Solutions (NbS) capacity. Regulation barriers arise from local strategies inadequately countering CC and a lack of mainstreaming CC in national policies. Overcoming these barriers is essential to enable the project's success and ensure sustainable and climate-resilient agricultural practices in BiH.

71. STAZA embraces an agroecology approach as a cornerstone of its strategy for sustainable agricultural development. The project recognizes that agroecology, with its emphasis on harmonizing ecological processes and community dynamics, provides a holistic framework for addressing the complex challenges posed by climate change in Bosnia and Herzegovina. By adopting agroecological principles, STAZA aims to enhance the resilience of smallholder farmers and rural ecosystems. This approach involves the integration of sustainable agricultural practices, climate change adaptation measures, and improved water management within the agroecological zones identified in the participatory local climate adaptation plans (See Part II – A. Project components). Through promoting biodiversity, soil health, and ecosystem services, the project endeavors to build climate-resilient agricultural systems that benefit both farmers and the environment. By linking traditional knowledge with innovative agroecological practices, STAZA strives to create a regenerative and adaptive agricultural landscape in response to the evolving climate challenges in the region.

Project Area and Target Groups

72. **Project target area and Geographical targeting.** BiH is highly vulnerable to climate change due to its geography, economic dependence on agriculture, limited adaptation capacity, and a high ranking on the Global Climate Risk Index (2021). The country's National Determined Contribution identifies agriculture and water resource management as the most vulnerable sectors. Smallholder farmers in BiH face increasing risks from climate-related events like droughts, floods, and late frosts, which disrupt their agricultural income sources. These events have become more frequent and severe due to climate change, with droughts impacting water availability and crop yields, floods causing erosion and infrastructure damage, and late frosts damaging crops. Changing weather patterns make these events unpredictable and challenging for smallholder farmers. To address these threats and draw lessons from the previous IFAD project, READP[41], STAZA will adopt a territorial approach, utilizing clusters, in RS and FBiH. STAZA will be executed in both entities. Under components 1 and 3, STAZA is designed to encompass all municipalities in FBiH and RS, organized into clusters. Component 2 of STAZA will specifically target the most vulnerable municipalities in the two entities.

73. STAZA geographic targeting is using the Climate Vulnerability Index (in line with the Inter-governmental Panel on Climate Change (IPCC) approach) as a function of Exposure, Sensitivity and Adaptive Capacity (see Annex 4 for details). The remote sensing analysis rely on the following elements:

Table 3: Exposure, Sensitivity and Adaptive Capacity in BiH

Exposure	Sensitivity	Adaptive Capacity
• **Storm** - Daily heavy rains (number of events; >20mm/day; 1981-2022) • **Drought** - Trend of Standardized Precipitation-Evapotranspiration Index – SPEI (1981-2021). • **Temperature**-Trends of Min temperature in cold months (Nov-Apr) 1958-2021	• **Erosion** - Revised Universal Soil Loss – RUSLE (<200tn/ha/year) • **Rural Population** (<250 hab/km^2) • **Poverty -** Human Development Index • **Agriculture** - Presence of agricultural land	• **Electricity** - Proximity to main electric lines • **Youth** population (<35y) • **Access** - Proximity to main roads

[41] Rural Enterprises and Agricultural Development Project (READP) https://www.ifad.org/en/web/operations/-/project/2000001813

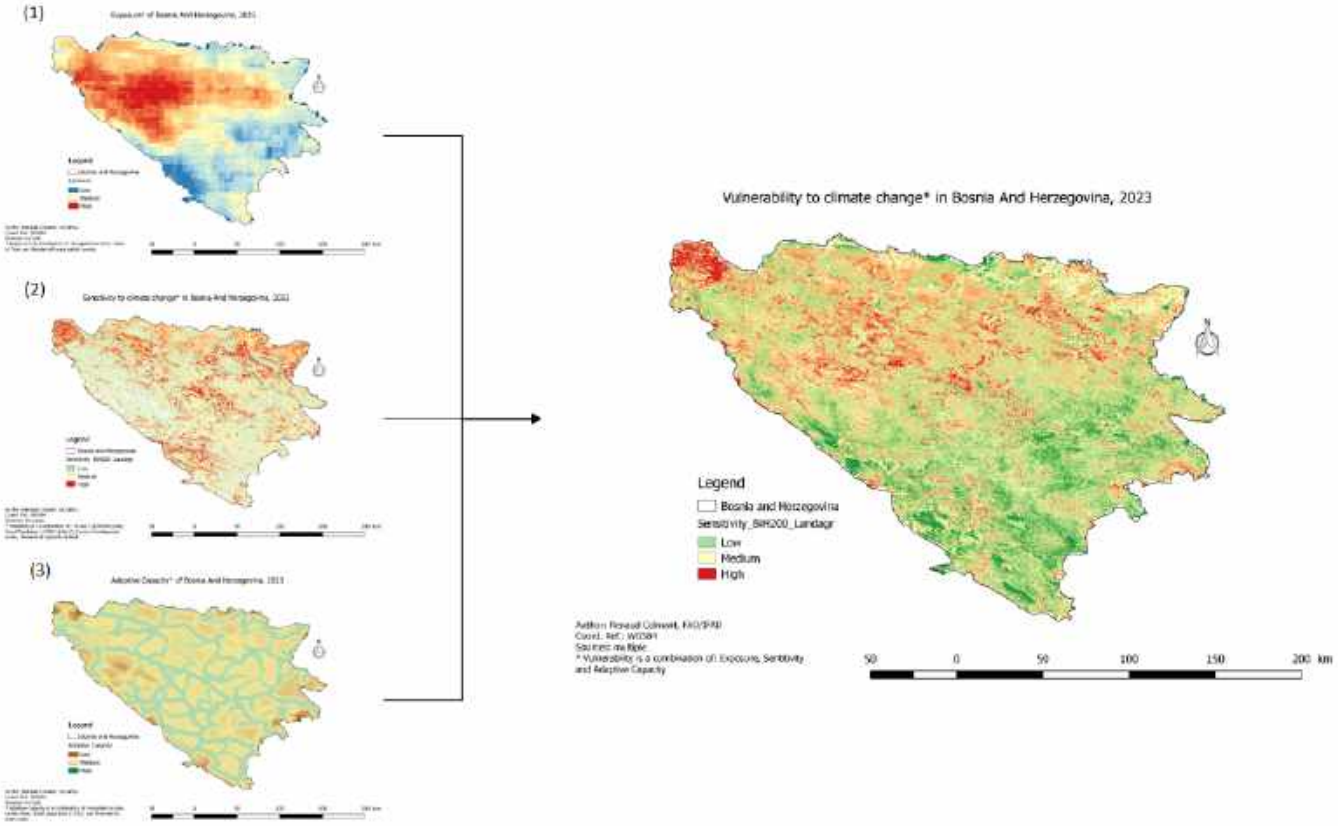


Figure 14: BiH Climate Vulnerability Index as a result of the combination of (1) Exposure, (2) Sensitivity and (3) Adaptive Capacity.

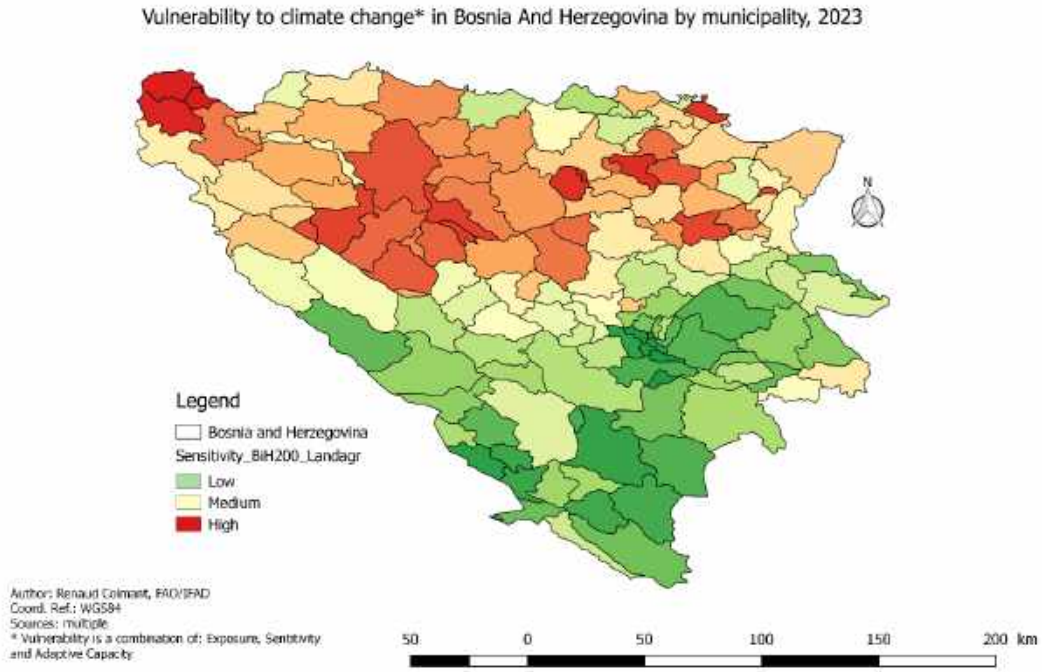


Figure 15: BiH Climate Vulnerability Index by Municipality

74. The project employs a comprehensive targeting approach that combines geographic, self, and direct targeting methods. Some initiatives will benefit the entire community, such as Local Climate Adaptation Plans (LCAPs) for adaptive infrastructures/activities. Targeting will be based upon a two-fold strategy:

- **Geographic Vulnerability Approach:** The selection of clusters and municipalities is informed by a climate vulnerability index, encompassing social, environmental, and climatic parameters. Selection prioritizes areas with high to medium climatic vulnerability, significant agricultural activity, and relatively high poverty levels.

- **Territorial Compacts:** Activities are strategically concentrated to ensure local continuity, allowing upstream climate-related interventions to positively impact downstream areas.

75. This dual approach involves targeting 37 municipalities in RS and 34 municipalities in FBiH out of respectively 64 and 79 Municipalities in RS and FBiH, distributed within 5 and 4 clusters in RS and FBiH.

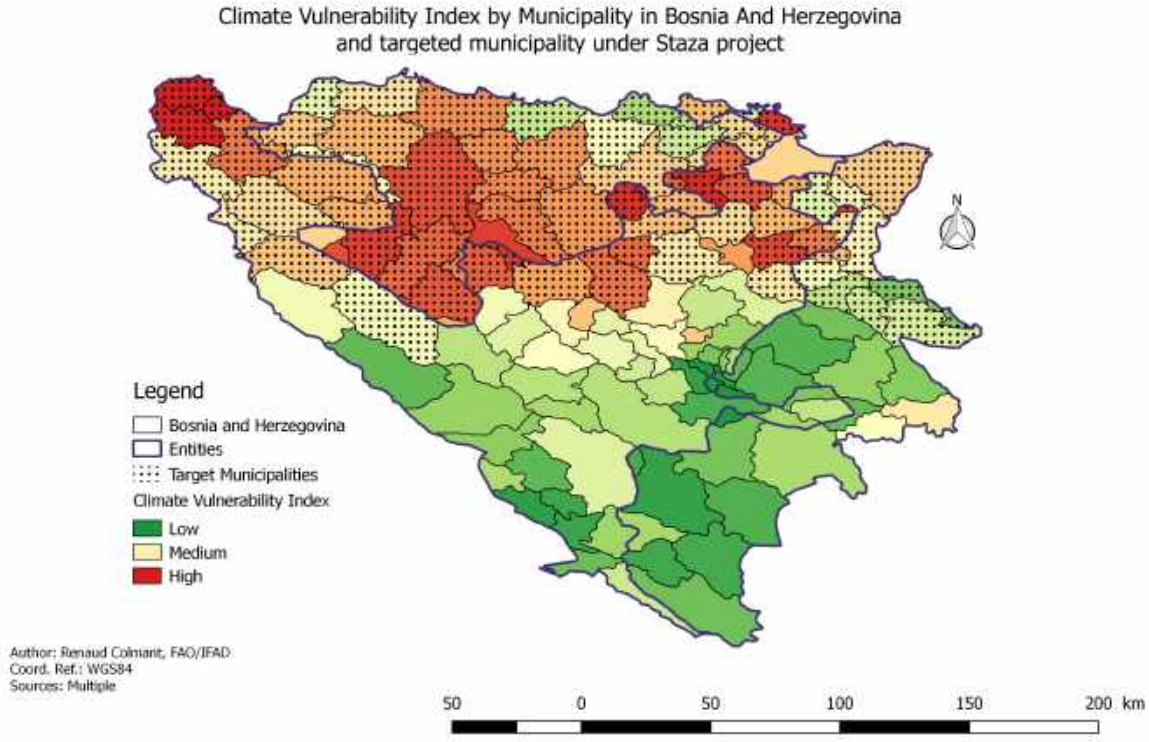


Figure 16: BiH Climate Vulnerability Index by Municipality and targeted Municipalities

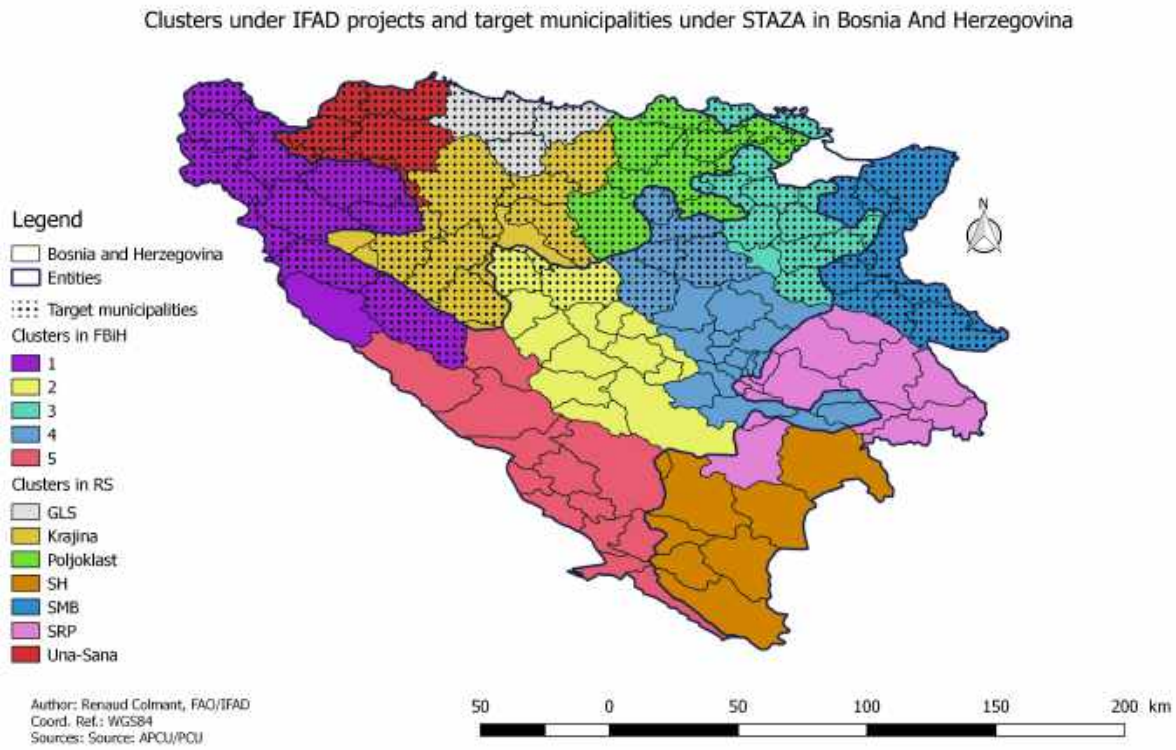


Figure 17: Clusters under IFAD projects and target municipalities under STAZA in BiH. Source: APCU/PCU.

76. **Target group and outreach**: The main target group consists of poor communities of smallholder farmers and those households whose livelihood is severely affected by climate change. The project will provide direct targeted support to 5,845 households[42]. Total outreach is estimated at 18,954[43] individuals. Women will be 9,477 direct beneficiaries[44] and youth about 3,790.

77. Direct targeted beneficiaries will have access to multiple project services including: trainings in improve agriculture practise, capacity building, technologies and access to grant opportunities, in line with activities described in each component[45]. Examples include: trainings at demo-plots from, study tours participation, benefits from rehabilitated infrastructures and grant financing (three grant windows will be benefit 3,600 HHs, of which 1,800 direct beneficiaries will be women). Other actors will be involved, for example, in consultation processes but as they are not receiving direct project services, they are not considered as project's direct targeted beneficiaries (e.g. population living in the targeted municipalities).

78. **Target groups:** The main target group consists of smallholder farmers engaged in mixed farming systems and deriving most of their income from agricultural production at different scale (e.g. subsistence, semi-commercial, and commercial). Farmers are generally constrained by the small and fragmented nature of production, lack of access to markets, financial and insurance services,

[42] They will be benefiting directly from a "*high intensity*" level of project support, in line with AF guidelines https://www.adaptation-fund.org/wp-content/uploads/2016/04/AF-Core-Indicator-Methodologies.pdf and 1 individual per HHs will receive project services which will benefit the all HHs members considering farming as a family business. The number is calculated on the basis of HHs receiving training, infrastructures and grant support.

[43] Average household members 2.9 based on Agency for Statistic BiH, 2023, The total number of HHs members is 18,212. The project will also provide direct targeted services and training to an additional 742 non-farmers beneficiaries (e.g. extension officers, students/ university staff and representatives from cluster and municipalities). The total number of final outreach is 18,954.
https://bhas.gov.ba/data/Publikacije/Saopstenja/2023/CIS_01_2022_Y1_1_BS.pdf

[44] Out of a total population of 3.2 Million, women represent 50.8% of total population. Source: World Bank 2022, https://data.worldbank.org/indicator/SP.POP.TOTL.FE.ZS?locations=BA Furthermore, women are 50% beneficiaries of IFAD funded projects. Their presence and participation in smallholder agriculture is on an equal basis as men.

[45] Description is provided in the below section;

infrastructure in rural areas. These aspects compromise farmers' resilience and capacity to respond to climatic shocks and extreme weather events. During stakeholders consultation and as reported in Annex 2, it clearly emerged that farmers face problems such as: droughts, storms, intense precipitation, late frost among others. Women are particularly vulnerable to economic and climatic shocks. A brief profile of each group is provided below, including their socio-economic characteristics and vulnerability level based on the consultation conducted during the design. They are described mainly on the basis of poverty level, income and land ownership as poor, transitory poor and better-off. The profiling is based on the targeting methodology[46] of the ongoing IFAD funded project READP.

79. **Poor rural households:** These poor households derive their income from agriculture and forestry products, coupled with other incomes derived from off-farm activities. These include poor men and women farming small areas of land of about 0.1-0.5 ha (1-5 donums) growing some fruits and vegetables and having irregular connections with markets and aggregators. Lack of access to productive water sources and irrigation limits their productivity and levels of production which is particularly affected by climate chocks and extreme weather events. Average monthly income is up to 389 BAM per individual and less than 817 per household. In case of adverse conditions (economic and climatic) the low level of resilience put these households at high risk of vulnerability. They have limited capacity and lack resources to cope with shocks.

80. **Transitory poor households**: They are men and women smallholders and/or small-scale processors who typically own 0.5 ha up to 1.5 ha of land (often orchards); have some livestock and are also engaged in processing (e.g milk). They have sufficient labour and skills as well as access to key agriculture assets (e.g. irrigation) but lack affordable inputs, finance, connectivity to networks and markets, technical capacity and scale. Monthly income per person ranges between 390-500 BAM; and less than 1,000 per month for the household. In terms of poverty this groups consist of households above the poverty line, but at risk to slide back due to the climatic shocks/other negative variables and seasonal trends.

81. **Better off households:** These are lead farmers, processors, leader of small enterprises, commercially oriented who can serve as models to demonstrate the viability of new approaches, to increase rural resilience and provide potential development pathways for the poor and transitory poor. Producers in this category have enough land (above 1.5 ha) and can be considered to serve as drivers for wider climate change adaption practises. They have better capacity and resources to cope with climatic and economic shocks. The project will engage with them to catalyse the expected transformation and shift towards improved adaptive practises and technologies.

82. **Women:** They correspond to 9,477 direct beneficiaries. Based on consultation with women, it is noted that larger participation of them is recorded in the sub-sectors they traditionally engaged: greenhouses for vegetable, milk production, gherkins, strawberry, paprika, MAPS, lavender, potatoes and cherry. In the farm work women are more often engaged in manual labour (e.g. harvesting fruit and vegetables, milking cows and preparing agricultural products for sale). Their contribution tend to be both unregistered and often unpaid, as emerged during the consultation process. Land is often not registered in women's name. Women commonly face higher risks and greater burdens from the impacts of climate change in situations of poverty. This was also confirmed by Focus Group Discussion with women. Specific activities and targets for women's participations are described in **Annex 5** Gender Assessment, Strategy and Action Plan.

83. **Youth**: The unemployment rate for youth (age 15-24) in BiH stands at 33.5%[47] (young women 38.9%)[48] showing a considerable reduction from the 63 % in 2015. However, young people still face challenges such as lack of employment opportunities, increasing rural to urban/abroad migration, poor

[46] The target group description and classification builds on the existing poverty targeting criteria applied in the IFAD funded project RLDP, RCDP (completed) and the ongoing READP. It is proved to be successful for pro-poor targeting and hence identify most vulnerable categories.
[47] World Bank data, 2022. Source: https://data.worldbank.org/indicator/SL.UEM.1524.ZS?locations=BA
[48] Ibidem

access to land and finance, low entrepreneurship skills. During consultation young people expressed their aspirations for the future and while some showed interest to go abroad as they could not find attractive to stay in rural areas, others showed interest to be with family and explore income generation opportunities in the rural development sector. Furthermore they are aware of the increasing concern regarding environmental degradation and climate change. Students of agriculture (high level education) are very keen to improve their knowledge on the subject. The project will support engagement of rural youth in the main activities and also introduce innovative curricular courses with a focus on climate change and adaptive approaches in agricultural production.

84. **Private sector**: The project will also engage with private sector stakeholders. Private sector stakeholders include agro-processors, traders, buyers, wholesalers and exporters. Previous IFAD projects have developed various models in facilitating linkages and increasing supply chains for private lead buyers, notably by channeling inputs through the lead buyers and other forms of pre-financing arrangements.

85. **Social targeting**: All target groups described above will participate in the programme activities with different levels of participation. STAZA present interventions that are of interest for all target groups and respond to the needs expressed by consulted stakeholders. Some activities will be of interest for the community as a whole: i.e. Local Climate Adaptation Plans (LCAPs) for productive infrastructures/adaptation activities and therefore all members will be mobilized through existing institutions and community based organizations (e.g. Associations, Cooperatives). Demonstration technologies will be of interest for farmers producing at different scale (men and women) and grants will be provided to improve on farm production and resilience giving priority to vulnerable groups and special incentives for women and youth. Pro-poor targeting criteria will be considered to ensure vulnerable households are included. Households and beneficiaries' selection process, especially *Grants for scaling up Climate-Adaptive Initiatives*, will consider the existing READP targeting methodology based on self-targeting (open call for application) coupled with enabling measures[49] to ensure the poorer, vulnerable and women are included.

86. **Social Inclusion**: Dedicated measures will be applied to ensure vulnerable categories such as women and youth are properly included. Separate consultation to identify gender specific needs, priorities will be conducted and activities for women will be implemented ensuring they are 50% direct beneficiaries. Youth living in rural areas will also be mobilised to ensure access to decision-making and project services. Furthermore, young students (men and women) will be directly targeted to benefit from support to enhance their knowledge about agriculture and adaptation to climate change through improved curricula of university programmes. Youth will be 20% of total direct beneficiaries.

87. **Youth and gender mainstreaming**: Overall, gender and youth will be mainstreamed by: (i) applying appropriate responsive development, planning and implementation methods; (ii) ensuring equitable participation of women, youth and other vulnerable groups in consultation and decision-making processes; (iii) enabling equal access to project services and opportunities provided (e.g. access to key assets, knowledge, training, grant financing opportunities).

88. Specific measures will include: (i) training and awareness raising in (gender and youth) responsive participatory approaches for involved stakeholders (e.g cluster/municipality level); (ii) specific sessions and Focus Group Discussions (FGDs) for the identification of climate adaptation needs and priorities for women, youth and other vulnerable groups; (iii) inclusion of women and youth representatives (min 30 percent) in decision making processes, specifically related to local planning development; (iv) ensure equitable participation (50 percent) of women and youth (20 percent) in accessing training for climate

[49] In the READP targeting methodology, the income thresholds for eligibility of beneficiaries receiving starter package is set as the monthly income per household: very poor (below 200 KM) poor (201-400 KM) and borderline poor (401-500 KM). During public call for application the targeting criteria are properly communicated to all beneficiaries. Furthermore, specific question to assess the income level of the applicants to ensure priority is given to poor and vulnerable are reported in the application form. Validation process is also conducted. Quotas for women participation is set at 50%.

adaptation practices (demo-plots) and study tours/exchange visits; (v) access to grant financing, giving priority to women and youth and providing additional economic incentives (e.g. 10%); (vi) direct support to young men and women students to acquire additional knowledge, more specifically in the academic domain and in the sector of agroecology, resilience and climate change.

B. Project Objectives:

89. **Goal.** The overall goal of STAZA (meaning footpath) is to increase resilience of ecosystems and adaptation of livelihoods in rural areas affected by climate change.

90. **Objective.** The specific objective of STAZA is to enhance the adaptive capacity of smallholder farmers and rural households to climate change risks and effects. STAZA will achieve the objective by assessing the requirements of farmers and the vulnerable population, identifying their specific needs, and implementing tailored solutions to effectively adapt to the impacts of climate change. STAZA aims to support smallholder farmers in developing a climate-proof ecosystem for agriculture through climate change adaptation measures, improved water management, disaster risk reduction, and land protection initiatives.

C. Project Components and Financing:

Table 4: Project components and financing

Project/Programme Components	Expected Outcomes	Expected Concrete Outputs	Amount (US$)
Component 1. Participatory assessment and territorial planning	**Outcome 1.1.** Enhanced Community Mobilization and Improved Knowledge for Climate Change Adaptation	**Output 1.1.1.** Supporting Clusters strengthening	1,435,258
		Output 1.1.2. Development of Participatory Local Climate Adaptation Plans (LCAP)	800,178
		Output 1.1.3. Exchange visits	107,049
Component 2. Enhancing Climate Change Adaptation at the Territorial Level	**Outcome 2.1.** Enhanced resilience of smallholders' livelihoods to climate change	**Output 2.1.1**. Strengthening Adaptive Farming Systems	574,257
		Output 2.1.2. Grants for scaling up Climate-Adaptive Initiatives	1,402,558
		Output 2.1.3. Strengthening Market Access	233,459
	Outcome 2.2. Improved resilience of ecosystems and infrastructures assets	**Output 2.2.1**. Biotechnical Measures for Ecosystem Protection	1,251,925
		Output 2.2.2. Rehabilitation and Construction of Rural Adaptive Infrastructure	1,958,885
Component 3. Policy support and knowledge enhancement for a climate-resilient agriculture	**Outcome 3.1.** Improved Knowledge and Research for integrating adaptation strategies and mechanisms at cantons/municipal and national policy levels, drawing on project approaches and implementation lessons	**Output 3.1.1**. Effective Knowledge Sharing for Policy Support	168,563
		Output 3.1.2. Supporting Educational Institutions in Curriculum Development	63,792
		Output 3.1.3. Supporting Agricultural Research Grants and Specialized Institutions for Climate, Soil and Water	502,895
Total project activity cost			**8,498,820**
Project Execution cost			717,771

Total Project cost	**9,216,590**
Project Cycle Management Fee charged by the implementing entity (8.5%)	783,410
Amount of Financing Requested	**10,000,000**

D. Projected Calendar:

Table 5: Project milestones

Milestones	Expected Dates
Start of Project/Programme Implementation	2025
Mid-term Review (if planned)	2027
Project/Programme Closing	2029
Terminal Evaluation	2030

PART II: PROJECT/PROGRAMME JUSTIFICATION

A. Project components

Component 1: Participatory assessment and territorial planning

C1.1.1. Supporting Clusters' Strengthening:

91.IFAD-supported intervention has successfully established 12 Clusters (5 in FBiH and 7 in RS) gathering a diverse range of stakeholders, including cantons (in FBiH), municipalities, extension services (both public and private), business leaders, cooperatives, producer associations, and individual farmers. These Clusters, functioning as Multi-Stakeholder Platforms (MSPs), aim to foster collaboration and partnerships for rural development on a territorial basis. STAZA will build upon this foundation, providing additional support to these clusters to serve as the primary structure for implementing activities and disseminating information, ensuring long-term sustainability beyond the project's duration.

92.Multi-Stakeholder Platforms should actively involve farmer's associations, cooperatives, private companies, municipalities, cluster/cantons women's organizations, and youth representatives. The cluster manager, a role utilized in previous IFAD projects in the country, will act as a dynamic facilitator, ensuring collaboration and close connections with farmers, with special attention to engaging individual small-scale farmers. Strengthened clusters will include a strong representation of women and youth participation, along with representation of vulnerable groups and persons with disabilities.

93.**Multi-Stakeholder Platforms and Meetings.** A significant obstacle to adaptation in rural areas is the insufficient presence of social capital, which plays a crucial role in shaping the range of options or constraints households encounter in the face of climate change impacts. STAZA will concentrate on fostering competitive and resilient clusters for products with confirmed market potential and adaptation capabilities, promoting social cohesion for a collective response. Information campaigns and outreach events targeting women and youth will be conducted throughout the project implementation period. . Information campaign will be held at municipality level in the first year of STAZA, using existing modules from READP. One workshop on MSP will be held in each cluster at the beginning of implementation in each entity. Throughout the implementation phase, the MSP meetings will follow a recurring cycle of dialogues, convening 1-2 times per year in each cluster. This framework aims to create a dedicated space for reflection and the discussion of emerging opportunities and challenges. Consequently, it is anticipated that key priorities for bolstering agricultural resilience at the cluster level will be pinpointed. This includes

identifying training requirements to enhance the climate resilience of both farming systems and local businesses, as outlined in subcomponent 2.1.1.

94. **Social Inclusion Training.** STAZA adopts a territorial approach, engaging stakeholders within specific territories and prioritizing vulnerable groups. Gender-awareness training and capacity building will be prioritized within local institutions and community members, including women's groups. This proactive approach aims to ensure gender-responsive participatory methods are consistently applied throughout the project, raising awareness about the necessity of reflecting women's priorities in decision-making. STAZA will provide consultants (3 in each entity) to develop a final report on women's consultation and training materials, supporting clusters' managers and field officers.

95. **Business and Public Linkages.** Under STAZA, MSPs will be used to foster linkages between stakeholders in the clusters. Clustering can help sustainably improve market access for small farmers, increasing resilience to shocks. The ongoing IFAD READ project's approach to supporting Business Plans (BP) is demand-driven, open to any marketing opportunity identified by Business Leaders, without focusing on specific value chains as was the case in previous IFAD projects. Thus, READP is selecting proposals for different value chain crops in the identified geographical clusters. STAZA will adopt a similar approach and ensure that the project responds to actual CC impacts at the cluster level on several value chains. STAZA will map main commodities in the clusters, identifying interrelations and responding to actual climate change impacts on several value chains. The mapping initiates the identification and engagement of stakeholders that will later compose the MSP. Gender sensitive value chains will be properly mapped and included. Cluster strengthening processes are driven by main actors, primarily farmers and agribusinesses, facilitated by the project team to create a space for engagement, trust-building, knowledge sharing, and addressing common issues. The initial mapping and animation process will also introduce discussions around elements that characterize the resource, using participatory approaches such as those adopted in Participatory Guarantee Systems. The clustering of production is crucial to aggregate supply and reduce transaction costs between buyers and farmers, especially for those with minimal initial investments, enabling them to become reliable suppliers. Business to business (B2B) meetings will be facilitated by the project team and extension services, focusing on developing and negotiating practical trading plans between farmers and businesses. Technical support will be arranged to assist farmers and businesses in preparing well-informed investment plans, including climate-resilient options for Participatory Local Climate Adaptation Plans (LCAPs) planned under the sub-component 1.1.2. Municipalities will play a role in cluster development, with representatives having regular meetings with clusters to jointly agree on priorities, considering municipal budgets and cluster needs.

C 1.1.2: Development of Participatory Local Climate Adaptation Plans (LCAP)

96. **Climate Change Impacts Assessment:** Within this activity, STAZA will conduct a comprehensive climate change analysis at the Cluster level. This analysis will encompass a thorough examination of historical and future climate scenarios, covering at least the past 30 years and extending up to 2050. It will include a GIS remote sensing assessment of historical and future climate-related impacts on agriculture and the water cycle, incorporating an evaluation of watershed basins. Collaborative partnerships will be established with educational institutions and research centres to identify critical climate change themes and adaptive solutions for each geographic area. The analysis aims to provide profound insights into the repercussions of climate change on agriculture and the environment across various agro-ecological zones, forming the basis for extensive discussions on adaptive solutions at the cluster level. Workshops will be conducted for each cluster to present the results of the GIS analysis and ensure a comprehensive understanding of the conclusions.

97. **Consortium with Faculties:** In accordance with the National Adaptation Plan, the Environmental Protection and Energy Efficiency Fund of Republika Srpska and the Environmental Protection Fund of Federation BiH will spearhead the preparation of trends and projections in both entities. However, while ensuring data availability, the collection and evaluation of value indicators can be delegated to government

institutions or scientific and other entities. Bosnia and Herzegovina is home to seven public universities, along with several private ones, most of which have faculties dedicated to agriculture and natural and mathematical sciences, engaged in research on natural resource utilization and the impact of climate on agriculture. A Memorandum of Understanding (MoU) with a consortium of faculties and Agricultural Institutes will secure their participation. Members from these institutions will serve as the core of STAZA's expert team under this activity, providing technical support in the formulation of LCAPs for the agricultural sector.

98. **Cluster Animation and social capital:** While faculties play a crucial role in providing data and expertise, the animation of the Clusters will primarily rest with the cluster manager, supported by the faculties and specialist consultant experts (2 per entity during the first year of the project). Series of collective discussions with communities, leveraging the enhanced social capital from rural clustering, will facilitate broader participation of local stakeholders. Participants will be presented with scientific data on climate-related risks (from the GIS vulnerability analysis) and insights from local consultations. The strategies will incorporate gender and youth analysis, exploring the roles and relationships between genders, as well as gender- and youth-specific opportunities, barriers, and decision-making power. This knowledge will inform climate-resilient interventions while addressing discriminatory norms and practices. The cluster manager will support clusters in including decisions in plans at municipal and cantonal levels. Therefore, agricultural and water plans could be revised or updated to integrate climate change considerations and promote climate-resilient agricultural practices. [50]

99. **LCAP creation:** A single document, the LCAP, will be produced at the Cluster level, consolidating action plans approved by the municipalities. The LCAPs will include the main conclusions of the climate change analysis at the cluster level, the impacts on agriculture, water, and the population, as well as the solutions and actions proposed by the Multi-Stakeholder Platforms (MSP) to increase resilience. The LCAPs will encompass georeferenced maps that highlight key vulnerabilities and intervention priorities. The resulting documents will be shared with all local stakeholders. These mappings will provide a comparative advantage for local stakeholders (such as producer groups, settlements, or municipalities) seeking access to other investments targeting climate adaptation, including opportunities like IPARD III. A workshop will be held in each cluster for dissemination. Unidentified sub-projects (USPs) could be identified during this activity and will contribute to the activities in Component 2 (see Annex 3).

100. **Social inclusion:** Enhancing the climate resilience of agricultural fields and human settlements requires active involvement from local populations directly impacted by environmental changes. While geophysical observations and models can identify relative vulnerabilities in different areas, effective prioritization of adaptation efforts is achievable only through engaging stakeholders whose livelihoods and quality of life will be influenced. The participatory mapping process will utilize data from the GIS vulnerability analysis and insights gathered from discussions within clusters. Through these participatory meetings, participants will integrate their experiences and visions to build a consensus on priority actions and investments (including those eligible under STAZA) for enhancing the climate resilience of their territory. The planning processes will create opportunities for meaningful participation by women, youth, and other traditionally excluded groups, necessitating targeted consultations, capacity building, and engagement of facilitators from these groups. Communities are expected to be mobilized to participate in LCAP exercises and study tours (under subcomponent 1.1.3.). As part of the planning process, separate consultations will ensure that women and youth: (i) are properly informed about the Local Climate Adaptation Plans, with their inputs/feedback included; (ii) have the opportunity to discuss needs and priorities (public and private investments, types of technologies of interest, demo-plots, exposure visits); (iii) women and youth representatives are identified and capacitated to actively participate in relevant decision-making processes; (iv) participate in exchange visits on an equal basis.

[50] E.g. In FBiH, in accordance with Law on Development Planning and Development Management of the FBiH ("Službene novine F BiH"/Official Gazette of FBiH", No: 32/17) and implementation regulations, the three-year work plans arising from the strategic priorities from strategic documents are developed.

C 1.1.3: Exchange Visits:

101. Within this activity, STAZA will support the organization of exchange visits, providing opportunities for Cluster members to observe existing initiatives and discover the potential for climate change adaptation in Bosnia and Herzegovina. Many effective adaptive practices are already being implemented within the country. Additionally, these exchanges will extend to neighboring countries in the region, serving as a valuable tool to promote synergy and facilitate the exchange of knowledge, particularly with projects that embrace adaptive approaches, such as the Gora project in Montenegro[51]. This activity will empower participants to incorporate concrete actions into their LCAPs based on evidence, enabling them to select the most effective solutions to combat climate change at the local level. Participation in these visits will also be extended to ministry staff and the PCU/APCU staff. Furthermore, additional exchange visits are planned later during the project's life for the 12 planned clusters, once more mature, allowing them knowledge and experience exchanges between them. MSPs from the project will benefit from these visits as well, providing them with the opportunity to reflect on their practices by explaining them to others.

102. **Expectations for Participation**: It is anticipated that about 360 farmers (representing different categories of smallholders, with 50% being women) will participate in exchange visits to learn about existing and effective adaptive practices implemented both in the country and at the regional level. Through these activities, both men and women smallholders will acquire knowledge and make evidence-based and informed decisions for the development of LCAPs.

Component 2: Enhancing Climate Change Adaptation at the Territorial Level

103. This component is focused on reinforcing the resilience of smallholders' livelihoods against the impacts of climate change. STAZA will actively facilitate the adoption of climate change adaptation approaches at the territorial level, building upon the LCAPs established under Component 1. This will be achieved through two key avenues, operating both at the level of individual farmers and the territorial entities through the support to infrastructure development and NRM practises. The approach will emphasize scaling up and replicating sustainable adoption of climate change adaptation practices with a strong focus on agroecological principles.

Outcome 2.1. Enhanced resilience of smallholders' livelihoods to climate change

104. The multiple impacts of climate change on production systems go beyond drought and heat cycles, and also include hail, late spring frost, and an increase in pests and diseases. A resilient agricultural strategy combines risk management through diversification of crops (species as well as varieties) with the development of high nutritional value products (dairy, meat, fruits, Non-Timber Forest Products-NTFP), an optimized use of productive surfaces (pastures, agroforestry) and resources (water, manure, compost) as well as physical and social infrastructures that optimize their market value (collection, storage, processing, certification or branding, access to high-end consumers, etc.). Outcome 1 under component 1 aims at facilitating clustering for resilient transformation of the farming systems and local businesses through an accompaniment of the stakeholders which leads to the Outcome 2.1. under component 2 with financial support directly impacting the most vulnerable, through public calls thus responding to priorities in terms of diversification and resilient value-chain development. It is expected that up to 10,440 local stakeholders (50% women, 20% youth) would benefit from the support delivered under this outcome, notably through the enhancement of services provided by extension services. By the end of the project, up to 80% of directly targeted households should report (i) the adoption of environmentally sustainable and climate resilient technologies and practices, and (ii) an increased stability of income, while 80% supported rural enterprises should report an increase in profit. It is also expected that the adoption of agroecology and other climate resilient practices at farm level could contribute to the resilient management of up to 1600

[51] https://www.adaptation-fund.org/project/adaptation-to-climate-change-and-resilience-in-the-montenegrin-mountain-areas-gora/

hectares of agricultural land[52]. STAZA will support value-chains among the following, which have been screened for their relevance with regards to climate adaptation in the project area.

105. Drawing from the lessons learned during the READP implementation, the identification of value chains under STAZA will be guided by several key criteria: (i) the adaptive potential of the commodity, which will be verified during the initial mapping conducted under component 1; (ii) the existence of opportunities for competitive, profitable, and sustainable smallholder production, with a specific emphasis on climate resilience; (iii) a clear and current market demand for the targeted products, ensuring a reliable income stream; (iv) expressed interest from traders and agribusinesses to expand their sourcing from cluster locations; (v) the willingness of farmers, including smallholders, to enhance their production practices; (vi) practical intervention opportunities for the project to facilitate the rapid development of the identified market and local cluster; and (vii) possibilities for increased participation of women, youth, and other vulnerable groups in the selected value chains. This comprehensive approach ensures that the chosen value chains align with both market dynamics and the socio-economic landscape, promoting sustainable development and inclusivity within the targeted communities.

Table 6: Pre-identified Value-Chains

Value-chain	Resilience Potential	Adaptation Needs
Beekeeping[53]	Beekeeping, a high-value product in BiH, enhances resilience by providing a stable income and supporting ecosystems as crucial pollinators.	- Ensuring well-managed beekeeping practices, providing water points, cultivating flowers across seasons, reinforcing beehive boxes, relocating beehives, and supplementing the honey bees' food. -Need for help formulating supplementary honey bee diets and managing pests and diseases. Need information and demonstrations from local sources to improve adaptation strategies and the health and productivity of honey bees.
Cultivated berries (raspberries)	Cultivated berries significantly contribute to resilience by offering a stable income. Their role in providing soil coverage reduces erosion caused by heat/drought cycles and increased runoff.	- Implementing effective measures to mitigate increasing droughts, such as shading nets, micro-irrigation, and improved soil coverage. - Employing fertility management for improved water retention. - Managing pests and risks related to hail through climate-resilient practices and combination with other production (e.g. fruit trees) for diversification. – Equipment to process fruits and shorten the value-chain.
Livestock (cattle, sheep, goats, cows, etc.)	Livestock, a cornerstone of agriculture in both entities of BiH, enhances resilience by providing a stable income.	- Implementing improved fodder production through small mechanization and fertility management. - Developing multi-purpose water storage for enhanced livestock water access.
Non Timber Forest Products (mushrooms, etc.)	The promotion of NTFPs encourages improved forest management, gives the opportunity to people without land to collect and sell organic products.	- Enhancing surveillance and awareness. - Implementing clearing practices for flammable material, including forest grazing. – Need for continuous training for harvesters. - Need for collecting points to avoid production loss.
Cultivated aromatic and medicinal herbs	Essential for local culinary products and health, these herbs contribute to resilience.	- Implementing measures to mitigate increasing droughts, such as shading nets, micro-irrigation, and improved soil coverage. - Employing fertility management for improved water retention.

[52] With an estimation of 1600 producers trained on agroecology and other climate resilient practices.
[53] Bekić Šarić, B., Muça Dashi, E., Subic, J., & Džimrevska, I. (June 2023). "Environmental threats to beekeeping in the Western Balkan Countries - beekeepers' perceptions." Environmental Research Communications, 5(6). DOI: 10.1088/2515-7620/acd913

Market gardens (cabbage, onions, potatoes etc.)	Market gardens have substantial market potential, contributing to resilience.	- Implementing measures to mitigate increasing droughts, such as shading nets, micro-irrigation, and improved soil coverage. - Employing fertility management for improved water retention. - Adapting to pests and pathogens. - Managing water supply during droughts.
Cereals (wheat, barley, alfalfa, clover, etc.)	Limited but crucial for food safety, cereals play a significant role in resilience.	- Identifying drought-resilient varieties. - Implementing agroecology and climate-resilient practices like mulching and intercropping. - Employing fertility management for soil protection. - Implementing biotechnical measures against erosion.
Fruit trees (plums, apples, cherries, etc.)	Orchards offer integrated climate adaptation solutions, enhancing resilience.	- Managing exposure to pests, spring frost, and hail with climate-resilient practices. – Equipment to process fruits and shorten the value-chain.

Subcomponent 2.1.1: Strengthening Adaptive Farming Systems.

Output 2.1.1. Adaptive capacity of farming systems strengthened

106. STAZA focuses on vulnerable farmers in rural areas of BiH. Given the escalating climate shocks and uncertainties, these farmers may turn to out-migration or maladaptation, opting for intensive short-term production highly dependent on market prices. Drawing on the successes of the READP project, STAZA aims to overcome a critical barrier to adaptation. It will support farmers, farmer organizations, and business leaders in accessing stable and sustainable sources of income, while engaging in resilient agricultural practices and businesses. Subcomponent 2.1.1. will enhance the capacities of vulnerable producers in two key aspects: (i) adopting climate-resilient practices and fostering a community of practice around agroecology, and (ii) developing business skills to ensure a sustainable and stable income. Indeed, at the farmer's level, a comprehensive approach blends training and capacity building with innovative adaptive and agroecological demonstration initiatives. These initiatives combine community-led research with experts and university faculty support (as outlined in Component 3).

107. Communities highly susceptible to climate change face a pressing need for adaptation. However, the risks associated with adopting inappropriate interventions are substantial. High vulnerability arises from a combination of elevated exposure, heightened sensitivity, and a low adaptive capacity. In cases where adaptation interventions prove inadequate or result in unsuccessful adaptation, or maladaptation, vulnerability increases, creating a detrimental cycle[54,55].

108. To address these challenges, modern sustainable development grounded in agroecological concepts must encompass vital areas. These include (i) safeguarding soil from the degradation of its physical, chemical, and biological properties; (ii) implementing sustainable soil management interventions, such as conservation soil tillage and the sustainable disposal/usage of post-harvest residues; (iii) executing climate change mitigation/adaptation through agrotechnical interventions in plant/crop production; and (iv) understanding below-soil interactions in agroecosystems[56,57,58].

[54] Magnan, A. K., et al.¸2016. “Addressing the risk of maladaptation to climate change.” WIREs Climate Change, Vol. 7, Issue 5, 646-665.
[55] Srđan Seremesic, Zoran Jovović, Danijel Jug, Mirha Djikic, Željko Dolijanović,Franci Bavec, Suzana Jordanovska, Martina Bavec, Boris Đurđević & Irena Jug (2021):Agroecology in the West Balkans: pathway of development and future perspectives, *Agroecology and Sustainable Food Systems*.
[56] Altieri, M. A., F. R. Funes-Monzote, and P. Petersen. 2012. Agroecologically efficient agricultural systems for smallholder farmers: Contributions to food sovereignty. *Agronomy for Sustainable Developmen*t.
[57] Wezel, A., M. Casagrande, F. Celette, J. F. Vian, A. Ferrer, and J. Peigné. 2014. Agroecological practices for sustainable agriculture. A review. *Agronomy for Sustainable Development*.

109. Agroecology is widely recognized as a bottom-up, holistic approach that prioritizes small-scale farmers and farms, emphasizing environmental principles over short-term profits. In contrast, agroecological measures in the Western Balkans are currently introduced during the EU accession process, constituting a policy-supported top-down approach. These measures encompass predefined practical activities and conditions for payments, including a 'greening payment' for environmental public goods. Unfortunately, these subsidies are inaccessible to STAZA's primary target group, which is simultaneously the most vulnerable to climate change[59].

110. **Training of extension services.** Successful project implementation relies on the support and collaboration of local extension services, whether municipal/cantonal or private entities. In the previous READP initiative, extension services played a pivotal role as intermediaries between farmers and private companies involved in processing and distribution, serving as essential local stakeholders. In the current project, their role will be further strengthened through capacity building and improving the services they offer to clusters, cantons, and the broader community. Extension services will receive training to deepen their local knowledge of agroecology and other climate-resilient practices, while developing skills in business and market development. Training of trainers will be necessary, and if the required knowledge is not available in BiH, the project may require external expertise from specialized institutions. Building upon the dissemination tools used in previous IFAD projects, STAZA will utilize phone apps[60] as communication tools between farmers and extension services, facilitating support for production, weather information, monitoring plant and animal diseases and other relevant activities.[61]

111. **Participatory demo-plots.** Adopting the EU's innovative "living labs" approach, STAZA aims to establish participatory demo-plots as dynamic platforms for accelerating the integration of sustainable and adaptive agricultural practices. These living labs will transform actual farms into experimental hubs, fostering collaborative efforts among farmers and stakeholders to co-create, test, refine, and endorse solutions tailored to address their unique climate-related challenges. To facilitate widespread adoption and dissemination, STAZA plans to implement 20 participatory demonstration plots in each entity, totaling 40 for Bosnia and Herzegovina.

112. **Visits on demo-plots and training.** In these participatory demo-plots, farmers will engage in at least three visits, accompanied by trained extension services and STAZA field officer for cluster, providing a hands-on learning experience. Each visit will serve as an opportunity for extension services to deliver targeted training sessions on the demonstrated practices. These sessions will not only focus on the specific practices showcased in the demo-plots but also outline clear pathways for farmers to replicate and integrate these practices into their own agricultural systems. This iterative process of learning and knowledge-sharing is central to STAZA's commitment to building local capacities and fostering the widespread adoption of climate-resilient agricultural practices across the project area.

113. Moreover, the training sessions extend beyond primary production, encompassing areas such as circular economy principles, alternative composting techniques, and the utilization of by-products, all supported under subcomponent 2.1.2. Farmers will receive comprehensive training from extension services, covering essential aspects of agroecology and other climate-resilient practices, while simultaneously developing skills in business and market development. To enrich the learning experience and ensure the effectiveness of these practices, the demo-plots will be supported by faculties and master students (see component 3). They will actively contribute by monitoring and sharing results related to critical aspects such as soil fertility, water use efficiency, and cost-benefit analysis, fostering a collaborative and research-driven approach to sustainable agriculture within the community.

[58] Gliessman, S. R. 2014. Agroecology: A global movement for food security and sovereignty. Proceedings of the FAO International symposium: Agroecology for Food Security And Nutrition, Rome, Italy 18–19 September 2014.
[59] Srđan Seremesic, Zoran Jovović, Danijel Jug, Mirha Djikic, Željko Dolijanović,Franci Bavec, Suzana Jordanovska, Martina Bavec, Boris Đurđević & Irena Jug (2021):Agroecology in the West Balkans: pathway of development and future perspectives, *Agroecology and Sustainable Food Systems*.
[60] Such as "Viber" or other type of communication app.
[61] Already partially implemented under previous IFAD READ project.

114. **Support to women entrepreneurship.** To empower women, STAZA will provide targeted support to women, engaging groups of women to organize themselves (including into formalized associations) centred on customized demonstration plots. These plots will be tailored to their specific needs and preferences in terms of frequency, duration, timing, and location, while aligning with various livelihoods. STAZA will also be providing dedicated trainings on business skills and negotiation, and training in climate-adaptive agricultural practices, gaining knowledge about new techniques and technologies.

Subcomponent 2.1.2: Grants for scaling up Climate-Adaptive Initiatives.

Output 2.1.2. Grants to adaptive activities provided

115. This activity streamlines access to grants with the aim of fostering the broad adoption of innovative solutions among farmers. These grants will run concurrently with the pilot projects under Subcomponent 2.1.1 and empower farmers to initiate their initiatives, expanding on the pilot's successes with the technical support of extension services. The STAZA project will announce 2 types of open calls for business leaders' cooperatives, producer associations as well as for individual farmers. The open calls for grant financing (matching grant approach) will be the following: (i) Grants for On-Farm Adaptation: these grants are aiming at adapting farmers production to climate change threats; (ii) Grants promoting Circular Economy, sustainable waste management practices: to produce inputs such as organic fertilizer, biological inputs, or seeds multiplication to support other farmers; The grants align with a circular economy approach, which prioritizes sustainability by minimizing waste and optimizing resource efficiency through the reuse, recycling, and regeneration of agricultural materials and by-products.

Table 7: Matching grants for private investments On-Farm and Circular economy

Grants for scaling up Climate-Adaptive Initiatives: Matching grants for private investments promotion, offered on a competitive basis to smallholders, farmers engaged in the clusters	**Window 1: Grants for On-Farm Adaptation for a total investment cost of EUR 2,500 on average (maximum EUR 3,000) NET** **Amount of grant: maximum EUR 1,400 - net value, for STAZA support.** **Beneficiaries contribution**: from 50% of net value **Total:** 800 matching grants **Targeting:** individual farmers and groups of farmers (farmers organizations, business leaders). 50% grants to be allocated to women and 20% to youth. **Focus:** production in the targeted value chains
	Window 2: Grants promoting Circular Economy, sustainable waste management practices for a total investment cost of EUR 2,500 on average (maximum EUR 3,000) NET **Amount of grant:** maximum EUR 1,400 - net value, for STAZA support. **Beneficiaries contribution:** from 50% of net value **Total:** 800 matching grants **Targeting:** individual farmers and groups of farmers (farmers organizations, business leaders). 50% grants to be allocated to women and 30% to youth. **Focus**: to produce inputs such as organic fertilizer, biological inputs, or seeds multiplication to support other farmers

116. To encourage the adoption of good on-farm models and the improvement of farming practices, grant financing opportunities will be accessible, with a particular focus on increasing the participation of women (aiming for at least 50%). Leveraging the successful outcomes of previous IFAD-funded projects like RCDP and READP, additional incentives for women's grants are being considered, potentially increasing from 10% to 20% to further support their engagement[62]. Moreover, STAZA will place emphasis on establishing connections between its activities and the existing grants for youth and rural women that

[62] The final figure will be set at the start-up phase to ensure that STAZA aligns with the incentives provided by the Entities and to avoid confusion for women farmers during the application process. This is a lesson learned from previous projects in the region.

have been developed by the BiH authorities[63]. This approach aims to leverage and integrate these pre-existing grant programs into STAZA's framework, allowing for synergies and maximizing support for the targeted groups.

Table 8: Eligible investments under matching grants for scaling up Climate-Adaptive Initiatives

Equipment/investment	Rationale
Grants for scaling up Climate-Adaptive Initiatives Window 1: Grants for On-Farm Adaptation	
Investments for water efficiency: Small sized rain harvesting ponds and associated equipment; other small water collection systems; drip irrigation system; shading nets for water conservation, censors for water efficiency irrigation system.	Improved efficiency of water use is critical in the face of increasing droughts and heat waves
Climate protection material For plant production: anti-hail nets; protection nets; anti-frost material (such as candles and sprinklers); Small greenhouses for controlled cultivation (up to 70m^2 depending on the material used) To protect livestock/production: Barn improvements and facilities for housing livestock (excluding sanitary ware, carpentry, locksmithing) To monitor weather at local level: Small weather stations equipment	Material key to support small producers in sustainably managing their production. Plant protection material such as anti-hail nets and bird protection nets enable to reduce production loss in case of climate shocks. Such investments are critical to either protect animals in a context of increasing weather extremes (heat, hail) Such equipment is useful to create a network of weather data and should be connected in such a way to feed the information at entity level (or at least at cluster level) and give information to farmers on climate related disaster risk.
Equipment to reduce workload and accelerate farm works in critical periods: Small machinery for agricultural works: motor cultivator, land mower, trimmer, hay collector, hay turner, towing and cardan trailer, disc harrow, seeding material, material for fruit harvesting, silage equipment.	Small machinery contributes to improved production management, by replacing tasks that are managed by hand (e.g. accelerating the gathering of hay/fodder, which is still done by hand in many places), and thus avoiding risks of production loss/damage in case of rains, which are becoming more erratic due to climate change. Such equipment is part of the sustainable management of pre-identified value chains, and contributes to alleviating the burden of tasks that often fall upon women (e.g. milking with the electric machine instead of by hand). Electric equipment associated with solar panels will be preferred wherever possible.
Live material: Seeds and planting material Live bees and beehives : Acquisition of bee colonies; Beehives and associated equipment	Where possible, adapted/drought resilient varieties will be provided. No invasive/or non-native species will be proposed. Bees as pollinators are part of well-functioning ecosystems, and directly contribute to the resilience of ecosystems
Grants for scaling up Climate-Adaptive Initiatives Window 2: Grants promoting Circular Economy, sustainable waste management practices	
Investments for local planting material supply: Equipment for small commercial nurseries and seed banks.	Such investments aim at an increased local supply of planting material, contributing to the resilience of the targeted area
Investments for soil improvement: composting system, composting equipment, vermi-composting, manure management systems	Climate change drives the degradation of soil resources both through the increased occurrence of heat and drought cycles and the erratic rains and early melting of snow in the spring leading to increased runoff.

Subcomponent 2.1.3.: Strengthening Market Access.

[63] E.g. Existing grants in RS under the Ministry of Agriculture's Rulebook on Agricultural Subsidies. The rulebook is adopted every year in order to disburse different types of subsidies for farmers, mentioned under specific articles of the Rulebook. Existing grants include: (i) 20,000 EUR grant for graduated agronomists or food technologists to start their own rural business or farm, in order to keep them living and working in rural areas. (ii) 5000 EUR grant for rural women of any level of education, who would like to start or improve their rural business or farm.

Output 2.1.3. Market access strengthened

117. Market access stands at the forefront of STAZA's climate change adaptation endeavours. In a concerted effort to support small-scale farmers, a comprehensive array of strategies will be deployed to foster robust connections between producers and consumers. STAZA's approach includes Establishing Producer-Consumers links to forge connections between farmers implementing effective practices and consumers, through bulking practices, farmers markets, and producers-to-consumers platforms, bolstering primarily local market access for small-scale producers. By diversifying markets, farmers and business entities will enhance their resilience to potential shocks such as fluctuating energy prices or political decisions on import/export, which may be influenced by climate change.[64] Cluster managers, supported by extension services and field officers will build on such initiatives already started under READP.

118. Under this sub-component STAZA will also promote open calls for the promotion of sustainable processing practices to support activities such as post-harvest handling, processing, and equipment. The project will actively promote short value chains and assist small farmers in reducing losses and improving market access.

Table 9: Grants for Strengthening market access

Grants for Strengthening market access: Matching grants offered on a competitive basis to smallholders, farmers engaged in the clusters	**Grants for short value chains for a total investment cost of EUR 5,000 on average (maximum EUR 7,500) NET** **Amount of grant: maximum EUR 3,000 - net value, for STAZA support.** **Beneficiaries contribution: from 50% of net value** **Total: 100 matching grants** **Targeting: groups of farmers, average of 20 farmers per group (farmers organizations, business leaders, women groups).** **50% grants to be allocated to women and 20% to youth.** **Focus: post-harvest handling, processing, storage and equipment**

Table 10: Eligible investments under matching grants for strengthening market access

Equipment/investment	Rationale
Grants for strengthening market access Window 3	
Small equipment for transformation: Dehydrators, Solar dryers, Electric dryers, Food processors, Blenders and mixers	Shorten the value chains. Preserving farm products, together with increasing the value of products (possibility to better store and preserve, to store and sell at a later date, to add value by transforming products on farm, etc.). This increases the autonomy and empowers small farmers, and thus enhances their adaptive capacity and resilience.
Packaging Equipment: Vacuum sealers, Shrink-wrapping machines, Labeling machines, Packaging conveyors, Weighing scales and equipment, Bagging machines	
Small equipment for on-farm storage facility (for raw material, semi-finished and finished products): Refrigerators, Storage bins, Silos, Cold storage containers, Climate-controlled cabinets.	

119. To further enhance these market access initiatives, STAZA will collaborate with Clusters to co-organize fairs, providing small-scale farmers with a platform to showcase and sell their products and directly engage with consumers throughout the project's duration. These events will serve as pivotal opportunities for marketing and selling agricultural produce, with a particular emphasis on high-value products. In total, at least 6 local fairs will be organized during STAZA project life (3 in each entity). The project will create a revolving fund to provide financial resources to Clusters for participation to local fairs. This initial capitalization will ensure sustained support for organizing local fairs, enabling clusters to

[64] E.g. Germany import of raspberries from BiH was reduced in 2023, buying less quantity at a time, due to high energy price to store them – source from interviews with farmers and distributors.

continue hosting regular fair activities beyond the project's completion. Fair participants contribute a percentage of their earnings from selling their products during the fair into the fund. This contribution is typically a small portion of their profits and will be discussed at cluster level. As farmers continue to participate in fairs, a portion of their earnings is consistently reinvested in the revolving fund. This creates a sustainable cycle where the fund is continuously replenished by the participants themselves. The revolving fund model promotes a sense of ownership and responsibility among participants. Farmers directly contribute to and benefit from the fund, fostering a collaborative and self-sustaining approach to organizing events. Over time, as the fund grows, it can be used to improve and expand the scope of agricultural fairs, potentially reaching a larger audience, introducing new features, or enhancing the overall quality of the events. This enduring commitment to facilitating market access is paramount to the project's success.

120. In addition to these efforts, farmers and other stakeholders will receive training on effective product presentation and promotion. The project will also facilitate the implementation of app-based sales systems (see component 3), ensuring continuity beyond agricultural fairs. This approach will facilitate direct connections between farmers and consumers. Furthermore, STAZA will explore the implementation of Participatory Guarantee Schemes (PGS), a cost-effective method to recognize and certify products from farmers, often more affordable than traditional certification methods. Collaboration with organizations such as Slow Food will be pursued to further enhance PGS-related initiatives.

Outcome 2.2. Improved resilience of ecosystems and infrastructures assets.

121. At the landscape level, STAZA will **enhance the resilience of ecosystems and infrastructure assets under 2 subcomponents**. STAZA will implement biotechnical measures identified in the LCAPs to withstand the challenges posed by climate variability and change. Biotechnical anti-erosion and flood measures encompass various techniques that combine living vegetation and biomass to create physical structures mitigating water-related impacts on critical sites. STAZA will also support the **rehabilitation and construction of rural adaptive infrastructure.** These infrastructure elements collectively contribute to enhancing the resilience of rural areas to climate change and creating opportunities for sustainable agricultural practices. It is expected that 3,350 households will benefit from Biotechnical Measures for Ecosystem Protection and 2,010 households from Rehabilitation and Construction of Rural adaptive infrastructures (Multipurpose Water Storage Systems).

122. Both subcomponents will be facilitated through public calls and with the assistance of national service providers. Feasibility studies will precede the construction of each infrastructure, followed by post-work supervision. The APCU/PCU will conduct regular field visits and maintain communication with Clusters to ensure successful outcomes.

Subcomponent 2.2.1: Biological Measures for Ecosystem Protection.

Output 2.2.1. Ecosystem protecting measures implemented

123. STAZA recognizes the importance of prioritizing Natural Resource Management (NRM) investments to effectively address the impacts of climate change within the clusters. By targeting these areas, STAZA aims to mitigate both current and future climate threats that pose risks to the local ecosystem, agriculture, and population. These priorities will be identified through thorough analysis and extensive discussions conducted under Component 1, ensuring that the interventions align with the specific needs and vulnerabilities of each territory. By integrating Nature-based Solutions (NbS) into STAZA's interventions, it complements traditional grey infrastructure while reducing reliance on costly engineering interventions. Furthermore, the restoration of forests and other landscape ecosystems contributes not only to climate change mitigation but also enhances the overall resilience of the regions by offering additional protection against floods, storm surges, and droughts.

124. To safeguard against floods and mitigate the adverse effects of strong winds, STAZA will implement ecosystem-protecting measures such as afforestation and the establishment of windbreaks, among others. These NbS investments play a crucial role in enhancing resilience and facilitating climate change

adaptation within the designated areas. Afforestation efforts will not only contribute to the preservation and restoration of vital ecosystems but also act as a natural barrier against floodwaters, reducing their impact on communities and agricultural lands. Similarly, the strategic placement of windbreaks will help shield vulnerable areas from the damaging effects of strong winds, protecting crops and infrastructure. The estimated outcome for 2.2. entails the protection of approximately 1,675 hectares, achieved through the implementation of biotechnical measures covering an area up to 335 hectares, depending on needs and priorities identified in the LCAPs (see component 1), for a total of 84 natural assets created, maintained or improved to withstand conditions resulting from climate variability and change.

125. **Eco-engineering erosion control measures** encompass a range of techniques that integrate living vegetal material (seeds, seedlings, shoots, or propagation cuttings) with dead biomass (branches, trunks, logs, stakes) to construct physical structures. These structures attenuate slopes, decrease the velocity of runoff water, improve soil permeability, facilitate groundwater recharge, and enhance the cohesion of topsoil layers, fortifying resistance to erosion. These measures can synergize with other features like geotextiles, nets, or stone walls. While these measures are often associated with linear structures perpendicular to the primary slope direction, they can also involve afforestation of broader surfaces.

126. Procuring biological materials, such as seeds and seedlings, can be done through public forest nurseries, private nurseries, or local producers eligible for support under subcomponent 2.1.2. When selecting orchard fruit species, prioritizing robust rootstock seedlings is recommended if compatible with the assessment. If legally permissible and meeting adequate phytosanitary standards, the inclusion of imported seedlings of drought-tolerant varieties (i.e., different varieties of the same species native to BiH) may be considered in the seedling mix. Reforestation and afforestation plans should (i) steer clear of monospecific populations susceptible to parasitic and other diseases and (ii) aim to enhance diversity and complementarity among tree species, aligning with the local environment (e.g., providing habitat continuity for fauna, etc.).

127. **Implementation and Decision-Making:** The meticulous implementation of appropriate biotechnical measures on pre-identified vulnerable surfaces follows a detailed decision-making process. This process considers the measure's potential to reduce erosion and runoff, creating progressive terraces, promoting natural assisted regeneration (e.g., in areas affected by previous forest fires), and improving infiltration. The choice of biotechnical measure is influenced by various factors related to the location of the area to be protected, including:

- **Distance to the nearest road and accessibility:** The ease of delivering necessary materials (e.g., seedlings, tools) and access for operational manpower may limit options.
- **Legal characteristics of the site:** The applicable spatial planning category (forest area, agricultural area, protected area, etc.) and public or private ownership restrict potential techniques.
- **Distance to the nearest permanent or seasonal human settlement:** Human presence can influence the success of investments in biotechnical measures.
- **Altitude and exposure to solar radiation:** Slopes facing north, receiving less photosynthetic light and experiencing a colder micro-climate, affect the selection of eligible plant species.
- **Soil structure and thickness, type of bedrock, and slope.**

128. **Professional Execution and Training:** The implementation of biotechnical measures demands professional expertise or specialized training to ensure effective application. Specialized companies with credible references, demonstrating successful completion of similar projects, should be engaged for this purpose. These companies will not only execute the measures but will also be responsible for managing and monitoring the success of the investment, including tracking survival rates. The APCU/PCU will conduct regular field visits to validate reported survival rates, maintaining close communication with local residents and municipal forestry services. This verification process ensures that reported rates align with

the actual outcomes. In cases where discrepancies or excessive losses, attributable to poor seedling quality or execution, are identified (e.g., through comparison with survival rates and tree growth in parcels with similar characteristics), the APCU/PCU will mandate the service provider to compensate for the losses.

129. Municipalities, based on their level of development[65], will contribute to the net cost of works related to biotechnical measures. This contribution may include providing necessary equipment and workforces as part of their regular budget commitments.

130. **Building Community Resilience**. STAZA will enhance the capacities of local communities to monitor, prevent, manage, and intervene in climate-related disasters by facilitating access to essential equipment based on identified needs. These needs range from small-scale items like sandbags for flood prevention emergencies to larger machinery. Requests for such equipment will be solicited through public calls, with municipalities contributing a portion of the total net value based on their developmental level. Procurement of this equipment will occur through public calls, encouraging municipalities to allocate a portion of their regular budget to prioritize critical materials, particularly those relevant to flood, drought and forest fire risks. The list of materials encompass sandbags and flood barriers for flood risk mitigation, emergency water pumps for flood response, water spraying backpacks, fire-resistant clothing, and tools for forest fire preparedness, as well as piezometers for groundwater monitoring, soil moisture sensors, and weather stations for effective drought monitoring of aquifers and superficial soils. If necessary, any additional details required for material selection will be incorporated into the Project Implementation Manual which will be developed at Start up. Public calls for proposals will accommodate more requests than the targeted number of grants for the year to account for potential dropouts due to loss of interest. In-kind contributions, such as the renovation of existing equipment, may also be considered. The Adaptation Fund budget allocated to these investments is sufficient to facilitate meaningful interventions even in the absence of counterpart contributions.

Subcomponent 2.2.2: Rehabilitation and Construction of Rural Adaptive Infrastructure.
Output 2.2.2. Rural adaptation collective infrastructure rehabilitated or constructed

131. As outlined in the introductory section of this document, the anticipated climate change impacts include substantial alterations in the seasonal distribution of precipitation at the local level, even though significant variations in the total annual precipitation are not projected at the national level. The effects of climate change, characterized by erratic precipitation patterns and severe heatwaves, are currently contributing to water scarcity, evident in both historical climate analyses and the experiences of local farmers. The disrupted flow of water in watersheds exacerbates this scarcity, leading to a range of consequences such as diminished crop yields, increased risks of forest fires and floods, elevated erosion rates due to torrential rains, degradation of soil cover, habitat loss for diverse species, and heightened economic vulnerabilities for farmers and processing businesses.

132. In response to these multifaceted challenges, comprehensive climate adaptation measures, particularly those focused on water management and storage, become paramount. Strategic choices in the selection of localization and infrastructure types are essential to maximize the impact of such measures. Acknowledging the critical role of water management in addressing the impacts of climate change, STAZA will actively support the rehabilitation and construction of collective rural infrastructure, including open markets, to enhance the resilience of local communities. This adaptive action aims not only to address water-related challenges but also to foster economic and social resilience in the face of a changing climate.

[65] In each entity, municipalities are categorized based on their level of development, ranging from 'Extremely Underdeveloped' and 'Underdeveloped' to 'Moderately Developed' and 'Developed'. Following the lessons learned from READP, the Project Implementation Manual of STAZA will incorporate the latest municipality classification table for both entities, ensuring that the contributions of municipalities align with their respective category (respectively 5%, 15%, 50% and 70%).

133. **Multipurpose water storage.** Local communities within the designated target municipalities or clusters of rural inhabitants organized into groups will be encouraged to submit well-defined budget requests for the financing of multipurpose water storage capacities to their respective municipalities. These submissions will be channeled through a public call, and the evaluation of eligible applications will be based on various criteria. These criteria include:

- **Exposure to Water Scarcity:** The vulnerability of the chosen area to seasonal or permanent water scarcity. Incorporation of the climate vulnerability index which include this exposure to water scarcity, as presented in section I, into the selection criteria to ensure that project activities are targeted towards climate-vulnerable areas.
- **Household Impact:** The number of households directly benefiting from the project relative to its cost.
- **Public Interest:** This is measured by the range within which the water storage point would support immediate intervention in the case of a wildfire or critical reforestation and afforestation initiatives, such as through irrigation.
- **Additional Benefits:** Consideration of broader advantages, such as biodiversity preservation.

134. The criteria for selection are outlined below and will be confirmed in the Project Implementation Manual (PIM) from the project's Start up. Following a model similar to READP, municipalities will contribute based on their developmental status, while direct beneficiaries are expected to contribute up to 6.6%, either in cash or kind. Public calls for proposals will accommodate more requests than the targeted number of grants for the year to mitigate the risk of dropouts. In-kind contributions, such as the provision of equipment and workforce by municipalities and direct support to works from beneficiaries, will also be considered, building on the successful approach of READP.

135. Under this subcomponent, STAZA will support the establishment or rehabilitation of Multipurpose Water Storage Systems, including options such as:

- Rainwater Accumulation Ponds: Designed to collect and store rainwater for various agricultural purposes.
- Hermetic Water Tanks: Surface and buried tanks equipped with suitable roofing and gutters to efficiently collect rainwater.
- Seasonal Stream (Snowmelt) Collection Dams: Structures to capture and manage water from seasonal streams, especially snowmelt.

136. STAZA will provide support for the rehabilitation of flood management-related infrastructure, encompassing various options such as:

- Storm Basins: These are designed to effectively manage water flow during heavy precipitation events, thus mitigating flooding and minimizing potential damage to both infrastructure and agriculture.
- Drainage Systems: Drainage systems play a critical role in managing water distribution, preventing flooding, and protecting against soil erosion and water-related damage.

137. Investments in this category do not cover deviation and storage from permanent rivers, or the use of drilled wells and pumps for irrigation schemes.

138. This inclusive approach will be facilitated by the participatory process established under sub-component 1.1.1. The budget allocated from the Adaptation Fund for these investments is deemed sufficient to enable substantial interventions even in the absence of counterpart contributions. To ensure technical feasibility, proposals will undergo a thorough review by technical advisors from the APCU and PCU before final selection.

139. **Rehabilitating multipurpose open markets.** The project will also include the rehabilitation of multipurpose open markets. Facilities and spaces for farmers to showcase and sell their agricultural products directly to consumers, promoting local produce and supporting small-scale farmers.

Rehabilitating multipurpose open markets in rural villages as part of an agricultural development project aimed at climate change adaptation brings forth multifaceted advantages. It serves as a cornerstone for fostering social cohesion within communities. Open markets create communal spaces where residents converge, exchange ideas, and build relationships, contributing to a shared sense of identity and solidarity.

140. This social fabric is crucial for the overall resilience of the community, especially in the face of climate-induced challenges. The revitalization of open markets enhances local nutrition by providing a platform for the exchange and sale of diverse, locally-produced agricultural products. This promotes a more varied and balanced diet for community members, contributing to improved health outcomes. The accessibility of fresh, locally-sourced produce becomes instrumental in addressing food security concerns, ensuring that communities have reliable access to nutritious food even in the midst of climate-related uncertainties. Furthermore, rehabilitated open markets offer local farmers a direct avenue to showcase and sell their produce. This direct access to markets can significantly enhance the economic prospects of smallholder farmers, providing them with opportunities to secure stable incomes and improve their livelihoods.Moreover, the markets can serve an additional purpose by fostering the exchange of knowledge and best practices among farmers. They can become hubs for receiving training, organizing discussions, and promoting sustainable agricultural practices that exhibit resilience to the impacts of climate change.

141. As part of this initiative, rural communities within the identified clusters will receive financial support through co-financing grants (with a contribution from the Municipality depending on their level of development) for the construction or rehabilitation of multi-purpose open markets. Eligible construction and rehabilitation costs for publicly-owned buildings encompass raw materials, manpower, tools, and equipment for various purposes:

- Executing structural and completion work (masonry, wooden framework, plaster, flooring, etc.).
- Improving the thermal comfort of buildings (insulation, heating system, ventilation network, etc.).
- Connecting utilities (cabling, drainage, lighting, waterpipes, lavatories, etc.).
- Delivering administrative and educational services (internet connection, document printer).
- Facilitating theoretical and practical training sessions by extension services, NGOs, or mentoring peers (whiteboard, documentation library, demonstration plot, small-scale food processing tools, etc.).
- Promoting local products (display shelf and refrigerator for direct sales).

142. The APCU/PCU will launch several public calls for applications regarding the rehabilitation or construction of eligible investments in public infrastructures, such as open markets, that contribute to strengthening the social fabric and cohesion of remote rural communities. To ensure equal access to opportunities while managing expectations, the APCU/PCU will inform representatives of settlements identified as particularly vulnerable through the participatory LCAPs under subcomponent 1.1.2. about the opportunity to submit proposals. Eligible applications for co-financing will be prioritized based on various criteria, including:

- The number of settlements, households, formal and informal groups or NGOs, and businesses benefiting from the construction or rehabilitation, relative to the cost.
- A "remoteness index" considering physical distance, travel time, travel cost, and/or reliability and frequency of public transport connection to the nearest urban hub.
- The diversity of purposes that the constructed or rehabilitated facility would serve, with multifunctionality indicating the potential for success and social dynamism resulting from the investment.

- Incorporation of the climate vulnerability index, as presented in section I, into the selection criteria to ensure that project activities are targeted towards climate-vulnerable areas.

143. The selection criteria outlined here will be confirmed in the Project Implementation Manual during the Start up of STAZA. The Adaptation Fund budget allocated to these investments is deemed sufficient to enable meaningful interventions even in the absence of counterpart contributions. To ensure the project reaches 100% of its target, calls for proposals will consider more requests than the targeted number of grants for the year. In-kind contributions, such as availing existing buildings, will also be accepted.

Component 3. Policy support and knowledge enhancement for a climate-resilient agriculture

144. In response to the pressing challenges outlined in the Fourth National Communication (FNC) report to the UNFCCC (2021), STAZA's Component 3 takes a strategic approach to address critical adaptation opportunities in BiH. The report highlights the imperative to enhance systematic research on climate change and agriculture, emphasizing the crucial role of capacity building in the comprehension of extreme events like droughts, floods, and hail. Furthermore, the need to raise public awareness about the harmful consequences of climate change and the possibilities of adequate adaptation is underscored. Indeed, as stated in the FNC, farmers will need to acquire new knowledge and to test and to adopt, if positive, new scientific and technological solutions, in order to adapt their production to changed environmental conditions. In this process, the important role played by universities, institutes, professional services and education system in general is recognized and supported under STAZA.

145. STAZA aligns seamlessly with the outlined priorities, specifically targeting Component 3 to make substantial contributions. Within this framework, STAZA, aligned with the National Adaptation Plan's (NAP, 2021) list of potential indicators for capacity building and mainstreaming, is focusing on enhancing the knowledge base and research capabilities essential for effective adaptation.

146. Indeed, STAZA emphasizes providing support to improve knowledge and research for integrating adaptation strategies and mechanisms at various policy levels. To achieve this, specific goal, STAZA will work on the Creation and effective sharing of knowledge products with key stakeholders to provide policy support, addressing identified policy gaps through advocacy, lobbying efforts, and thematic conferences. STAZA will also support to relevant institutions in the creation of master's courses, specifically focusing on developing courses related to the adaptation of agriculture to climate change. This includes the preparation of lecturers and the generation of climate-focused master's theses.

147. The project will do the promotion of research on resilience and adaptation to climate change, ensuring the dissemination of knowledge through various channels. This involves enhancing research capacities, conducting workshops, evaluating project proposals, and establishing a platform for Agriculture Adoption to Climate Change. By addressing the identified gaps and challenges, STAZA's Component 3 strives to foster a comprehensive and informed approach to climate adaptation, bridging knowledge gaps and empowering key stakeholders in BiH.

148. Furthermore, the project, through the inclusive participation of stakeholders will support the strengthening of gender mainstreaming in the policy dialogue. Gender and climate change study will be prepared and finding disseminated through gender workshops at national level involving key stakeholders engaged in policy formulation. The goal of the gender and climate change analysis is to better understand the national context, particularly focusing at gender equality issues in key climate sectors from a gender and climate change perspective and discuss main findings and recommendations during thematic workshops at national level for policy makers to ensure CC and NRM policies/ legal frameworks consider gender-specific recommendations.

Outcome 3.1. Improved Knowledge and Research for integrating adaptation strategies and mechanisms at cantons/municipal and national policy levels, drawing on project approaches and

implementation lessons

149. Outcome 3.1 of STAZA, is dedicated to fostering knowledge and research support to integrate adaptation strategies and mechanisms at the cantonal/municipal and national policy levels. The project envisions a comprehensive approach, disseminating knowledge, promoting educational development, and offering research grants to fortify the adaptive capacity of Bosnia and Herzegovina's agricultural sectors. This initiative aims to bolster the resilience of communities and ecosystems in the face of climate change.

150. Coordination efforts will be led by the Ministry of Foreign Trade and Economic Relations of BiH (MoFTER), collaborating with competent entity ministries in RS and FBiH. Their joint mission involves gathering pertinent information and documents from STAZA to facilitate specific policy changes in agriculture and water management in response to climate change. Technical experts engaged in STAZA will actively contribute by identifying regulatory gaps and bottlenecks, offering crucial insights to policymakers. This involvement supports the ongoing process of developing laws and strategies, aligning with the measures and activities outlined in the Agriculture and Rural Development Strategy (2021-2027).

151. Recognizing the interconnectedness of water management, agricultural production, and climate change, STAZA's outcomes will play a pivotal role in informing the next iteration of the Agriculture and Rural Development Strategy. Covering the period from 2028 to 2032, this future strategy will be intricately shaped by STAZA's results and lessons learned, with an amplified emphasis on adapting to the challenges posed by climate change.

Subcomponent 3.1.1. Knowledge Product Development and Sharing for Policy Support.

Output 3.1.1. Knowledge products are effectively created and shared with key stakeholders to provide policy support

152. Subcomponent 3.1.1 of STAZA, is dedicated to the effective creation and sharing of knowledge products with key stakeholders to provide policy support. This component of the project acknowledges the pivotal role of well-crafted policies in addressing climate change adaptation, specifically in the agriculture and water management sectors.

153. **Policy gaps.** During the design phase, the STAZA project identified significant gaps in policy making within these sectors, along with related barriers that hinder effective adaptation. These barriers encompass limited access to biological inputs, challenges in importing new technological equipment, the need for harmonization of variety lists, insufficient integration of climate change considerations into spatial planning, and outdated data and measures concerning climatic shocks. A targeted approach will focus on enhancing policy making in the sector, promoting more effective adaptation strategies, and contributing to the country's climate change agenda. Throughout STAZA's lifespan, careful selection and prioritization of necessary policies will occur, ensuring long-term sustainability and alignment with national climate change goals.

154. **Advocacy and Lobbying.** Engaging farmers, associations, institutes, and relevant departments within the ministry in collaborative working groups and encouraging the preparation of proposals will greatly contribute to the effective provision of policy support. Additionally, incorporating climate change considerations into spatial planning and addressing outdated data and measures related to climatic shocks in plans and strategies are important policy objectives. STAZA will carry out the necessary analyses and propose solutions for the barriers identified during the development of action plans for adaptation to climate change through the engagement of the necessary technical assistance (jurists, climatologists, agro-ecologists, economists, and other experts). Initiatives and expert support will also be used from regional working groups for climate, soil, water, crops, livestock, and socio-economic issues, which operate under the auspices of SWG RRR. Contracted through project units, these experts will provide professional assistance to proponents of various initiatives. This will primarily involve amendments

to legal regulations and by-laws, all with the aim of reducing the vulnerability of the agribusiness sector and rural areas to climate change. Another aspect of the project's impact is the inclusion of the issue of climate change in agriculture and measures of adaptation and mitigation in all future strategic documents (sectoral strategies or local development strategies).

155. **Thematic Conferences**. STAZA will organize thematic conferences, in the second, third, and fourth years of project implementation. The conferences will result from identified threats or opportunities for agriculture in the context of climate change. At the conferences, a certain number of invited experts from the country and region will present as panelists, and representatives from all three sectors—business, academic, and governmental—will participate. Potential topics for these conferences can include, for example, the role of agricultural insurance in adopting agribusiness climate change, the impact of climate change on women in rural areas, precision agriculture, and other new technologies in adaptation to climate change, and similar. Thematic workshops on gender and CC will also be organised.

Subcomponent 3.1.2: Capacity Building through Master's Course Development

Output 3.1.2. Relevant institutions supported in the creation of master's courses

156. **Courses on the Adaptation of Agriculture to Climate Change.** There are seven agricultural or agricultural and food technology public faculties in Bosnia and Herzegovina. None of them offer master's programs specifically related to the adaptation of agriculture to climate change. In addition to promoting policy support and enhancing the country's climate change efforts, STAZA will facilitate the introduction of innovative curricular courses (each evaluated with 5 ECTS) focused on climate change and adaptive approaches, such as:

- **Sustainable Agriculture and Climate Resilience:** This course could cover a broad range of topics related to sustainable and climate-resilient agriculture, including discussions on traditional and innovative agricultural practices, crop selection, and land management strategies to adapt to and mitigate climate change.
- **Agricultural Innovations for Climate Mitigation:** This course could delve into precision agriculture, agroecology, and other innovative techniques aimed at reducing the environmental impact of farming while increasing efficiency. It would explore technologies and practices that promote climate mitigation.
- **Agriculture and Climate Policy:** This course would examine the role of government policies and regulations in shaping agricultural practices and their impact on climate change. Students could study international agreements, subsidies, and incentives for sustainable agriculture.
- **Eco-Friendly Food Production and Supply Chain Management:** This course would focus on the entire food production and distribution process, addressing issues related to climate change, sustainable agriculture, and the reduction of waste within the supply chain.

157. **Gender and Climate-Responsive Agriculture.** Building on the idea of the role of women in agriculture and climate change, this course could take a more in-depth look at the intersection of gender, climate change, and agricultural practices, exploring how empowering women can lead to more sustainable farming methods.

158. **Implementation.** These courses would mostly be offered as compulsory or elective courses at most agricultural faculties in Bosnia and Herzegovina. The lecturers for these courses will be assembled from different faculties and universities, taking advantage of the best experts they currently have. Later, in cooperation with EU university partners, a joint master's program with a double degree could be accredited.

159. **Preparation of Lecturers.** Before the introduction of climate-sensitive courses at the university level, there will be an assessment of the content of current study programs and courses in terms of their

responsibility to climate change issues. The assessment will be followed by the preparation of a Roadmap for universities on how to include climate change in the curricula of many faculties in BiH. The lecturers who will teach those subjects will undergo preparatory training, held by experts from one of the more advanced universities abroad or in cooperation with UN organizations (e.g., University of Wageningen[66], CIHEAM[67], FAO[68], UNDP[69]). Capacity building initiatives will be extended to policymakers and ministry staff members, enhancing their understanding of critical agricultural and climate adaptation topics. After systematic preparation, these courses will be introduced into the curricula of individual faculties. Pre-prepared university lecturers can later become trainers of trainers, public and private advisors.

160. **Climate-Focused Master's Theses.** Furthermore, STAZA will involve the engagement of universities from both entities (RS and FBiH) by incorporating master students in the evaluation of on-farm innovative adaptive practices (under Component 2). This active involvement of master students through grants from STAZA will offer them an opportunity to utilize pilot cases for their master's theses, contributing to the dissemination of knowledge regarding climate change and agroecological practices within their country. The assessments will encompass various perspectives, including economic, social, agronomic, and soil health aspects. The approach provides students with the valuable opportunity to actively participate in STAZA and gain hands-on experience, equipping them with practical skills as they transition into professional work life.

Subcomponent 3.1.3: Climate Resilience Research and Knowledge Dissemination

Output 3.1.3. Research on resilience and adaptation to climate change and dissemination of knowledge

161. **Research Capacities.** Bosnia and Herzegovina has ten scientific research institutions of the scientific research institute type, dealing with research specific to agriculture. Most of them are connected to universities, and some are independent. Their research focuses on examining the results of applying different production technologies, mainly in plant production, which is more exposed to climate shocks. Different plant varieties, cultivation technologies, etc., are examined. Cooperation with the business sector (farmers, SMEs, etc.) is rarer. Research on the impact of climate change on yields, product quality, and other results of agricultural production is sporadic, occurring only occasionally (e.g., SMARTWATR project[70]). The topics of this research are mostly defined top-down, initiated by researchers. Dissemination of research results is insufficient. Cooperation between researchers and advisors in the agriculture sector is sporadic and irregular (in some parts of BiH, there is almost no agricultural advisory service).

162. **Quadruple Helix Model.** There is a need for better connection between the science and business sectors, better targeting of research priorities, and wider and more diverse dissemination of research results. The public sector, ministries, and other institutions (such as the public agricultural advisory service in the RS and some cantons in the FBiH) should be included in that process. In the context of climate change, it is important to include the community (society) because the causes and consequences of climate change are intertwined and have positive and negative impacts on both the agricultural sector and the community. It is the so-called Quadruple Helix Model, a connection and interaction between academia (university), industry (agriculture), government (public institutions), and the community.

[66] https://www.wur.nl/en/education-programmes/master/msc-programmes/msc-resilient-farming-and-food-systems.htm
[67] https://www.iamb.it/education/masters/sare/
[68] https://elearning.fao.org/course/view.php?id=439
[69] https://www.unitar.org/about/news-stories/news/undp-and-fao-join-launch-new-online-course-climate-change-and-agriculture
[70] https://www.smartwater-project.eu/

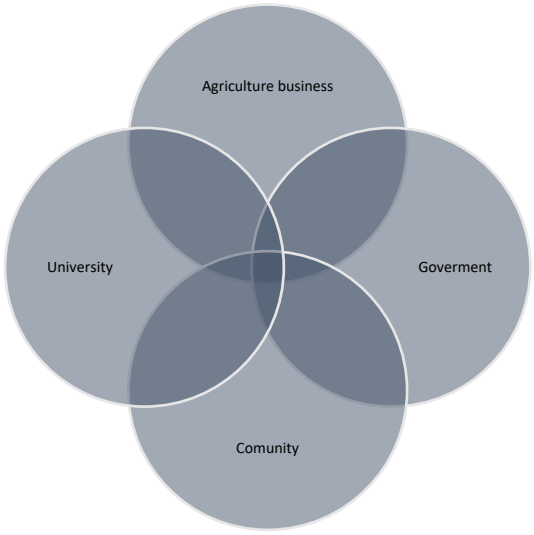


Figure 18: Quadruple Helix Model

163. **STAZA Project Initiatives.** The STAZA project will initiate and support scientific research in the context of better adaptation of the agricultural sector, especially small producers, to the emerging conditions caused by climate change. The goal is not only to support research but also to demonstrate the results of that research on a wider basis.

164. **Agriculture Adaptation to Climate Change B2R Workshops.** To avoid funding research just for research, research priorities will be created based on the B2R (business to research) model. This means that problems caused by climate change will be identified by farmers and other representatives of the agro-business sector. This will be done through B2R gatherings (Agriculture Adaptation to Climate Change B2R workshops), the organization of which will be mediated by existing agricultural clusters. At these events, farmers, agro-entrepreneurs and their representatives, and researchers and their representatives (faculties and institutes) will meet directly. These events will be an opportunity for business sector representatives and researchers to meet and discuss problems and potential solutions, generating ideas for research projects that they will continue to develop and prepare.

165. **Gathering Research Proposals.** Both project units (PCU and APCU) will publish calls for the collection of project proposals for research on the topic of agricultural adaptation to climate change. The process of selecting projects to be financed will take place in two steps: (1) collection and review of concept notes of proposals and (2) collection of full project proposals. Single project proposals will be submitted jointly by the scientific research institution and the business sector entity, the final beneficiary of the research results. This will ensure better alignment of research with the real needs of the agribusiness sector.

166. **Project Proposals Evaluation Process.** The selection of research priorities will be made by a multi-stakeholder committee formed for these needs in each of the two entities. They will be reviewers of concept notes and project proposals, ranking the projects following the conditions and objectives of the call. Project units will use independent experts to evaluate concept notes and full project proposals. To eliminate the conflict of interest, the experts should not be from the institutions proposing the project. Therefore, it is best to use retired professors close to the topic of the project proposals.

167. **Climate Change Resilience Research Projects.** At least 50 concept notes for potential projects and at least 30 project proposals are expected. Due to the limited number of scientific research institutions, it should be allowed that one institution can propose more than one project, but not more than three. Research in agriculture usually lasts several years (due to the repetition of experiments in several growing seasons), so research contracts should be signed at the beginning of the project to allow

sufficient time to follow up on the results and their application. In the end, at least 15 scientific research projects should be selected for funding from the Project Track with an average value of EUR 20,000.

168. **Demonstrations of CC Resilient Technologies.** Not all projects will necessarily require beforehand problem-solving research. Scientific research institutions in the country, based on accumulated knowledge and experience, know how to make certain solutions, and they only need to be demonstrated in appropriate conditions. Because they are based on prior knowledge, these demonstrations will have lower costs than research projects. It is preferred that the demonstrations be set up on farmers' farms, and only exceptionally at the locations of scientific research institutions if the demonstrations will require the existence of specific equipment that the farmers do not possess. Those demonstrations can also be done by consultants or advanced companies, cooperatives, etc. Since demonstrations can be completed in one year, they can be contracted and performed each year of the project life, excluding the last one. It is especially important to do a good and high-quality dissemination of demo trials in various stages of the vegetation period, by inviting farmers to demo farms and subsequent dissemination through digital media.

169. **The Need for Additional and New Knowledge.** Climate change has been in the focus of researchers and practitioners only recently. Therefore, it is logical that earlier generations of agronomists and other experts were educated without receiving special knowledge on how to deal with climate change. There is a noticeable gap in the knowledge of practitioners, advisors, and even teachers regarding how to adequately adapt agriculture to the consequences of climate change and how to mitigate agricultural impact on climate change. Therefore, it is necessary to enable the acquisition of specific knowledge about how to adequately adapt agriculture to the consequences of climate change and how to mitigate the agricultural impact on climate change for public and private advisors. In addition to new knowledge, the outcome of this activity will be the development of toolkits for training delivered by trained advisors.

170. **Award Fund for Works and Theses on the Topic of Adaptation of Agriculture to Climate Change.** A certain level of research and dissemination of knowledge can also be achieved through research for the needs of bachelor works, master theses, and doctoral dissertations at BiH universities. It is difficult to predict the scope and type of such research. However, to focus the attention of students and professors on such topics, the project will establish an award fund from which the best final BSc works, MSc theses, and PhD dissertations on that topic will be awarded. The condition for the award is that these works, theses, and dissertations are publicly available through the project's Agriculture Adoption to Climate Change platform.

171. **Agriculture Adoption to Climate Change Platform.** The project will establish a digital web-based Agriculture Adoption to Climate Change platform on which all project results will be accumulated, starting from CC vulnerability assessments, through CC adaptation action plans, results of scientific research activities financed within the project, co-financed master's theses, awarded students' papers, and other useful documents that are the result of other projects and research.

B. Economic, Social and Environmental Benefits

172. STAZA aims to provide economic, social, and environmental benefits, with particular attention to the most vulnerable communities and vulnerable groups within those communities, including gender considerations. IFAD, as Implementing Entity, is committed to enhancing social, environmental, and climate resilience through it’s STAZA. The Social, Environmental, and Climate Assessment Procedures (SECAP) guide IFAD in managing risks and impacts and integrating priorities into its investments. SECAP includes environmental, social, and climate due diligence, procedures for integrating IFAD priorities, collaboration with countries, and stakeholder engagement.

173. **Economic benefits.** STAZA project’s main economic benefits rely on the following: (i) improved climate change adaptation of farmers with stabilized or increased incomes thanks to the implementation of type grant I, on-farm initiatives on selected value chains, with an economic stream of benefits estimated at around EUR0.97 million per year (under subcomponent 2.1.3); (ii) enhance circular economy activities

and generate innovative income-generating opportunities through by-products to improve farmer's climate resilience through the implementation of grant type II, with an economic stream of benefits estimated at around EUR 0.40 million per year (under subcomponent 2.1.3); (iii) initiatives on selected value chains, with an economic stream of benefits estimated at around EUR 0.4 million per year ((under subcomponent 2.1.3); (iii) increase in value-addition of selected value-chains and income-generating opportunities to improve farmer's climate resilience through the implementation of grant type III, with an economic stream of benefits estimated at around EUR 1.42 million per year (under subcomponent 2.1.3). All these estimated co-benefits have been assessed through an economic and financial analysis.

174. In addition to this, other non-quantifiable economic benefits include the empowerment of farmers, and more particularly women and youths, that will be benefited from rural clustering strengthening and from services provided by the clusters (under component 2), not only allowing the realization of economic benefits mentioned above, but also better preparing them to face climate-change challenges in selected value-chains.

175. Finally, other non-quantifiable economic benefits include the expected economic gains from the elaboration and implementation of local climate adaptation plans (subcomponent 1.2.). Under component 1, 12 LCAPs will be developed at the community level, paving the way to the maintenance/improvement of at least 71 natural resource assets, over an estimated surface of 2,140 hectares. STAZA will identify and implement ecosystem measures (subcomponent 2.2) such as financing biotechnical measures and reforestation/afforestation to improve landscape restoration and conservation. Among the main sources of economic benefits, the following were identified: reduced soil erosion and risks of landslides, increased carbon sequestration (through afforestation, reforestation, natural assisted regeneration and soil conservation), avoided water runoff and biodiversity losses, protection generated against rock falls and wind damages.

176. STAZA will target vulnerable smallholders, especially those who are poor and transitory poor, as they are more exposed to the vulnerability of climate change. The project's targeting strategy will ensure that services supported by the project are provided in a fair, equitable, and inclusive manner. **The social benefits of STAZA** are manifold: building social capital, economic empowerment, and social inclusion (especially of women, youth, and vulnerable households).

177. **Social Capital:** Based on the experience of RCDP and READP, multi-stakeholder platforms (MSPs) are successful instruments in bringing together a wide range of stakeholders to participate in dialogue, decision-making, and implementation. Multi-stakeholder platforms have proven to be a sustainable and successful approach to decision-making that can help stakeholders achieve common cluster-level goals. Similarly, STAZA will use MSPs with the aim to lead the innovation and transformation processes in terms of climate adaptation and resilience building in line with project goals. Furthermore, the project's approach is based on community consultation and participation, paying attention to capturing and integrating the views of all stakeholders into local development to enhance smallholder farmers' resilience to climate change. Through these platforms and the adoption of participatory processes, social capital will be strengthened.

178. **Economic Empowerment:** In general, by building the resilience of agricultural production and thereby safeguarding income, vulnerable smallholder households will increase income stability, with associated social benefits. Similarly, by providing opportunities to access grant financing, income security will be strengthened, resulting in increased economic and social empowerment.

179. **Women's Inclusion and Empowerment:** The project will put special emphasis on addressing gender inequalities and empowering women, as this is key to helping them reduce the vulnerability of livelihoods to the negative impacts of climate change. This will be done in three ways: (i) recognition of gender differences in adaptation needs and capacities as part of Local Climate Adaptation Planning (LCAP) processes; (ii) gender-equitable participation and influence in adaptation decision-making processes; (iii) gender-equitable access to finance and other benefits resulting from investments in

adaptation. The project's approach to social inclusion and empowerment of women will aim to ensure the following:

- Ensure that women and men have equal access to capacity building, training, and productive assets and financial opportunities (e.g., grants financing). With this objective, the project will target 50% women as overall direct beneficiaries, and they will be able to access project services on an equal basis.

- Increase women's voice in decision-making at the household and community level. Women will be trained to form groups and be properly informed through separate consultations to enable them to make informed decisions during the climate adaptation plan planning process (Component 1). It is expected that women in representative positions will be a minimum of 30%. This will result in women's social empowerment and increased voice in decision-making at the community level.

- Increase women's access to skills and knowledge: women will be 50% beneficiaries for the technical trainings where they will be able to acquire practical knowledge on agroecology and improved production through demo-plots and related demonstration sessions and study tours (Component 1 and 2). An increase in income will result in economic and social benefits for women and the household.

180. **Youth Inclusion and Empowerment:** In addition, rural youth will be targeted by the project. Emphasis will be put on promoting their economic and social empowerment (e.g., by giving them priority for accessing the climate adaptive grants) and enabling them to have an equal voice and influence in rural institutions and organizations, especially in MSPs and Clusters. Youth will participate based on their interest, i.e., as existing young farmers, producers, agri-entrepreneurs, or students in the agriculture sector (higher education). They will receive targeted interventions and training based on their aspirations and interests. It is expected that their integration into rural economies will bring long-term positive social and economic results.

181. STAZA's consultative process involved engaging with a wide range of stakeholders during concept note and full design, defining entry points and inclusion barriers for actively involving the most vulnerable groups, including women and youth, to ensure their participation in the design process and in all the activities of STAZA. This approach aligns with IFAD's mandate to support the most vulnerable people and promotes inclusivity and gender considerations.

182. Furthermore, STAZA's **environmental benefits** are significant and integral to its design, aligning closely with IFAD's commitment to enhancing environmental sustainability and climate resilience in small-scale agriculture. The project activities have been developed in full alignment with the Adaptation Fund's Environment and Social Principles (ESPs) and IFAD's SECAP, ensuring that climate adaptive and environmental benefits are inherent in STAZA's objectives.

183. Through the implementation of comprehensive measures, STAZA addresses the vulnerability of soils to erosion and degradation. Under Component 1, a detailed mapping process is employed to visualize the comparative vulnerability of landscapes to changing climate conditions, including exposure to droughts and floods, the most severe climate-related impacts in BiH. Communities are actively engaged in identifying erosion hotspots, and awareness is raised about the consequences for land users and the broader settlement. STAZA's participatory cluster strengthening, combined with comprehensive diagnostics and workshops, establishes collective ownership of the rural landscape. Rural inhabitants are empowered to invest in and apply for support in rehabilitating or constructing rural adaptation collective infrastructure to sustain rural livelihoods.

184. Under Component 2, STAZA promotes the sustainable use of natural resources, preservation of biodiversity, increase of carbon sinks, and effective water management practices. Preventive biotechnical measures, such as hedges and light structures, are implemented to mitigate soil erosion risks. Capacity building and support for climate-resilient agriculture practices contribute to soil fertility restoration, ensuring sustainable land management. Through measures such as the restoration of storm basins, implementation of green infrastructure projects like afforestation and windbreaks, and the establishment of rainwater harvesting systems, STAZA mitigates the negative impacts of climate change on the environment.

185. Finally, Component 3 of STAZA focuses on policy support and knowledge enhancement for sustainable climate-resilient agriculture. The initiative is aligned with the Fourth National Communication report to the UNFCCC, addressing critical adaptation opportunities. Through Outcome 3.1, STAZA aims to integrate adaptation strategies at cantonal/municipal and national policy levels. This involves creating and sharing knowledge products, supporting institutions in developing master's courses related to climate change adaptation and agroecology, and conducting research on resilience and adaptation. It focuses on effective knowledge product development and sharing, addressing policy gaps, and emphasizes research on resilience and adaptation, involving academia, industry, government, and the community. These efforts contribute to a comprehensive and informed approach to climate adaptation, promoting sustainable practices for climate-resilient farming, strengthening knowledge, and empowering key stakeholders in BiH's agricultural sectors.

186. The SECAP Review Note includes IFAD's Complaints Procedure and Enhanced Complaints Procedure which provide mechanisms for addressing complaints related to social, environmental, and climate aspects (in the case of project is not complying with SECAP). These procedures ensure accountability and transparency. To avoid or mitigate negative impacts, STAZA incorporates risk assessment and management strategies, guided by the Environmental and Social Policy and Gender Policy of the Adaptation Fund. An Environmental and Social Management System (ESMS) with measures to comply with the Environment and Social Policy of the Fund for these activities has been included in the project ESMP (Annex 3), which will be regularly updated throughout STAZA's lifespan to identify and address potential adverse impacts on the population and ecosystem (see Part III: Implementation Arrangements). Through these comprehensive measures, STAZA promotes sustainable and inclusive development, aligning with IFAD's commitment to social, environmental, and climate resilience and complying with the Environmental and Social Policy and Gender Policy of the Adaptation Fund.

C. Cost-effectiveness

187. An economic and financial analysis of STAZA was developed assessing cost-benefit measures of interventions and it shows that the project is financially and economically profitable. The analysis identified a set of potential quantifiable incremental benefits generated by STAZA’s implementation. It takes into consideration the READP realizations and outcomes from the different value chains, and it also includes new models based on circular economy such as vermicomposting production, seed multiplication and beekeeping.

188. **Benefits.** The main sources of benefits are the following: (i) the farmers’ incremental benefits due to the increase in agricultural and livestock margins, and (ii) the incremental benefits of the added-value initiatives that are linked to the clusters; (iii) the incremental value of agricultural production due to the increased availability of water; and (d) the increased profits of farmer’s due to intense visits to demo-plots and capacity building that will enable them to replicate successful climate resilient practices (CRA) on their lands.

189. The primary sources of benefits encompass the following: (i) the increased benefits experienced by farmers resulting from better agricultural practices and as a results of the frequent visits to demonstration plots and capacity-building efforts that empower them to replicate successful techniques on their own lands, (ii) the added-value initiatives associated with clusters that contribute to incremental benefits, (iii)

the incremental value of agricultural production due to enhanced water availability, intercropping, and use of bio-fertilizers.

190. Three financial models were developed to illustrate the anticipated benefits of on-farm financial support, reflecting the existing cropping pattern in the project area. These models include open-air production of raspberries, strawberries, and apricots; intercropping of potatoes with onions; and intercropping of gherkins with tomatoes. In addition, three more financial models were constructed for Circular Economy financial support, covering seed multiplication, vermicomposting production, and beekeeping. Finally, two financial models were conceived to assess the market-oriented financial support, focusing on juice processing and a fruit drying unit.

191. **Financial Results.** The table 2 shows favorable Net Present Value (NPV) and Financial Internal Rate of Return (FIRR) across all financial models devised for this analysis. Specifically, the on-farm models, which involve the cultivation of raspberries, strawberries, and apricots in an open-air farm, exhibit a significant NPV of EUR 69,241, coupled with a benefit-cost ratio exceeding two. In the context of market-oriented models, the analysis reveals that in investing in fruit drying stands out as one of the most profitable options, with a FIRR of 442% and a corresponding NPV of EUR 63,761. Consequently, most of the proposed models show positive financial profitability at a financial discount rate at 10%.

Table 11. Financial Profitability results per model

Unit cost (EUR)	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10
On farm (primary production) models										
1. FM1 - Open field: Raspberry + Strawberries + Apricot	2,444	6,906	7,814	9,122	6,926	9,407	8,386	9,407	7,946	9,407
2. FM2 - Greenhouse: Potato + Onion	-1,883	599	558	565	570	571	572	573	573	573
3. FM3 - Greenhouse: Gherkin + Tomato	-1,409	413	372	379	384	385	386	387	387	387
Circular Economy models										
1. Seed multiplication	-2,114	656	530	482	482	482	482	482	482	482
2. Vermicomposting production	132	181	181	180	181	181	180	181	181	180
3. Beekeeping	-1,608	967	967	892	967	883	892	967	917	892
Market (short VC) models										
1. Juice processsing unit	-1,027	6,881	6,881	6,881	6,881	6,881	6,881	6,881	6,881	6,881
2. Fruit drying unit	-2,865	12,676	12,676	12,676	12,676	12,676	12,676	12,676	12,676	12,676

Table 12. Financial Profitability indicators per model

	unit	FIRR	NPV (12%, EUR)	B/C ratio
On farm (primary production) models				
1. FM1 - Open field: Raspberry + Strawberries + Apricot	ha	#NUM!	69,241	2.26
2. FM2 - Greenhouse: Potato + Onion	dum	27%	2,649	1.93
3. FM3 - Greenhouse: Gherkin + Tomato	dum	23%	1,668	1.57
Circular Economy models				
1. Seed multiplication	ha	23%	2,967	1.21
2. Vermicomposting production	unit	#NUM!	320,311	1.37
3. Beekeeping	unit	58%	3,415	1.15
Market (short VC) models				
1. Juice processsing unit	unit	670%	35,089	1.02
2. Fruit drying unit	unit	442%	63,761	1.05

192. **Economic Results.** Economic benefits from on-farm, circular economy and market-oriented models have been aggregated using an expected number of grants to be supported by STAZA (extracted from the costing exercise). The economic analysis was conducted by assessing the combined stream of benefits, which were derived from the previously described financial models and converted into economic values. An adoption rate of 85% at full development was assumed for all project interventions, recognizing that not all beneficiaries may be able to fully realize the anticipated benefits as described. The economic analysis shows satisfactory results, with a NPV at EUR6.77 million and an EIRR of 17.13 per cent, suggesting that the overall Project is economically profitable.[71]

193. **Sensitivity Analysis.** The sensitivity analysis tested the robustness of results in face of different adverse scenarios for costs and benefits (due to the materialization of key risks identified). These included

[71] The economic discount rate applied was 6%

increase in project costs (10% and 20%), a reduction in project benefits (10% and 20%), and combined scenarios (of both benefits reduced by 10%, 20% and 30% and costs increased by 10% or 20%). Additionally, a delay in project benefits (1 and 2 years) and the reduction in benefits by 50% every 2 and 3 years due to the occurrence of climate change shocks were considered. NPV remains positive under the different scenarios, so the project results seem to be robust. The table below presents the main results of the sensitivity test.

Table 13. Sensitivity Analysis

Sensitivity Analysis								
	Δ%	Risk					EIRR	NPV (EUR)
Base scenario							17.13%	6,774,984
Benefits	-10%	Combined risks on sale prices, yields, adoption rates					14.64%	4,976,170
	-20%						11.88%	3,177,356
Costs	10%	Increase in expenses and prices					14.88%	5,653,668
	20%						12.83%	4,532,353
Delay 1yr in Benefits		Adoption rate / delays					13.61%	5,067,716
Delay 2yr in Benefits							10.90%	3,459,633
External Shock every 2 yr	50% Benefits	External shock (prices, quantities, climate)					15.21%	5,533,087
External Shock every 3 yr	50% Benefits						15.05%	5,477,885
Mixed Scenarios		Costs	10%	Benefits	-10%		12.41%	3,854,854
			10%		-20%		9.65%	2,056,040
			20%		-20%		7.60%	934,724
			20%		-10%		10.37%	2,733,538

194. Overall, STAZA exhibits a high level of cost-effectiveness through Integrated Landscape Management (ILM) approach and the strategic utilization of Nature-based Solutions (NbS). Component 1 conducts a comprehensive climate change analysis, forming a basis for informed participatory decision-making by understanding climate implications at the territorial level. Component 2, emphasizing on-farm agroecological activities and grants, optimizes resource use through decentralized, farmer-empowered initiatives. NbS integration in territorial management aligns with global evidence of cost-effective climate adaptation. ILM approach, considering climate risks, creates synergies between green and grey infrastructure, and prioritizes sustainable practices to mitigate environmental degradation and enhance climate resilience. This comprehensive approach aims for optimal cost-effectiveness and sustainable outcomes. Component 3 contributes to cost-effectiveness by aligning adaptation measures with national strategies, minimizing duplication, and fostering coherent policies. The overall multi-component, NbS-driven strategy ensures efficient resource allocation, maximizing impact while incorporating lessons from successful IFAD-supported operations. Future project design phases will include a thorough cost analysis and alternative analysis, ensuring ongoing cost efficiency. Further details are provided in table below.

Table 14: Cost-effectiveness and alternatives to project

Component/ Subcomponent	Total costs (USD)	Beneficiaries	Benefits generated – losses averted	Alternative to project
Component 1. Participatory assessment and territorial planning				
1.1.1. Supporting Clusters strengthening **1.1.2. Development of Participatory Local Climate Adaptation Plans (LCAP)** **1.1.3. Exchange visits**	*1,435,258* *800,178* *107,049*	- Just under 19,000 persons accessing services provided by the clusters - 360 people participating in exchange visits.	- Improved resilience of ecosystems and infrastructure assets thanks to the development of 19 Local Climate Adaptation Plans - Improved sustainability of benefits of farmers participating in 9 MSPs, benefitting from services related to agroecology and other climate resilient agriculutre practices, business development, marketing opportunities and access to land. - A total of 3,275 hectares of land protected or under	*1. Supporting Value Chains without Building Social Capital:* Barriers to Adaptation: Lack of social capital remains a key barrier to effective adaptation, hindering the resilience of farming communities in the face of climate change. Higher Transactional Costs: Targeting individual farmers not organized in clusters results in increased transactional costs. Reduced Adoption: The absence of a participatory process leads to reduced adoption of climate-resilient practices, diminishing both the benefits and adaptive capacity. *2. Value Chain Clustering without Integrated Landscape Management:* Increased Ecosystem Vulnerability: The lack of an integrated landscape management approach heightens the vulnerability of

			improved practices under LCAPs.	ecosystems to climate change hazards. Risk to Farmer Benefits: Farmers' benefits are at risk due to insufficient mitigation of climate change impacts on landscapes, affecting the overall productivity and sustainability of agriculture. *3. Landscape Management Measures without Participatory Approaches:* Lack of Local Appropriation: Absence of participatory approaches results in a lack of local ownership, engagement, and effective management of investments by the communities. Limited Replicability: Inability to replicate and sustain local landscape management processes due to a lack of capacities and social capital among local stakeholders. Threat to Sustainability: Both factors pose a threat to the sustainability of project benefits and diminish cost-effectiveness.
Component 2.Enhancing Climate Change Adaptation at the Territorial Level				
2.1.1. Strengthening Adaptive Farming Systems	*574,257*	- 100 extensionists capacitated - 40 demo-plots installed - at least 1,600 people engaged in demo-plots visits and training	-1,600 people trained in climate resilient practices and social inclusion	*- 1. Targeting Less Vulnerable Producers:* Scenario: In an alternative scenario, the project targets less vulnerable producers, excluding the poorest smallholders. Drawbacks: Exclusion of Poorest Smallholders: The alternative neglects the most vulnerable smallholders, leaving them with limited sustainable options for their livelihoods. Risk of Out-Migration: Excluded from sustainable opportunities, the poorest smallholders might resort to out-migration or engage in maladaptive practices, exacerbating poverty. *2. Limited Financial Access without Project Intervention:* Scenario: The project's financial support is omitted, and smallholders are expected to rely on existing financial mechanisms. Drawbacks: High Micro-Finance Interest Rates: Current interest rates from micro-finance institutions are high, making productive models financially unviable for smallholders. Financial Barriers: The lack of affordable finance prevents the financial viability of sustainable livelihood models, hindering the participation of smallholders. *3. Lack of Climate Resilience in Value Chains:* Scenario: Alternatives do not address the climate resilience of targeted value chains. Drawbacks: Impact of Climate Shocks: The omission of climate resilience considerations exposes targeted commodities to climate shocks, jeopardizing a stable and sustainable income stream. Failure to Generate Expected Benefits: Without addressing climate vulnerabilities, the economic and financial analysis would not yield the expected benefits, and smallholders would lack motivation to participate in clusters.
2.1.2. Grants for scaling up Climate-Adaptive Initiatives	*1,402,558*	-1,600 Grant recipients households	- At least 1280 households reporting an increased stability of income - - 1600 hectares of agricultural land protected or under improved management practices	
2.1.3. Strengthening Market Access	*233,459*	2,000 Grant recipients households	- 10 fairs organized and revolving fund established to maintain sustainability after project - 100 grants approved	
2.2.1. Biotechnical Measures for Ecosystem Protection	*1,251,925*	-At least 3,350 households directly benefit from the landscape protection	- 1,675 hectares protected thanks to the implementation of biotechnical measures over 335 hectares - 71 natural assets maintained or improved under climate change and	*1. Distribution of Investments without Climate Considerations:* Reduced Cost-Effectiveness: Without integrating climate risks and synergies, the cost-effectiveness of investments would be diminished, leading to suboptimal outcomes. *2. Pursuing Business as Usual Scenario:* Climate-Induced Losses: Without

		measures implemented using NbS	variability-induced stress - Improved landscape restoration and conservation benefiting 3,350 households. - Reduced water runoff and biodiversity losses - Protection generated in landscapes against rock falls and wind damage - Increase in the value of production generating a stream of economic benefits. - Areas of value for agricultural and recreational use are protected/maintained	considering climate scenarios and investing in climate-resilient infrastructure, there would be significant losses due to soil and biodiversity losses from increased exposure to forest fires and soil erosion. Increased Water Runoff: The absence of investment in water storage infrastructure and protective measures would lead to increased water runoff, contributing to environmental degradation. Financial Risks for Farms: Farms would face financial risks due to ecosystem degradation, including rock falls and wind damage, reducing productivity and yields in eroded or damaged soils. *3. Maintenance Costs of Biotechnical Structures:* Higher Initial Costs: Biotechnical structures have higher initial maintenance costs, potentially dissuading investment; however, these costs become significantly lower and steadier over time. Dependence on Maintenance Frequency: The maintenance of wood vegetation depends on maintenance frequency, impacting the long-term sustainability and effectiveness of these structures. *4. Afforestation as a Low-Cost Carbon* Missed Carbon Sequestration Opportunities: Neglecting afforestation as an option may miss the opportunity to sequester carbon in a comparatively low-cost manner, even though it requires adapted and drought-resistant varieties.
2.2.2. Rehabilitation and Construction of Rural Adaptive Infrastructure	*1,958,885*	-2,010 households benefitting from Rural Adaptive Infrastructure	-67 rural adaptive infrastructure constructed or rehabilitated - Better access to water and reduced risk related to floods and erosion. - Reduced losses and increase in value of production due to the construction/rehabilitation of multipurpose open-markets, generating a stream of economic benefits.	
Component 3. Policy support and knowledge enhancement for a climate-resilient agriculture				
3.1.1. Effective Knowledge Sharing for Policy Support	*168,563*		-6 Policy-relevant knowledge products completed - 6 events organized to share evidence-based results from the project	*1. Scaling Up Lessons Learned without Systematizing Results:* Limited Impact: Scaling up without systematic documentation may lead to a limited impact as the knowledge and experiences might not be effectively communicated or utilized. Reduced Replicability: The absence of a systematic approach might hinder the replicability of successful models and mechanisms in different contexts. *2. Investment in National Rather than Local Strategies:* Limited Municipal Sustainability: Without dedicated plans at the municipal level, there would be limited sustainability of benefits, and replication of the project's results and mechanisms might be constrained. Reduced Community Engagement: National strategies might overlook the specificity of municipal-level needs and miss the opportunity for strong community engagement.
3.1.2. Supporting Educational Institutions in Curriculum Dev	*63,792*	-74 people from universities and government with improved CC adaptation knowledge		
3.1.3. Supporting Agricultural Research Grants and Specialized Institutions for Climate, Soil and Water	*502,895*		- 50/30 research CC resilience projects submitted/approved - 39 B2B demo-plots developed	

D. Strategic alignment

195. The proposed Project will align with the government's national priorities in implementing adaptation activities to mitigate the adverse impacts and risks of climate change in the country.[72] With a strong emphasis on targeting the most vulnerable populations living in rural areas, particularly in those areas

[72] Since the territory of the Brcko District of BiH is not a project area, strategies and laws relevant to that administrative unit are not listed.

severely impacted by climate change, the proposed project will align with the mandates and climate change strategies of both IFAD and AF, as well as BiH's strategies included in the **Fourth National communication (FNC, 2021)**, and subsequent **National Determined Contribution (NDC, 2021)** and **National Adaptation Plan (NAP, 2021)**. The STAZA project aligns with the NAP by implementing strategies for shifting precipitation patterns (under C1), including water resource management, flood prevention, and disaster risk reduction (under C2). STAZA focuses on water and agriculture, the two sectors most affected by climate change in BiH according to the NDC and will support the country in determining the impacts of climate change and identify priority action measures locally (under C1) as recommended in the NDC. The FNC of BiH under the United Nations Framework Convention on Climate Change[73] reports that the agricultural sector contribution to CO_2 emission was 7% in 2015. Regardless of the small contribution, in addition to the adaptation of agriculture to climate change, attention should also be paid to its decarbonization, i.e. reducing its impact on the greenhouse effect.

196. In term of water management, specifically under the component 2 at territorial level, STAZA will align its activities to the Strategic documents at entity levels, such as **the Water Management Strategy of the Federation of BiH** (2010-2022) and the **Integrated Water Management Strategy of Republika Srpska** (2015-2024). The full design of the proposed project will also rely on the updated **Water Management Plan for the period 2022-2027** at Canton's level in FBiH. Indeed, the Agency for the Water Area of the Adriatic Sea Basin specified the preparation of a Study on the impact of climate change on the water resources of this area, as well as the preparation of a proposed program of measures for the prevention of climate change on which the proposed project will be aligned.

197. At the proposal of the Ministry of Foreign Trade and Economic Relations, the Council of Ministers of BiH adopted in January 2018 a proposal of the **Strategic Plan for Rural Development of Bosnia and Herzegovina (2018-2021)[74]**, which created conditions for domestic agricultural producers to receive funds from the European Union funds through projects. An updated SPRR BiH should cover the period 2023-2027 (Not yet approved by the government as of today).

198. STAZA is aligned with the SPRR BiH[75] and especially the measures 6.1. "Direct support to agricultural producers", 6.3. "Support for vocational training, knowledge development & acquisition of advice & information", 6.5. "Support for diversification in rural areas" specifically through non-conventional agricultural production and waste management, and **6.8. "Support for organic production, environment protection & reducing the impact of climate change"**. The measure 6.8. states that farming is requiring the development of more mixed cropping farming systems and more diverse farm management practices. In such circumstances, the risks to the incomes from agricultural holdings, the quality of life and the socio-economic status of rural households are gradually increasing. The results and lessons learned from the proposed project will also lead to support to the next SPRR BiH covering the 2028-2032 period, including more aspects of Adaptation to climate change (only minor at the moment in the 2023-2027 SPRR).

199. The proposed project is also aligned with the third edition of the **Gender Action Plan** 2018-2022 (last updated plan) and will ensure complementarity with the **Financial Mechanism for the Implementation of the Gender Action Plan (FIGAP)**. STAZA aligns with the **Social Inclusion Strategy** 2021-2027 of the RS and of the FBiH and is committed to upholding the principles of inclusivity as outlined in the respective strategies of each entity.

200. STAZA is aligned with several strategic documents which are pivotal in addressing environmental protection, nature preservation, and climate change. The **Strategy of Adaptation to Climate Changes**

[73] https://unfccc.ba/lat/4ni-lat

[74] Strategic plan on the state level is developed using modular system of integrating strategic priorities at the level of entities and Brcko district who develop their own Strategic plans.

[75] The Strategic Plan for Rural Development of Bosnia and Herzegovina 2018-2021, framework document. Ministry of Foreign trade and Economic Relations of Bosnia and Herzegovina.

and Low-Emission Development of Bosnia and Herzegovina for the period 2020-2030 (2020)[76] is a cornerstone, aligning with international obligations. It emphasizes the need for a low-carbon economy, circular economy concepts, and resilience-building in the face of climate change. Notably, the agricultural sector is identified as particularly vulnerable, with a focus on supporting small producers and rural communities in adapting to climate challenges. This strategy encompasses seven intervention measures specific to agriculture.

201. Additionally, the **Bosnia and Herzegovina Environmental Strategy and Action Plan 2030+**[77] is under development, and the recently released **Federal Strategy of Environment Protection 2022-2032 (2022)**[78] emphasizes enhancing natural resource use and biodiversity protection. Climate change mitigation and adaptation are integral components, featuring prominently in priorities such as reducing greenhouse gas emissions and strengthening resistance to climate change.

202. Moreover, the **Strategy for Environmental Protection of the Republic of Srpska 2022-2032 (2022)**[79] addresses critical challenges, with its fourth strategic goal focusing on improving mitigation and adaptation to climate change and air quality. This aligns with national efforts to meet EU standards and obligations related to climate change.

203. Within the agricultural sector, specific strategies further address climate change adaptation and mitigation. For instance, the **Strategy for the Development of Agriculture and Rural Areas of the Republic of Srpska 2021-2027 (2021)** emphasizes applying environmental practices that adapt to and mitigate climate change impacts, which is specifically supported under the component 2 of the project. Similarly, the forthcoming **Federation of BiH Agriculture and Rural Development Strategy 2021-2027** focuses on supporting sustainable development, efficient natural resource management, and biodiversity protection.

204. Furthermore, at sub-regional level, STAZA will contribute to the **Western Balkan commitment** to achieve carbon neutrality by 2050 and will align with the **European Green Deal**, following the endorsement of the **Green Agenda for the Western Balkan (GAWB**) 2021-2030[80] at the Summit in Sofia in 2020, and subsequently the **GAWB Action Plan**[81], at the Brdo Summit in October 2021. STAZA is aligned with the Green Agenda for the Western Balkans and associated action plan, envisaged by the European Green Deal and is aligned with the following two pillars of the Green Agenda: **pillar 3** – Biodiversity, aiming to protect and restore the natural wealth of the region and **pillar 5** Sustainable food systems and rural areas. By adopting an agroecological approach, STAZA can support BiH contribute to the **EU's objectives of promoting sustainable and climate resilient food systems**, and facilitating trade and market access within the European Union. Transitioning to agroecology aligns with the EU's vision of sustainable and environmentally friendly agriculture. The **EU's Common Agricultural Policy (CAP)** emphasizes the promotion of agroecological approaches, biodiversity conservation, and ecosystem services.

205. The proposed project will be fully developed taking into account key European Union agricultural policies, such as the CAP, **Horizon Europe**, **Farm to Fork Strategy, European Innovation Partnership for Agricultural Productivity and Sustainability (EIP-AGRI),** the **Biodiversity Strategy** and the **Sustainable Use of Pesticides Directive**. Agroecology has gained recognition as a sustainable practice to be promoted and expanded upon in these key European Union initiatives and the **new Regulation on the Sustainable Use of Plant Protection Products**, aiming to reduce the use and risk of chemical

[76] http://ppipo.bdcentral.net/data/dokumenti/pdf/Strategija_prilagodjavanja_i_niskoemisionog_razvoja_BiH_2020-2030_Nacrt-april_2020.pdf
[77] https://esap.ba/
[78] https://parlamentfbih.gov.ba/v2/userfiles/file/Materijali%20u%20proceduri_2022/Feder_%20strat_za%C5%A1t_okoli%C5%A1a%20-%20bos.pdf
[79] chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://nasljedje.org/wp-content/uploads/2023/02/strategija.pdf
80 https://www.rcc.int/docs/546/sofia-declaration-on-the-green-agenda-for-the-western-balkans-rn
[81] Regional Cooperation Council | Action Plan for the Implementation of the Sofia Declaration on the Green Agenda for the Western Balkans 2021-2030 (rcc.int)

pesticides by 50% across the European Union by 2030.[82] These strategies emphasize the potential of agroecology to minimize the reliance on pesticides, fertilizers, and antimicrobials, thereby promoting environmentally friendly agricultural practices. Furthermore, agroecology aligns with the future eco-schemes of the CAP, making it eligible for support and incentivization within the EU's agricultural framework. Besides, by indirectly contributing to the reduction of **Scope 2 and Scope 3** emissions in agriculture, STAZA will actively support the process for integration of BiH into broader European Union's agricultural policy objectives.

206. Finally, STAZA will contribute directly to the following Sustainable Development Goals: **SDG 1** (No poverty), **SDG 2** (Zero hunger), **SDG 5** (Gender equality), **SDG 8** (Decent work and economic growth), **SDG 12** (Responsible consumption and production), and **SDG 13** (Climate action).

E. National Technical Standards and Environmental and Social Policy

207. **Institutional Capacities**: Institutions dealing with natural resources relevant to agriculture and climate change at different administrative levels in Bosnia and Herzegovina include:

(a) In Bosnia and Herzegovina: • Ministry of Foreign Trade and Economic Relations, Sector for Water Resources, Tourism, and Environmental Protection.

(b) In the Republic of Srpska: • Ministry of Spatial Planning, Civil Construction and Ecology of the Republic of Srpska (cooperating with all ministries of the Government of the Republic of Srpska and local self-government units), • Ministry of Agriculture, Forestry, and Water Management of the Republic of Srpska, • Fund for Environmental Protection and Energy Efficiency of the Republic of Srpska.

(c) In the Federation of Bosnia and Herzegovina: • Federal Ministry of Environment and Tourism, and the relevant cantonal ministries within their competences, • Ministry of Agriculture, Water Management, and Forestry of the Federation of BiH, • Environmental Protection Fund of the FBiH.

208. **Alignment of STAZA with National and Entity-Level Laws.** In the case of construction works for infrastructure that enables better adaptation to climate change, the works will be carried out in accordance with the project documentation. The ministry responsible for construction in the entity, canton (only for FBiH), or the municipality in whose territory the works are carried out, depending on their scope, is responsible for issuing construction and use permits. The documentation submitted with the application for the issuance of a building permit also includes an environmental protection study if the building's purpose, defined by the ordinance, can endanger the environment, and a study on waste disposal if specific disposal measures are prescribed by law. The **Law on Environmental Protection** (Official Gazette of RS, 71/12), articles 60-79 prescribes the environmental impact assessment (EIA) procedure. Additional clarifications can be found in the Rulebook on projects for which an environmental impact assessment is carried out and criteria for deciding on the need to carry out and the scope of an environmental impact assessment (Official Gazette of RS, 124/12). Analogously, in FBiH, there is a Rulebook on plants and facilities for which an environmental impact assessment is mandatory, as well as plants and facilities that can be built and put into operation only if they have an environmental permit (Official Gazette of FBiH, 19/04). STAZA will comply with BiH's national technical standards. Investments planned to be supported by the STAZA project are mostly small-scale investments that simplify their implementation based on the legal regulations in force in BiH. In Bosnia and Herzegovina, most construction and procurement procedures are not regulated at the state level but at the level of its two entities. Based on READP experience (where this inquiry is systematically made as part of relevant Public Calls), and considering

[82] The measures include legally binding targets at the EU level, promotion of Integrated Pest Management (IPM) for environmentally friendly pest control, and a ban on pesticide use in sensitive areas. Additionally, Member States will be required to increase the use of non-chemical pest control methods and provide independent advice to farmers and pesticide users for greater adoption of alternative approaches. These measures aim to reduce the environmental impact of the EU's food system and address the challenges posed by climate change and biodiversity loss - European Union's Sustainable use of pesticides directive: https://food.ec.europa.eu/plants/pesticides/sustainable-use-pesticides_en .

none of the works planned under the project are of “complex” nature, it is not foreseen that EIAs will be required. STAZA will systematically conduct Rapid Environmental Impact Assessments for all works.

209. The project complies with the Environmental and Social Policy of the Adaptation Fund (see ESP risk assessment summary in section II. K and detailed assessment in the EMSP in annex 3) and has been designed to minimize any negative environmental impact. STAZA respects and adheres to state and entity legislation. In particular, the project will comply with the following laws and bylaws:

- FBiH Law on Agriculture (Official Gazette 88/07, 4/10, 27/12, 7/13, 82/21), Law on Construction of FBiH (Official Gazette of FBiH, 55/02), • Law on Agriculture of RS (Official Gazette of the RS, 70/06, 20/07, 86/07, 71/09), • Law on Spatial Planning and Construction of RS (Official Gazette of RS, 40/13, 2/15, 106/15, 3/16, 104/18, 84/19), • Rulebook on projects for which an environmental impact assessment is carried out and criteria for deciding on the need to carry out and the scope of an environmental impact assessment (Official Gazette of RS, 124/12), • Rulebook on facilities that can be created and put into operation only if they have an environmental permit (Official Gazette of RS, 124/12), • Law on Spatial Planning in FBiH (Official Gazette of FBiH, 55/02), • Trade Law of the RS (Official Gazette of RS, 06/07, 52/11, 67/13, and 106/15), • Law on Internal Trade of the Federation of BiH (Official Gazette of FBiH, 40/10, 79/17); • Law on Basics of Road Traffic Safety in BiH (Official Gazette of BiH, 6/06, 75/06, 44/07, 84/09, 48/10, 18/13, 8/17, 89/17, 9/18), • Law on Seeds of Agricultural Plants of the Republic of Srpska (Official Gazette of RS 37/97, 10/11, 110/16, 90/21), • Law on Seeds and Planting Material of the Federation of BiH (Official Gazette of FBiH, 55/01); • Law on Nature Protection of the Federation of BiH (Official Gazette of FBiH, 66/13), • Law on Nature Protection of the Republic of Srpska (Official Gazette of RS, 20/14), • Law on Environmental Protection of the Federation of BiH (Official Gazette of FBiH, 15/21), • Law on Environmental Protection of the RS (Official Gazette of RS, 7/12, 79/15, 70/20), • The Water Law of the FBiH (Official Gazette of the FBiH, 70/06); • Water Law of the RS (Official Gazette of the RS, 50/06, 92/09, 121/12, 74/17), • Law on Agricultural Land of the RS (Official Gazette of the RS, 93/06, 86/07, 14/10, 5/12, 58/19, 119/21, 106/22), • Law on Agricultural Land of F BiH (Official Gazette of FBiH, 52/09).

210. According to the **FBiH Law on Agriculture** (Official Gazette 88/07, 4/10, 27/12, 7/13, 82/21), one of the goals of agricultural policy in FBiH is the rational use and preservation of natural resources, environmental protection, and improvement of integral and organic agriculture (Article 4). Article 18 of the same law particularly emphasizes the need to encourage the introduction of technology in agricultural production that enables the protection and preservation of natural resources such as agricultural land and water, tea protection, and preservation of the environment in general and the preservation of agricultural biological diversity of ecological systems. According to the **Law on Agriculture of RS** (Official Gazette of the RS, 70/06, 20/07, 86/07, 71/09), one of the objectives of the agricultural policy in the RS is the rational use and preservation of natural resources, environmental protection, and improvement of integral and organic agriculture. One of the measures is measures for the regulation of agricultural land, which (among other things) include the establishment of a soil fertility control system and the improvement of agricultural land management (Article 23).

211. According to the **Law on Spatial Planning and Construction of RS** (Official Gazette of RS, 40/13, 2/15, 106/15, 3/16, 104/18, 84/19), it is not necessary to obtain location conditions and a building permit for works on the adaptation of construction facilities (under component 2 of STAZA). Adaptation is considered to be the performance of construction and other works on the building for the purpose of changing the activity, replacement of completed buildings and equipment and installations of the same capacity, which do not affect the stability and safety of the building, do not change the structural elements, do not change the external appearance and do not affect the safety of neighboring buildings, i.e., they do not change the conditions given in the construction permit on the basis of which the building was built. If there are works that will go beyond the framework of the adaptation, the investor will have to previously provide urban planning consent and a building permit in accordance with the provisions of the Law on Spatial Planning and Construction and an environmental permit in accordance with the **Law on**

Environmental Protection. It is expected that the subject of support will not be projects for which it is always mandatory to carry out an assessment of their impact on the environment. The subject of support will also not be projects for the construction of new facilities in animal husbandry, specifically not facilities of a size above the thresholds for which an EIA is carried out. The subject of a mandatory assessment is for irrigation and drainage projects and the construction of a biogas processing plant, but the project will not support the construction of such facilities, but only their completion with certain equipment, whereby it is understood that such facilities already have a use permit, the issuance of which was preceded by an analysis of the impact on life in the middle. According to the Law on Spatial Planning and Construction of the Republic of Srpska, as part of the procedure for issuing a building permit, an investor whose project is considered to have or may have a negative impact on the environment must first obtain an environmental permit. **The Law on Environmental Protection**, articles 60-79 prescribes the EIA procedure. Additional clarifications can be found in the **Rulebook** on projects for which an EIA is carried out and the criteria for deciding on the need to carry out and the scope of an EIA (Official Gazette of RS, 124/12) and the Rulebook on facilities that can be created and put into operation only if they have an environmental permit (Official Gazette of RS, 124/12). According to the **Law on Spatial Planning in FBiH** (Official Gazette of FBiH, 55/02), construction of a building can only be started on the basis of a building permit. According to this law, a construction permit is not required for water wells and water tanks with a volume of 10 m3, septic tanks with a volume of 10 m3, works on replacing and supplementing equipment if it is in accordance with the purpose of the building, and building maintenance works if they do not affect compliance with essential building requirements and urban planning conditions. The investor is obliged to obtain a building permit if he intends to reconstruct an existing building.

212. **Law on Basics of Road Traffic Safety in BiH** (Official Gazette of BiH, 6/06, 75/06, 44/07, 84/09, 48/10, 18/13, 8/17, 89/17, 9/18), Article 297 regulates that Motor and trailer vehicles participating in road traffic must be registered. Motor vehicles and trailers that are found to be in good working condition during a technical inspection can be registered. Motor vehicles include tractors and motocultivators and their attachment tools that move on the roads and which can be the subject of procurement within the project. This type of vehicle is registered permanently, i.e., only once during procurement, which will be a requirement for users who receive support from the project for their procurement.

213. According to the **Trade Law of the RS** (Official Gazette of RS, 06/07, 52/11, 67/13, and 106/15), the goods that are placed on the market must comply with the standards, technical norms, and qualitative norms prescribed or recognized as a condition for their circulation or use on the market of Republika Srpska and Bosnia and Herzegovina (Article 3). Since the project users will purchase equipment and other goods from authorized dealers, only goods for which the dealers have previously proven that they meet the standards and technical norms valid for the BiH market will be the subject of procurement, whether they are goods of domestic or imported origin. In an identical manner, this issue is regulated by Article 3 of the **Law on Internal Trade of the Federation of BiH** (Official Gazette of FBiH, 40/10, 79/17).

214. According to the **Law on Seeds and Planting Material of BiH** (Official Gazette of BiH, 3/05), only suppliers registered in the register of suppliers may deal with the production, preparation for placing on the market, import, and placing on the market of seeds and planting material of agricultural plants. The supplier must perform the activities of the supplier in accordance with this law and ensure that the seeds and planting material of agricultural plants in circulation meet the prescribed requirements. According to the **Law on Seeds of Agricultural Plants of the Republic of Srpska** (Official Gazette of RS 37/97, 10/11, 110/16, 90/21), only seed producers registered in the Register of Seed Producers (article 5) whose production starts mandatory control. Trade in seeds can be carried out by a business company, that is, another legal entity, and an entrepreneur who is registered in the Register of Producers for seed trade. The sale of seedlings can be handled by a company, that is, another legal entity, and an entrepreneur who is registered in the Register of Producers. Seedlings that are placed on the market are accompanied by a declaration and certificate of health status issued in accordance with the **Law on Plant Health Protection in the Republic of Srpska**. According to the **Law on Planting Material of the Republic of Srpska** (Official Gazette RS 37/09, 117/11) production of planting material can be carried out by a business

company, another legal entity, and an entrepreneur registered in the Register of Planting Material Producers (Article 7). The production of planting material is subject to mandatory professional control. Trading in planting material can be done by a company, another legal entity, and an entrepreneur registered in the Register for trading in planting material. **The Law on Seeds and Planting Material of the Federation of Bosnia and Herzegovina** (Official Gazette of FBiH, 55/01) stipulates that the production of agricultural seeds can be carried out by legal entities registered in the Register of Seed Producers and natural persons who cooperate with legal entities (Article 7). Seeds of varieties registered in the Register of Varieties, as well as non-varietal seeds, can be marketed (Article 40). The import of seeds can be conducted by a business company or another legal entity and an entrepreneur, provided they are registered in the Register of Seed Importers (Article 42). The production of seedlings can be undertaken by a company, another legal entity, or an entrepreneur registered in the Register of Producers. Only legal entities registered for that activity with the competent court can engage in the sale of planting material (Article 39 of the same law). The production of seedlings can be carried out by legal entities (hereinafter referred to as the producer of seedlings) registered in the Register of Seed Producers. Exceptionally, the production of seedlings can also be undertaken by natural persons based on a written cooperation agreement with the seed producer, and the seedlings produced in that collaboration are considered the production of the seed producer. The production of planting material during the growing season is subject to mandatory expert inspection. The expert inspection of the planting material determines the origin of the used planting material, the authenticity of the variety, vegetative development, and health status. The risk of trading seeds and seedlings that do not meet national standards within the STAZA project is minimal. When procuring seeds and seedlings from project funds, the condition will be that the seeds and seedlings have a certificate of origin and are in good health.

215. According to the **Law on Nature Protection of the FBiH** (Official Gazette of the FBiH, 66/13), plant protection agents may only be used in justified cases based on expert checks and the results of checking the overall condition of endangered species, in a manner acceptable to nature, and in accordance with special regulations (Article 17). If nature protection measures are not included in spatial planning documents, for the construction of buildings and the performance of other works and interventions in a protected area determined by special regulation, the obligation to assess the impact on the environment for the intended intervention is established. A building permit can be issued, and the execution of other works allowed, if the competent ministries of spatial planning give their consent that the main project or other documentation has been prepared in accordance with the conditions and measures of nature protection (Article 29). **The Law on Nature Protection of RS** (Official Gazette of the RS, 20/14) states that the holder of the project, i.e. a legal entity, an entrepreneur, and a natural person using natural resources, performing construction and other works, activities, and interventions in nature, is obliged to act in accordance with the measures and conditions of protection of nature determined in the plans, foundations, and programs and in accordance with the design and technical documentation, in such a way as to avoid or minimize endangerment and damage to nature (Article 17).

216. The **Forest Regulations of FBiH** (repealing the Forest Law, in the Official Gazette of FBiH, 83/2009) aims at: setting rules and issues for granting the overall preservation and protection of forests and forest land; strengthening their functions; planning in forestry and management of forests and forest land; correct run of economic functions; financing of biological reforestation on the territory of the Federation of Bosnia and Herzegovina; supervision over the application of related rules; setting penalty provisions as well as other issues of importance for forests and forest lands. The **Forest Law of RS** (amended in 2020 in the Official Gazette of the Republika Srpska, 70/2020) defines all necessary rules and requirements aimed to regulate the mandatory forest protection, financing and use of forests, Forest Agency duties and obligations, Forest Commission powers and relations, cadastre and forestry information system, property relations and obligations, as well as other issues of importance for the safe, sustainable and secure management and development of forests.

217. The **Law on Environmental Protection of RS** (Official Gazette of RS, 7/12, 79/15, 70/20) stipulates that in using the environment, the precautionary principle must be respected, i.e., the elements

of the environment must be carefully managed and economically used, and the creation of waste must be minimized by applying the recycling of the generated waste, i.e., reusing natural and artificial materials (Article 8). Conservation of the biosphere includes the protection of organisms, their communities, and habitats, including the preservation of natural processes and natural balance within ecosystems, while ensuring their sustainability. Biological diversity and biological resources are protected and used in a way that enables their survival, diversity, restoration, and improvement in case of damage (Article 19). The **Law on Environmental Protection of FBiH** (Official Gazette FBiH, 15/21) regulates that the existing activity that has harmful consequences for the environment must be adjusted to the prescribed limits regarding the extent of the impact on the environment. The adjustment of activity is carried out even if the adjustment costs are greater than the value to be protected (Article 7).

218. The **Water Law of the FBiH** (Official Gazette of the FBiH, 70/06) regulates that the construction of protective water structures and structures necessary for the use of water is permitted on water assets in accordance with regulations, water management plans, and previously obtained approvals. The water facilities that the STAZA project will potentially work with include small dams, embankments and reservoirs, pipelines, wells, catchments, and facilities for the protection of water from pollution (collectors, etc.). One of the principles of water management according to the **Water Law of the RS** (Official Gazette of the RS, 50/06, 92/09, 121/12) is the use of water and its management in a rational and sustainable manner, preventing unnecessary water use and ensuring that water use does not exceed the natural renewal of resources. As in the FBiH, the construction of water infrastructure facilities is allowed on the water domain, which includes the construction of facilities for irrigation and drainage of agricultural land and its defense against floods. Permitted interventions from paragraph 1 of this article may be undertaken under the conditions prescribed by this law and construction regulations (Article 13).

219. The **Law on Agricultural Land of the RS** (Official Gazette of the RS, 93/06, 86/07, 14/10, 5/12, 58/19, 119/21, 106/22) regulates the purpose of using agricultural land based on natural and other conditions (possibility of rezoning), the degree of erosion of agricultural land, areas that are protected as habitats of wild plant and animal species, and areas whose purpose cannot be changed to preserve the natural balance (Article 7). Based on the arrangement, protection, and use of agricultural land for the territory of the municipality, the following are regulated: the purpose of using agricultural land based on natural and other conditions (possibility of rezoning), areas that need to be arranged for more rational agricultural production (melioration, compaction, etc.), the degree of erosion of agricultural land, areas that are irrigated or can be irrigated, areas that are protected as habitats of wild plant and animal species, and areas whose purpose cannot be changed to preserve the natural balance (Article 8). These documents will serve as a good basis for planning specific project activities in the area of a specific municipality (with the acknowledgment that all municipalities in the RS have not yet completed this basis, and the STAZA project can contribute to improving that situation). The **Law on Agricultural Land of FBiH** (Official Gazette of FBiH, 52/09) aims to improve the conditions of agricultural production, increase the fertility and productive capacity of agricultural land, and promote more rational and economical production through land management measures such as compaction, arrondation, land reclamation (construction and maintenance of drainage and irrigation systems, improvement of the quality of agricultural land, cultivation of meadows and pastures, conversion of uncultivable agricultural land into arable), anti-erosion protection, recultivation, etc. (Article 72). Agricultural land development measures are implemented with the goal of technical development, improvement of production characteristics, regulation of soil water regime, and prevention of damage and remediation of land degradation and pollution caused by natural phenomena or economic and social activities, based on the land development program (Article 83).

220. The STAZA project will ensure that its implementation activities contribute to the rational use of natural resources in agricultural production, primarily agricultural land and surface and underground water, without endangering protected species of plants and animals. If activities are carried out in protected areas, they will align with the management plan of those areas and adhere to the highest standards of environmental protection. The design of the STAZA project considered the provisions of the relevant laws in force in BiH or its individual parts, acknowledging their existence. The obligation of compliance of

individual project activities with the provisions of those laws will be detailed in the Project Implementation Manual, and there will be an obligation to check subsequent compliance of each project implementation activity with appropriate regulations related to, among others, construction, environmental and nature protection, water, land and air protection, procurement of seeds and planting material, and the safety of using certain types of equipment.

F. Duplication

221. Following in-country consultations under the concept note mission, followed by the full design mission, the mission team has confirmed that there is no risk of duplication with other existing projects or programs. The development of the proposed project is the result of a comprehensive national assessment of climate change adaptation needs and the recommended course of action. During the preparation of STAZA, a thorough needs assessment process was conducted, including a detailed analysis of synergies and potential overlaps with other projects, which was concluded during the full design process (see H. Consultative Process and Annex 2 - Stakeholders consultation process). The findings, presented in the table below, demonstrate that the majority of STAZA's initiatives either have complementary activities or do not have geographical overlap with STAZA's targeted intervention area.

222. The careful analysis conducted during the project design phase ensures that the proposed project is well-positioned to avoid duplication and effectively contribute to addressing climate change in BiH. By leveraging existing initiatives, scaling up successful practices, and fostering partnerships, the AF project maximizes its impact while minimizing any potential overlap with other projects or programs.

Table 15: List of relevant projects

Other projects/ partners	Summary And Geographic overlap with the project	Identified synergies
EU – UNDP - CzDA : European Union Support to Agriculture Competitiveness and Rural Development in Bosnia and Herzegovina (EU4AGRI)	The EU is the single largest provider of funds and financial assistance in BiH. Its priority sectors have been democracy and governance; rule of law and fundamental rights; competitiveness and innovation; education, employment and social policies; transport; gender equality; environment, climate action and energy; and agriculture and rural development. EU4AGRI Project is a four-year initiative (2020-2024) that aims to modernize agri-food sector, create new jobs, as well as retain existing ones, and support recovery from crisis caused by COVID-19 in Bosnia and Herzegovina. The EU4Agri project is primarily funded by the European Union (EU) under the Instrument for Pre-Accession Assistance (IPA). Worth EUR 20 million, the project is implemented and co-funded jointly by United Nations Development Programme (UNDP) and Czech Development Agency (CzDA).	EU4Agri project should not overlap in time and will close before the proposed project starts. However, the close alignment between such EU projects and the proposed project will naturally occur due to the complementary nature of their target groups. The support provided through capacity building and grants will empower and uplift disadvantaged producers who may face challenges in accessing grants under EU projects (e.g.EU4Agri), particularly small farmers. By enabling the graduation of these marginalized producers, they will gradually become eligible for other forms of support and subsidies, ensuring their inclusion and progression within the agricultural sector. The project teams (RS and FBiH) will be responsible for keeping abreast of all relevant support available under the government's agricultural budget, as they will be anchored in the MAWMF and the MAFWM. Similar to the previous IFAD project READP, the proposed project's team will maintain regular communication with other stakeholders involved in agricultural budget planning and management. This collaborative approach ensures strong synergies among various initiatives. In this process, STAZA's field staff will provide relevant information to local stakeholders seeking support, thereby presenting alternative opportunities for their consideration.
World Bank: Agriculture Resilience and	The World Bank project (2022-2027) of US$ 68.50 million consists of three components. The first component aims to enhance public support resilience and traceability, improve the efficiency of budgetary resources allocated to the	STAZA complements the project of the World Bank (not yet effective at this date). Overall, the two projects complement each other by addressing different aspects of agricultural development. While the World Bank project focuses on business development and productivity, the Adaptation Fund project contributes to the agroecological resilience of the

Competitiveness Project	agriculture sector, and strengthen extension services. The second component focuses on improving agriculture productivity, adaptation to climate change, and market linkages, while incorporating climate-smart agriculture practices. The third component aims to enhance food quality and safety, upgrade public institutions and systems, and harmonize standards with relevant EU legislation.	ecosystem and the adaptation of farming systems to climate change. Together, they contribute to the overall development and resilience of the agricultural sector in BiH. Specifically, the World Bank project will work on irrigation schemes which can directly benefit the AF project's beneficiaries for on-farm access to water. Discussions took place during STAZA full design mission with the WB team to ensure complementarity between both projects. STAZA teams will be in constant contact with the WB project team to ensure complementarity in implementation.
UNDP – GCF: FP051: Scaling-up Investment in Low-carbon Public Buildings	The GCF project (2017-2025) primarily focuses on urban areas and emphasizes mitigation rather than adaptation. The GCF project aims to secure a total of US$ 122.6 million of grant resources to address barriers to low-carbon retrofits of public buildings. The GCF project specifically targets non-financial barriers, policy development, and capacity-building efforts to support the implementation of the National Investment Framework for Low-Carbon Public Buildings.	STAZA do not focus in urban areas but instead focuses on agriculture and water management with an agroecological approach, addressing adaptation measures to build resilience in response to climate change impacts in rural areas. As such, these two projects have distinct objectives, geographical focuses, and thematic areas, and therefore do not duplicate each other.
UNEP/FAO-GEF: Land Degradation Neutrality	The GEF project of US$ 6.5 million in Bosnia and Herzegovina will be implemented for the period 2022-2024 and focuses on addressing land degradation in the most vulnerable regions of the country. Through the Land Degradation Neutrality (LDN) Target setting process, these regions have been identified as Tuzla canton, Herzegovina-Neretva canton, Canton 10, Lijevče polje, Semberia, and Herzegovina. The GEF project has identified four pilot areas located in the Southeastern and Northeastern parts of the country. These pilot areas include Tuzla Canton, Bijeljina Municipality, Neretva Canton, and Trebinje Municipality. The project will focus on implementing best practices for land management, with a gender perspective, in these areas. The results, specifically the number of hectares under best practices, will be monitored and entered into an interactive Decision Support System developed by the project.	By leveraging the valuable experiences gained from these pilots, the proposed project will be able to capitalize on the identified best practices (discussion under Component 1) and incorporate them into its own activities under Component 2. This will help to enhance the effectiveness and efficiency of the project's interventions, ensuring that the lessons learned from the previous initiatives are applied and further advanced.
USAID: Country Development Cooperation Strategy	USAID has many short-term initiatives in the country, but none in agriculture. The USAID strategy (2020-2025) indicates a broader approach to incorporating climate change risks into various activities, including livelihoods, tourism, and SME development. Project such as Developing Sustainable Tourism (Turizam) is implemented during 2020-2025.	STAZA and USAID can collaborate synergistically to enhance their respective efforts. They can exchange knowledge, share best practices, and communicate information on climate risks and rural tourism. Additionally, there is potential for collaboration in capacity-building activities. In particular, USAID's focus on tourism under its Turizam project aligns well with the objectives of STAZA. By diversifying the activities of farmers and enhancing their resilience to climate change, USAID can complement the activities STAZA. Even though the project will not overlap in time, USAID expect to have similar tourism focused type of project in the future.
IFAD: Rural Enterprises and Agricultural	The READP (2018–2026, US$14.5 million) aims to make significant contributions to rural economic development and poverty reduction by fostering improved livelihoods, generating sustainable revenue, and elevating the living standards of targeted	STAZA is designed to align with and complement the implementation of the READP project, providing an opportunity to leverage economies of scale and enhance cost-effectiveness, especially during the initial 18 months of implementation (as highlighted in Section C: Cost-effectiveness). By drawing upon the lessons learned from

Development Project (READP)	households through their active participation in profitable agribusiness ventures and employment opportunities. It aligns with the country's objectives to modernize the agricultural sector, enhance food security, and boost the incomes of both commercial and non-commercial farmers, as well as on- and off-farm enterprises.	previous initiatives, the proposed project aims to adopt a more efficient and targeted implementation strategy that directly engages and benefits the most vulnerable smallholder farmers. It is important to note that the READP project primarily focused on business leaders who were less directly affected by climate change impacts. In contrast, the proposed project will incorporate valuable lessons from the RCDP and READP, specifically emphasizing sustainable adaptation to climate change. This project recognizes the need for long-term and sustainable solutions to address climate change challenges, which may not have been explicitly prioritized in the previous initiatives that primarily focused on short-term effects regarding climate change adaptation.[83]

G. Learning, Knowledge Management and Lessons Learned

223. Effective knowledge management – including the collection, generation and dissemination of information – is an important component of climate change adaptation. Learning from adaptation activities and being able to transform knowledge into products that are targeted at various audiences is essential to effective climate change adaptation. The learning and knowledge management component will be an integral part of the project's management framework. However, it is important to note that knowledge management is already inherent across all components of STAZA.

224. Under Component 1, STAZA will leverage the data generated to facilitate the development of a comprehensive climate change analysis. This analysis will encompass historical and future scenarios at the territorial level, yielding a profound understanding of climate change implications for agriculture and the environment in diverse agro-ecological zones. The information will be disseminated through the discussions in multi-stakeholder platforms in clusters and through existing effective communication media.[84] The project leverages the role of clusters as knowledge aggregators and development of policy stances on issues for promotion of climate resilient policies. The project conducts thorough analyses and proposes solutions to overcome barriers identified during LCAP development for climate change adaptation. This process involves engaging essential technical assistance and collaborating with the Regional Expert Advisory Group on Adaptation to Climate Change in Agriculture, under the auspices of the Regional Rural Development Standing Working Group in South Eastern Europe (SWG).

225. Additionally, Component 2 and Component 3 will involve active engagement with universities from both entities (RS and FBiH), specifically by involving master students in evaluating on-farm innovative adaptive practices. At the territorial level, under the Component 2 STAZA may support equipment of municipalities (See Part II – A Subcomponent 2.2.1: Biological Measures for Ecosystem Protection) such as the expansion of the piezometers network and other censors to enhance comprehension of underground water levels and the water cycle. This kind of valuable information can be used to better inform the country regarding water availability and the water cycle.

226. Under Component 3. *Policy support and knowledge enhancement for a climate-resilient agriculture*, STAZA will facilitate knowledge and research support to integrate adaptation strategies and mechanisms at the cantonal/municipal and national policy levels, leveraging project approaches and implementation lessons.Furthermore, Component 3 will incorporate the outcomes of discussions from Component 1 and Component 2 activities into policy support efforts. This component will also integrate project knowledge and learning into the curriculum for university master students, ensuring that STAZA's findings are disseminated among future professionals.

[83] Project Completion Report of Rural Competitiveness Development Programme (RCDP): https://www.ifad.org/en/-/bosnia-and-herzegovina-1100001728-rcdp-project-completion-report

[84] E.g. In BiH, this is the responsibility of the Institute for agricultural advisory service and plant protection, which is a part of the Ministry of Agriculture, Forestry and Water Management through the website of the Ministry and print media, radio stations and web portals.

227. All project interventions will generate knowledge that will be utilized to inform the policy dialogue in a more evidence-based manner. Advocacy and lobbying efforts will drive policy and regulatory changes, fostering an improved environment and opportunities for agricultural adaptation to climate change. The highly inclusive policy dialogue will reach out to all relevant stakeholders, in government, civil society, development partners, private sector including smallholder farmers and disadvantaged people, thus contributing to increase their knowledge on the project interventions as well as their participation in decision making processes.

228. Additionally, the project will develop and widely disseminate Gender and Climate Change studies based on project results and findings, incorporating gender assessments, lessons learned, case studies, and more. This dissemination encompasses thematic workshops on gender and climate change. These evidence-based discussions aim to contribute to the formulation of agriculture development strategies and policies, emphasizing gender equality and recognizing the pivotal role of women as key drivers for resilience in agriculture and rural areas.

229. To align the M&E system of the proposed project to national initiatives, it will adhere to Annex 1 of the NAP, which outlines the conceptual framework for monitoring and evaluating climate change adaptation indicators. Provided by the Environmental Protection and Energy Efficiency Fund of RS and the Environmental Fund of the FBiH. Lastly, STAZA has the potential to disseminate its results through the EU CAP network[85], facilitating broader knowledge sharing and collaboration with European partners.

230. By incorporating these various measures, STAZA aims to capture and disseminate lessons learned effectively, ensuring that valuable knowledge and insights gained throughout STAZA's implementation are shared widely for the benefit of stakeholders, policy-makers, and the wider agricultural community.

231. **Communication:** In general workshops, dissemination via social media and digital technologies and tool developed during the project implementation will help disseminate progress, lessons learned, challenges and solutions to implementation constraints based on evidence from the implementation. Both project units (PCU and APCU) will establish a web-based digital platform for agricultural adaptation to climate change knowledge dissemination. On that platform, the project will make publicly available materials produced within STAZA project (CC vulnerability assessments, action plans, research project results, demonstration results, training material, masters; MSc thesis and other award-winning student works). The overall responsibility for Knowledge Management (KM) and communication will rest with the PCU/APCU M&E Officer.

232. Lessons learned from previous and ongoing IFAD projects are presented in Annex 6.

H. Consultative Process

233. An in-country design mission took place from October 30th to November 10th, 2023. During this period, the STAZA design team engaged with a diverse array of stakeholders at the national, municipal, and local levels. The mission involved interactions with approximately 120 individuals, as per recorded attendance lists, including 50 women (42%) and 20 individuals below 40 years of age (16%). Stakeholders interviewed represented various sectors, including the public sector (ministries, agencies), academia (faculties, institutes), and the private sector (farms, cooperatives, associations, SMEs, companies). This encompassed a diverse group of participants, such as youth, women, men, farmers, researchers, advisors, entrepreneurs, managers, and civil servants.

234. Special attention was given to ensuring a gender and youth focus in these consultations. Thus, institutions dealing with gender and youth issues, both public and from civil society, were consulted, including the Gender Centre at federal and entity levels, meetings with UN Women, meetings with gender focal points of the Ministry of Agriculture, and discussions with women's associations and women

[85] Common Agricultural Policy network : https://eu-cap-network.ec.europa.eu/index_en

members of cooperatives. The consultative process focused on identifying key challenges, potential solutions, and lessons learned to be adequately captured in the design process.

235. Male and female potential beneficiaries and stakeholders were consulted both separately and in mixed groups. Additionally, the appropriateness of the time and location of consultation meetings, especially for women, was taken into account. Focus group discussions were specifically held with women's associations, with an average of 5 women participants per group, including associations such as Priroda Bratunac, Maja Kravica, Female Cooperative Žena, Srbac, Zepce Women Association, and Women Association Blagaj.

236. The main findings from consultations with farmers and companies engaged in agricultural production reveal that the increasing exposure to the negative impacts of climate change, such as droughts, storms, intense precipitation, and late frost, heightens farmers' vulnerability, reduces their income, and makes agricultural production unprofitable and nonviable. Preventive and adaptive measures are considered urgent priorities, and the project's proposed activities align with the needs of smallholders.

237. Women farmers highlighted challenges such as not being registered in the agricultural holdings registry or holding land titles in their names, hindering their access to public agriculture subsidies. They expressed interest in accessing equipment or technologies to reduce their workload and finding ways to access finance as main priorities. Specific points raised by women about agriculture production included extreme weather events leading to reduced production/losses, the difficulty of manual labor, especially harvesting, and the lack of technologies for women. Existing greenhouses were considered basic and in need of additional technologies. Women also mentioned the need for increased representation in decision-making processes and stronger consultation processes that are more gender-sensitive.

238. Discussions with institutions responsible for improving the gender and women's empowerment agenda at the country level highlighted the necessity to strengthen the presence of women in decision-making processes, ensure proper budget allocation to activities benefiting women, address the disproportionate burden of domestic chores and farm work on women, and raise awareness and recognition of women's significant contribution to agriculture as drivers for resilience. Details are available in the Annex 2 - Stakeholders consultation process.

I. Justification for Funding

239. The justification for the requested funding lies in the comprehensive assessment of the full cost of adaptation associated with implementing STAZA, which is intended to be fully funded through AF resources. STAZA recognizes the urgent need to adapt to the challenges posed by climate change, particularly in the context of agriculture and water resources, the two sectors most affected by climate change in BiH (NDC, 2021).

240. By adopting an agroecological approach, STAZA aims to promote sustainable and resilient farming practices that integrate ecological principles and enhance the adaptive capacity of agricultural systems. The funding request encompasses various aspects necessary for successful adaptation, including participatory climate change assessments, capacity building, infrastructure development, and community engagement.

241. STAZA builds on the successes of the IFAD funded READP, with an enhanced approach tailored to the adaptation needs of rural areas. In particular, STAZA will integrate a landscape management approach with direct support to resilient agriculture, which was limited in READP, enabling the adaptation and increased resilience of local landscape and communities to the adverse effects of climate change and variability.

242. The full cost of adaptation reasoning takes into account the direct and indirect expenses incurred throughout STAZA's lifespan. This includes investment (fully covered by AF resources) in advanced practices and approaches to optimize water management and improve agricultural productivity in the long term. It also covers costs associated with training farmers on agroecological practices, facilitating

knowledge exchange, and ensuring the long-term viability of sustainable farming methods and restoring climate change-induced degraded agricultural land and avoiding further degradation.

243. According to the United Nations Convention to Combat Desertification, investing in the restoration of degraded land in Bosnia and Herzegovina can yield significant returns86. It is estimated that every dollar invested in restoring degraded land can result in returns of USD 6. This highlights the strong economic incentive for taking bold actions against land degradation through the application of sustainable land management practices. By implementing these practices, STAZA aims to address the economic consequences of maladaptation and promote the sustainable use of land resources in BiH.

244. Given the projected impacts of climate change, including increased water scarcity, changing precipitation patterns, and heightened vulnerability of crops, the agroecological approach proposed in this project represents a holistic and adaptive solution. The funding requested from AF is crucial for covering the full cost of adaptation, enabling the successful implementation of sustainable agricultural practices and water management strategies that can enhance the resilience of BiH's agricultural sector in the face of climate uncertainties.

245. The implementation of green infrastructure, including nature-based solutions (NbS), can play a crucial role in addressing climate change challenges in BiH. NbS, which focus on the protection, sustainable management, and restoration of ecosystems, have been shown to deliver 37 percent of the necessary cost-effective climate mitigation measures by 2030.87 Investments in green infrastructure, such as the preservation and restoration of watersheds, have proven to be cost-effective in terms of water resource management and disaster risk reduction. These natural solutions enhance the performance of traditional grey infrastructure and, in some cases, can even serve as alternatives to it. Therefore, by leveraging green infrastructure and NbS, the proposed project can effectively address climate change, protect communities and their livelihoods, and promote sustainable development in a cost-effective manner.

246. Furthermore, the requested funding accounts for the development and implementation of robust monitoring and evaluation systems to track the project's progress and assess its effectiveness in building climate resilience within the agricultural sector. These mechanisms will be aligned with and contribute to the national-level monitoring and evaluation system developed under the NAP of 2021. This comprehensive approach allows for evidence-based decision-making and ensures that STAZA's impact is maximized.

247. **Project costs and financing**. The total STAZA costs, including physical and price contingencies, are estimated to be US$13.78 million, of which US$12.63 million represent the base cost and US$1.15 million the contingency allowances. Taxes and foreign exchange represent respectively 12 per cent and 23 per cent of total Project cost. The largest part is for Component 2 “Enhancing Climate Change Adaptation at the Territorial Level” (US$8.97 million, base costs), followed by Component 1 “Participatory assessment and territorial planning” (US$2.25 million, base costs), and finally Component 3 “Policy support and knowledge enhancement for a climate-resilient agriculture” US$0.74 million, base costs). Finally, the execution costs are estimated at US$0.68 million.

248. The overall cost of the Project is estimated at US$13.78, which will be disbursed over five years. Of this total financing, the Adaptation Fund (AF)’s contribution amounts to US$10.00 million (of which US$9.22 million for project costs and US$0.78 million for project cycle management implementing entity fee). The Government of Bosnia and Herzegovina’s contribution is estimated at US$1.03 million. The beneficiaries will contribute to the Project with US$0.48 million. Finally, the Project will have a contribution from the Municipalities of US$3.05 million. Further detail on possible leveraged domestic contributions is presented in Annex 7, in line with the demonstrated success from READP in terms of ownership at local,

[86] United Nations – Bosnia and Herzegovina : https://bosniaherzegovina.un.org/en/211435-reversing-land-degradation-neutrality-sustainable-land-management-and-sustainable-forest
[87] World Bank Group - Climate Change Action Plan (CCAP) 2021 - 2025

regional and national level. This potential leveraged financing does not contribute to the targets included in the project's results framework, but has a strong potential to enhance the sustainability of the investments, and replicability of project activities.

Table 16: Baseline and alternative adaptation scenario the Adaptation Fund will help materialise.

Business as usual scenario	Adaptation Fund additionality
Component 1. Participatory assessment and territorial planning	
The projected climate changes in BiH, and drought and floods in particular affect agriculture. Beyond drought and heat cycles, the multiple impacts of climate change on production systems also include hail, late spring frost, and an increase in pests and diseases. Smallholder farmers are not organized and have a limited negotiation power. Insufficient and irregular incomes decrease as a result of climate shocks, driving them further into poverty. Producers leave the rural area for cities and other countries in hopes for better living conditions, or resort to maladaptation. Business as usual support (as it is the case of initiatives such as EU4Agri): leave out smaller and most vulnerable producers, omit to build social capital (a key barrier to adaptation), and do not specifically take into account climate risks and how they may affect the production systems/value-chains.	- 12 clusters and associated Multi-Stakeholder Platforms are strengthened, increasing the negotiation power and social capital of local stakeholders (addressing a critical barrier to adaptation, which is the limited social capital, impeding the necessary collaboration to collectively invest in climate resilience both at cluster and landscape level) - 12 LCAPs are established following a participatory process. - All project stakeholders are sensitized about climate impacts in rural areas of BiH. - Dedicated support to women, youth and social inclusion is provided under the leadership of the Gender and Youth Specialist, as women and youth are key drivers of change, and their meaningful inclusion in project activities is a powerful way to further ensure climate adaptation. The project will follow a strict strategy in this regard. This support includes: It is expected that 180 women (or 50% target) will participate in exchange visits and learn about existing and effective adaptive practices already implemented in the country and also at regional level. Through these activities women smallholders will be able to acquire knowledge and make evidence based and informed decision for the LCAP development.
Component 2. Adoption of approaches for climate change adaptation at territorial level	
Accelerated snowmelt in spring results in a disruption of water flow, leading to flash floods and excess accumulation downstream. Simultaneously, reduced upstream infiltration causes water deficits in highlands. Heightened temperatures and intensifying droughts increase the vulnerability of forests to fires and degrade natural resources. Fragile soils and burnt areas become more susceptible to landslides due to increased water runoff, impacting infrastructures such as drainage channels and water storage basins. The rising heat and drought, combined with disrupted water flow, emphasize the urgency of a reliable water supply. While local stakeholders are aware of climate change, they may not fully grasp the scope, scale, and cascading consequences of climate impacts on their livelihoods and environment. They	- 100 extensionists are capacitated and provide technical advice on agroecology and other climate resilient practices, and business development to 3600 households belonging to the clusters, and more widely to close to 19,000 people within the Municipalities. Such practices directly offer adaptation solutions to the expected climate impacts on the targeted value-chains (most importantly heat and drought), thus mitigating the foreseen impacts on productivity and income; leading to more stable production and income). - 1600 producers receive direct training on agroecology and other climate resilient practices, leading to the increased resilience of up to 1600 hectares of agricultural land. Such practices directly offer adaptation solutions to the expected climate impacts on the targeted value-chains (most importantly heat and drought), and thus contribute to an enhanced resilience of agricultural land, thanks (amongst others) to better soil and water conservation, fertility management, and erosion control. - 80% of targeted households report the adoption of environmentally sustainable and climate resilient technologies and practices, directly contributing to their enhanced climate resilience. - 80% of household targeted have stable and sustainable sources of income (increasing their adaptive capacity). As indicated previously, income stability under the project will be attained thanks to the promotion of resilient and sustainable practices for the targeted value chains (see

lack the necessary tools to anticipate and adapt to these impacts. Limited adaptation measures and/or maladaptation accelerate the degradation of local ecosystems. Municipalities and national investments in local infrastructure often occur with limited consultation of local stakeholders and insufficient consideration of climate risks. The result is the exacerbation of degrading living conditions and restricted access to services. In response, local stakeholders may fall further into poverty or resort to maladaptation and migration. The mismanagement of climate impacts on rural areas accelerates downstream effects, leading to flooding, siltation of water bodies, and disruptions in energy production.	Part II – A. Project components- outcome 2.1.). At the same time, stability of income under the project increases the adaptive capacity of targeted households, as it positively influences the capacity and dispositions of smallholders towards the adoption of climate resilient agricultural practices, and their support to sustainable landscape management. The project will thus promote a virtuous cycle by which support to VCs enhances income stability, thereby increasing the likelihood of producers to adopt resilient practices at farm and landscape level, further guaranteeing the stability of their incomes. - 1600 grants are delivered under the subcomponent 2.2 to enhance the development and resilience of targeted value chains. Eligible investments under the windows 1 and 2 (see Part II – Project components – Subcomponent 2.2), highlight the rationale for eligible grants, prioritizing investments that will directly contribute to the enhanced resilience of targeted VCs, as well as stability of income. - 100 grants for short value chain are delivered to groups of smallholder farmers and business leaders. Targeting investments that will directly contribute to the enhanced resilience of targeted VCs, as well as stability of income. - Biotechnical measures (including natural assisted regeneration, afforestation and reforestation) are implemented on 335 hectares, resulting into the downstream protection of up to 1,340 hectares, for a total of 1,675 hectares protected (at least 71 assets). - 67 Rural adaptation collective infrastructures are established. Multipurpose water storage enables prolonged access to water during droughts, benefitting to livestock and agriculture production, as well as to natural resource protection both through the possibility of early response in case of forest fire, and runoff breakage. Multipurpose open-markets provides direct access to markets can significantly enhance the economic prospects of smallholder farmers, providing them with opportunities to secure stable incomes and improve their livelihoods.
Component 3. Policy support and knowledge enhancement for a climate-resilient agriculture	
Limited to no adaptation measures specific to the rural context in BiH have been identified at the national level. Rural areas continue to be on the periphery of decision-making processes. Additionally, there is no methodology for participatory climate vulnerability mapping in the country.	- 6 Policy-relevant knowledge products completed, relying on high resolution climate vulnerability mappings and 6 events organized to share evidence-based results. - 74 people from universities and government are trained with improved CC adaptation knowledge. - Relevant institutions are supported in the creation of curriculum for master students of Climate Change and Climate Resilient Agriculture practices. - Research stakeholders are actively involved in the project and project lessons are well studied and documented, involving master students. - National and subregional stakeholders are aware of the project and document and readily uptake its tools and methodologies.

J. Project Sustainability

249. The sustainability of STAZA outcomes has been a central consideration during the project's design phase. The integration of agroecology principles and approaches, as evidenced by the outcomes outlined below, contributes to the long-term sustainability of STAZA:

250. The Outcome 1.1.: *Enhanced Community Mobilization and Improved Knowledge for Climate Change Adaptation* focuses on empowering communities and enhancing their capacity to adapt to climate change. By strengthening community mobilization and knowledge on climate change adaptation, STAZA facilitates the development of resilient and self-reliant communities capable of sustaining the implemented practices and strategies. Additionally, conducting qualitative studies on climate change and agricultural practices adapted to specific agroecological zones will provide valuable insights into effective strategies

for coping with climate risks and addressing food security. By incorporating such studies, STAZA ensures the contextual relevance and sustainability of its interventions. Moreover, Component 1 will provide municipalities and local communities with a clear understanding of climate-related issues and the solutions available to them, fostering sustainability by empowering local entities to address their specific challenges.

251. By enhancing the resilience of smallholders' livelihoods to climate change under the Outcome 2.1., STAZA aims to ensure the long-term viability and sustainability of agricultural practices. This outcome acknowledges the importance of supporting smallholders in adapting their farming systems to changing climatic conditions, thus enabling them to continue their livelihood activities in a sustainable manner. Furthermore, STAZA aims to implement best practices for land management practices beyond project implementation. To achieve this, it will build on the successes and lessons learned of the pilot project implemented by UNDP/FAO under the ongoing GEF project as presented in the section F. Recognizing the interdependence between ecosystems, infrastructure, and sustainable development, Outcome 2.2. focuses on enhancing the resilience of these vital assets. By promoting agroecological practices and sustainable management of natural resources, STAZA contributes to maintaining the integrity of ecosystems and infrastructure, which are essential for long-term sustainability. While Component 2 is expected to showcase good adaptive practices, it acknowledges that the project may not address all issues, highlighting the need for continuous learning and adaptation.

252. Outcome 3.1.: Improved Knowledge and Research for integrating adaptation strategies and mechanisms at cantons/municipal and national policy levels, drawing on project approaches and implementation lessons, emphasizes the importance of integrating project strategies and mechanisms for adaptation into local and national policies and regulations. By incorporating lessons learned from the project's implementation, STAZA ensures that the adopted approaches are mainstreamed and sustained beyond its duration, thereby fostering long-term sustainability. This outcome also plays a pivotal role in attracting attention and investments to cover solutions under the Local Climate Adaptation Plans (LCAPs) at the municipal level. The lessons learned from Component 1 and Component 2 will enhance the project's sustainability by attracting more attention and investments from municipalities, local communities, and national and international entities such as EU, WB, and GCF. The knowledge generated by Component 3 will provide valuable insights into successful adaptive practices, creating a foundation for continued support and replication.

253. STAZA's alignment with the findings and recommendations from the IFAD agroecology stocktake study[88] further reinforces its commitment to sustainability. By adopting integrated and holistic approaches, such as agroecology, and focusing on activities that promote community ownership, responsible governance, and enabling policies, STAZA maximizes its potential for sustainable food systems transition and development effectiveness.[89]

254. **Environmental sustainability** is ingrained in STAZA through the adoption of an Ecosystem-based Adaptation approach at both the farm and landscape levels. This involves promoting agroecology and integrated planning of biotechnical measures. STAZA will employ participatory approaches to comprehensively address issues affecting the long-term sustainability of natural resource management and the well-being of local communities.

255. **Replicability** is a key aspect that STAZA will ensure by fostering strong ownership among local stakeholders. The project will capacitate municipal and extension services to provide sustained support at the local level, extending beyond designated clusters. Success in developing social capital within targeted

[88] Stock-take report on agroecology in IFAD operations: An integrated approach to sustainable food systems (2021) https://www.ifad.org/en/web/knowledge/-/stock-take-report-on-agroecology

[89] The IFAD stocktake shows that Adaptation to Climate Change, Environment and Natural Resource Management, Gender Equality and Women's Empowerment, Food Security, Human and Social Capital, Sustainability and Effectiveness all have higher ratings in the AE-based projects (rating given during supervision and completion of IFAD's projects), showing the comparative advantage of integrated agroecology approaches in achieving IFAD's development effectiveness targets and Adaptation Fund mandate.

communities will serve as a model, encouraging peer-to-peer exchanges and learning. This learning process is crucial for replicability, allowing for the capitalization of methodologies, tools, and approaches within targeted municipalities, other regions of Bosnia and Herzegovina, and potentially across borders in the subregion.

256. **STAZA's exit strategy** is anchored on ensuring the sustained adoption of its methodologies by local communities and stakeholders, fostering progressive empowerment for autonomous implementation and replication of proposed activities. Specifically, the strategy focuses on enhancing the negotiation power of Multi-Stakeholder Platforms (MSPs), facilitating further value addition, and ensuring the continuity of services to clusters through the capacity-building of local extensionists. To ensure the long-term sustainability of project outcomes, STAZA is committed to actively involving local communities and stakeholders in the post-project operating and management of investments. This inclusive approach aims to secure ongoing support and commitment beyond the project's duration, facilitating the seamless integration of STAZA's initiatives into local systems and practices. Additionally, the creation of Local Climate Adaptation Plans (LCAPs) will serve as a key mechanism for institutionalizing vulnerability planning and prioritization approaches developed by STAZA, thereby enabling access to funding from diverse sources, including municipal budgets, EU funds, national budgets, and other avenues. By fostering ownership and collaboration among local stakeholders, STAZA is poised to achieve lasting impact and sustainability in the target communities.

K. Environmental and Social Impacts and Risks

257. The environmental and social screening conducted during the concept stage, as presented in the table below, indicates that the proposed project entails low to moderate risks. Any site-specific risks identified can be readily addressed, resulting in STAZA being categorized as a Medium-risk project. The project proposal undergo assessments in accordance with both the Adaptation Fund and IFAD SECAP, as well as gender policies. To ensure transparency and inclusivity, the design missions engaged in public consultations at ministerial levels, with beneficiaries, donor and partner organizations, NGOs, civil society, academia, and women and farmer associations operating in BiH. Comprehensive records was maintained as evidence of all consultations conducted (see Annex 2).

Unidentified Sub-Projects (USPs): The process of ESP risk identification and management during project implementation is outlined in the Annex 3: II. Screening and categorization - i) ESP Screening and categorization, aligning with the updated guidance document on USPs provided by the Adaptation[90]. Project specific intervention areas have been thoroughly identified at design stage, and the nature of project activities has been formulated to the extent that pre-identification of environmental and social risks is possible (as detailed in Annex 3). The project-specific intervention areas have been thoroughly identified at the design stage, and the nature of project activities has been formulated to the extent that pre-identification of environmental and social risks is possible. However, due to the community-based nature of the STAZA project, exact site locations for project activities cannot be determined at the design stage. As such, activities resulting from the participatory-based approach are recognized as USPs. As identified during design, various project activities fall into different categories of USPs. Indeed, NRM activities outlined in the LCAPs (outcome 2.2.1) are anticipated to be fully unidentified USPs withing fixed framework, given the community-based decision-making process but within a framework that determines which kind of activities are allowed or acceptable locations. Conversely, grants, such as those allocated under outcome 2.1, have a clear eligibility criteria presented in part II, thereby minimizing the likelihood of USPs and qualifying as Partially USPs. Each USP will be screened prior to its implementation to identify potential site-specific risks and adopt appropriate mitigation measures to be captured by relevant ESMPs for implementation, monitoring and reporting. Risk mitigation measures established at design stage for the USPs include the definition of eligibility restrictions as described in Annex 3.

90 https://www.adaptation-fund.org/wp-content/uploads/2021/05/Updated-guidance-on-USPs-.pdf

258. STAZA will facilitate the gathering of gender-disaggregated data through the expertise of a gender design specialist. This process will adhere to IFAD gender guidelines, which encompass the following AF guidelines:

- Conduct consultations with male and female beneficiaries/stakeholders separately as well as in mixed groups.
- Carefully consider the timing and location of consultation meetings to ensure balanced gender representation.
- Utilize appropriate communication methods to effectively engage both women and men.
- Set targets for gender attendance to ensure meaningful participation.
- During the design mission, deliberate efforts will be made to involve national women's machineries, structures within and outside the government ministry dedicated to women, youth, and gender equality agencies, in addition to the National Designated Authority (NDA). This inclusive approach will encompass women's networks, gender and women's rights organizations, civil society, and academia at both the national and local levels.

Table 17: Adaptation Fund Environmental and social checklist

ESP	Potential Impacts and Risks	Mitigation Efforts	Screening and ESMP
ESP 1	**Compliance with the Law**. **Positive impact**: the project, as it is formulated, complies with all national relevant laws. **Risk**: the project will be executed by the government; the risk of non-compliance to the law (especially with regards to laws related to agriculture, water and environmental impact assessment) could come from service providers that will be contracted during implementation	All *interventions* will be compliant with national and international law. Compliance by service providers will be ensured through contractual arrangements including provisions with reference to relevant Laws.	Not needed
ESP 2	**Access and Equity**. **Positive impact**: the project's participatory and inclusive approach will enable fair and equitable access to project benefits to all participants, including marginalised and vulnerable groups, who meet the project eligibility criteria. **Risk**: There is a risk that the project would leave out some of the most vulnerable groups such as women due to traditions and norms in rural areas.	Participation of the project target groups will be closely monitored through the M&E system. The Grievance Redress Mechanism is also an avenue in case individuals and/or communities who feel excluded or marginalized from project benefits. The identified risk is low and fully mitigated by the project's approach.	No screening needed. Through the ESMP, the project will ensure transparency and mechanisms for fair and equitable access to project benefits, and the monitoring thereof.
ESP 3	**Marginalized and Vulnerable Groups**. **Positive impact**: interventions will target marginalised and vulnerable groups, including vulnerable semi-subsistence farmers, women and youth. Pathways to achieve gender equality and women empowerment under the project are outlined in the Gender Assessment, Strategy and Action Plan (Annex 5). **Risk**: There is a risk that the project would leave out some of the most vulnerable groups such as women due to traditions and norms in rural areas.		No screening needed. Through the ESMP, the project will ensure meaningful participation of marginalised and vulnerable groups to the project, and the monitoring thereof. The Gender Action Plan will also contribute to achieving gender equality and women empowerment under the project.
ESP 4	**Human Rights**. **Positive impact**: all interventions will respect and promote human rights	N/A	Not needed

ESP 5	**Gender Equality and Women's Empowerment**. **Positive impact**: three strategic pathways for gender equality and women's empowerment will be followed: (i) promote economic empowerment to enable rural women and men to have equal opportunities to participate in and benefit from profitable economic activities; (ii) enable women and men to have an equal voice and influence in rural institutions and organizations; and, (iii) achieve a more equitable balance of workloads and the sharing of economic and social benefits between women and men. Women will make up 50 per cent of the beneficiaries	The Project has undertaken a Gender Assessment that is presented in Annex 5. To address the identified gender issues, the project has taken proactive measures to integrate gender focused development strategies that will ensure it will not pose a risk to the principle of gender equality and women's empowerment. The participation of women will be monitored. The implementation of the gender strategy and action plan will be monitored. Complaints if any will be addressed through the Grievance redress mechanism.	Not needed
ESP 6	**Core Labour Rights**. **Positive impact**: all interventions will meet the applicable core labour standards identified by the International Labour Organization, as well as national standards.	Complaints if any will be addressed through the Grievance redress mechanism	Not needed
ESP 7	**Indigenous Peoples – not applicable**.	There are no indigenous people in the project area	Not needed
ESP 8	**Involuntary Resettlement – not applicable**.	The project will not engage in resettlement activities	Not needed
ESP 9	**Protection of Natural Habitats**. **Positive impact**: The project will restore natural habitat in rural areas through natural assisted regeneration, afforestation and reforestation. **Risk**: The project is highly unlikely to pose a risk to critical natural habitats, however as the project specific intervention sites have not yet been defined it is not possible to make a definitive assessment.	Project activities are designed to not negatively affect any natural habitats. As part of the ESMP, the project will identify the national critical habitat areas and monitor that the project implementation will not encroach or affect them in any way. This will be mapped and reported in the PPR.	Through the ESMP the project will identify if any protected natural habitat areas will be included in the project zones. In the unlikely event that this may be the case, the project will describe the location of the critical habitat in relation to the project and if absolutely necessary explain why it cannot be avoided, as well as its characteristics and critical value.
ESP 10	**Conservation of Biological Diversity**. **Positive impact**: The project will increase the density of diverse habitat through anti-erosive hedges that will create a habitat continuum between patches of forested areas for the migration of fauna. No overlap of project intervention zones with protected areas is foreseen. **Risk**: The project is highly unlikely to pose a risk to critical biodiversity, however as the project specific intervention sites have not yet been defined it is not possible to make a definitive assessment. Attention will be given to avoid use of invasive or non-native species for afforestation/reforestation.	As part of the ESMP, the project will identify the national critical biodiversity areas and monitor that the project implementation will not encroach or affect them in any way. This will be mapped and reported in the PPR. In buffer zones surrounding protected area, the project will only support activities that are compatible with the regulatory framework of nature reserves (e.g. agricultural and pastoral activities). Where afforestation and reforestation activities are planned, the use of tree species that are not native to the environment will be prohibited, in line	Through the ESMP the project will identify if any protected natural habitat areas will be included in the project zones. In the unlikely event that this may be the case, the project will describe the location of the critical habitat in relation to the project and if absolutely necessary explain why it cannot be avoided, as well as its characteristics and critical value.

		with national regulations.	
ESP 11	**Climate Change**. **Positive impact**. Through better equipment of specialized services, preparedness of rural population, and preventive landscape management as well as soil protection and forest restoration measures, the project is expected to contribute significantly to reducing/avoiding GHG emission. **Risk**::Agricultural practices and NbS supported under STAZA are not adequate for the country and sub-region (maladaptation).	Mitigation measures rely notably on the benefits brought by improved agricultural practices, access to water and improved welfare of animals. Overall, and thanks also to the promotion of NbS, STAZA is expected to be a net carbon sink.	The project will monitor the implementation of agricultural practices and NbS and document their (favorable) impact on the local landscape, in terms of preservation and sustainable management. These elements will be reported on in the progress reports and PPR.
ESP 12	**Pollution Prevention and Resource Efficiency**. Release of pollutants to the environment in significant quantities is not expected to result from the project, as fertilizers and pesticides are not widely used in these areas. STAZA will also promote agroecology practices, including solutions in terms of integrated pest management, composting and manure management. Resource efficiency for water, timber and non-timber forest products as a result of the combined activities planned under the project should improve. **Risk**: Additional minor risks of effluents discharge may be posed by the upgrading of facilities (e.g. livestock barns).	Cluster workshops and trainings will promote organic and nature-based alternatives where relevant (in line with agroecology principle). Environmental Impact Assessments aligned with national legislation will be conducted if required for the upgrading of dairy or meat facilities. Water conditions and water no-objection will be obtained with the Municipalities where required. Rapid Environmental Impact Assessments will be conducted for all infrastructures.	No screening needed. The ESMP will involve reporting of proper management of effluents if the risk is identified.
ESP 13	**Public Health**. **Positive impact**. The project will contribute to public health by improving accessibility of remote communities to healthcare services, reducing the risk of floods which can result in water pollution for nearby inhabitants, and encouraging nutritional health through diversification of available edible products. The project is not expected to cause adverse effect on public health.	The project will ensure compliance with national standards in terms of Food Safety.	Not needed
ESP 14	**Physical and Cultural Heritage**. **Positive impact**: STAZA will ensure tangible or intangible Cultural Heritage will not be damaged or removed. **Risk**: The project is highly unlikely to pose a risk to physical and cultural heritage, however as the project specific intervention sites have not yet been defined it is not possible to make a definitive assessment.	The project will ensure whether there will be any national cultural heritage sites in the project areas and propose measures to avoid any alteration, damage, or removal of physical cultural resources, cultural sites, and sites with unique natural values.	Through the ESMP the project will identify if any national or cultural heritage will be included in the project zones. In the unlikely event that this may be the case, the project will describe the location of the heritage in relation to the project, and if absolutely necessary, explain why it cannot be avoided and what measures are being taken to minimize negative impact.
ESP 15	**Lands and Soil Conservation**. **Positive impact**. Practices resulting in the	Biotechnical measures to reduce erosion will be executed in	Not needed

	regeneration of the natural fertility of soils will be promoted. These include dissemination of efficient composting and vermicomposting to farmers as part of agroecology practices, the promotion of fragmented ramial wood to accelerate mycelial colonisation and degradation of ligneous material resulting from tree felling, and agroforestry through mobilization of bedrock minerals, mycorrhizal fixation of nitrogen and/or decomposition of deciduous leaves on topsoil. Antierosion measures will also be implemented as part of biotechnical measures. Planting non-native or inadapted trees may result in excessive soil acidification	compliance with the Water Management Plan where relevant.	

PART III: IMPLEMENTATION ARRANGEMENTS

A. Project implementation

259. STAZA will adopt a successful approach for the overall responsibilities and management structures, building upon the models utilized in previous and ongoing IFAD-supported operations under READP. This approach offers the advantage of economies of scale, particularly during the initial 24 months of proposed project implementation, as it aligns with and complements the implementation of the READ project. Therefore, the proposed institutional arrangements were discussed and agreed with the NDA:

260. **Overall responsibility.** The Ministry of Finance and Treasury of Bosnia and Herzegovina (MOFT) as Adaptation Fund NDA will have overall responsibility of STAZA and will coordinate with the Federal Ministry of Finance of FBiH/Ministry of Finance of RS and Ministry of Agriculture, Water Management and Forestry (MAWMF)/Ministry of Agriculture Forestry and Water Management (MAFWR). The below entities will report to the MOFT under this project.

261. **Lead Agencies**. At entity level, the MAWMF in the FBiH and the MAFWM in the RS will have the overall responsibility for the implementation as the Lead Agencies.

262. **Project Steering Committee (PSC)**. The Project Steering Committees, one in each entity, will be established by the respective government decision. The PSC is chaired the entity Ministry of Agriculture represented by the Minister personally or by another designated representative. The PSCs will meet at least three times a year and more frequently if it is needed. will be established to provide overall guidance to the project implementation. The two PSC shall be in charge of providing conceptual, strategic and policy guidance for the implementation or redesign of the project activities and conformity with overall AF/IFAD and national and sub-national development strategies; Approve the annual project work plan and budget; Approve annual and semi-annual progress report; Review project progress and performance; Approve implementation of selected matching grants; Ensure effective cooperation between the APCU/PCU and the entity/ municipality administrations; Resolve any implementation problems.

263. **Project coordination units**: FBiH will entrust the responsibility of coordination and management of project activities to the existing Project Coordination Unit (PCU) in Sarajevo. Likewise, the RS will entrust these functions to the existing Agricultural Project Coordination Unit (APCU) located in Banja Luka. The PCU and the APCU each will be headed by a project director who will also be the secretaries of the PSCs. The APCU/PCU consists of a sufficient number of qualified experts who are in charge of the implementation of one or more IFAD or other projects whose coordination is assigned to that unit. Staff that already work for IFAD funded READP will be inherit for the purpose of implementation of STAZA. The APCU/PCU will be vested with financial and technical autonomy. Its proposed staffing will encompass:

- In RS: (i) a Project Coordinator; (ii) a Gender and Youth Specialist; (iii) an Environment and Climate Specialist; (iv); a Monitoring and Evaluation Officer; (v) a Technical secretary; (vi) a Civil Engineer; (vii) a Finance manager; (viii) a Procurement Officer; (ix) a Procurement assistant.
- In FBiH: (i) a Project Coordinator; (ii) a Gender and Youth Specialist; (iii) an Environment and Climate Specialist; (iv); a Monitoring and Evaluation Officer; (v) a Finance Specialist; (vi) a Procurement Specialist; (vii) a Technical advisor; (viii) an Inclusive business specialist, (ix) an Interpreter/secretary.

264. The PIM will provide clear descriptions of tasks and responsibilities for the individual team members of the APCU/PCU and include procedures to carry out annual performance evaluations for all key staff.

265. **Implementing Entity:** IFAD as IE will undertake the oversight and quality control of the proposed project ensuring that the Gender Policy and Environmental and Social Policy is respected.

266. **Project costs.** It is proposed on the basis of lessons learned from the previous IFAD project in the country to adopt a similar fund allocation approach for the share of net AF contribution (10 million USD net Project Cycle Management Fee), with 40% designated for the Republika Srpska and 60% for the Federation of Bosnia and Herzegovina.

267. **Planning**. A rigorous planning process – that clearly identifies the concrete outputs (or physical targets) to be produced in a 12 months period in pursuit of overall project objectives, the activities to be implemented to deliver these outputs and the financial resources (or financial targets) required – will be the starting point for the sound management and monitoring of STAZA's execution. To this end, the APCU/PCU will use a pre-defined Annual Work Plan and Budget (AWPB) template. Although the results framework and the cost-tables shall not constitute a rigid blueprint, they will be a key reference for the preparation of the AWPBs.

268. While the first AWPB will be updated during the start-up workshop, the preparation of subsequent AWPBs shall follow an iterative process, starting around the month of September with the organization of municipality-level annual planning workshops. On this basis, a draft consolidated AWPB will be prepared by the APCU/PCU, identifying under each Component: (i) outputs and related physical targets to be achieved; (ii) key activities, sub-activities and inputs required; (iii) timetable for implementation of key activities; (iv) staff/persons responsible for each activity and sub-activity; and (v) financial resources required. The AWPB shall also include a Procurement Plan (PP). Both documents shall be submitted to IFAD for no-objection no later than 60 days before the end of the fiscal year. Once the AWPB is approved by the PSC, the APCU/PCU submits it to IFAD for no-objection. It will constitute a binding document that will govern, through the year, IFAD's decisions on funds' release or procurement matters. The AWPB and PP may be amended during the year at the APCU/PCU request, along with proper justification and upon IFAD's no-objection.

269. **Specific Implementation Arrangements for Each Component**. Detailed implementation arrangements will be outlined in the Project Implementation Manual (PIM) during STAZA's startup. STAZA will adopt effective mechanisms from the READP project, which have proven their efficiency and relevance. The specific arrangements for each component are briefly described as follows:

- Component 1: CLUSTER establishment (Activity 1.1.1) will involve direct facilitation by APCU/PCU members, cluster managers, and extension services. A Memorandum of Understanding (MoU) with a consortium of faculties and Agricultural Institutes will secure their participation, particularly for Activity 1.1.2, which focuses on LCAP development with remote sensing analysis. National or international experts will be engaged to support the process.
- Component 2: Grants' implementation will follow READP procedures and public calls. Extensionists will receive training from national and international service providers to offer a range of services to CLUSTER members and other local producers. Activities 2.2.1 and 2.2.3 will rely on public calls and national service providers. Co-financing is expected from grant recipients, municipalities, and cantons in FBiH, aligned with the current READP project.

- Component 3: The creation of guidelines for sustainable agriculture and climate change adaptation will be primarily supported by national consultants. Students working on their master's theses will document project methodologies and approaches. Knowledge management will be promoted through establishment of social media platforms to share lessons from STAZA activities and education materials. Collaboration with research institutions, universities, and agricultural experts is integral to the implementation of research initiatives.

B. Financial and project risk management

Financial risk

270. **Fiduciary and financial risks at Country Level**. Bosnia and Herzegovina's country risk is rated as Moderate, according to the scoring provided by Transparency International on the Corruption Perception Index at country level, which slightly worsened in 2022 with a score of 34/100 compared to the 35/100 of 2020.

Bosnia and Herzegovina, along with other Western Balkan countries, was recognized as a potential candidate for EU membership at the Thessaloniki European Council su/mmit in June 2003, with the goal of achieving EU accession by 2025. The conflict in Ukraine is overshadowing the European economy, introducing new challenges for Bosnia and Herzegovina just as it was recovering from the Covid-19 crisis. The outlook for economic activity is additionally hampered by internal tensions and a lack of agreement on reforms aimed at strengthening the country's integration both domestically and with global markets. The primary and immediate economic consequence of the war is a substantial rise in food and fuel prices, causing significant strain on numerous households and businesses, with the effects expected to persist for an extended period.[91]

271. The economic growth rate contracted from 7.4 percent in 2021 to 3.9 percent in 2022, and further deceleration to 2 percent is anticipated this year due to weakened domestic and external demand. In October 2022, inflation reached a peak at 17.4 percent, subsequently following a declining trajectory but maintaining elevated levels. Aligned with the decrease in global food and energy prices, the average inflation rate is expected to decrease to 6 percent in 2023. However, there are notable downside risks, including the potential for a sudden slowdown in Europe, an escalation of domestic political tensions, and the realization of financial risks.[92]

272. The fiscal stance improved in 2022 as the overall fiscal surplus increased to 0.9 percent of GDP from 0.6 percent in 2021. A surge in current spending reflecting measures to mitigate the cost-of-living crisis was accompanied by a smaller increase in capital spending. Total government debt declined below 30 percent of GDP in 2022, also because of slow project disbursement and implementation. With expenditures rising faster than revenues, the fiscal balance is expected to turn to a deficit of 1.5 percent of GDP in 2023. Financing needs have increased in 2023 given large debt repayments. [93]

273. **Fiduciary risks at IFAD Portfolio level.** The only active IFAD investment project in Bosnia and Herzegovina is the READP, which activities STAZA will scale-up. Since the first IFAD supervision mission in June 2022, READP's Assessment of the Overall Implementation Performance improved from 3.83 to 3.93 (rated on 6). In 2023, the Financial Management and Execution was rated 4/6 and the Quality of Financial Management, 5/6. AWPBs are approved on time and monitored directly within the accounting software. Budget implementation has been very high throughout project implementation leading to a highly satisfactory disbursement rate. Despite a slowdown in 2021 due to the COVID-19 Pandemic, the disbursement rate remained satisfactory.

[91] European Commission
[92] International Monetary Fund (IMF) Country Report No23/234
[93] Ibid.

- **Fiduciary and financial risks at Project Level.** STAZA will adopt the same financial management and flow of funds architecture of READP, based on the excellent performance of the ongoing project. Therefore, the financial management risk at design of this project is also considered low. The main risks for STAZA are:

- Staff turnover causing a loss of knowhow and skills accumulated by the READP project: IFAD will work with the Government of Bosnia and Herzegovina to ensure that READP key staff is maintained for the implementation of STAZA project. Existing financial management arrangements will be replicated, including the use of a well-performing accounting software. READP PIM will be amended and adapted to reflect STAZA's specificities, and financial processes and procedures will be maintained to the extent possible, including fiduciary arrangements and controls linked to the disbursement of matching grants, which have proven to provide a good level of fiduciary assurance.

274. Inability of the project to report in USD given that their Designated Account will be denominated in Euro. The risk is mitigated by the fact that IFAD grant agreement with the Government of Bosnia and Herzegovina will be signed in Dollars. This will allow the project to use the exchange rate applied to IFAD at the time of each transfer of funds to their designated account to easily keep track of the corresponding USD equivalent. However, a foreign exchange risk remains due to the tendency of Euro to depreciate against the American Dollar which accelerated with the start of the war in Ukraine. Nevertheless, given the contingent nature of this tendency and the overall contained scale at which this depreciation is taking place, this risk is very unlikely to prevent the project from reaching its objectives.

275. **Financial management arrangements.** The financial management structure of the APCU and PCU comprises of a Finance Officer and an Administrative Assistant who will be reporting directly to the Project Coordinator, he/she will need to be experienced in working with international funded projects. All staff will be trained to IFAD anticorruption policies from project start-up. Financial management structure and flow of funds arrangements will be largely drawn from the positive experience of READP. Project risk level and the adequacy of these arrangements will be closely monitored and assessed by IFAD Financial Management Division on an on-going basis and throughout the implementation of the project (during implementation support and supervision missions).

276. **Budgeting.** The AWPB and PP will be recorded in the project's accounting software, which will be able to generate timely and reliable reports on budget implementation by components, subcomponents, activities, financing categories as well as financiers and geographical area. Leveraged national contributions will also be integrated in the AWPB and accounted for within the accounting software. Specific procedures for the accounting and valorization of in-kind contributions from national stakeholders and beneficiaries will be clearly defined in the PIM.

277. **Flow of Funds and disbursement Arrangements.** One designated account will be opened at a commercial bank to receive proceeds exclusively from the Adaptation Fund grant and will follow the revolving fund mechanism. Withdrawal and disbursement from grant account will be based on a six months cash forecast which will be included in the project's quarterly Interim Financial Reports (IFRs). A template of the IFRs will be included in the PIM and will constitute the basis for project disbursement. The project will generate, approve, and submit to IFAD its Withdrawal Applications (WA) using the ICP. This online application facilitates the approval and submission of WAs and provides the project with timely financial information and reports generated directly from the IFAD accounting system, further facilitating financial management at project level.

278. **Internal Controls.** An acceptable level of segregation on duties within the PCU will be assured by the division of tasks between the Finance Officer, the administrative assistant and the project coordinator in the role of approver. Cash transactions will therefore be minimized or eventually be eliminated, to further enhance funds traceability at project level. An internal audit function exists at the level of the ministry, but its capacity is limited. The possibility of activating this internal audit function will be explored with relevant authorities at start-up phase.

279. **Accounting and financial reporting.** The project will maintain its accounts in accordance with IPSAS/Cash standards, which are accepted by IFAD. Additional financial information, aside from all financial statements that are mandatory under IPSAS cash, will be prepared by the project in accordance with the IFAD Handbook for Financial Reporting and Auditing of IFAD-Financed Projects. The project will submit its annual unaudited financial statements to IFAD within 4 months from the end of each fiscal year for IFAD review.

280. STAZA's accounts will be kept by using an accounting software which will be able to automatically generate both financial reports and budget monitoring information. The accounting software used by READP has proven to be very performing and adapted to project's needs, and is thus recommended to be used by STAZA. The project will submit a set of interim financial reports to IFAD within 45 days by the end of each quarter. These IFRs will also serve as basis for disbursement for the project (cash forecast). Templates of the IFRs and procedures for preparation and approval will be included in the PIM.

281. **External Audit:** The project will submit an external audit report to IFAD within six months of the end of each fiscal year. The audit's Terms of Reference will be revised and cleared by IFAD before their submission to the audit firm (to be selected through a competitive process, in line with IFAD's auditing standards). IFAD will review the quality and timeliness of each audit report and ensure proper follow-up to audit recommendations contained in the mandatory Management Letter. Audit firm rehiring will only be possible for a maximum four consecutive years, and conditional to the outcome of IFAD' yearly assessments. During project implementation, IFAD will also assess the possibility to assign the role of external auditor for the project to the Supreme Audit Institution (SAI) depending on their capacity and availability.

282. **Procurement**. All procurement for the project will be under the oversight of the PCU. The Procurement Specialist (PS) will oversee and carry out STAZA's procurement activities in coordination with PCU members and specialized and technical units of MoAWMF. The procurement of goods, works and services shall be carried out in accordance with the provisions of IFAD's Project Procurement Guidelines. As provided in IFAD's Project Procurement Guidelines, each PP shall include the proposed contracts, methods of procurement and related IFAD review procedures. All contracts must be entered into the IFAD Contract Monitoring Tool-CMT, replacing the previous requirement for listing in the Register of Contracts. This should be done on a monthly basis and submitted to the IFAD Country Director.

283. At the outset of the project, STAZA in conjunction with IFAD, shall establish a PP covering the first 18 months of the project, followed by 12-month successive plans synchronized with the AWPB during implementation. IFAD's review of and No objection to PP is compulsory. For each contract to be financed by IFAD proceeds, the types of procurement methods, estimated cost, prior review requirements and time-frame would be agreed between STAZA and IFAD respectively in the PP. The PP should be divided into goods, works and services (consultancies) and as a minimum, contain the following information: (i) a brief description of each procurement activity to be undertaken during the period or the plan; (ii) the estimated value of each activity; (iii) the method of procurement to be adopted for each activity; (iv) the method of review IFAD will undertake for each activity; (v) in addition to the minimum information above, it is considered good practice for the PP to capture additional information such as: planned timing of the procurement activities, procurement by Project component and dates for IFAD prior review.[94]

284. **Fraud prevention.** Fraud risks will be addressed in accordance with provisions of the IFAD Policy on Preventing Fraud and Corruption in its Activities and Operations, IFAD applies a zero- tolerance policy regarding any fraudulent, corrupt, collusive, or coercive actions in the projects it manages. This entails not only pursuing all allegations of fraudulent practices and applying appropriate sanctions but also promoting preventive control measures such as assessments of national and project-specific financial management, auditing, and procurement systems. Where it is determined that fraudulent, corrupt, collusive, or coercive

[94] Note that the PCU started to use OPEN- Project Procurement End-to-End System introduced by IFAD earlier this year, replacing NOTUS for prior review activities as well as PP submission. All the PP activities are individually entered directly into the OPEN system, in which the workflow was automatically programmed by IFAD in advance;The Excel version will not be used anymore for preparing PP.

practices have occurred in projects financed through its loans and grants, IFAD applies a range of sanctions, including disciplinary measures for IFAD staff; and pursues the recovery of any losses in accordance with the provisions of the applicable IFAD rules and regulations and legal instruments. The Policy on Preventing Fraud and Corruption has been integrated into IFAD's legal framework (Project Procurement Guidelines[95], General Conditions for Agricultural Development Financing[96], IFAD's Code of Conduct[97]) and applies to all recipients of IFAD financing.

Project risk

Table 18: Risk Management

Risk	Impact	Probability of Occurrence			Mitigation Measures
		L	M	H	
Youth out-migration in BiH primarily involves the movement of people from rural to urban areas. Additionally, a significant number of young individuals leave the country each year in search of better opportunities elsewhere. This ongoing youth migration poses a challenge to the implementation and sustainability of interventions in the project area. The decrease in youth presence could hinder the uptake of interventions and jeopardize their long-term viability.	Moderate		X		STAZA aims to contribute to tackling youth migration by offering viable alternatives for young people residing in the project area. The involvement of youth in the READP has shown that youth migration can be moderate, indicating the success of the approach in retaining young individuals. Moreover, STAZA aims to enhance the resilience and attractiveness of the intervention areas. This endeavor, in conjunction with existing entities grants for youth and women, presents opportunities for young individuals who face challenges in urban areas and desire to return to rural regions, providing them with prospects for sustainable livelihoods.
Climate-related shocks are a prominent consequence of climate change, leading to a rise in the frequency of extreme weather events such as droughts, floods, and hailstorms. These abrupt changes in weather patterns can directly impact crops and cause damage to critical infrastructure.	Moderate		X		STAZA will implement water management infrastructure and integrate climate adaptation measures. A key focus will be on enabling farmers to minimize water consumption while enhancing production and product quality, thus equipping them to better withstand drought conditions. Additionally, for farms in need, STAZA will propose alternative practices to safeguard crops against climate shocks such as storms and hail. By addressing these challenges, STAZA aims to enhance farmers' resilience to water scarcity and storms while improving overall agricultural productivity. STAZA will also focus on disaster risk reduction by implementing infrastructure in order to reduce the impacts of floods and droughts at territorial level.
Staff turnover: causes a loss of knowhow and skills accumulated by the RCDP and READP projects	Moderate	X			IFAD will work with the Government to ensure that READP key staff is maintained for the implementation of the proposed project. Existing financial management arrangements will be replicated.
International instability (e.g. war in Ukraine) leads to shortage of goods and high inflation	Moderate		X		Price contingencies will be implemented within STAZA, although they may not fully address high inflation. The primary objective of STAZA is to enhance the resilience of local farms and the surrounding landscape. Through economic analysis at full design, STAZA will ensure that profitability is maintained even in scenarios where benefits decrease and costs increase. This approach will enable STAZA to navigate economic challenges and sustain the long-term viability of agricultural activities in the face of changing circumstances.
Insufficient capacities to appropriately manage the day-to-day implementation of the project	Major	X			The PCU/APCU will have independent administrative and financial management authority and will be responsible for overseeing the fiduciary management functions of STAZA. IFAD will be involved as an observer throughout the entire recruitment process.

[95] https://www.ifad.org/web/guest/document-detail/asset/39438991
[96] https://www.ifad.org/web/guest/document-detail/asset/39500875
[97] https://www.ifad.org/web/guest/document-detail/asset/40186603

Low interest and capacity of smallholders to adopt new climate adaptive approaches such as agroecology and technologies.	Major	X			STAZA will prioritize the inclusion of smallholders in territorial-level discussions, fostering strong connections among stakeholders. It will provide technical capacity building and training opportunities, aiming to bridge the knowledge gap. Through demonstrations and awareness-raising efforts, STAZA will enhance environmental and climate change awareness among the broader community. Farmers will receive training on the economic and environmental advantages of adopting new systems and technologies. STAZA will offer adaptive support combined with productive inputs, creating an appealing package that farmers can benefit from.
Low ministerial buy-in for modifying creating existing sustainable agriculture and water management sector policies and strategies.	Major		X		The Strategic Plan for Rural Development of Bosnia and Herzegovina recognizes the importance of sustainable agriculture and organic production. This strategic framework provides a strong foundation to promote and advocate for agroecology practices within the country. To address any skepticism or resistance, STAZA will implement various measures to mitigate this risk. Training programs, awareness campaigns, and exchange visits will be organized to engage individuals and groups, and promote the value and benefits of agroecology practices and the integration of water conservation at a national level. These activities aim to persuade skeptics and foster a broader understanding and acceptance of sustainable agriculture practices in Bosnia and Herzegovina.

C. Environmental and Social Risk Management

285. IFAD-funded projects and programmes are designed in a participatory manner, taking into account the concerns of all stakeholders. IFAD requires that projects are carried out in compliance with its policies, standards and safeguards. Moreover, IFAD's Strategic Framework calls for ensuring that projects and programmes promote sustainable use of natural resources, build resilience to climate change and are based upon ownership by rural women and men themselves in order to achieve sustainability. As shown in Annex 3 (ESMP) the project design was assessed in compliance with the Adaptation Fund Environmental and Social as well as Gender Policies (and IFAD's SECAP). Following the ESP screening in Annex 3 (ESMP), the project has been categorised as a Category B (equivalent to the IFAD/SECAP "moderate risk" category) with regards to environmental and social aspects (also refer to section II. K).

286. The risk screening conducted in the ESMP in Annex 3 identifies that STAZA will not have any adverse environmental and social impacts: the expected impact of the project on the environment will be positive given its specific orientation and dedication to a proactive management of the landscapes towards climate resilience. Improved availability of water throughout the dry season in remote areas, preventive actions to reduce the occurrence and extent of floods, implementation and dissemination of anti-erosive soil protection techniques, capacity building at community level to enhance rural inhabitants' ability to anticipate consequences of climate change while diversifying and consolidating their income streams, will all contribute to a reduced exposure to social and environmental consequences of climate changes.

287. Annex 3 proposes a methodology for the development of Environmental and Social Impact (ESI) screening and ESMP of the project. The ESMP will include mitigation and monitoring actions and the institutional responsibilities for implementing them clearly. The project will notably minimize environmental and social risks by integrating a safeguarding system in:

- **Institutional processes**: Staff and partners will be guided by the IFAD APCU/PCU to identify, assess, manage and/or mitigate environmental and social risks. Processes are in place for the Environmental and Social Risks to be assessed and respective ESMPs designed and applied for the mitigation of risks related to the 15 ESPs.
- **Implementation of hard interventions**: proposed small-scale water-related infrastructure investments, anti-erosive biotechnical measures as well as afforestation/reforestation will directly impact the physical environment. Each of these activities will fully comply with relevant national laws and regulations on environmental impact assessment, water management, spatial planning, construction standards and the objective criteria for resource allocation will be communicated transparently to all stakeholders.

- **Execution of 'soft' project activities**: Proposed 'soft' project activities have been screened for environmental and social risks during the project design mission by consultations involving local stakeholders and a multidisciplinary team of national and international specialists with a thorough understanding of the specific context in each of the targeted municipalities.

288. Social risks will be reduced by following the targeting strategy that has been developed, with a strong focus on women and youth empowerment. It is based on the successful targeting strategy of READP. The LCAPs done at the beginning of the project will also take social risks into account. Participatory approaches will be used and inclusion will be closely monitored through the M&E system and using specific tools.

D. Grievance and redress mechanisms

289. The project will utilize the existing IFAD grievance mechanism to allow those affected to raise concerns that the project is not complying with its social and environmental policies or commitments, first by establishing a grievance mechanism at project level, drawing from the existing mechanism at national or entity level. The consultative process with the community and beneficiaries aims to ensure prevention of grievances that might arise from the project activities. However, if there are any grievances, the below redress mechanism is proposed:

290. Grievance redress mechanism should be shared with the community during the project inception workshop and subsequent meetings with the beneficiaries.

(i) As part of the grievance redress mechanism, the contact details of the project partners (Project Coordinator) should be made available to stakeholders including project beneficiaries and the community. Contact numbers would be displayed at common or predominant places along–with the project details. This is expected to promote social auditing.

(ii) Complaints must be put forward by at least two people who are both nationals of the country concerned and/or living in the project area.

(iii) Complaints from foreign locations or anonymous complaints will not be taken into account.

(iv) Complaints must concern projects currently under design or implementation. Complaints concerning closed projects, or those that are more than 95 per cent disbursed, will not be considered.

291. Grievances are aimed to be addressed at the field level by the project team which will be the first level of redress mechanism. If the grievance is not resolved at the field level, it will be escalated to the APCU/PCU and then to IFAD who will be responsible for addressing grievances related to violation of any of the provisions of Environmental and Social Policy of the Adaptation Fund. All grievances received and actions taken on them will be put up before the APCU/PCU and Steering Committee meetings and will also be included in the progress reports for monitoring purposes.

292. In all cases, if the complainants disagree with IFAD's response, they may submit a request to SECAPcomplaints@ifad.org and request that an impartial review be carried out by the Office of the Vice-President. The Office of the Vice-President will decide on the steps to be taken to examine such complaints, including, if necessary, contracting external experts to review the matter. The complainants will be informed of the results of the review. IFAD will include in its Annual Report a list of received complaints and a summary of actions taken to address them.

293. The Ad hoc Complaint Handling Mechanism (ACHM) of the Adaptation Fund can be directly used in cases where the Parties have failed to reach a mutually satisfactory solution through the implementing entities' grievance mechanism within a year. The Adaptation Fund Board Secretariat independently manages all aspects related to the ACHM, under the oversight of the Ethics and Finance Committee of the Board. Guidance to ACHM are available at this link: Ad Hoc Complaint Handling Mechanism - Adaptation Fund.

E. Monitoring and Evaluation Arrangements

294. **Project Monitoring and Evaluation** (M&E) will be under the oversight of the PCU/APCU, and led by the M&E officer who will work closely with the implementing partners. The M&E system should: (i) produce, organize and disseminate the information needed for the strategic management of STAZA, (ii) document the results and lessons learned for internal use and for public dissemination on the achievements and (iii) respond to the information needs of Adaptation Fund, IFAD and the Government on the activities, immediate outcomes and impact of the proposed project. A monitoring and evaluation manual that will describe a simple and effective system for collecting, processing, analysing and disseminating data will be prepared in the first year of STAZA. A computerized database will be developed that will enable the generation of dashboards used in IFAD projects. The system will be regularly fed from data collected in the field by the implementing partners and the various studies carried out as part of STAZAs' implementation. Trainings will be organized to strengthen the capacities of the various stakeholders involved in the monitoring and evaluation system. Day to day monitoring of implementation progress will be the responsibility of the project team, based on the project's Annual Work Plan and its indicators. During the first months of STAZA, the project team will complete and fine-tune baseline data for each indicator, and will define and fine-tune performance. Specific targets for the first year of implementation, progress indicators, and their means of verification will be developed at the Inception Workshop (see below).

295. **Project Inception Workshop**. An inception workshop will be conducted within two months of project start up with the full project team, relevant government counterparts and IFAD. The inception workshop is crucial to building ownership for the project results and to plan the first-year annual work plan. A fundamental objective of the Inception Workshop will be to present the modalities of project implementation and execution, and assist the project team to understand and take ownership of STAZA's goals and objectives.

296. A **Project Inception Report** will be prepared immediately following the Inception Workshop. It will include: (i) a detailed First Year/Annual Work Plan divided in quarterly time-frames detailing the activities and progress indicators that will guide implementation during the first year of STAZA; (ii) the detailed project budget for the first full year of implementation, prepared on the basis of the Annual Work Plan; (iii) a detailed narrative on the institutional roles, responsibilities, coordinating actions and feedback mechanisms of project related partners; (iv) a section on progress to date on project establishment and start-up activities and an update of any changed external conditions that may affect project implementation.

297. **Baseline study**. A baseline study will be conducted within the first year to collect data and serve as the basis for the assessment of how efficiently the activity has been implemented and results achieved. The study will include the target group and a control group which will be essential to determine the attribution of results to programme activities.

298. **Quarterly Progress Reports** will also be prepared by project implementing partners in the field, and submitted to the PCU/APCU to ensure continuous monitoring of project activities and identify challenges to adopt necessary corrective measures in due time.

299. **Technical reports** – such as a best practices and lessons learned report - will also be completed, as determined during the project inception report.

300. **Annual Project Report** (APR). The project team will prepare an APR to reflect progress achieved in meeting the project's Annual Work Plan and assess performance of the project in contributing to intended outcomes through outputs and partnership work. The format of the APR will be flexible but should include the following issues: (i) an analysis of project performance over the reporting period, including outputs produced and, where possible, information on the status of the outcome; (ii) the constraints experienced in the progress towards results and the reasons for these; (iii) the three (at most)

major constraints to achievement of results; (iv) AWP and other expenditure reports; (v) lessons learned; (vi) clear recommendations for future orientation in addressing key problems in lack of progress.

301. **Supervision** will be done by IFAD (under its direct supervision framework and guidelines), with a supervision mission mobilized at least once per year. Additional implementation support from IFAD on specific identified issues will be mobilized if considered necessary by the government of BiH and IFAD or recommended by the Supervision mission. The composition of the Supervision missions would be based on an annual supervision plan. The supervision plan would highlight, in addition to the routine supervision tasks (fiduciary, compliance and programme implementation), the main thematic or performance areas that require strengthening and would imply deployment of additional inputs for capacity building, in-depth analytical studies or review of existing policies.

302. **Mid-term Review** (MTR). The MTR will be carried out in year 3. It will assess operational aspects such as programme management and implementation of activities as well as the extent to which the objectives are being fulfilled and corrective actions needed for the programme to achieve impact. Depending on the achievements the programme and the resources available, the possibility of scaling up the activities to other regions will also be considered in consultation with the government.

303. A **Final Evaluation** will be conducted three months before project closure which will include the programme completion survey (below).

304. **Programme completion survey** (impact evaluation): Will include the same set of questionnaires included at baseline to allow for comparison against baseline results. In addition, a panel of households will be interviewed to provide a thorough analysis of programme impact. Moreover, analysis will be done by type of beneficiary, region and gender of household head.

305. **Gender and youth.** The M&E system will give strong emphasis to monitoring of targeting performance. All implementing partners will be required to provide disaggregated data on women and youth participation, in relation to overall programme targets. The M&E system will collect and analyse information about programme outreach, effectiveness of the targeting strategy and specific benefits for women and youth. This requires strong coordination and collaboration between the M&E responsible persons and the Gender Officers (PCU/APCU). Other participatory monitoring tools like annual outcome survey, environmental and social safeguard monitoring, and regular tracking of vulnerable groups with their problems and progress will be adopted to ensure that target groups are effectively participating and getting progress on their livelihood improvement pathways Lessons learned on gender and climate change will be produced and included as part of key relevant reports. Additionally, technical reports such as a best practices and lessons learned reports will also be developed. Under Component 3 the project will develop and widely disseminate Gender and Climate Change studies based on project results and findings, incorporating gender assessments, lessons learned, case studies, and more. Impact will be assessed on the basis of methodologically gender sensitive baseline, mid-term and completion surveys which will use key indicators to measure women's empowerment and youth inclusion.

Table 19: Breakdown of M&E fee utilisation

Breakdown of M&E Supervision	Responsibility	Timeframe	Budget (USD)
Contribution of project budget to M&E (AF)			
Baseline study	APCU/PCU	First year (2024/2025)	32,983
Annual workplan and budgets	APCU/PCU	Annual	M&E officer salary 153,418
Project records and consolidation	M&E Officer and other APCU/PCU members	Trimestrial	
Semi-annual progress report	M&E Officer and other APCU/PCU members	Semi-annual	
Annual project report	M&E Officer and other APCU/PCU members	Annual	

Project completion survey	APCU/PCU	2029	35,716
Completion process	APCU/PCU	2029	7,586
Total			**229,703**
Contribution of IE Fees to M&E			
Inception workshop report	APCU/PCU	After workshop	20,000
Supervision visits	IFAD, APCU/PCU, Government	Biannual	60,000
Mid-term review	IFAD, external consultants	2027	20,000
Final evaluation	IFAD, external consultants	2029	20,000
Total			**120,000**
Grand total			**349,703**

E. Results Framework

Table 20: Results Framework

Objective and expected outputs	Indicators	Unit	Targets				Means of verification			Assumptions
			Ref.	Y1	Mid-term	Y5	Source	Frequency	Responsibility	
Project objective. Increase resilience of ecosystems and adaptation of livelihoods in rural areas affected by climate change.	Ha of land protected or under improved practices	Hectares	0	0	1,800	3,275	Completion survey, GIS analysis, and Municipalities statistics	At completion	M&E officer	Initial and continued political commitment and support to project implementation. Macro-economic conditions remain stable or improve
	Number of households with an increased resilience to climate change	Households	0	0	3,000	6,535				
	Number of beneficiaries (direct)	Individuals	0	0	9,000	18,954				
Component 1. Participatory assessment and territorial planning										
Outcome 1.1. Enhanced Community Mobilization and Improved Knowledge for Climate Change Adaptation	% Percentage of households reporting improved access to land, forests, water or water bodies for production purposes	% of households	0	0	50%	80%	Completion survey	At completion	APCU/PCU environment & climate specialist and M&E officer	Relevance of LCAPs with regards to climate change impacts in both entities. Climate change patterns are according to predictions in LCAPs.
Output 1.1.1. Supporting Clusters strengthening	Number of functioning multi-stakeholder platforms supported	Platform	0	9	9	9	Field officers records and clusters meeting minutes	Annually	APCU/PCU Field Officers	
	Number of events organized to raise awareness and create capacity of stakeholders' platform members (municipality, BLs, clusters' representatives) on CC and resilient agriculture	Events	0	5	7	14	Field officers & M&E officer records	Annually	APCU/PCU Field Officers and M&E officer	
Output 1.1.2. Development of Participatory Local Climate Adaptation Plans (LCAP)	Number of territorial analyses on CC impacts on agriculture and water management	Analyses	0	12	12	12	Field officers & M&E officer records	Annually	APCU/PCU Field Officers and M&E officer	
	Number of LCAPs approved (1 per cluster)	Plans	0	12	12	12	Field officers & M&E officer records	Annually	APCU/PCU Field Officers and M&E officer	
Output 1.1.3. Exchange visits	Number of exchange visits (national/international)	Visits	0	6 (4/2)	12 (8/4)	12 (8/4)	Field officers & M&E officer records	Annually	APCU/PCU Field Officers and M&E officer	
	Number of participants in exchange visits	Number of people	0	180	360	360	Field officers & M&E officer records	Annually	APCU/PCU Field Officers and M&E officer	
Component 2. Adoption of approaches for climate change adaptation at territorial level										

Objective and expected	Indicators	Unit	Targets				Means of verification			Assumptions
Outcome 2.1. Enhanced resilience of smallholders' livelihoods to climate change	% of households reporting adoption of environmentally sustainable and climate resilient technologies and practices	% of households	0	0	50%	80%	Completion survey	At completion	APCU/PCU Field Officers and M&E officer	Macro-economic conditions continue to be supportive for the supported value-chains. Farmers and other stakeholders' willingness to participate in activities. No political interference in the choice of investments. Technical expertise can be mobilized for demo-plots and biotechnical measures.
	% of smallholders reporting an increased stability of income (production/ commercialization)	% of smallholders	0	0	50%	80%	Completion survey	At completion	APCU/PCU environment & climate specialist and M&E officer	
	% of supported rural enterprises reporting an increase in profit	% of supported rural enterprises	0	0	50%	80%	Field officers records	At completion	APCU/PCU environment & climate specialist and M&E officer	
	Number of hectares of land protected or brought under improved climate resilient practices	Hectares	0	0	800	1,600	GIS analysis	At completion	APCU/PCU environment & climate specialist and M&E officer	
Output 2.1.1. Adaptive capacity of farming systems strengthened	Number of demo-plots installed	Demo-plots	0	0	30	40	Field officers records	Annually	APCU/PCU Field Officers and M&E officer	
	Number of farmers accessing demonstration plots on climate resilient technologies	Number of farmers	0	0	1200	1600	Field officers records	Annually	APCU/PCU Field Officers and M&E officer	
Output 2.1.2. Grants to adaptive activities provided	Number of grant proposals approved (BLs/Cooperatives/PAs/Individuals)	Grants	0	0	1200	1600	Field officers records	Annually	APCU/PCU Field Officers and M&E officer	
Output 2.1.3 Market access strengthened	Number of fairs organized	Fairs	0	0	6	10	Field officers records	Annually	APCU/PCU Field Officers and M&E officer	
	Number of grant proposals approved (BLs/Cooperatives/PAs/Individuals)	Grants	0	0	65	100	Field officers records	Annually	APCU/PCU Field Officers and M&E officer	
Outcome 2.2. Improved resilience of ecosystems and infrastructure's assets	Physical infrastructure improved to withstand climate change and variability-induced stress (AF 4.2.)	Number of infrastructure	0	0	44	67	Progress report	At mid-term and completion	APCU/PCU environment & climate specialist and M&E officer	
	Number of hectares of land protected or brought under improved climate resilient practices	Hectares	0	0	1,000	1,675	GIS analysis	At completion	At mid-term and completion	
	Number of households benefitting from of	Number of households	0	0	2,200	3,350	Field officers records	At Mid-term and	APCU/PCU Field Officers and	

Objective and expected	Indicators	Unit	Targets				Means of verification			Assumptions
	natural resource assets							completion	M&E officer	
Output 2.2.1. Ecosystem protecting measures implemented	Number of natural resource assets created, maintained or improved to withstand conditions resulting from climate variability and change	Assets	0	0	50	71	Field officers records	Annually	APCU/PCU Field Officers and M&E officer	
Output 2.2.2. Rural adaptation collective infrastructure rehabilitated or constructed	Number of physical assets strengthened or constructed to withstand conditions resulting from climate variability and change (by sector and scale)	Assets	0	0	44	67	Field officers records	Annually	APCU/PCU Field Officers and M&E officer	
	Number of households benefitting from assets	Number of households	0	0	1,320	2,010	Field officers records	Annually	APCU/PCU Field Officers and M&E officer	
Component 3. Policy support and knowledge enhancement for a climate-resilient agriculture										
Outcome 3.1. Improved Knowledge and Research for integrating adaptation strategies and mechanisms at cantons/municipal and national policy levels, drawing on project approaches and implementation lessons	Evidence-based guidelines based on discussions at Multi-stakeholder platforms are expected to contribute to influence agriculture development strategies and policies	Yes/No	No	No	Yes	Yes	Municipal strategic documents	At mid-term and completion	APCU/PCU environment & climate specialist and M&E officer	Continuing MAWMF and MAFWM interest to building the resilience of smallholder farmers. Policy makers' willingness to learn from project experience. Universities willing to participate in project's activities.
Output 3.1.1. Knowledge products are effectively created and shared with key stakeholders to provide policy support	Policy-relevant knowledge products completed	Knowledge products	0	0	4	6	Field officers & M&E officer records	Annually	APCU/PCU Field Officers and M&E officer	
	Number of events organized to share evidence-based results from the project	Events	0	0	4	6	Field officers & M&E officer records	Annually	APCU/PCU Field Officers and M&E officer	
Output 3.1.2. Relevant institutions supported in the creation of curriculum for master students	Number of people from universities and government with improved CC adaptation knowledge	Number of people	0	0	74	74	Field officers & M&E officer records	Annually	APCU/PCU Field Officers and M&E officer	
	Number of students receiving research grants	Students	0	0	4	8	Field officers & M&E officer records	Annually	APCU/PCU Field Officers and M&E officer	
Output 3.1.3. AE research grants on pilots, and soil and water specialized institutions supported	Number of research CC resilience projects submitted/approved	Projects	0	0	50/30	50/30	Field officers & M&E officer records	Annually	APCU/PCU Field Officers and M&E officer	
	Number of demonstrations set up and disseminated	Demo-plots	0	0	26	39	Field officers & M&E officer records	Annually	APCU/PCU Field Officers and M&E officer	

F. Alignment with AF results framework

Table 21: Alignment with AF results framework

Project Outcomes	Project Outcome indicators	Adaptation Fund Outcome	Adaptation Fund Outcome Indicator	Grant Amount (USD)
Component 1. Participatory assessment and territorial planning				
Outcome 1.1. Enhanced Community Mobilization and Improved Knowledge for Climate Change Adaptation	Percentage of persons/households reporting improved access to land, forests, water or water bodies for production purposes	**Outcome 5:** Increased ecosystem resilience in response to climate change and variability-induced stress	5. Ecosystem services and natural resource assets maintained or improved under climate change and variability-induced stress	2,348,387
Component 2. Adoption of approaches for climate change adaptation at territorial level				
Outcome 2.1. Enhanced resilience of smallholders' livelihoods to climate change	% of households reporting adoption of environmentally sustainable and climate resilient technologies and practices % of smallholders reporting an increased stability of income (production/ commercialization) % of supported rural enterprises reporting an increase in profit	**Outcome 6:** Diversified and strengthened livelihoods and sources of income for vulnerable people in targeted areas.	6.2. Percentage of targeted population with sustained climate-resilient alternative livelihoods	2,210,274
Outcome 2.2. Improved resilience of ecosystems and infrastructure's assets	Physical infrastructure improved to withstand climate change and variability-induced stress Number of hectares of land protected or brought under improved climate resilient practices	**Outcome 4:** Increased adaptive capacity within relevant development sector services and infrastructure assets	**4.2.** Physical infrastructure improved to withstand climate change and variability-induced stress	3.210.810
Component 3. Policy support and knowledge enhancement for a climate-resilient agriculture				
Outcome 3.1. Improved Knowledge and Research for integrating adaptation strategies and mechanisms at cantons/municipal and national policy levels, drawing on project approaches and implementation lessons	Evidence-based guidelines based on discussions at Multi-stakeholder platforms are expected to contribute to influence agriculture development strategies and policies	**Outcome 7:** Improved policies and regulations that promote and enforce resilience measures	**7.** Climate change priorities are integrated into national development strategy	735,250
Project Outputs	**Project Outputs indicators**	**Adaptation Fund Output**	**Adaptation Fund Output Indicator**	**AF Amount (USD)**
Component 1. Participatory assessment and territorial planning				
Output 1.1.1. Multi-stakeholder platforms established and facilitated in clusters	Number of functioning multi-stakeholder platforms supported Number of events organized to raise awareness and	**Output 6:** Targeted individual and community livelihood strategies strengthened in relation to climate change	**6.2.1.** Type of income sources for households generated under climate change	*1,435,258*

	create capacity of stakeholders' platform members (municipality, BLs, clusters' representatives) on CC and resilient agriculture	impacts, including variability	scenario	
Output 1.1.2. Participatory Local Climate Adaptation Plans developed (LCAP)	Number of territorial analyses on CC impacts on agriculture and water management Number of LCAPs approved (1 per municipality)			*800,178*
Output 1.1.3. Exchange visits	Number of exchange visits (national/international) Number of participants in exchange visits			*107,049*
Component 2. Adoption of approaches for climate change adaptation at territorial level				
Output 2.1.1. Adaptive capacity of farming systems strengthened	Number of demo-plots installed Number of farmers accessing demonstration plots on climate resilient technologies	**Output 5:** Vulnerable ecosystem services and natural resource assets strengthened in response to climate change impacts, including variability	**5.1.** No. of natural resource assets created, maintained or improved to withstand conditions resulting from climate variability and change (by type and scale)	*574,257*
Output 2.1.2. Grants to adaptive activities provided	Number of grant proposals approved BLs/Cooperatives/PAs/Individuals)			*1,402,558*
Output 2.1.3 Market access strengthened	Number of fairs organized			*233,459*
Output 2.2.1. Ecosystem protecting measures implemented	Number of natural resource assets created, maintained or improved to withstand conditions resulting from climate variability and change Number of households benefitting from infrastructures			*1,251,925*
Output 2.2.2. Rural adaptation collective infrastructure rehabilitated or constructed	Number of physical assets strengthened or constructed to withstand conditions resulting from climate variability and change (by sector and scale) Number of households benefitting from assets	**Output 4:** Vulnerable development sector services and Infrastructure assets strengthened in response to climate change impacts, including variability	**4.1.2.** No. of physical assets strengthened or constructed to withstand conditions resulting from climate variability and change (by sector and scale)	*1,958,885*
Component 3. Policy support and knowledge enhancement for a climate-resilient agriculture				
Output 3.1.1. Knowledge products are effectively created and shared with key stakeholders to provide policy support	Policy-relevant knowledge products completed Number of events organized to share evidence-based results from the project	**Output 7:** Improved integration of climate-resilience strategies into country development plans	**7.1.** No. of policies introduced or adjusted to address climate change risks (by sector) **7.2.** No. or targeted development strategies with	*168,563*

Output 3.1.2. Relevant institutions supported in the creation of curriculum for master students	Number of university teachers with improved CC adaptation knowledge Number of students receiving research grants		incorporated climate change priorities enforced	*63,792*
Output 3.1.3. AE research grants on pilots, and soil and water specialized institutions supported	Number of research CC resilience projects submitted/approved Number of demonstrations set up and disseminated			*502,895*

H. Project Budget

306. The overall cost of the Project is estimated at US$13.78, which will be disbursed over five years. Of this total financing, the Adaptation Fund (AF)'s contribution amounts to US$10.00 million (of which US$9.22 million for project costs and US$0.78 million for project cycle management implementing entity fee). The Government of Bosnia and Herzegovina's contribution is estimated at US$1.03 million. The beneficiaries will contribute to the Project with US$0.48 million. Finally, the Project will have a contribution from the Municipalities of US$3.05 million.

Table 22: Project Budget

Item/activity	Note	Total AF (US$)	Domestic contributions (US$)	Grand total (US$)
Component 1. Participatory assessment and territorial planning				
Outcome 1.1. Enhanced Community Mobilization and Improved Knowledge for Climate Change Adaptation				
Output 1.1.1. Supporting Clusters strengthening	Environmental & climate specialist	250,779	-	250,779
	Project coordinator/manager	177,329	-	177,329
	M&E Officer	153,418	-	153,418
	Technical advisor/secretary	87,572	-	87,572
	Gender targeting officer	133,809	-	133,809
	Vehicle	28,816	5,902	34,718
	Training and workshops	83,828	-	83,828
	Senior consultant to develop final report on women consultation and development of training materials /a	26,762	-	26,762
	(2) Junior consultants	8,921	-	8,921
	Workshop on multistakeholder platform	10,132	-	10,132
	Organizing campaigns (using existing modules at municipality level)	157,611	-	157,611
	Field officer for cluster	316,282	-	316,282
Sub-total Output 1.1.1		*1,435,259*	*5,902*	*1,441,161*

	Climate change assessment (one per cluster)	661,304	-	661,304
	Climate change workshop	39,678	-	39,678
Output 1.1.2. Development of Participatory Local Climate Adaptation Plans (LCAP)	Participatory Local Climate Adaptation Plans (LCAP) - consultants	59,517	-	59,517
	Workshop for dissemination Participatory LCAPs	39,678	-	39,678
Sub-total Output 1.1.2		*800,177*	-	*800,177*
Output 1.1.3. Exchange visits	Exchange visits	107,049	-	107,049
Sub-total Output 1.1.3		*107,049*	-	*107,049*
Total Cost Component 1		2,342,485	5,902	2,348,387
Component 2.Enhancing Climate Change Adaptation at the Territorial Level				
Outcome 2.1. Enhanced resilience of smallholders' livelihoods to climate change		2,225,527	3,257,650	5,483,177
Output 2.1.1. Strengthening Adaptive Farming Systems	Inclusive business specialist	73,926	-	73,926
	Training of extension services	15,777	-	15,777
	Demo-plots	344,862	-	344,862
	Demo visits and training	139,692	-	139,692
Sub-total Output 2.1.1		*574,257*	-	*574,257*
Output 2.1.2. Grants for scaling up Climate-Adaptive Initiatives	Grant type I - on farm (primary production)	701,279	1,411,007	2,112,286
	Grant type II - circular economy	701,279	1,411,007	2,112,286
Sub-total Output 2.1.2		*1,402,558*	*2,822,014*	*4,224,572*
Output 2.1.3. Strengthening Market Access	Fairs	48,153	32,102	80,255
	Grant type III - short value chain	200,559	403,534	604,093
Sub-total Output 2.1.3		*248,712*	*435,636*	*684,*348
Outcome 2.2. Improved resilience of ecosystems and infrastructures assets		3,210,810	1,206,964	4,417,774
Output 2.2.1. Biotechnical Measures for Ecosystem Protection	Feasibility Study of Biotechnical Measures at the Landscape Level	100,681	20,621	121,302
	Biotechnical measures-Works	513,471	214,341	727,812
	Supervision of biotechnical measures	78,480		78,480
	Biotechnical measures- equipment and services	559,293	233,468	792,761
Sub-total Output 2.2.1		*1,251,925*	*468,430*	*1,720,355*
Output 2.2.2. Rehabilitation and Construction of Rural Adaptive Infrastructure	Civil engineer	77,932	-	77,932
	Feasibility study	52,851	-	52,851
	Construction/Rehabilitation of multipurpose rural adaptative infrastructure	1,769,222	738,534	2,507,756

	Supervision of water storage/drainage	58,880		58,880
Sub-total Output 2.2.2		*1,958,885*	*738,534*	*2,697,419*
Total Cost Component 2		5,436,337	4,464,614	9,900,951
Component 3. Policy support and knowledge enhancement for a climate-resilient agriculture				
Outcome 3.1. Improved Knowledge and Research for integrating adaptation strategies and mechanisms at cantons/municipal and national policy levels, drawing on project approaches and implementation lessons				
Output 3.1.1. Effective Knowledge Sharing for Policy Support	Assistance in the preparation of amendment of legal policy documents	51,731	-	51,731
	Digital platform	9,557	829	10,386
	Thematic conferences	34,487	-	34,487
	National consultant for developing gender climate change study	21,484	-	21,484
	Publication of the gender climate change study - printout	4,161	852	5,013
	Thematic workshop on gender and climate change adaptation	5,371	-	5,371
	Senior international consultant to develop gender impact assessment	41,774	-	41,774
Sub-total Output 3.1.1		*168,564*	*1,681*	*170,245*
Output 3.1.2. Supporting Educational Institutions in Curriculum Dev	Training university staff	45,442	-	45,442
	Master thesis student for doing research in the field	18,350	-	18,350
Sub-total Output 3.1.2		*63,792*	*-*	*63,792*
Output 3.1.3. Supporting Agricultural Research Grants and Specialized Institutions for Climate, Soil and Water	Business to Research (B2R) Workshop (in year2) one per cluster	25,380		25,380
	Evaluators for concept note and project proposals	22,721		22,721
	Research project - research of priorities and B2R whop	257,463	52,733	310,196
	Demonstration of new varieties and technologies	134,500		134,500
	Training of advisors - national consultant providing the training to the local advisors	20,278		20,278
	Training of advisors - international consultant providing the training to the local advisors	30,417		30,417
	Award fund for best students for all levels	12,137	2,486	14,623
Sub-total Output 3.1.3		*502,896*	*55,219*	*558,115*
Total Cost Component 3		735,250	56,900	792,150
Project Execution Costs				
Procurement officer/manager		161,979	-	161,979
Financial specialist-/manager		163,033	-	163,033
Interpreter/secretary		67,136	-	67.136
Procurement asssitant		52,419	-	52,419

Driver	46,810	,	46,810
Travelling and allowances	35,859	,	35,859
Sub-total Salaries and Allowances	*527,236*	-	*527,236*
Equipment and Goods (computer, printer, peripherials and other office equipment, software licensee)	6,967	1,427	8,394
Baseline survey, Project Completion (final) survey, Completion report, and Translation	63,624	13,031	76.655
Operating costs (vehicle O&M, fuel, insurance, registration and maintenance, other operational costs)	104,691	21,443	126,134
Total execution costs	702,518	35,901	738,419
Total project costs	**9,216,590**	**4,556,317**	**13,779,907**
Project Cycle Management Implementing Entity Fee			
Financial Management (General financial oversight, support audits and quality control, manage, monitor and track AF funding including allocating and monitoring expenditure based on agreed work plans; financial management compliance with AF requirements; financial reporting compliance with AF standards; procurement support and compliance with Government procurement rules).	170,048	-	170,048
Programme Support (Technical support in project implementation; methodologies, identification of experts; troubleshooting and support implementation missions as necessary; portfolio management, reporting; Independent Environmental and Social Audit s and policy programming and implementation support services).	315,088	-	315,088
Technical support (Supervision missions and implementation support, risk, management, programming; guidance in establishing performance measurement processes; technical support on methodologies, TOR, validation, identification of experts, results validation, and quality assurance; troubleshooting, and support evaluation missions as necessary; support on technical issues in programme implementation).	298,274	-	298,274
Total Project Cycle Management Implementing Entity Fee	783,410	-	783,410
Amount of financing requested	**10,000,000**	**4,556,317**	**14,556,317**

F. Disbursement Schedule

Table 23: Disbursement schedule

	Amount disbursed per year (US$)					
	Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Total**
Project Funds	1,420,951	2,078,167	2,648,955	2,266,429	802,089	9,216,590
Implementing entity fees	133,180	156,682	188,018	188,018	117,512	783,410
Total	**1,554,131**	**2,234,849**	**2,836,973**	**2,454,447**	**919,601**	**10,000,000**

PART IV: ENDORSMENT BY GOVERNMENT AND CERTIFICATION BY THE IMPLEMETING ENTITY

A. Record of endorsement on behalf of the government[98]*:*

Muhamed Hasanoviç, MSc *Deputy Minister* *Ministry of Finance and Treasury B&H*	Date*: 07/24/2023*

See Annex 1: Letter of endorsement by the Government

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 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.	
Implementing Entity coordinator: Mr Juan Carlos Mendoza Casadiegos Director Environment, Climate, Gender and Social Inclusion Division	
Date: 18 August 2022	e-mail: ecgmailbox@ifad.org
HQ Focal point: Ms Janie Rioux Senior Climate Finance Specialist ECG Division	email: j.rioux@ifad.org
Project contact persons:	
Mr Walid Nasr Regional Climate and Environment Specialist	e-mail: w.nasr@ifad.org
Mr Roberto Longo IFAD B&H Country Director	e-mail: r.longo@ifad.org

[98] 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.

Annex 1: Letter of endorsement by the Government

BOSNA I HERCEGOVINA
MINISTARSTVO FINANCIJA/
FINANSIJA I TREZORA

БОСНА И ХЕРЦЕГОВИНА
МИНИСТАРСТВО ФИНАНСИЈА
И ТРЕЗОРА

BOSNIA AND HERZEGOVINA
MINISTRY OF FINANCE
AND TREASURY

Number: 06-21-1-3714-3 /24
Sarajevo, May 22, 2024

The Adaptation Fund Board
c/o Adaptation Fund Board Secretariat
Email: afbsec@adaptation-fund.org
Fax: +1 202 522 3240/5

Subject: Endorsement for Increasing Climate Change Resilience in the Agricultural sector of Bosnia and Herzegovina - Staza

Dear Sirs,

In my capacity as designated authority for the Adaptation Fund in Bosnia and Herzegovina, I confirm that the above national project proposal is in accordance with the government's national priorities in implementing adaptation activities to reduce adverse impacts of, and risks, posed by climate change in the Bosnia and Herzegovina.

Accordingly, I am pleased to endorse the above project proposal with support from the Adaptation Fund. If approved, the project will be implemented by the International Fund for Agricultural Development (IFAD) and executed by the Ministry of Agriculture, Water Management and Forestry (MAWMF) in the Federation of Bosnia and Herzegovina and by the Ministry of Agriculture, Forestry and Water Management (MAFWM) in the Republika Srpska.

Sincerely,

Srđan Amidžić, PhD
Minister
National Designated Authority
The Cabinet of the Minister
Ministry of Finance and Treasury B&H

Contact details:
Trg Bosne i Hercegovine 1, 71000 Sarajevo
Email: trezorbih@mft.gov.ba
Phone: +38733205345
Fax: +38733202930

Annex 2: Stakeholder consultation process

307. **Approach**. STAZA was designed in consultation with national and international participants, as well as members of the two project units (PCU and APCU) that implemented previous IFAD projects in BiH. The STAZA was designed by the design mission that stayed in Bosnia and Herzegovina from October 30 to November 10, 2023. The mission met with numerous stakeholders from different sectors (private, public, academia, international organisation), and the list of persons with whom the mission met is attached.

308. **Meetings.** The meetings took place in such a way that the mission visited the stakeholders in their place of life and work, or the interlocutors were invited to the premises of the PCU in Sarajevo, or the APCU in Banja Luka. In order to use the available time as effectively as possible, some meetings were held in parallel, and mission members attended them depending on their area of interest. The dates and places of the meetings are attached to this annex. The meetings were held as group or individual meetings, and some information was collected during the visit to the stakeholders, and in addition to the information received, the members of the mission had the opportunity to see production facilities, crops, domestic animals and other resources.

309. **Stakeholders consulted.** Respecting the complex administrative structure of BiH, the mission held a series of meetings with stakeholders at the state level, two entities, the Republika Srpska and the Federation of BiH, and cantons and municipalities. The persons interviewed were from the public (ministries, agencies), academic (faculties, institutes) and private sectors (farms, cooperatives, associations, SMS, companies). They represented different professions: youth, women, men, farmers, researchers, advisors, entrepreneurs, managers, civil servants. The list of persons with whom the mission met is attached.

310. **Focus of meetings.** Depending on the type of interlocutor, the meetings had different focuses:

(a) With representatives of the **public sector**, current and future strategies and policies regarding climate change adaptation and mitigation were discussed, as well as the support that ministries and other public institutions provide to farmers in this regard.
(b) The representatives of the **private sector** (individual farmers and companies) discussed their vulnerability to climate change and adaptation measures that they undertake or plan to undertake to reduce their exposure to the negative consequences of climate change.
(c) The representatives of the **scientific community** discussed their research and information on the topic of climate change and their capacity to be involved in the implementation of the project regarding the creation of adaptation plans to climate change and to participate in the implementation of smaller scientific research projects as part of the STAZA project.
(d) The representatives of the **public and private advisory services** were discussed about their capacities and ways of working and the possibilities of participating in the project through the setting up and monitoring of a certain number of trials on farmers' premises with the aim of demonstrating good practices of adaptation to climate change.
(e) With the representatives of **international organizations** (EU, UNDP, WB, FAO) were discussed their current and future interventions in BiH in order to avoid overlapping and achieve synergy in joint action.

311. **Consultation techniques.** Consultations are carried out through individual meetings and individual and group interviews with groups of related stakeholders. Also, part of the information was collected through field visits to beneficiaries of the current IFAD project in BiH (READP) as well as to potential beneficiaries of the future project as new target groups. During the consultations, it was tried to get the views of different categories of users, including women, young and vulnerable social groups, as the project could provide adequate answers to their specific needs.

312. **Consultation fundings.** A series of consultations with various stakeholders resulted in useful information for the design process of the STAZA project. Those key findings are summarized below according to the type of stakeholder.

(a) The main findings of the interviews with the public sector are that the competent ministries and other agencies are aware of the climate risks to which agricultural production is exposed and that they are trying to undertake and finance certain interventions that mitigate these consequences, but that the funds

available to them are insufficient, and most the measure amounts to expanding the irrigation measure and possibly financially compensating part of the damages from weather disasters when they occur on a large scale.

(b) The main findings of the consultations with farmers and companies engaged in agricultural production are that they are increasingly exposed to the negative impacts of climate change (droughts, storms, intense precipitation, late frost) and that without taking preventive and adaptive measures, agricultural production practically became unprofitable.

(c) The main findings of the consultations with academic and other scientific research institutions are that they have now carried out certain research on the impact of CC on agriculture and that they are ready for future cooperation with the project by undertaking additional research and by adapting existing educational curricula.

(d) The main findings of the consultation with the advisors is that they are witnessing increasing variations in yields due to CC and that they are still advising farmers on how to reduce these damages, but that at the same time their knowledge should be improved in this regard.

(e) The main findings of the discussion with the international organizations present in BiH is that they have or are planning new projects that will partly deal with the adaptation of agriculture to climate change, and that in this regard, coordination between them and the IFAD project is welcome and necessary in order to jointly achieve the best possible outcome. effects and avoid overlaps in interventions.

Case study

Smart Village Cooperative Knezica

313. Smart Village Knežica is located in the north-western part of Bosnia and Herzegovina, Republic of Srpska entity, municipality Kozarska Dubica. The village is located in the beautiful fertile valley of Knežopolje, surrounded by the slopes of the mountain Kozara.

314. Smart Village is created in response to the structural crisis of rural areas in Bosnia and Herzegovina.

315. Current analysis shows that the economy and society in the Republic of Srpska as an entity in BiH requires better communication with science and research institutions, based on real-life challenges. This esspecially implies to rural areas, which are faced with lack of services, job opportunities and emigration of youths. In order to change this picture, completely new and different solutions and approaches to this problem are needed. Smart village Knežica aims to offer a framework for structural change, instead of insisting on maintaining an existing system that is not efficient nor effective enough.

316. Smart village Knežica is centralized space that will helps agricultural producers from the region of Prijedor in Republic of Srpska, in a broader sense to become more competitive in terms of their business/production processes, products or services with focus on usage of digital technologies.

317. The research and development agricultural cooperative were chosen for the organizational model of Smart village Knežica, which enables the establishment of dynamic profitable open and responsible cooperation in order to achieve greater competitiveness of the agri-food sector in the Republic of Srpska. The Smart Village model is in compliance to Living Lab methodology, focusing on development of real-world ecosystem for technology and innovation co-creation, testing and refinement in colaboration with farmers, stakeholders and local community. The model is based on technological infrastructure: demonstration field plots - digital farm, digital innovation hub, food hub, fab lab, multimedia studio, conference and workshop room, coworking and coliving space - providing access to the latest knowledge, expertise and technology, to support users in piloting, testing and experimentation.

318. Networking of individuals representing ecosystems rather than organizations due to the need for a flexible development environment, less dependent on conventional hierarchies and institutional constraints is the focus of the proposed model. This model already has been recognized by motivated youths, experts and farmers.

319. Smart Village work with students started in 2021, gathering initial group of 6 high – school trainees. Since then, over 80 youths passed training in Microcotrolers programming and Internet of Things, creating stable community of about 20 youth developers, including also group of elementary school pupils from Knežica itself. Together with senior mentors and proffessionals in the various fields of: electrical engineering, web design, graphic design, agriculture, economics etc. they are engaged in creating innovative solutions based on the application of information technologies in agriculture. Smart Village Knežica at the moment gathers network of about 30 researches from country and worlwide, maintaining active communication and collaboration on project basis.

320. So far, Smart Village hatched two technical solutions, which are at the prototype stage of high technological maturity: Aquaterrius - a system for autonomous irrigation management; and OpenPestTrap – an automatic insect trap. In addition elementary school group developed one early-stage prototype: the Smart Greenhouse99.

321. The cooperative established an experimental vineyard of 1 ha built in 2022 near the Knežica100. The main focus is on testing new resilient varieties and agricultural practices potentaially suitable for organic growing in north-western part of BiH.

322. In autumn of 2023, the municipality of Kozarska Dubica allocated 9 hectares of agricultural land to the cooperative for purpose of establishment of Smart Village campus and its business model development. Cooperation with local farmers at this phase of development is on a project basis.

323. In 2023, closer cooperation is initiated with scientific institutions as are Faculty of Agriculture and Faculty of Electrical Engeenering, based on projects aiming development and inclusion of innovatiove technology solutions into agricultural practice.

324. Smart Village members presented the Smart Village business model as speakers on panels at international conferences such as AgriTech Summit 'Digital Future of Agriculture' in Sarajevo, RCC Butterfly Innovation and Business Forum in Sarajevo, Conference on Green Economy in Montenegro, Regional grow up Conference - Power of the land in Kopaonik, Serbia, and AgriSummit.tech in Serbia.

325. Smart Village is the only young agricultural cooperative that implemented two research and innovation projects within the SmartAgriHubs H2020 EU project. It actively participate in EU INTERREG calls for the Danube, Mediterranean and Adrien regions, with currently three projects in the second round of evaluation. Through the preparation of these projects, initial cooperation was achieved with at least 20 organizations from the EU and WBC countries.

Web site https://www.smartvillage.rs.ba

[99] The "Smart Greenhouse" prototype won a gold plaque at the innovation fair "Inost mladih 2023" held in Banja Luka from April 19-21, 2023.

[100] Financed through the program "European Union Support to Covid-19 Recovery and Resilience of Agriculture and Rural Development in Bosnia and Herzegovina: EU4AGRI-Recovery", with support of Czech Development Agency in BiH.

Mission schedule and list of people met during concept note and full design

Concept note (9-16 May 2023):

PLACE AND DATE	NAME	POSITION	INSTITUTION
Sarajevo, 9 May	Almir Bijedić	Director	Federal Hydro-meteorological Institute (of FBiH)
	Sabina Hodžić	Assistant Director	Federal Hydro-meteorological Institute (of FBiH)
	Sanja Bosiljčić-Pandur	Head of the Sector	Sector for EU Funds within the Fund for the Environmental Protection of FBiH
	Nedžla Buljina Ćato	Associate/Preparation of project senior specialist	Sector for EU Funds within the Fund for the Environmental Protection of FBiH
	Daria Šimunović	Interpreter	READP
	Halil Omanović	PCU Director	READP
Žepče, 10 May	Armin Kurbegović	Cluster manager/Farmer	READP
	Fatima Memčić	Business Leader/Farmer	DINEX cooperative
	Adel Dizić	Farmer	DINEX cooperative
	Ludmila Alicković	Farmer	DINEX cooperative
	Dizić Zerifi	Farmer	DINEX cooperative
	Edin Keserović	Director of the Cooperative (Professor)	Za plod Cooperative
	Edib Muhin	Agronomist	Za plod Cooperative
	Nedfad F.	Pensioner/Farmer	Za plod Cooperative
	Basic Asmia	Farmer	ZLATNA KAP cooperative
	Draško Bašić	Director and farmer	Agricultural Cooperative "Plodovi Slatine"
Prijedor, 11 May	Dalibor Jović	Director and farmer	Agricultural Cooperative Kooperativa, Prijedor
	Ognjen Siđak	Cluster Manager/Farmer	Agricultural Cluster Una-Sana, Prijedor
Laktaši, 11 May	Bojan Ćikić	Cluster Manager/Farmer	Agricultural Cluster GLS, Laktasi
	Petar Nikolić	Assistant Professor	Agricultural Faculty of Banja Luka
	Bojana Petrović	Coordinator	Agricultural Cluster GLS, Laktasi
	Radomir Vukelić	Director/Farmer	Agricultural Cooperative Klekovaca, Petrovac
	Miloš Galić	Cluster Manager/Farmer	Agricultural Cluster Krajina
	Bogdan Đurić	CEO	Business Leader Agrolux
	Tihomir Predić	Head of Department	Agricultural Institute of Banja Luka, Soil Department
	Stefan Jovanović	Assistant	Agricultural Institute of Banja Luka, Soil Department
Banja Luka, 12 May	Marko Ivanišević	GIS Consultant	Faculty of Natural Sciences Banja Luka
	Željka Ostojić	Project Coordinator	Faculty of Natural Sciences Banja Luka
	Svjetlana Radusin	Assistant Minister	Ministry of Spatial Planning, Construction and Ecology
	Ines Đurić	Head of Department for Climatology and Agrometeorology	RS Hydrometeorological Institute Banja Luka
	Gordana Roković Knežić	Advisor to the Minister	MAFWM
	Goran Bursać	Assistant Minister	MAFWM
	Boris Marković	Forestry Expert	MAFWM
	Marinko Vranić	Water Department Expert	MAFWM
	Dragan Vučković	Project Manager	APCU
	Violeta Lemić	Targeting and Gender	APCU

		Officer	
Sarajevo, 15 May	Miroljub Krunić	Assistant to the Minister	Ministry of Finance and Treasury of BiH and National Designated Authority for the AF
	Svjetlana Vukojičić	Senior Associate	Ministry of Finance and Treasury of BiH and National Designated Authority for the AF
	Biljana Tabaković	MFI Economist	Ministry of Finance and Treasury of BiH and National Designated Authority for the AF
	Kemal Hrnjić	Minister	Federal Ministry of Agriculture, Water Management and Forestry
	Josip Jukić	Assistant to the Minister	Federal Ministry of Agriculture, Water Management and Forestry
	Bešćo Alibegović	Assistant to the Minister	Federal Ministry of Agriculture, Water Management and Forestry
	Nijaz Brković	Assistant to the Minister	Federal Ministry of Agriculture, Water Management and Forestry
	Amina Smajić	Head of Project Management Department	Federal Ministry of Agriculture, Water Management and Forestry
	Mario Beus	Assistant to the Minister	Federal Ministry of Agriculture, Water Management and Forestry
	Amel Duranović	Assistant to the Minister	Federal Ministry of Agriculture, Water Management and Forestry
	Dragana Divković	International cooperation advisor	Federal Ministry of Agriculture, Water Management and Forestry
	Amer Husremović	Water engineer	Federal Ministry of Agriculture, Water Management and Forestry
	Idada Redić	Head of Department	Federal Ministry of Agriculture, Water Management and Forestry
	Almira Kapetanović	Head of Department	Federal Ministry of Environment and Tourism
	Sabina Salihbegović	Specialist	Federal Ministry of Environment and Tourism
Sarajevo, 16 May	Dženan Vukotić	Director	Federal Agro-pedological Institute
	Slobodan Cvijanovic	Assistant to the Minister	MoFTER/Ministry of Foreign Trade and Economic Relations of BiH
	Vanja Avram	Head of Department	Agricultural Information System and Analysis of Policies
After mission online meetings	Vlado Pijunović	National Program Coordinator	Food and Agriculture Organization
	Ismar Ceremida	Sustainable Growth Sector Leader	United Nations Development Programme
	Raduska Cupac	Sector Leader Energy and Environment	United Nations Development Programme
	Nezla Adilagic	Project Manager - EU4AGRI Project	United Nations Development Programme
	Ingrid Macdonald	UN Resident Coordinator	United Nations
	Carolina Modena	Biodiversity specialist	Slow Food
	Alessandra Villa	Regional specialist	Slow Food
	Gordana Bošnjak	Assistant to the Minister	MAWMF of Herzegovina-Neretva Canton
	Alma Hidić	Officer	MAWMF of the Una-Sana Canton
	Svjetlana Stanić-Koštroman	Head/Directress	Administration of Water, Herzegovina-Neretva Canton
	Haris Redžić	Officer	MAWMF of Una-Sana Canton
	Adis Džanić	Minister	MAWMF of Una-Sana Canton

Full proposal

Lists of stakeholders met in RS (between October 30 and November 10, 2023)

Date	Place	Name And Surname	Gender	Profession	Institution	Reason For The Meeting
31, October	East Sarajevo	Slavica Asonja	F	Economist	Municipality Han Pijesak	LAGs
31, October	East Sarajevo	Kristina Stojanovic	F	Economist	Municipality Han Pijesak	Local development
31, October	East Sarajevo	Zeljka Pejovic	F	Agronomist	Cluster SRP	Role of clusters
31, October	East Sarajevo	Zeljana Pjevalica	F	Economist	Women association Priroda Bratunac	Female entrepreneurship
31, October	East Sarajevo	Nada Markovic	F	Economic technician/Farmer	Women association Maja Kravica	Female entrepreneurship
31, October	East Sarajevo	Svetlana Vukovic	F	Textile engineer/Farmer	Women cooperative Kretivna vizija Rudo	Female entrepreneurship
31, October	East Sarajevo	Bojana Varagić	F	Agronomist/Farmer	Water user association Bratunac	Irrigation water management
31, October	East Sarajevo	Nenad Vukoje	M	Engineer	Water user association Plana	Irrigation water management
31, October	East Sarajevo	Dusko Cvjetinovic	M	Electrical engineer	Rural Development Network of BiH	Rural development
31, October	East Sarajevo	Angelina Lucic	F	Sport faculty	Rural Development Network of BiH	Rural development
31, October	East Sarajevo	Vileta Lemic	F	MSc Management	APCU	Project management
31, October	East Sarajevo	Dragan Vuckovic	M	MSc Agronomy	APCU	Project management
1, November	Banja Luka	Milan Sipka	M	MSC Agronomy	University of Banja Luka, Faculty of Agriculture	GIS
1, November	Banja Luka	Petar Nikolic	M	Agronomist	University of Banja Luka, Faculty of Agriculture	VIRAL Erasmus Project
1, November	Banja Luka	Miljan Cvetkovic	M	PhD, Professor	University of Banja Luka, Faculty of Agriculture	VIRAL Erasmus Project
1, November	Banja Luka	Slobodan Gnjato	M	PhD, Professor	University of Banja Luka, Faculty of Natural Sciences and Mathematics	Climate change
1, November	Banja Luka	Tatjana Popov	F	PhD, Professor	University of Banja Luka, Faculty of Natural Sciences and Mathematics	Climate change
1, November	Banja Luka	Marko Ivanisevic	M	PhD, Professor	University of Banja Luka, Faculty of Natural Sciences and Mathematics	Climate change
1, November	Banja Luka	Tihomir Predic	M	PhD, Researcher	Institute of Agriculture of RS	Agro ecology, Pedology

Date	Place	Name And Surname	Gender	Profession	Institution	Reason For The Meeting
1, November	Banja Luka	Nataša Cerekovic	F	PhD, Researcher	University of Banja Luka, Faculty of Agriculture	SMARTWAR project
1, November	Banja Luka	Mihajlo Markovic	M	PhD, Professor	University of Banja Luka, Faculty of Agriculture	SMARTWAR project
1, November	Banja Luka	Jovana Tadic	F	Economist	Gender center of RS	Gender mainstreaming
1, November	Banja Luka	Jelena Milinovic	F	PhD Social studies	Gender center of RS	Gender mainstreaming
1, November	Banja Luka	Milena Ljubicic	F	Consultant	Gender center of RS	Gender mainstreaming
1, November	Banja Luka	Drena Djukic	F	Agronomist	Gender center of RS	Gender mainstreaming
1, November	Banja Luka	Darko Golic	M	Director of school	Secondary Agricultural School	Vocational education
2, November	Trn, Laktaši	Tihomir Dejanovic	M	MSc in Geography	Public company Anti-hail Protection	Climate change and hail damage exposure
2, November	Trn, Laktaši	Bojan Cetojevic	M	Economist	Public company Anti-hail Protection	Climate change and hail damage exposure
2, November	Trn, Laktaši	Slavica Samardzic	F	PhD Rural Development	Slow Food	Innovative food VC
2, November	Trn, Laktaši	Ilija Gigovic	M	Economist	Gilmark company	Climate change and VC
2, November	Trn, Laktaši	Drasko Basic	M	Agronomist/Farmer	Agricultural cooperative Plodovi Slatine	Climate change and VC
2, November	Trn, Laktaši	Radomir Vukelic	M	Economist	Agricultural cooperative Klekovaca	Climate change and VC
2, November	Trn, Laktaši	Vesna Smiljanić,	F	President of PA	Women association Srbac	Female entrepreneurship
2, November	Trn, Laktaši	Cana Stojkovic	F	Member	Women association Srbac	Female entrepreneurship
2, November	Trn, Laktaši	Marko Karan	M	Agronomist	Agrolux company	Innovations in agribusiness
2, November	Trn, Laktaši	Rajko Kulaga,	M	Agronomist	Cooperative Union of the RS	Cooperative business
2, November	Trn, Laktaši	Miloš Galic	M	MSc in Rural development	Cooperative Union of the RS	Cooperative business
2, November	Trn, Laktaši	Drazen Cekic	M	Agronomist	Public Agricultural Extension Service	Advisory and innovations in agribusiness
2, November	Trn, Laktaši	Bojan Cikic	M	Agronomist/Farmer	GLS Cluster	Cluster facilitation
2, November	Trn, Laktaši	Bojana Petrovic	F	MSc Agronomy/Farmer	GLS Cluster	Innovative food VC
2, November	Trn, Laktaši	Ognjen Sidzak	M	Agronomist/Farmer	Una Sana Cluster	Cluster facilitation
2, November	Trn, Laktaši	Julijana Petrovic	F	MSc Agronomy/Farmer	Poljoklast Cluster	Cluster facilitation
2, November	Trn, Laktaši	Sladjana Babic Radjenovic	F	Agronomist	Inex company	Advisory and innovations in agribusiness
2, November	Trn, Laktaši	Vladimir Kacavenda	M	Agronomist	Agro viz company	Advisory and innovations in

Date	Place	Name And Surname	Gender	Profession	Institution	Reason For The Meeting
						agribusiness
2, November	Baja Luka	Tihomir Dakić,	M	Environmentalist	NGO Centre for Environment	Environment protection
2, November	Banja Luka	Dragan Ostic	M	Environmentalist	NGO Centre for Environment	Environment protection
3, November	Banja Luka	Ognjen Laganin	M	Senior associate	Ministry of Spatial Planning and Environment	CC and environmental policy
3, November	Banja Luka	Ljiljana Stanisljevic	F	Head of department	Ministry of Spatial Planning and Environment	CC and environmental policy
3, November	Banja Luka	Goran Bursac,	M	Assistant minister	MAFWM RS	Agricultural extension service
3, November	Banja Luka	Sasa Lalic	M	Assistant minister	MAFWM RS	Agricultural policy
3, November	Banja Luka	Radenko Laketic	M	Assistant minister	MAFWM RS	Forestry policy
3, November	Banja Luka	Milan Gavric	M	Assistant minister	MAFWM RS	Water management policy
3, November	Banja Luka	Gordana Rokvic	F	Advisor to minister	MAFWM RS	Agricultural and RD policy
3, November	Banja Luka	Goran Sepa	M	Agronomist	MAFWM RS	
3, November	Banja Luka	Svjetlana Lazic	F	Soil protection officer	MAFWM RS	Land rights and land protection
3, November	Banja Luka	Natasa Kosic	F	MSc Economics	APCU	Project M&E
3, November	Banja Luka	Aleksandar Majkic	M	Agronomist	Public Agricultural Extension Service	Demo trails in agriculture
3, November	Knezica	Đorđe Grujčić	M	PhD Agriculture/Farmer	Smart Village Cooperative	Innovative agricultural hub
3, November	Knezica	Mirko Jokić,	M	MSc Agriculture/Farmer	Smart Village Cooperative	Smart Village Cooperative
3, November	Knezica	Zoran Dimitrijević	M	Manager/Farmer	Smart Village Cooperative	Smart Village Cooperative
3, November	Knezica	Nikola Vučen	M	Economist	Smart Village Cooperative	Smart Village Cooperative
4, November	Donji Zabar	Goran Mitrovic	M	MS Agronomy	MG Gold company	Renewable energy production

Lists of stakeholders met in FBiH (between October 30 and November 10, 2023)

Place and Date	Name	Gender	Function	INSTITUTION
	Mr Miroljub Krunić	M	Assistant to the Minister and National Designated Authority for the AF	Ministry of Finance and Treasury of BiH
	Ms Daria Šimunović	F	PCU Interpreter	PCU READP
	Ms Branislava Crnčević-Čolić	F	Senior Associate	Agency for Gender Equality of Bosnia and Herzegovina

Sarajevo, 06th November	**Ms Sadmira Kotorić**	F	Gender advisor	Gender Centre of FBiH
	Ms Smiljana Kraljević	F	Focal point for gender	Federal Ministry of Agriculture, Water Management and Forestry
	Ms Andrea Bevanda-Hrvo	F	Head of Department in Environment Sector	Federal Ministry of Environment and Tourism
	Mr Mustafa Čopelj	M	consultant	Federal Ministry of Environment and Tourism/UNDP
	Ms Sabina Šahman-Salihbegović	F	Ministry's Secretary	Federal Ministry of Environment and Tourism
	Mr Armin Kurbegović	M	Cluster 4 manager	PCU READP
	Mr Rifet Džambegović	M	Consultant for infrastructure	SERDA d.o.o.
	Mr Midhat Glavić	M	Cluster 3 manager	PCU READP
	Mr Smail Toromanović	M	Cluster 1 manager	PCU READP
	Mr Sejad Herceg		Cluster 2 manager	PCU READP
	Mr Haris Redžić	M	Associate for water	Una-Sana Cantonal Ministry of Agriculture, Water Management and Forestry
	Mr Faruk Cerić	M	Senior Project Manager	SERDA d.o.o.
	Mr Amil Šehović	M	Associate for plant production	Central Bosnia Cantonal Ministry of Agriculture, Water Management and Forestry
	Mr Armin Terzić	M	Director/Farmer	Fruitprom, Čelić
	Mr Fahrudin Delibajrić	M	Director/Farmer	Voćarpromet, Kalesija
	Mr Nihad Hodžić	M	Director/Farmer	Amanita d.o.o., Bihać
	Mr Ivo Blaž	M	Director/Farmer	Agrostroj d.o.o., Vitez
	Mr Adis Hodžić	M	director/Farmer	Balkan GT d.o.o., Visoko
	Mr Augusto Garcia	M	Agriculture Resilience and Competitiveness Project director	World Bank
	Mr Regassa Ensermu Namara	M	Senior water economist	World Bank
	Mr Jacek Zandarski	M	consultant	World Bank
	Mr Mirzet Sabirovic	M	FAO/ World Bank team member	World Bank
	Mr Milos Milovanovic	M	Agribusiness investment support specialist	FAO
	Ms Rosalie Trinidad	F	Programme assistant	World Bank
	Ms Xueling Li	F	Agriculture Economist	World Bank
	Ms Dijana Jurkovic	F	Team Assistant	World Bank

	Mr Slavisa Jovanovic	M	M&E specialist	GIZ
	Ms Nezla Adilagic	F	Project manager	EU4AGRI
	Ms Jasenka Ćorić	F	Deputy Chief of Party	USAID
	Ms Nina Kovač	F	Tourism Product Development Team Leader	USAID
	Mr Velibor Trifković	M	Product Development Specialist Developing Sustainable Tourism in BiH Project	USAID
Sarajevo, 07th November	**Mr Fahro Belko**	M	PCU M & E Officer	PCU READP
	Mr Halil Omanović	M	PCU Director	PCU READP
	Mr Admir Pivić	M	Executive director for production/Farmer	Butmir Farm
	Mr Nagib Hadžić	M	Associate for cooperatives	Union of Cooperatives in FBiH
	Mr Senad Ćerimović	M	President	Union of Cooperatives in FBiH
	Ms Nihada Šurković	F	Directress/Farmer	PZ "EKO BEHAR" P.O. Sarajevo
	Ms Sadžida Hafizović	F	Vice President & Project Manager	CENER 21
	Mr Haris Đapo	M	Project Associate, Agronomist/Farmer	CENER 21
	Ms Dušanka Jelavić	F	Farmer	OPG Jelavić
	Mr Nedim Džano	M	PCU Inclusive Business Officer	PCU READP
Pale, 07th November	**Mr Haris Ramić**	M	Head of real estate cadastre, member of Youth Association	Municipality of Pale
	Mr Senad Mutapčić	M	Chairman of Municipal Council, member of Youth Association	Municipality of Pale
	Mr Anel Škulj	M	Representative of Department for Agriculture, member of Youth Association	Municipality of Pale
	Ms Sabaha Žigo	F	Member of Women Association for Rural Development	Municipality of Pale
	Ms Azra Omerović	F	Senior Associate for public procurement	Municipality of Pale
	Ms Sedina Žigo	F	Member of Women Association for Rural Development	Municipality of Pale
	Ms Abida Aganović	F	Head of Department for budget	Municipality of Pale
	Ms Belma Sipović	F	member of Youth Association	Municipality of Pale
	Mr Elvedin Karo	M	member of Youth Association	Municipality of Pale
	Ms Aida Crnčalo		Chairwoman of Women Association for Rural Development	Municipality of Pale
	Ms Aida Selimić	F	PCU Gender and Targeting Officer	PCU READP
Tuzla 07th November	**Mr Samid Šarac**	M	Deputy Minister	Cantonal Ministry of Agriculture, Forestry and Water Management
	Mr Suad Selimović	M	Assistant for agriculture	Cantonal Economy Chamber

Kalesija, 07th November	**Mr Ohran Imamović**	M	Municipal Officer	Municipality of Kalesija
Ljubuški, 08th November	**Mr Mijo Grgić**	M	Member of Cooperative/Farmer	Udruga poljodjelaca u ŽZH
	Mr Ivan Primorac	M	Agronomist/Farmer	PZ "Plodovi zemlje"
	Ms Luca Dunđer	F	Senior Public Servant	Municipality of Žepče
Žepče,08th November	**Mr Marin Buljeta**	M	Infrastructure expert	Municipality of Žepče
	Ms Marijana Zovko	F	Agriculture and rural development manager	RAŽ
	Ms Nikolina Kosić	F	Agronomist/Farmer	SUZ "VITIS"
	Ms Erna Kahriman	F	Greenhouse producer/Farmer	PD "Erna", Žepče
	Ms Ankica Samardžija	F	Greenhouse producer/Farmer	PD "Plastenici Samardžija"
	Ms Pava Slišković	F	Wine producer/Farmer	OPG
	Ms Fatima Memčić	F	Directress	DINEX Comerc
	Mr Samir Pašalić	M	Economic technician	BOSNAPLOD
	Mr Suad Hadžić	M	Cool storage facility owner	Goodberry
Sarajevo, 09thNovember	**Ms Irena Jerkić**	F	Extension service	Federal Ministry of Agriculture, Water Management and Forestry
	Mr Muamer Balihodžić	M	Director/Farmer	WELT p.o. Vitez
	Ms Edina Šuta	F	member/Farmer	Udruženje žena/WA za ruralni razvoj "Blagaj"
	Ms Alma Huseinbegović-Radmanić	F	Director/Farmer	OPZ "KONJIC"
	Ms Melisa Ljuša	F	Professor	Agriculture-Food Faculty, Sarajevo
	Mr Jasmin Grahić	M	Vice-dean for international cooperation and science	Agriculture-Food Faculty, Sarajevo
	Ms Jo-Anne Bishop	F	representative	UN Women
	Ms Amila S. Bajrović	F	Operations manager	UN Women
	Ms Anela Lemeš	F	Programme coordinator	UN Women
	Mr Sabahudin Mujkić	M	Assistant	UN Women

Agenda of the Full Design Mission

Date	Type of works	People to meet	Location
Monday, 30 October	Arrival to Sarajevo	Team meeting and brainstorming.	Sarajevo

Tuesday, 31 October	Meeting with APCU	Dragan Vuckovic Violeta Lemic	Istocno Sarajevo
	Meeting with Municipality Han Pijesak	Slavica Asonja, Kristina Stojanovis	Istocno Sarajevo
	Meeting with Cluster SRP	Zeljka Pejovic	Istocno Sarajevo
	Meeting with Women association Priroda Bratunac	Zeljana Pjevalica	Istocno Sarajevo
	Meeting with Women association Maja Kravica and Female Cooperative Žena	Nada Markovic	Istocno Sarajevo
	Meeting with Water Users' Association Bratunac	Bojana Varagic	Istocno Sarajevo
	Meeting with Water Users' Association Bileća	Nenad Vukoje	Istocno Sarajevo
	Meeting with Rural Development Network BiH	Duško Cvjetinovic, Angelina Lucic	Istocno Sarajevo
Wednesday, 1 November	Meeting at the Faculty of Agriculture, Viral project	Miljan Cvetkovic Petar Nikolic	Banja Luka
	Meeting at the Faculty of Natural Sciences and Mathematics	Marko Ivaniševic Tatjana Popov Slobodan Gnjato	Banja Luka
	Meeting at the Gender Centre	Jelena Milinović, Jovana Tadić	Banja Luka
	Meeting at the Agricultural Institute Banja Luka	Tihomir Predić	Banja Luka
	Visit to the Secondary Agricultural School Banja Luka	Bojan Bakal	Banja Luka
	Meeting with gender consultant	Milena Ljubičić	Banja Luka
	Meeting at the Faculty of Agriculture, Smart Water project	Mihajlo Markovic, Natasa Cerekovic	Banja Luka
	Meeting with Gender unit of the Ministry of Agriculture	Drena Djukić,	Banja Luka
	Field trip to Faculty's Experimental Centre in Aleksandrovac	Petar Nikolić	Laktasi
	Field trip to Technical School	Darko Golic	Gradiska

	Gradiska		
Thursday, 2 November	Meeting with Public company Anti-hail Protection	Tihomir Dejanovic Bojan Cetojevic	Trn, Laktaši
	Meeting with Slow Food representative	Slavica Samardzic	Trn, Laktaši
	Mitting with Gilmark company (business leader)	Ilija Gigovic	Trn, Laktaši
	Meeting with Meeting with Agricultural cooperative Plodovi Slatine	Drasko Basic	Trn, Laktaši
	Metting with Agricultural cooperative Klekovaca (business leader)	Radomir Vukelic	Trn, Laktaši
	Meeting with Women association Srbac	Vesna Smiljaniv Cana Stojkovic	Trn, Laktaši
	Metting with Agrolux company	Marko Karan	Trn, Laktaši
	Meeting with Union of the Republic of Srpska	Rajko Kulaga, Miloš Galic	Trn, Laktaši
	Meeting with Public Agricultural Extension Service	Drazen Cekic	Trn, Laktaši
	Meeting with GLS Cluster	Bojan Cikic Bojana Petrovic	Trn, Laktaši
	Meeting with Una Sana Cluster	Ognjen Sidzak	Trn, Laktaši
	Meeting with Poljoklast Cluster	Julijana Petrovic	Trn, Laktaši
	Meeting with Inex company	Sladjana Babic Radjenovic	Trn, Laktaši
	Meeting with Agro viz company	Vladimir Kacavenda	Trn, Laktaši
	Meeting at the NGO Centre for Environment	Tihomir Dakic Dragan Ostic	Banja Luka
Friday, 3 November	Meeting at the Ministry of Spatial Planning and Environment	Ognjen Laganin, Ljiljana Stanisljevic	Banja Luka
	Meetings at the Ministry of Agriculture, Forestry and Water Management	Gordana Rokvic, Goran Bursac, Sasa Lalic Radenko Laketic Milan Gavric	Banja Luka

		Goran Sepa, Svjetlana Lazic,	
	Meeting at the Ministry of Finance	Aleksandar Kesic Bojana Poljašević	Banja Luka
	Meeting with Public Agricultural Extension Service	Aleksandar Majkic	Banja Luka
	Meeting at the Guarantee Fund	Neven Bućan, Oliver Blagojević, Vojislav Blagojević, Saša Zubović, Puzić	Banja Luka
	Visit to Smart Village	Đorđe Grujicic Mirko Jokic Zoran Dimitrijeviv Nikola Vuven	Banja Luka
Saturday Nov 04, 2023	Meeting with the APCU	Dragan Vuckovic Violeta Lemic	Banja Luka
	Visit to Gold MG company	Goran Mitrovic	Banja Luka
	Travel to Sarajevo		
Sunday 5 November	Report writing		Sarajevo
Monday, 6 November	Meeting with Ministry of Finance &Treasury	Meeting with Mr Krunic	
	Meeting with Claster 4	Armin Kurbegovic	Sarajevo
	Meeting with Cluster 3	Midhat Glavic	Sarajevo
	Meeting with Cluster 1	Smail Toromanovic	Sarajevo
	Meeting with Cluster 2	Sejad Herceg	Sarajevo
	Meeting with SERDA	Rifet Dzambegovic	Sarajevo
	Meeting with Una Sana Canton	Hariz Redzic	Sarajevo
		Amil Sehovic	
	Meeting with Gender Center BiH	Branisalva Crncevic-Culic Smiljana Kraljevic	Sarajevo

	Meeting with USAID	Ms Jasenka Ćorić, Deputy Chief of Party, Ms Nina Kovač, Tourism Product Development Team Leader Mr Velibor Trifković, Product Development Specialist Developing Sustainable Tourism in BiH Project	Sarajevo
	Meeting with Federal Ministry of Environment and Tourism	Andrea Bevanda-Hrvo, Mustafa Copelj Sabina Sahman-Salihbegovic	Sarajevo
	Meeting with GIZ	Mr Slavisa Jovanovic	Sarajevo
	Meeting with EU4AGRI	Nezla Adilagic	Sarajevo
	Gender Focal person Ministry Agricutlure		Sarajevo
	Meeting with FAO	Vlado Pijunovic	Sarajevo
	Meeting in the World bank office	Augusto Garcia Regassa Lonsermu Namara Jacell Zandarski Mirzet Sabirovic Rosalie Trinidado Xsueling Li Dijana Jurkovic	Sarajevo
	Meeting with PCU Office	Hali Omanovic Nedim Đano Ermina Kulovic	Sarajevo
Tuesday, 7 November	Meeting with Canton Tuzla, Agriculture Department	Samid Sarac Suad Selimovic	Tuzla
	Meeting with Vocar promet Company	Fahrudin Deibajic	Kalesija
	Meeting with Municipality Kalesija	Orhan Imamovic	Kalesija
	Meeting with Cluster 3	Midhat Glavic	
	Meeting in Municipality Pale	Haris Ramic Anel Skulj Azra Omerovic Belma Sipic Elvedin Karo	Pale
	Meeting with Fruit Prom	Armin Terzic	Sarajevo
	Meeting with Amanita Company	Nidhat Kosic	

	Meeting with Agro-Stroj Complay	Ivo Blaz	
	Meeting with Balkan Company	Adis Hodzic	
	Visti to Bio fertilizer Plant, Butmir	Admir Pivic	Sarajevo
	Meeting with Cooperative Union of BiH	Nagib Hadzic Senad Cerimovic Nihada Purkovic	Sarajevo
	Meeting with CENER - Center for Energy, environment and resources	Sadzida Hafizovic Haris Djapo	Sarajevo
Wednesday, 8, November	Meeting with Cooperative Plodovi zemlje	Ivan Primorac	Ljubuski
	Meeting with Producer association	Mijo Grgic	Ljubuski
	Meeting with farmer	Dusanka Jelavic	Ljubuski
	Meeting with Municipality Zepce	Luca Dundjer Marin Buljeta	Zepce
	Meeting with Development Agency RAZ	Marijana Zovko	Zepce
	Meeting with SUZ Vitis	Nikolina Kosic	Zepce
	Meeting with farmer	Ema Zahirman	Zepce
	Meeting with farmer	Ankica Samardzija	Zepce
	Meeting with farmer	Pava Siskovic	Zepce
	Meeting with Dinex-commerc Company	Fatima Memcic	Zepce
	Meeting with Bosnaplod Company	Samir Pasalic	Zepce
	Meeting with Goodbery	Suad Hadovic	Zepce
Thursday, 9 November	Meeting in Federal Ministry of Agriculture	Irena Jerkic	Sarajevo
	Meeting with Welt Company Vitez	Muamer Balihodzic	Sarajevo
	Meeting with Women association Blagaj	Edina Suta	Sarajevo
	Meeting with Female cooperative Konjic	Alma Huseinbegovic-Radmanic	Sarajevo

	Meeting with UN Women	Jo-Anne Bishop Aida Lemes Amila Bajrovic Sabahudin Mujkic	Sarajevo
	Meeting with Faculty of Agriculture and Food Technology Sarajevo	Jasmin Grahic Melisa Ljusa	Sarajevo
Friday 10 Nov	Meeting with EU delegation in BiH	Ms Maja Došenović	EU premises Sarajevo
	PCU	Wrap up STAZA	Sarajevo

Annex 3: Environmental and Social Management Plan

I. Summary description of the project

326. **Country**. Bosnia and Herzegovina (BiH) is located on the Balkan Peninsula, sharing borders with the Republic of Croatia in the north, northwest, and south, as well as the Republic of Serbia and the Republic of Montenegro in the east. The total area of BiH is 51,209.2 km², with 51,197 km² being land and 12.2 km² being sea. To the north, BiH has access to the Sava River, while in the south, it reaches the Adriatic Sea through Neum. Geographically, BiH falls within the basin of both the Adriatic and Black Seas. It is primarily a mountainous country covered with forests, with an average altitude of 500 meters and the highest peak being Mt. Maglić at 2,387 meters. The land composition of BiH includes 42% mountains, 24% hills, 29% karst areas, and 5% lowlands. Four distinct agroecological areas can be identified in BiH: the lower Herzegovina area (including the upper Neretva and karst fields), the high karst area with karst fields, the central hilly-cum-mountainous area with river valleys and the lowland hilly area (including serpentine and flysch zones).

327. Before 1991, BiH was a republic within the Yugoslav Federation. After the Bosnian war from 1991 to 1995, it gained independence and became a sovereign country through the Dayton Peace Agreement in 1995. However, a complex system of governance was established, consisting of multiple tiers. The country's structure is deeply fragmented and thus often functions inefficiently. There are four tiers of governance: the state, entity, canton, and municipal levels. The two entities, "Republika Srpska" (RS) and the "Federation of Bosnia and Herzegovina" (FBiH), respectively represent 49% and 51 % of the country's surface. In 2000, a small separate autonomous district was created: the "Brčko District' (BD). It has many autonomous features similar to RS and FBiH , further complicating the country's governance. The FBiH has a unique third tier, composed of 10 cantons. The fourth tier consists of 143 municipalities, with 79 in the FBiH and 64 in the RS. These municipalities vary greatly in terms of socio-economic development, size, and population. BiH has a decentralized system with many public services provided at the municipality level.

328. **Poverty**. In BiH, poverty has a disproportionally large impact on rural populations where people are twice as likely to be poor as in urban areas (19% vs 9%). This presents a particular challenge as BiH, which, unlike other emerging economies, remains majority rural (51% of the total population) and where only 5.2% of the GDP is estimated to come from agriculture, forestry and fishing combined . There is a need to have direct financing for adaptation to climate change for farmers depending on their own production for food security. Economic uncertainty faced by the rural households may discourage experimentation and the uptake of new or alternative models of production, unless they are perceived as strongly proven by successful practical examples.

329. **Agriculture**. Rural areas dominate the landscape of BiH, encompassing 85% of the territory in the FBiH, 95% in the R), and 95% in the BD. Agriculture plays a central role in these areas, serving as the primary economic activity[101]. In the FBiH, there are 57,943 registered farms, covering a total of 93,095 hectares, of which 54,600 are family farms. Similarly, the RS has 42,000 farms, spanning 129,137 hectares, with 24,504 of them being family-run. Across Bosnia and Herzegovina, family farms have an average size of 2 hectares, accounting for 50% of the total farms. Furthermore, approximately 80% of all farms in the country are smaller than 5 hectares[102].

330. **Climate change**. Bosnia and Herzegovina (BiH) is experiencing significant and concerning climate trends that pose challenges to various sectors, including agriculture, water resources, and public health. The region has witnessed a consistent upward trend in maximum annual temperatures, indicating a changing climate. This temperature rise has implications for agriculture, affecting snow cover dynamics, leading to a shorter duration of snow cover and faster snowmelt. While there has been a slight upward trend in annual precipitation, the distribution of rainfall throughout the year is uneven across the country. Some months, particularly March, April, June, and October, have experienced a decrease in rainfall, raising concerns about water availability. Geographical variations

[101] FAO (Food and Agriculture Organization of the United Nations), 2021. Family Farming Knowledge Platform: Bosnia and Herzegovina. http://www.fao.org/ family-farming/countries/BIH/en/ (retrieved May 2023) & https://www.fao.org/ family-farming/countries/en/ (retrieved May 2023).
[102] Idem

further exacerbate the situation, with different areas facing distinct impacts in terms of precipitation patterns. BiH has observed an increase in the frequency of heavy precipitation events since 1981, concentrated during specific periods of the year. The analysis of the drought index reveals an alarming trend of increased frequency of drought occurrences, particularly since 2010, with certain regions, including Canton 10, Banka Luka, Doboj, Foca, Herzegovina-Neretva, Posavina, West Herzegovina, and Sarajevo, being more vulnerable. Future climate scenarios project a continuation of these trends, with increasing average temperatures, changes in precipitation patterns, and a rise in the severity and frequency of drought events. The agricultural sector, already vulnerable, faces negative impacts, including rising temperatures, extended heatwaves, droughts, hailstorms, reduced snow cover, and extreme weather events, affecting yields and agricultural productivity.

331. **Project approach and theory of change**. BiH grapples with a complex landscape of challenges, encompassing climate change, social dynamics, and agricultural sustainability. As presented in the above sections, the country experiences climate variability, marked by prolonged droughts, intensified precipitation, and shifts in precipitation patterns. With over 80% of the territory situated on slopes greater than 13%, water erosion poses a significant threat, particularly on sloping lands. Soil degradation compounds these issues, with acid soils covering about one-third of the land, low humus content, and insufficient essential nutrients, painting a multifaceted picture for sustainable agriculture.

332. In this context, small-scale producers emerge as particularly vulnerable entities facing the brunt of climate shocks. These producers often lack the means to anticipate and adapt to the accelerating changes brought about by climate change. The impacts extend beyond drought and heat cycles, encompassing challenges such as hail, late spring frost, and an increase in pests and diseases—each exacerbated by the evolving climate. Certain regions and demographic groups, including women, youth, and marginalized farmers, find themselves particularly vulnerable to the impacts of climate change. The compounding factors of income instability, limited social capital, gaps in knowledge and awareness about climate change adaptation measures and deficient infrastructure, especially in water management and markets, further amplify the vulnerabilities of these producers in BiH.

333. STAZA aims to address these challenges through a multi-faceted approach. STAZA's comprehensive approach envisions empowering communities, especially vulnerable groups, by enhancing their adaptive capacity to climate change. The focus on participatory planning, sustainable farming practices, improved market access, and policy support ensures a holistic response to the complex challenges posed by climate change in Bosnia and Herzegovina.

334. Through Enhanced Community Mobilization and Improved Knowledge for Climate Change Adaptation, Component 1 of the STAZA project is strategically designed to enhance community mobilization and improve knowledge and exchange for climate change adaptation. Recognizing the multifaceted challenges posed by climate change, the emphasis is on addressing trade-offs associated with climate change and making informed decisions at the territorial level. In Component 1 of the STAZA project, the focus is on strengthening Clusters, collaborative platforms established in previous IFAD-supported interventions, which serve as Multi-Stakeholder Platforms (MSPs). These Clusters bring together diverse stakeholders, including cantons, municipalities, extension services, business leaders, cooperatives, and individual farmers. By supporting and enhancing these Clusters, STAZA establishes a robust structure for project implementation and information dissemination, ensuring long-term sustainability. Additionally, the project prioritizes gender-awareness training and youth involvement, aiming for gender-responsive and youth-engaged participatory methods. A comprehensive climate change analysis will be conducted at the Cluster level, leveraging partnerships with educational institutions and research centers. This collaboration will contributes to formulating Participatory Local Climate Adaptation Plans (LCAPs), providing a comprehensive framework for addressing climate change impacts. Furthermore, focuses on exchange visits, facilitating knowledge-sharing and empowering participants to incorporate effective actions into their LCAPs based on evidence, fostering the exchange of best practices and solutions to combat climate change at the local level.

335. Component 1 serves as the foundational pillar for the entire STAZA project. The Participatory Local Climate Adaptation Plans (LCAPs) developed under this component provide a crucial roadmap

for subsequent actions in Components 2 and 3. The insights gained from the community-driven planning process inform the implementation of adaptive farming systems, grants for scaling up climate-adaptive initiatives, infrastructure development and policy support in later project stages, ensuring that subsequent activities are tailored to the specific needs and priorities identified at the territorial level.

336. Component 2 of the STAZA project is strategically designed to address the challenges faced by small-scale producers, who are disproportionately impacted by climate change in Bosnia and Herzegovina (BiH). Recognizing that these producers often lack the resources to adapt to evolving climatic conditions, the component focuses on enhancing their resilience through a combination of adaptive farming systems, improved market access, and targeted infrastructure development leading to Enhanced resilience of smallholders' livelihoods to climate change and Improved resilience of ecosystems and infrastructure's assets. Component 2 of the STAZA project employs a multi-level approach to enhance the resilience of small-scale producers in BiH against the impacts of climate change. Through the implementation of innovative adaptive farming systems, the project focuses on empowering farmers with the knowledge and skills necessary to navigate climate-related challenges. The introduction of grants for scaling up climate-adaptive initiatives will facilitate the broad adoption of innovative solutions among farmers, fostering sustainability and resilience. Strengthening market access is prioritized, with strategies like producer-consumer links and open calls for sustainable processing practices, promoting local markets and supporting small-scale producers. Additionally, biotechnical measures and rural adaptive infrastructure initiatives at the landscape level aim to safeguard ecosystems and infrastructure assets from climate-related impacts.

337. The adaptive farming systems developed under Component 2 align with the Local Climate Adaptation Plans (LCAPs) formulated in Component 1. The LCAPs provide the foundation for identifying and implementing specific strategies that integrate sustainable agricultural practices. The success of Component 2 is contingent on knowledge sharing and policy support, which are pivotal aspects of Component 3. By engaging in the dissemination of research findings and advocating for policy changes, Component 3 reinforces the adaptive capacity cultivated through Component 2 activities.

338. The third component aims at improving knowledge and research for integrating adaptation strategies and mechanisms at cantonal/municipal and national policy levels, drawing on project approaches and implementation lessons. The component recognizes that effective policies, informed by robust research and knowledge-sharing mechanisms, are fundamental to promoting sustainable practices and mitigating the impacts of climate change. In Component 3, the project will actively share knowledge and advocate for climate-resilient policies. This includes engaging with clusters as knowledge aggregators, conducting workshops, and disseminating gender and climate change studies. STAZA will contribute to curriculum development in educational institutions, ensuring that climate change and adaptive approaches are integrated into agricultural and other relevant courses. Moreover, the project will support agricultural research grants to bridge the gap between science and business sectors.

339. Component 3, with its emphasis on policy support and knowledge enhancement, acts as a linchpin that connects the localized efforts of Component 1 and the on-the-ground interventions of Component 2. By fostering a continuous feedback loop between local realities, regional expertise, and policy advocacy, the STAZA project aims to create a holistic and adaptive framework for sustainable agriculture in Bosnia and Herzegovina.

II. Screening and categorization

i) ESP Screening and categorization

340. STAZA aims to identify and implement priority adaptation measures for rural areas of BiH, in line with the priorities set forth by the Government of BiH. The project complies with the relevant national legislation and the investments undertaken by the project will promote climate resilience and take into consideration the vulnerability of the target areas in terms of climate-risks such as drought and exposure to floods, increased water shortages, land degradation, negative impact on income and

livelihoods of rural poor. The proposed investments and capacity development support also aim to help marginalized climate vulnerable beneficiaries out of poverty through sustainable and diversified sources of income, and by increasing awareness about integrated landscape management and concrete consequences of climate change.

341. As such, STAZA is an environmentally positive project with no potentially adverse impacts. Following the risk assessment detailed in section III below, the project corresponds to a **Category B** project, equivalent to a "moderate risk category" under the IFAD SECAP (see part II. ii) hereunder), due to some minor risks for which mitigation measures have been taken and integrated as described in the ESMP below. Overall, the potential environmental and social risks posed by STAZA are limited and the project will make a net-positive contribution to ENRM and climate change adaptation.

342. **Unidentified Sub-Projects (USPs) and Justification.** The inclusion of Unidentified Sub-Projects (USPs) within the proposed project framework is necessitated by the community-based approach adopted to address climate change adaptation challenges in BiH. The decision to incorporate USPs is grounded in the following considerations:

1. **Limitations at Design Stage:** Due to the complex and dynamic nature of community-based initiatives, certain activities could not be fully formulated at the design stage of the project. Factors such as diverse stakeholder needs, evolving climatic conditions, and variable resource availability necessitated a flexible approach to project implementation.
2. **Enhanced Stakeholder Engagement:** Delayed formulation of activities allows for deeper and more meaningful engagement with local stakeholders, including farmers, community leaders, and relevant government agencies. This participatory approach promotes ownership of project interventions and fosters a sense of empowerment within the target communities.
3. **Flexibility and Adaptability:** The inclusion of USPs provides the project with the necessary flexibility to adapt to changing circumstances and unforeseen challenges during implementation. By deferring the formulation of specific activities, we can ensure greater alignment with the evolving needs and priorities of local communities facing CC. This adaptive management approach allows us to capitalize on emerging opportunities and leverage local knowledge and expertise to achieve project objectives effectively.

343. To mitigate the increased risk associated with the inclusion of USPs, the project will implement the following risk mitigation strategies:

1. **Robust Monitoring and Evaluation:** A comprehensive monitoring and evaluation framework is presented below to track the progress and impact of USPs throughout the project lifecycle. This framework will enable timely identification of potential risks and deviations from project objectives, allowing for corrective action to be taken as necessary.
2. **Stakeholder Engagement Plans:** Transparent and inclusive stakeholder engagement plans was developed to ensure active participation and feedback from all relevant stakeholders, including local communities, government agencies, and civil society organizations. Regular consultation and feedback mechanisms will be established to address concerns and ensure alignment with project goals.
3. **Capacity Building Initiatives:** Capacity-building initiatives are foreseen under STAZA and will be implemented to strengthen the technical skills and institutional capacities of local stakeholders involved in the implementation of USPs. Training programs, knowledge-sharing sessions, and skill development workshops will be conducted to enhance the effectiveness and sustainability of project interventions.

344. It is acknowledged that Unidentified Sub-Projects (USPs) could emerge during Component 1 (participatory LCAPs), contributing to activities in Component 2, specifically under Outcome 2.2 - Improved resilience of ecosystems and infrastructure assets. The identification of USPs is expected to be dynamic, particularly under Component 1, involving community-based decision-making processes.

The project-specific intervention areas have been thoroughly identified at the design stage, and the nature of project activities has been formulated to the extent that pre-identification of environmental and social risks is possible. However, due to the community-based nature of the STAZA project, exact site locations for project activities cannot be determined at the design stage. As such, activities resulting from the participatory-based approach are recognized as USPs.

345. As identified during design, various project activities fall into different categories of USPs. Indeed, NRM activities outlined in the LCAPs (outcome 2.2.1) are anticipated to be fully unidentified USPs withing fixed framework, given the community-based decision-making process but within a framework that determines which kind of activities are allowed or acceptable locations. Conversely, grants, such as those allocated under outcome 2.1, have a clear eligibility criteria presented in part II, thereby minimizing the likelihood of USPs and qualifying as Partially USPs.

346. An Environmental and Social Management System (ESMS) with measures to comply with the ESPs for these activities has been included in the project's Environmental and Social Management Plan (ESMP). Each USP will undergo screening prior to implementation to identify site-specific risks and adopt appropriate mitigation measures outlined in relevant ESMPs. Risk mitigation measures established at the design stage for the USPs include eligibility restrictions as described in this Annex.

Checklist of environmental and social principles	**No further assessment required for compliance**	**Potential impacts and risks – further assessment and management required for compliance**
ESP 1. Compliance with the Law	X	**Low risk:** the project will be executed by the RS and FBiH governments; the risk of non-compliance to the law (especially with regards to laws related to agriculture, water and environmental impact assessment) could come from service providers that will be contracted during implementation.
ESP 2. Access and Equity	X	**Low risk:** the project's participatory and inclusive approach will enable fair and equitable access to project benefits to all participants, including marginalised and vulnerable groups, who meet the project eligibility criteria. There is a low risk that the project would find difficulty in including some of the most vulnerable groups such as women due to traditions and norms in rural areas. The project will rely on a strong consultative process and ensuring that all community members and relevant stakeholders are informed and can access to project benefits, including separate consultation with women, youth and vulnerable groups as required. Cluster level information and sensitisation sessions and field level consultations will ensure all target groups are properly informed. Specific actions (e.g. consultation, meetings, set up of a system for beneficiaries feedback, regular monitoring and also verifications) will help ensure that the benefits of the project are being distributed fairly with no discrimination nor favouritism. Quotas for women and youth are set to ensure project benefits are equally shared. Participation of the project target groups will be closely monitored through the M&E system. The Grievance Redress Mechanism is also an avenue in case individuals and/or communities who feel excluded or marginalized from project benefits. The identified risk is low and fully mitigated by the project's approach, including its targeting and social inclusion strategy and its gender strategy and action plan. Both are built on the positive experience of RBDP and RCDP and the PCU/APCU have experience and capacity to use this methodology. Moreover, all project staff and implementers at all levels will be trained on issues related to diversity, equity and inclusion.
ESP 3. Marginalized and Vulnerable Groups	X	**Low risk:** interventions will target marginalised and vulnerable groups, including vulnerable subsistence low income households, women and youth. There is a low risk that the project will exclude them from receiving project's services. In the first place the project promote services and activities that are of interest for them. Marginalized and vulnerable groups including women and youth have been extensively consulted during the proposal development process to ensure that their identified threats, priorities and mitigation measures are reflected in the project design. The project will empower vulnerable groups to make decisions on concrete adaptation actions (LCAPs), valuing their view, aspiration and knowledge. The project propose trainings, technologies and adaptive capacity solutions, including grants, in line with needs of

		vulnerable categories and their livelihood models. The most vulnerable groups are also included by targeting 50% women and 20% youth. The targeting strategy applies a strong pro-poor targeting focus. Building on successes of RLDP and RCDP in reaching the poor and most vulnerable households, the ongoing READP selection of beneficiaries is successfully conducted according to the poverty categories of very poor, poor and borderline poor, in line with monthly incomes per HHs member and land tenure/usage as main criteria for selection. Verification mechanisms are in place to ensure the most vulnerable and lower income HHs are targeted. The Grievance Redress Mechanism is also an avenue in case individuals and/or communities who feel excluded or marginalized from project benefits. The identified risk is low and fully mitigated by the project's approach, including its targeting strategy and its gender strategy and action plan.
ESP 4. Human Rights	X	**No risk**
ESP 5. Gender Equality and Women's Empowerment	X	**Low risks:** The extensive consultations have ensured that gender considerations are integrated into each activity. Women's concerns of lacking technologies, access to finance, market and requiring improved time and energy saving technologies as well increased representation in local planning decision-making have been addressed. STAZA gender strategy promotes women economic empowerment by : (i) promoting economic empowerment to enable rural women and men to have equal opportunities to participate in and benefit from profitable economic activities; (ii) enable women and men to have an equal voice and influence in rural institutions and organizations; and, (iii) achieve a more equitable balance of workloads and the sharing of economic and social benefits between women and men. Women will be 50% beneficiaries.
ESP 6. Core Labour Rights	X	**No risk**
ESP 7. Indigenous Peoples	X	**Not applicable**: there are no indigenous people in the project area
ESP 8. Involuntary Resettlement	X	**Not applicable**: the project will not engage in resettlement activities (nor in economic resettlement activities)
ESP 9. Protection of Natural Habitats		**Low risk**: During the mapping of the project activities the PCU/APCU will identify and exclude protected natural habitats ensuring that they will not directly or indirectly impact protected areas or high value conservation areas.
ESP 10. Conservation of Biological Diversity		**Low risk**: During the mapping of the project activities under component 1, the PCU/APCU will conduct a full analysis on the potential impact on critical biodiversity in the project areas and take corrective measures to ensure their protection. Additionally, attention will be given to avoid use of invasive or non-native species for afforestation/reforestation.
ESP 11. Climate Change		**Low risk**: Dairy and meat production are essential agricultural activities in rural areas, and STAZA might provide support to these value-chains, although from READP experience, other value chains are preferred. Intensification of livestock production may result in limited additional greenhouse gas (GHG) emissions. The ESMP and STAZA M&E framework will ensure all pastoralists taking part in the project will have their cattle registered and herd sizes will be monitored. Any potential increase in cattle numbers by STAZA will be offset through Ecosystem based Adaptation measures and improved pasture management and the resulting reduction of fire risk.
ESP 12. Prevention and Resource Efficiency		**Low risk**: Staza will actively promote the adoption of agroecological practices, water conservation, and efficient technologies. Although there may be specific risks associated with each project site, these risks can be easily identified and effectively addressed. The project team will proactively work towards finding suitable solutions and mitigation measures to overcome any site-specific challenges that may arise, ensuring the successful implementation of Staza activities.
ESP 13. Public Health	X	**No risk**
ESP 14. Physical and Cultural		**Low risk**: All cultural heritage sites in the project areas will be mapped, avoided and reported on in the PPR as part of the ESMP. The project will ensure whether there are any national cultural heritage sites in the project areas and propose measures to

Heritage		avoid any alteration, damage, or removal of physical cultural resources, cultural sites, and sites with unique natural values.
ESP 15. Lands and Soil Conservation	X	**No risk**

ii) Alignment between ESP/AF and SECAP/IFAD

347. IFAD's Social, Environmental and Climate Assessment Procedures (SECAP) were approved by the Executive Board and became effective in 2015. They were updated in 2017 and 2021. These procedures defined an improved course of action for assessing social, environmental and climate risks to enhance the sustainability of country strategic opportunities programmes (COSOPs), country strategy notes (CSNs), programmes and projects. SECAP along with its 9 Social, Environmental and Climate Standards, sets out the mandatory requirements and other elements that must be integrated throughout the project life cycle. The 2021 updated version (i) draws on lessons learned in SECAP's implementation since 2017; (ii) clarifies the mandatory and non-mandatory requirements applicable to IFAD-supported investments; (iii) further aligns IFAD's environmental and social standards and practices with those of other multilateral financial institutions; (iv) reflects IFAD's complementary policies[103] and climate mainstreaming agenda; (v) enables IFAD's continued access to international environment and climate financing; and (vi) accounts for IFAD's new commitments and upgraded internal processes. All IFAD projects entering the pipeline are subject to an environmental, social and climate risk screening, and are assigned a risk category for environment and social risks (High, Substantial, Moderate or Low), and for climate risks (High, Substantial, Moderate or Low). These findings, along with subsequent analysis and assessments, must be reflected in the project's SECAP review note and project documents. Projects with "**Low environment and social Risk**" and "**Low**" climate risk do not require any further analysis.

348. **Moderate Risk** projects require: (i) the final SECAP review note and ESCMP, indicating how potential risks and impacts can be avoided or mitigated; and (ii) an environmental and social monitoring programme. Projects classified Moderate Risk for climate require a basic climate analysis.

349. For projects with **High and Substantial environmental and social risks and impacts**, the due diligence process entails a critical review of the documentation provided by the borrower/recipient/partner. This should involve site visits and interviews with project representatives and other stakeholders by independent environmental and social specialists. These specialists should gain first-hand knowledge of the project and meet with representatives of affected groups to discuss environmental and social concerns, and information needs. This provides IFAD with a more holistic view of the project's major environmental and social risks and impacts, and the project's mitigation resources. For Substantial Risk projects, a formal SECAP review note or abbreviated ESCMF is required. For High Risk projects, an Environmental, Social and Climate Management Framework or Environmental and Social Impact Assessment are required. These should also incorporate an ESCMP. In addition, thematic studies or plans can be required for substantial and high risk projects. These can include a Resettlement Action Framework or Plan (RAF or RAP), Indigenous Peoples Plan (IPP), FPIC implementation Plan, Pesticide Management Plan (PMP), etc.

350. For projects that are screened as "substantial" for climate risks, a Targeted Adaptation Assessment is required. For projects classified as "high", a detailed vulnerability impact and adaptation assessment is required. These assessments aim to quantify risks, identify related adaptation options and ways to integrate them into the project design.

351. IFAD SECAP includes 9 Standards, for which detailed guidance is provided in 9 corresponding Guidance Notes (GN) with: (i) an introduction to each subject, (ii) key steps, roles and responsibilities, objectives and background, (iii) criteria for environmental screening in IFAD projects; (iv) potential mitigation and adaptation plans and measures for controlling adverse impacts, (v) monitoring project implementation. The SECAP also includes a 10th guidance note that provides an overview of the

[103] Including, but not restricted, to policies on targeting (2006), gender equality and women's empowerment (2012), indigenous peoples (2009). Available at: www.ifad.org/operations/policy/policydocs.htm

importance of IFAD's mainstreaming commitments and highlights entry points for promoting mainstreaming along the project cycle. IFAD's mainstreaming commitments are related to environmental sustainability, climate finance, gender equality, women and youth empowerment and improved nutrition.

352. The following table provides some information about the relation between AF ESP Principles and IFAD SECAP (for further information, visit https://www.ifad.org/topic/gef/secap/overview).

AF ESP Guidance Principle	IFAD SECAP Standards, Guiding Values and Principles
ESP 1 Compliance with the Law	SECAP requires that activities in the framework of the IFAD financed projects or programmes meet IFAD's safeguard policy guidance, comply with applicable national laws and regulations (labour, health, safety, etc.) and international laws and treaties, and the prohibited investment activities list produced by the International Finance Corporation is adhered to. Project design should review: (i) current national policies, legislation and legislative instruments governing environmental management health, gender and social welfare, climate change (mitigation and adaptation) and governance with their implementation structures, identify challenges, and recommend appropriate changes for effective implementation; (ii) all relevant international treaties and conventions on the environment, climate change, health, gender, labour and human rights to which the country is a signatory.
ESP 2 Access and Equity	Access and Equity is a cross-cutting issue in all the 9 SECAP standards. SECAP requires that projects and programmes ensure the participation of target groups and equitable distribution of benefits. When projects result in physical or economic displacement (affecting access and user rights to land and other resources), the borrower or grant recipient should obtain FPIC from the affected people, document stakeholder engagement and consultation process and prepare resettlement plans or frameworks. The documents must be disclosed in a timely and accessible manner at the QA or relevant implementation stage. **Standard 2 – Resource efficiency and pollution prevention** highlights that Sustainable management requires that people who are dependent on these resources are properly consulted, enabled to participate in development and share equitably in the benefits of that development, and indicates that IFAD promotes an integrated water resources management approach that seeks the coordinated development and management of water, land and related resources in order to maximize economic and social welfare in an equitable manner and without compromising the sustainability of ecosystems. **Standard 3 – Cultural Heritage** includes the following objective: promote the equitable sharing of benefits from the use of Cultural Heritage. **Standard 4 – Indigenous People** includes the following objective: ensure indigenous peoples obtain fair and equitable benefits and opportunities from supported activities in a culturally appropriate and inclusive manner. **IFAD's mainstreaming themes in the project cycle guidance note** highlights that projects should aim at Expanding women's economic empowerment through access to and control of productive assets and benefits.
ESP 3 Marginalised and Vulnerable Groups.	Marginalized and Vulnerable Groups is a cross-cutting issue in all the 9 SECAP standards, as such groups are also the primary target of IFAD interventions. A robust SECAP process requires attention to social dimensions such as land tenure, community health, safety, labour, vulnerable and disadvantaged groups, and historical factors, particularly in relation to natural resource management. It not only looks at compliance (e.g. managing potential negative impacts), but expected positive impacts and ways to maximize opportunities. To assure a good contribution to the quality of SECAP, project design should assess the socio-economic and cultural profile, including key issues relating to disadvantaged or vulnerable groups, conflict, migration, employment and livelihoods. Consultation with communities and stakeholders must be maintained throughout the project lifecycle, especially in high-risk projects. For investment projects with a projected high sensitivity to climate hazards, IFAD requires a climate vulnerability analysis which can help to improve the targeting of investment actions to include the most vulnerable and least resilient target groups. Other IFAD policies that support and complement this principle are: Improving Access to Land Tenure Security Policy, Gender Equality and Women's Empowerment Policy, Engagement with Indigenous Peoples Policy, Targeting Policy, Youth Policy Brief, Climate Change Strategy, Rural Enterprise Policy, Rural Finance Policy, Private Sector Strategy.

ESP 4 Human Rights	Human Rights is a cross-cutting issue in all the 9 SECAP standards. Among the Guiding Principles and Specific Requirements for IFAD's Social Environmental Climate Assessment Procedures (SECAP), is the principle to "*support the efforts of borrowers/recipients/ partners to respect human rights, avoiding infringement on any human rights and addressing adverse human rights risks and impacts caused by clients' business activities*".
ESP 5 Gender Equality and Women's Empowerment	Gender Equality and Women's Empowerment is a cross-cutting issue in all the 9 SECAP Standards. **IFAD's mainstreaming themes in the project cycle guidance note** provides an overview of the importance of IFAD's mainstreaming commitments (including gender equality, women and youth empowerment); highlights entry points for promoting mainstreaming along the project cycle; proposes the use of assessments which – even if they may be focused on risk assessment and management – are opportunities for mainstreaming; and provides an overview of inventories of key sources of data, tools, methods and approaches that have been found useful.
ESP 6 Core Labour Rights	Core Labour Rights is a cross-cutting issue in all the 9 Standards. A robust SECAP process requires attention to social dimensions such as land tenure, community health, safety, labour, vulnerable and disadvantaged groups, and historical factors, particularly in relation to natural resource management. One of the guiding values and principles for SECAP is to minimize adverse social impacts and incorporate externalities. Avoid and mitigate any potential adverse impacts on health and safety, labour and working conditions and well-being of workers and local communities. The requirements set out in **Standard 5 – Labour and working conditions** are designed to achieve the following objectives: (i) Promote direct action to foster decent rural employment; (ii) Promote, respect and realize fundamental principles and rights at work through preventing discrimination and promoting equal opportunity of workers; supporting freedom of association and the effective recognition of the right to collective bargaining; and preventing the use of child labour and forced labour; (iii) Protect and promote the safety and health of workers; (iv) Ensure projects comply with national employment and labour laws and international commitments; and (v) Leave no one behind by protecting and supporting workers in disadvantaged and vulnerable situations, including a special focus, as appropriate, on women workers, young workers, migrant workers, workers in the informal economy and workers with disabilities
ESP 7 Indigenous People	**Standard 4 – Indigenous People** is a cornerstone to IFAD's goal to design projects not only with the full, effective and meaningful participation of indigenous peoples but also in a manner that aligns with their distinct vision and development priorities, building sustainable partnerships with indigenous peoples. Standard 4 seeks to ensure that projects are designed and implemented in a way that fosters full respect for indigenous peoples and their human rights, livelihoods and cultural uniqueness as they define them. The need for the standard is an acknowledgement of a history of discrimination and exclusion of indigenous peoples that has limited or prevented them from directing the course of their own development and well-being. The requirements set out in Standard 4 are designed to achieve the following objectives: (vi) Promote indigenous peoples ability to determine and develop priorities and strategies for exercising their right to development; (vii) Ensure that programming is designed in partnership with indigenous peoples, with their full effective and meaningful consultation and participation, with the objective of seeking their free, prior and informed consent (FPIC); (viii) Ensure indigenous peoples obtain fair and equitable benefits and opportunities from supported activities in a culturally appropriate and inclusive manner; and (ix) Recognize and respect the rights of indigenous peoples to their lands, territories, waters and coastal seas and other resources that they have traditionally owned or otherwise occupied and used. Implementation of the requirements of Standard 4 also aims to avoid adverse impacts on indigenous peoples, their rights, lands, territories and resources and – together with affected indigenous peoples – to mitigate and remedy any adverse impacts that cannot be avoided. According to SECAP, when impacting indigenous peoples, the borrower or the grant recipient must seek FPIC from the concerned communities, document stakeholder engagement and consultation process and prepare an indigenous plan (IP). Whenever FPIC is not possible during project design, the FPIC implementation plan should specify how FPIC will be sought during early implementation. The FPIC plan and related documents must be disclosed in a timely and accessible manner at the Quality Assurance (QA) or relevant stage during implementation. IFAD SECAP promotes the Indigenous Peoples Plan as a tool to ensure that the design and

	implementation of projects foster full respect for indigenous peoples' identity, dignity, human rights, livelihood systems and cultural uniqueness, as defined by the indigenous peoples themselves. It also ensures that the affected groups receive culturally appropriate social and economic benefits, are not harmed by the projects, and can participate actively in projects that affect them. Other IFAD policies that support and complement these principles: Indigenous People's Policy; Targeting Policy; Gender Policy; Climate Change Strategy.
ESP 8 Involuntary Resettlement	**Standard 7 – Physical and economic resettlement** recognizes that increasing investments in the rural sector may at times involve project-related land acquisition and restrictions on land use – actions that, if improperly managed, may have adverse impacts on communities and persons, including physical displacement (relocation, loss of residential land or loss of shelter), economic displacement (loss of land, assets or access to assets, leading to loss of income sources or other means of livelihood) or both. The term "involuntary resettlement" refers to these impacts. Resettlement is considered involuntary when affected persons or communities do not have the right to refuse land acquisition or restrictions on land use that result in displacement. Throughout the process of identification, planning, implementation and evaluation of the various elements of resettlement or economic displacement and their impacts, adequate attention will be paid to gender concerns: specific measures addressing the needs of female headed households, gender-inclusive consultation, information disclosure, and grievance mechanisms will be put in place in order to ensure that women and men will receive adequate and appropriate compensation for their losses and to restore and possibly improve their living standards. Other IFAD policies that support and complement this principle are: Gender Equality and Women's Empowerment Policy, Engagement with Indigenous Peoples Policy, Targeting Policy, Land Policy, ENRM Policy, Youth Policy Brief, Climate Change Strategy.
ESP 9 Protection of Natural Habitats	**Standard 1 – Biodiversity conservation** requires identification of habitat type and applies increasingly stringent requirements based on an areas' biodiversity values. Where natural habitats are affected, IFAD-funded/supported projects and programmes will proceed only after putting in place appropriate mitigation measures to achieve no net loss, and preferably a net gain of the associated biodiversity values over the long term. This must be accompanied by a robust long-term biodiversity action plan or equivalent that describes conservation outcomes and implementation, monitoring and evaluation actions. Other IFAD policies that support and complement these principles are: Environment and Natural Resources Management (ENRM) Policy; Land Policy; Climate Change Strategy.
ESP 10 Conservation of Biodiversity	The requirements set out in **Standard 1 – Biodiversity conservation** are designed to achieve the following objectives: (i) maintain and conserve biodiversity; (ii) preserve the integrity of ecosystems; (iii) maintain and enhance the benefits of ecosystem services; (iv) adopt the use of a precautionary approach to biodiversity conservation and ensure opportunities for environmentally sustainable development; (v) ensure the fair and equitable sharing of the benefits from the utilization of genetic resources; and (vi) respect, preserve, and maintain knowledge, innovations and practices of indigenous peoples, and local communities relevant to the conservation and sustainable use of biodiversity and their customary use of biological resources. The main role of this safeguard standard is to avoid or, if avoidance is not possible, minimize and mitigate potential adverse social and environmental impacts on biodiversity and ecosystem services associated with project-related activities. This can be seen through the promotion and requirements on the "use of a precautionary approach" as outlined throughout standard 1. Requirements of Standard 1 address risks to biodiversity and ecosystem types, with increasing stringency depending on risk levels and biodiversity values of project areas. Mitigation activities to eliminate or reduce the negative impacts of a project on biodiversity should follow the following order of preference: (1) Complete avoidance of adverse impact; (2) Reduction of impacts on biodiversity where unavoidable; (3) Restoration of habitats to their original state; (4) Relocation of affected species; (5) Compensation for any unavoidable damage. Other IFAD policies that support and complement these principles are: Environment and Natural Resources Management (ENRM) Policy; Land Policy; Climate Change Strategy.
ESP 11 Climate Change	SECAP asks to incorporate climate change risk analysis into projects, which are subject to an environmental, social and climate risk screening, and are assigned a risk category for climate vulnerability (substantial, high, moderate, low). The requirements set out in **Standard 9 – Climate change** are designed to achieve the following

	objectives: (i) ensure alignment of IFAD-supported projects with targets and priorities of countries' Nationally Determined Contributions and the goals of the Paris Agreement and other international frameworks; (ii) ensure that proposed activities are screened and assessed for climate change and disaster risks and impacts both of and to projects; (iii) apply the SECAP risk mitigation hierarchy principle of applying a hierarchy of risk management measures in project design; (iv) strengthen the climate resilience of communities and their adaptive capacity to address risks of climate change impacts and climate-related disasters; and (v) increase the ability of communities to adapt to the adverse impacts of climate change, and foster climate resilience and low GHG-emitting projects that do not threaten without compromising food production. **IFAD's mainstreaming themes in the project cycle guidance note** provides an overview of the importance of IFAD's mainstreaming commitments (including Climate change); highlights entry points for promoting mainstreaming along the project cycle; proposes the use of assessments which – even if they may be focused on risk assessment and management – are opportunities for mainstreaming; and provides an overview of inventories of key sources of data, tools, methods and approaches that have been found useful.
ESP 12 Pollution Prevention and Resource Efficiency	**Standard 2 – Resource efficiency and pollution prevention** includes requirements that aim at ensuring that IFAD-supported projects and programmes minimize, mitigate and manage any risks and potential adverse impacts that may be related to resource use and pollution, with the following objectives: (i) avoid, minimize and manage the risks and impacts associated with hazardous substances and materials, including pesticides; (ii) avoid or minimize project-related emissions of short-and long-lived climate-change related pollutants; (iii) promote sustainable use of resources, including energy, land and water; and (iv) identify, where feasible, project-related opportunities for resource-use efficiency. Standard 2 outlines a project-level approach to mitigating, minimizing and managing any risks and potential adverse impacts that may be related to resource use and pollution. IFAD requires that key principles are applied. These include a precautionary approach to addressing significant environmental and social risks and impacts through the mitigation hierarchy; the "polluter pays" principle (whereby the cost of mitigation is borne by the polluter, where relevant); and adaptive management techniques (whereby lessons are learned from past management actions and are proactively utilized to predict and improve management as the project implementation progresses).
ESP 13 Human Health	The requirements of **Standard 6 – Community Health and Safety** aim to ensure that IFAD-supported programs and projects avoid or minimize the risks and impacts to community health, safety and security. The requirements are designed to achieve the following objectives: (i) to anticipate and avoid adverse impacts on the health and safety of project-affected communities during the project life cycle from both routine and non-routine circumstances; (ii) to ensure that measures are taken to avoid or minimize community exposure to hazardous materials that be used during project activities; (iii) to promote quality and safety, and considerations relating to climate change, in the design and construction of infrastructure, including dams; (iv) to avoid or minimize community exposure to project-related traffic and road safety risks; (v) to minimize community exposure to diseases; (vi) to ensure that projects abide by the principles of "do no harm to nutrition"; (vii) to avoid risks of project-related gender-based violence, including risks of sexual harassment, sexual exploitation and abuse, and human trafficking to project-affected people and communities; (viii) to avoid or minimize adverse impacts on ecosystems services that may arise from project activities; (ix) to have in place effective measures to address emergency events; and (x) to ensure that the safeguarding of personnel and property is carried out in a manner that avoids or minimizes risks to the project-affected communities
ESP 14 Physical and Cultural Heritage	The requirements set out in **Standard 3 – Cultural heritage** are designed to achieve the following objectives: (i) preserve and safeguard Cultural Heritage; (ii) ensure that effective and active measures are taken to prevent IFAD-supported projects from altering, damaging, or removing any tangible or intangible Cultural Heritage; (iii) promote the equitable sharing of benefits from the use of Cultural Heritage; (iv) promote meaningful consultation on matters relating to Cultural Heritage. Other IFAD policies that support and complement ESP 14 are: Gender Equality and Women's Empowerment Policy, Engagement with Indigenous Peoples Policy, Targeting Policy, ENRM Policy, Climate Change Strategy.
ESP 15 Lands and Soil Conservation	**Standard 2 – Resource efficiency and pollution prevention** includes a specific focus on soil conservation, stating that *sustainable soil management is an essential element of sustainable agriculture and is central to sustainable intensification, climate -change resilience and safeguarding ecosystem services and biodiversity. The updated World Soil Charter lists nine*

	guiding principles that guide all actions to ensure that soils are managed sustainably and that the functions of degraded soils are rehabilitated or restored. IFAD will integrate these principles into its projects, as appropriate, to ensure sustainable soil management and to promote restoration of degraded soils Other IFAD policies that support and complement these principles: Land Policy; Targeting Policy; ENRM Policy; Climate Change Strategy.

III. Environment and Social Impact Assessment

Principle 1: Compliance with the Law

353. **Institutional Capacities**: Institutions dealing with natural resources relevant to agriculture and climate change at different administrative levels in Bosnia and Herzegovina include:

- (a) In Bosnia and Herzegovina: • Ministry of Foreign Trade and Economic Relations, Sector for Water Resources, Tourism, and Environmental Protection.

- (b) In the Republic of Srpska: • Ministry of Spatial Planning, Civil Construction and Ecology of the Republic of Srpska (cooperating with all ministries of the Government of the Republic of Srpska and local self-government units), • Ministry of Agriculture, Forestry, and Water Management of the Republic of Srpska, • Fund for Environmental Protection and Energy Efficiency of the Republic of Srpska.

- (c) In the Federation of Bosnia and Herzegovina: • Federal Ministry of Environment and Tourism, and the relevant cantonal ministries within their competences, • Ministry of Agriculture, Water Management, and Forestry of the Federation of BiH, • Environmental Protection Fund of the FBiH.

354. **Alignment of STAZA with National and Entity-Level Laws.** In the case of construction works for infrastructure that enables better adaptation to climate change, the works will be carried out in accordance with the project documentation. The ministry responsible for construction in the entity, canton (only for FBiH), or the municipality in whose territory the works are carried out, depending on their scope, is responsible for issuing construction and use permits. The documentation submitted with the application for the issuance of a building permit also includes an environmental protection study if the building's purpose, defined by the ordinance, can endanger the environment, and a study on waste disposal if specific disposal measures are prescribed by law. The **Law on Environmental Protection** (Official Gazette of RS, 71/12), articles 60-79 prescribes the environmental impact assessment (EIA) procedure. Additional clarifications can be found in the Rulebook on projects for which an environmental impact assessment is carried out and criteria for deciding on the need to carry out and the scope of an environmental impact assessment (Official Gazette of RS, 124/12). Analogously, in FBiH, there is a Rulebook on plants and facilities for which an environmental impact assessment is mandatory, as well as plants and facilities that can be built and put into operation only if they have an environmental permit (Official Gazette of FBiH, 19/04). STAZA will comply with BiH's national technical standards. Investments planned to be supported by the STAZA project are mostly small-scale investments that simplify their implementation based on the legal regulations in force in BiH. In Bosnia and Herzegovina, most construction and procurement procedures are not regulated at the state level but at the level of its two entities. Based on READP experience (where this inquiry is systematically made as part of relevant Public Calls), and considering none of the works planned under the project are of "complex" nature, it is not foreseen that EIAs will be required. STAZA will systematically conduct Rapid Environmental Impact Assessments for all works.

355. The project complies with the Environmental and Social Policy of the Adaptation Fund (see ESP risk assessment summary in section II. K and detailed assessment in the EMSP in annex 3) and has been designed to minimize any negative environmental impact. STAZA respects and adheres to state and entity legislation. In particular, the project will comply with the following laws and bylaws:

- FBiH Law on Agriculture (Official Gazette 88/07, 4/10, 27/12, 7/13, 82/21), Law on Construction of FBiH (Official Gazette of FBiH, 55/02), • Law on Agriculture of RS (Official Gazette of the RS, 70/06, 20/07, 86/07, 71/09), • Law on Spatial Planning and Construction of RS (Official Gazette of RS, 40/13, 2/15, 106/15, 3/16, 104/18, 84/19), • Rulebook on projects for which an environmental impact assessment is carried out and criteria for deciding on the need to carry out and the scope of an

environmental impact assessment (Official Gazette of RS, 124/12), • Rulebook on facilities that can be created and put into operation only if they have an environmental permit (Official Gazette of RS, 124/12), • Law on Spatial Planning in FBiH (Official Gazette of FBiH, 55/02), • Trade Law of the RS (Official Gazette of RS, 06/07, 52/11, 67/13, and 106/15), • Law on Internal Trade of the Federation of BiH (Official Gazette of FBiH, 40/10, 79/17); • Law on Basics of Road Traffic Safety in BiH (Official Gazette of BiH, 6/06, 75/06, 44/07, 84/09, 48/10, 18/13, 8/17, 89/17, 9/18), • Law on Seeds of Agricultural Plants of the Republic of Srpska (Official Gazette of RS 37/97, 10/11, 110/16, 90/21), • Law on Seeds and Planting Material of the Federation of BiH (Official Gazette of FBiH, 55/01); • Law on Nature Protection of the Federation of BiH (Official Gazette of FBiH, 66/13), • Law on Nature Protection of the Republic of Srpska (Official Gazette of RS, 20/14), • Law on Environmental Protection of the Federation of BiH (Official Gazette of FBiH, 15/21), • Law on Environmental Protection of the RS (Official Gazette of RS, 7/12, 79/15, 70/20), • The Water Law of the FBiH (Official Gazette of the FBiH, 70/06); • Water Law of the RS (Official Gazette of the RS, 50/06, 92/09, 121/12, 74/17), • Law on Agricultural Land of the RS (Official Gazette of the RS, 93/06, 86/07, 14/10, 5/12, 58/19, 119/21, 106/22), • Law on Agricultural Land of F BiH (Official Gazette of FBiH, 52/09).

356. According to the **FBiH Law on Agriculture** (Official Gazette 88/07, 4/10, 27/12, 7/13, 82/21), one of the goals of agricultural policy in FBiH is the rational use and preservation of natural resources, environmental protection, and improvement of integral and organic agriculture (Article 4). Article 18 of the same law particularly emphasizes the need to encourage the introduction of technology in agricultural production that enables the protection and preservation of natural resources such as agricultural land and water, tea protection, and preservation of the environment in general and the preservation of agricultural biological diversity of ecological systems. According to the **Law on Agriculture of RS** (Official Gazette of the RS, 70/06, 20/07, 86/07, 71/09), one of the objectives of the agricultural policy in the RS is the rational use and preservation of natural resources, environmental protection, and improvement of integral and organic agriculture. One of the measures is measures for the regulation of agricultural land, which (among other things) include the establishment of a soil fertility control system and the improvement of agricultural land management (Article 23).

357. According to the **Law on Spatial Planning and Construction of RS** (Official Gazette of RS, 40/13, 2/15, 106/15, 3/16, 104/18, 84/19), it is not necessary to obtain location conditions and a building permit for works on the adaptation of construction facilities (under component 2 of STAZA). Adaptation is considered to be the performance of construction and other works on the building for the purpose of changing the activity, replacement of completed buildings and equipment and installations of the same capacity, which do not affect the stability and safety of the building, do not change the structural elements, do not change the external appearance and do not affect the safety of neighboring buildings, i.e., they do not change the conditions given in the construction permit on the basis of which the building was built. If there are works that will go beyond the framework of the adaptation, the investor will have to previously provide urban planning consent and a building permit in accordance with the provisions of the Law on Spatial Planning and Construction and an environmental permit in accordance with the **Law on Environmental Protection**. It is expected that the subject of support will not be projects for which it is always mandatory to carry out an assessment of their impact on the environment. The subject of support will also not be projects for the construction of new facilities in animal husbandry, specifically not facilities of a size above the thresholds for which an EIA is carried out. The subject of a mandatory assessment is for irrigation and drainage projects and the construction of a biogas processing plant, but the project will not support the construction of such facilities, but only their completion with certain equipment, whereby it is understood that such facilities already have a use permit, the issuance of which was preceded by an analysis of the impact on life in the middle. According to the Law on Spatial Planning and Construction of the Republic of Srpska, as part of the procedure for issuing a building permit, an investor whose project is considered to have or may have a negative impact on the environment must first obtain an environmental permit. **The Law on Environmental Protection**, articles 60-79 prescribes the EIA procedure. Additional clarifications can be found in the **Rulebook** on projects for which an EIA is carried out and the criteria for deciding on the need to carry out and the scope of an EIA (Official Gazette of RS, 124/12) and the Rulebook on facilities that can be created and put into operation only if they have an environmental permit (Official Gazette of RS, 124/12). According to the **Law on Spatial Planning in FBiH** (Official Gazette of FBiH,

55/02), construction of a building can only be started on the basis of a building permit. According to this law, a construction permit is not required for water wells and water tanks with a volume of 10 m3, septic tanks with a volume of 10 m3, works on replacing and supplementing equipment if it is in accordance with the purpose of the building, and building maintenance works if they do not affect compliance with essential building requirements and urban planning conditions. The investor is obliged to obtain a building permit if he intends to reconstruct an existing building.

358. **Law on Basics of Road Traffic Safety in BiH** (Official Gazette of BiH, 6/06, 75/06, 44/07, 84/09, 48/10, 18/13, 8/17, 89/17, 9/18), Article 297 regulates that Motor and trailer vehicles participating in road traffic must be registered. Motor vehicles and trailers that are found to be in good working condition during a technical inspection can be registered. Motor vehicles include tractors and motocultivators and their attachment tools that move on the roads and which can be the subject of procurement within the project. This type of vehicle is registered permanently, i.e., only once during procurement, which will be a requirement for users who receive support from the project for their procurement.

359. According to the **Trade Law of the RS** (Official Gazette of RS, 06/07, 52/11, 67/13, and 106/15), the goods that are placed on the market must comply with the standards, technical norms, and qualitative norms prescribed or recognized as a condition for their circulation or use on the market of Republika Srpska and Bosnia and Herzegovina (Article 3). Since the project users will purchase equipment and other goods from authorized dealers, only goods for which the dealers have previously proven that they meet the standards and technical norms valid for the BiH market will be the subject of procurement, whether they are goods of domestic or imported origin. In an identical manner, this issue is regulated by Article 3 of the **Law on Internal Trade of the Federation of BiH** (Official Gazette of FBiH, 40/10, 79/17).

360. According to the **Law on Seeds and Planting Material of BiH** (Official Gazette of BiH, 3/05), only suppliers registered in the register of suppliers may deal with the production, preparation for placing on the market, import, and placing on the market of seeds and planting material of agricultural plants. The supplier must perform the activities of the supplier in accordance with this law and ensure that the seeds and planting material of agricultural plants in circulation meet the prescribed requirements. According to the **Law on Seeds of Agricultural Plants of the Republic of Srpska** (Official Gazette of RS 37/97, 10/11, 110/16, 90/21), only seed producers registered in the Register of Seed Producers (article 5) whose production starts mandatory control. Trade in seeds can be carried out by a business company, that is, another legal entity, and an entrepreneur who is registered in the Register of Producers for seed trade. The sale of seedlings can be handled by a company, that is, another legal entity, and an entrepreneur who is registered in the Register of Producers. Seedlings that are placed on the market are accompanied by a declaration and certificate of health status issued in accordance with the **Law on Plant Health Protection in the Republic of Srpska**. According to the **Law on Planting Material of the Republic of Srpska** (Official Gazette RS 37/09, 117/11) production of planting material can be carried out by a business company, another legal entity, and an entrepreneur registered in the Register of Planting Material Producers (Article 7). The production of planting material is subject to mandatory professional control. Trading in planting material can be done by a company, another legal entity, and an entrepreneur registered in the Register for trading in planting material. **The Law on Seeds and Planting Material of the Federation of Bosnia and Herzegovina** (Official Gazette of FBiH, 55/01) stipulates that the production of agricultural seeds can be carried out by legal entities registered in the Register of Seed Producers and natural persons who cooperate with legal entities (Article 7). Seeds of varieties registered in the Register of Varieties, as well as non-varietal seeds, can be marketed (Article 40). The import of seeds can be conducted by a business company or another legal entity and an entrepreneur, provided they are registered in the Register of Seed Importers (Article 42). The production of seedlings can be undertaken by a company, another legal entity, or an entrepreneur registered in the Register of Producers. Only legal entities registered for that activity with the competent court can engage in the sale of planting material (Article 39 of the same law). The production of seedlings can be carried out by legal entities (hereinafter referred to as the producer of seedlings) registered in the Register of Seed Producers. Exceptionally, the production of seedlings can also be undertaken by natural persons based on a written cooperation agreement with the seed producer, and the seedlings produced in that collaboration are considered

the production of the seed producer. The production of planting material during the growing season is subject to mandatory expert inspection. The expert inspection of the planting material determines the origin of the used planting material, the authenticity of the variety, vegetative development, and health status. The risk of trading seeds and seedlings that do not meet national standards within the STAZA project is minimal. When procuring seeds and seedlings from project funds, the condition will be that the seeds and seedlings have a certificate of origin and are in good health.

361. According to the **Law on Nature Protection of the FBiH** (Official Gazette of the FBiH, 66/13), plant protection agents may only be used in justified cases based on expert checks and the results of checking the overall condition of endangered species, in a manner acceptable to nature, and in accordance with special regulations (Article 17). If nature protection measures are not included in spatial planning documents, for the construction of buildings and the performance of other works and interventions in a protected area determined by special regulation, the obligation to assess the impact on the environment for the intended intervention is established. A building permit can be issued, and the execution of other works allowed, if the competent ministries of spatial planning give their consent that the main project or other documentation has been prepared in accordance with the conditions and measures of nature protection (Article 29). **The Law on Nature Protection of RS** (Official Gazette of the RS, 20/14) states that the holder of the project, i.e. a legal entity, an entrepreneur, and a natural person using natural resources, performing construction and other works, activities, and interventions in nature, is obliged to act in accordance with the measures and conditions of protection of nature determined in the plans, foundations, and programs and in accordance with the design and technical documentation, in such a way as to avoid or minimize endangerment and damage to nature (Article 17).

362. The **Forest Regulations of FBiH** (repealing the Forest Law, in the Official Gazette of FBiH, 83/2009) aims at: setting rules and issues for granting the overall preservation and protection of forests and forest land; strengthening their functions; planning in forestry and management of forests and forest land; correct run of economic functions; financing of biological reforestation on the territory of the Federation of Bosnia and Herzegovina; supervision over the application of related rules; setting penalty provisions as well as other issues of importance for forests and forest lands. **The Forest Law of RS** (amended in 2020 in the Official Gazette of the Republika Srpska, 70/2020) defines all necessary rules and requirements aimed to regulate the mandatory forest protection, financing and use of forests, Forest Agency duties and obligations, Forest Commission powers and relations, cadastre and forestry information system, property relations and obligations, as well as other issues of importance for the safe, sustainable and secure management and development of forests.

363. The **Law on Environmental Protection of RS** (Official Gazette of RS, 7/12, 79/15, 70/20) stipulates that in using the environment, the precautionary principle must be respected, i.e., the elements of the environment must be carefully managed and economically used, and the creation of waste must be minimized by applying the recycling of the generated waste, i.e., reusing natural and artificial materials (Article 8). Conservation of the biosphere includes the protection of organisms, their communities, and habitats, including the preservation of natural processes and natural balance within ecosystems, while ensuring their sustainability. Biological diversity and biological resources are protected and used in a way that enables their survival, diversity, restoration, and improvement in case of damage (Article 19). The **Law on Environmental Protection of FBiH** (Official Gazette FBiH, 15/21) regulates that the existing activity that has harmful consequences for the environment must be adjusted to the prescribed limits regarding the extent of the impact on the environment. The adjustment of activity is carried out even if the adjustment costs are greater than the value to be protected (Article 7).

364. The **Water Law of the FBiH** (Official Gazette of the FBiH, 70/06) regulates that the construction of protective water structures and structures necessary for the use of water is permitted on water assets in accordance with regulations, water management plans, and previously obtained approvals. The water facilities that the STAZA project will potentially work with include small dams, embankments and reservoirs, pipelines, wells, catchments, and facilities for the protection of water from pollution (collectors, etc.). One of the principles of water management according to the **Water Law of the RS** (Official Gazette of the RS, 50/06, 92/09, 121/12) is the use of water and its management in a rational

and sustainable manner, preventing unnecessary water use and ensuring that water use does not exceed the natural renewal of resources. As in the FBiH, the construction of water infrastructure facilities is allowed on the water domain, which includes the construction of facilities for irrigation and drainage of agricultural land and its defense against floods. Permitted interventions from paragraph 1 of this article may be undertaken under the conditions prescribed by this law and construction regulations (Article 13).

365. The **Law on Agricultural Land of the RS** (Official Gazette of the RS, 93/06, 86/07, 14/10, 5/12, 58/19, 119/21, 106/22) regulates the purpose of using agricultural land based on natural and other conditions (possibility of rezoning), the degree of erosion of agricultural land, areas that are protected as habitats of wild plant and animal species, and areas whose purpose cannot be changed to preserve the natural balance (Article 7). Based on the arrangement, protection, and use of agricultural land for the territory of the municipality, the following are regulated: the purpose of using agricultural land based on natural and other conditions (possibility of rezoning), areas that need to be arranged for more rational agricultural production (melioration, compaction, etc.), the degree of erosion of agricultural land, areas that are irrigated or can be irrigated, areas that are protected as habitats of wild plant and animal species, and areas whose purpose cannot be changed to preserve the natural balance (Article 8). These documents will serve as a good basis for planning specific project activities in the area of a specific municipality (with the acknowledgment that all municipalities in the RS have not yet completed this basis, and the STAZA project can contribute to improving that situation). The **Law on Agricultural Land of FBiH** (Official Gazette of FBiH, 52/09) aims to improve the conditions of agricultural production, increase the fertility and productive capacity of agricultural land, and promote more rational and economical production through land management measures such as compaction, arrondation, land reclamation (construction and maintenance of drainage and irrigation systems, improvement of the quality of agricultural land, cultivation of meadows and pastures, conversion of uncultivable agricultural land into arable), anti-erosion protection, recultivation, etc. (Article 72). Agricultural land development measures are implemented with the goal of technical development, improvement of production characteristics, regulation of soil water regime, and prevention of damage and remediation of land degradation and pollution caused by natural phenomena or economic and social activities, based on the land development program (Article 83).

366. The STAZA project will ensure that its implementation activities contribute to the rational use of natural resources in agricultural production, primarily agricultural land and surface and underground water, without endangering protected species of plants and animals. If activities are carried out in protected areas, they will align with the management plan of those areas and adhere to the highest standards of environmental protection. The design of the STAZA project considered the provisions of the relevant laws in force in BiH or its individual parts, acknowledging their existence. The obligation of compliance of individual project activities with the provisions of those laws will be detailed in the Project Implementation Manual, and there will be an obligation to check subsequent compliance of each project implementation activity with appropriate regulations related to, among others, construction, environmental and nature protection, water, land and air protection, procurement of seeds and planting material, and the safety of using certain types of equipment.

Principle 2: Access and Equity

367. The project will pose low risks to access and equity. The project will not reduce or prevent communities in the targeted areas from accessing basic services. The project will take a number of transparent steps that will help ensure that the benefits of the project are being distributed fairly with no discrimination nor favouritism.

368. Primarily, project targeting strategy will build on the existing pro-poor targeting methodology applied in IFAD projects. As such IFAD funded projects (RBDP, RACDP) achieved satisfactory results in poverty targeting and gender equality as duly reported in PCRs.

369. The vulnerability assessment conducted as part of the initial geographic targeting has taken into account levels of poverty and climate vulnerability, and hereby ensures that that the targeted beneficiaries will be rural poor and climate vulnerable smallholders as well as the vulnerable categories of women and youth. Access to services will be also guaranteed by project's services

responding to the need of all social groups. Furthermore participation of women is expected on an equal basis as they represent fifthly percent of project beneficiaries. Youth will be 20% and this is based on the outreach of youth of other IFAD projects (e.g. READP, RCDP).

370. The project will promote an extensive outreach programme that aims to be inclusive of the most vulnerable that will be executed in a participatory consultative and gender-sensitive manner and the grievances procedure promoted to ensure everyone being included is entitled.

371. The project will advertise broadly through the mass media (radio, social media, settlement and cluster village meetings, workshops, etc.) for the implementation of an outreach/mobilisation strategy. Beneficiaries will be explained (as they have been throughout the participatory and gender-balanced consultations during the design) that this is a project with a strong focus on low income and poor families, women and youth. Eligibility criteria will be properly explained. The project also foresee dedicated experts and young consultants to be deployed during the consultation and mobilisation process with the specific responsibility to ensure women, youth and the most vulnerable social groups are informed, consulted and mobilised.

Principle 3: Marginalised and Vulnerable Groups

372. There is low risk that the project will impose adverse impacts on marginalized and vulnerable groups as the project is based around the inclusion and climate-proofing of the livelihoods of the communities in climate-vulnerable areas. The design team had a Targeting, Gender and Social Inclusion Specialist who conducted a poverty, targeting and gender-sensitive assessment in collaboration with PCU/APCU gender and targeting specialists. The project targeting strategy has been designed based on these assessments as well as successful models and lessons learned on targeting the poorest and most vulnerable.

373. The main target group consists of poor communities of smallholder farmers and those households whose livelihood is severely affected by climate change. They will be around 19,000 direct beneficiaries and women approximately 9,500.

374. Smallholders farmers are engaged in mixed farming systems and deriving most of their income from agricultural production at different scale (e.g. subsistence, semi-commercial, and commercial). Farmers are generally constrained by the small and fragmented nature of production, lack of access to markets, financial and insurance services, infrastructure in rural areas. These aspects compromise farmers' resilience and capacity to respond to climatic shocks and extreme weather events. Farmers face problems such as: droughts, storms, intense precipitation, late frost among others. Women are particularly vulnerable to economic and climatic shocks. Target groups are described mainly on the basis of poverty level, income and land ownership as poor, transitory poor and better-off. The profiling is based on the targeting methodology of the ongoing IFAD funded project READP.

375. Target groups include: (i) **Poor rural households** deriving their income from agriculture and forestry products, coupled with other incomes derived from off-farm activities. These include poor men and women farming small areas of land of about 0.1-0.5 ha (1-5 donums) growing some fruits and vegetables and having irregular connections with markets and aggregators and being mostly exposed to climatic and economic shocks; (ii) **Transitory poor households,** including men and women smallholders and/or small-scale processors who typically own 0.5 ha up to 1.5 ha of land; have some livestock and are also engaged in processing (e.g milk). They have sufficient labour and skills as well as access to key agriculture assets (e.g. irrigation) but lack affordable inputs, finance, connectivity to networks and markets, technical capacity and scale; (iii) **Better off households:** These are lead farmers, processors, leader of small enterprises, commercially oriented who can serve as models to demonstrate the viability of new approaches, to increase rural resilience and provide potential development pathways for the poor and transitory poor.

376. Building on successes of RLDP and RCDP in reaching the poor and most vulnerable households, the ongoing READP puts poverty at the centre of the targeting methodology. The geographic focus is on underdeveloped municipalities and concentrates attention where majority of poor and underserved people are. Selection of beneficiaries (households) is successfully conducted

according to the poverty categories of very poor, poor and borderline poor, in line with monthly incomes per HHs member and land tenure/usage as main criteria for selection.

377. The income thresholds for eligibility of beneficiaries is set as the monthly income per household member on the basis of which categorization is made into three groups: very poor (below 200 KM per household member) poor (201-400 KM per household member) and borderline poor (401-500 KM per household member). This categorization (among other criteria) has being used to assess the eligibility of beneficiaries for inclusion in the submitted business plans (BP). Questionnaire and application forms successfully capture the main socio-economic elements of the HHs, including livelihood, land, income, disability. Validation processes are conducted to ensure the most vulnerable are targeted and can access project services. Based on latest supervision mission report (May 2023) the identification and validation process are properly conducted as per procedures reported in the PIM.

378. Women are among the most vulnerable and commonly face higher risks and greater burdens from the impacts of climate change in situations of poverty. This was also confirmed by Focus Group Discussion with women. Specific activities and targets for women's participations are described in Annex 5 Gender Assessment, Strategy and Action Plan and also in Principle 5 gender equality and women empowerment.

379. Rural youth will be targeted directly by STAZA. Emphasis will be put on promoting their economic empowerment (e.g. by giving them priority for accessing the climate-adaptive grants and strengthening their business skills) and enabling them to have an equal voice and influence in rural institutions and organizations, especially in terms of landscape and cluster management.

380. **Social targeting**: STAZA presents interventions that are of interest for all target groups and respond to the needs expressed by consulted stakeholders. Some activities will be of interest for the community as a whole: i.e. Local Climate Adaptation Plans (LCAPs) for productive infrastructures/adaptation activities and therefore all members will be mobilized through existing institutions and community based organizations (e.g. Associations, Cooperatives). Demonstration technologies will be of interest for farmers producing at different scale (men and women) and grants will be provided to improve on farm production and resilience giving priority to vulnerable groups and special incentives for women and youth. Pro-poor targeting criteria will be considered to ensure vulnerable households are included. Households and beneficiaries' selection process, will consider the existing READP targeting methodology based on self-targeting (open call for application) coupled with enabling measures to ensure the poorer, vulnerable and women are included. Direct targeting measures will include increasing the outreach to women and youth by allowing a 10% to 20% top-up co-financing granted to vulnerable categories for *Grants for scaling up Climate-Adaptive Initiatives.*

381. **Non-discrimination** of vulnerable people applies to all vulnerable categories as mentioned above but also extends to the elderly and persons with disabilities. In all consultations and at all times, IFAD will ensure that no vulnerable people are discriminated. Should any of the beneficiaries fall into this category, efforts will be made to facilitate access to the project's services, events, and any other activities related to the project.

382. **Monitoring**. STAZA includes an M&E officer as well as a Targeting and Gender Specialist. Both will be charged with ensuring that the system collects gender and age disaggregated data, produces gender knowledge and monitors investments in poor and climate vulnerable regions, and that the Grievance Redress Mechanism is well-functioning and successfully addresses any issue raised.

Principle 4: Human Rights

383. BiH has demonstrated its commitment to upholding international human rights standards by ratifying several key conventions. These include the International Covenant on Civil and Political Rights (ICCPR), the International Covenant on Economic, Social and Cultural Rights (ICESCR), the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW), the Convention on the Rights of the Child (CRC), the Convention against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment (CAT), and the Convention on the Rights of Persons

with Disabilities (CRPD).[104] Through these ratifications, Bosnia and Herzegovina has affirmed its dedication to protecting and promoting the fundamental rights and dignity of all individuals within its jurisdiction. Furthermore, the STAZA project is aligned with the recommendations of the Office of the High Commissioner for Human Rights (OHCHR) Universal Periodic Review (UPR) for BiH, particularly focusing on areas such as Equality & non-discrimination, Right to participate in public affairs, and Human rights & climate change. The project aims to address these issues in line with international human rights standards and commitments. No further assessment of potential impacts and risks is required for compliance with human rights since the project is designed to respect and adhere to the requirements of all relevant conventions on human rights in compliance with the ESP. The project will at all times support the United Nations principles expressed in the Universal Declaration of Human Rights.

Principle 5: Gender Equality and Women's Empowerment

384. There is low risk of women's exclusion from the project due to social norms and patriarchal attitudes. The project design team has conducted a Gender Assessment as required by the AF Gender Policy, which is presented in Annex 5 of the project proposal. The GA analysed gender in terms of gender-based violence; access to land; poverty; culture context of gender roles; the gendered division of labour; gender-based power structures; gender legal and national strategies; differentiated climate change impacts on gender; and the gender-related issues raised from community consultations. The assessment has assisted the project design in taking proactive measures to integrate gender-focused development strategies, thus ensuring that any risk posed to the principle of gender equality and women's empowerment is minimised.

385. **Main findings**: Women are disproportionately dependent on scarce natural resources, leaving them particularly vulnerable to weather changes and natural disasters. Due to high unemployment rates, a high percentage of women in the Balkans tend to stay at home, where they are responsible for the household's food production and its water and energy supply. These are the resources most affected by the impacts of climate change, making women in the Balkans more vulnerable than men to climate change.

386. The National Adaptation Plan (NAP) for BiH highlights that women commonly face higher risks and greater burdens from the impacts of climate change in situations of poverty. They participate unequally in decision- making processes but can play a critical role in responding to climate change. It also underlines the importance of using gender indicators, such as the number of women in agricultural cooperatives or the percentage of women in innovation.

387. A gender sensitive study on the 2014 floods impact105 demonstrates that the greatest impact of hazards on livelihoods tends to be felt in the informal economy where women make up a large part of the workforce. Besides, women tend to be less able to respond in case of emergency because of the role of caregivers they often assume in accordance with traditional gender roles.

388. Rural women in BiH do not get a fair share of the assets, resources and services needed to earn a decent living or adapt to climate change. They have less access than men to land, finances, agricultural inputs, training and technologies to help them manage climate-related shocks. Very often their decision-making power is limited, which means that they are not involved in the decisions at household and community level on how to address climate change. They are, however, powerful agents for promoting sustainable development and effective responses to climate change. Sustainable development demands the active participation of rural women in environmental planning, finance, budgeting and policy-making processes.

389. **Design**. The IFAD's poverty targeting and gender sensitive design and implementation guidelines were applied during the design of the project. The design team included a Targeting, Gender and Social Inclusion Specialist who conducted a poverty, targeting and gender-sensitive assessment. In order to overcome any potential risks related to this principle, the project has

[104] OHCHR: https://tbinternet.ohchr.org/_layouts/15/TreatyBodyExternal/Treaty.aspx
[105] Climate change and natural hazards in Bosnia and Herzegovina: a gender equality, social equity and poverty reduction lens, SEI 2021: https://www.sei.org/wp-content/uploads/2021/10/bih-esap-db-gesep-and-climate-change-final-eng.pdf

developed a proactive strategy for the participation of women in project activities. Specific gender objectives, activities, disaggregated targets and budget allocations have been established and presented in the Gender Action Plan.

390. Women will equally participate in the project implementation at all levels and benefit from its opportunities. Women will be 10.463 direct beneficiaries, considering also women households members. It is expected that 50% of grant support beneficiaries will be women and this corresponds to 5.220 of them as the package intends to benefit 3.600 HHs. It is expected that at least 400 women will be grants applicants from grant windows (on-farm primary production) and a top-up support for women's applicants considered (10 to 20% more). It is also expected that a total of 6.720 HHs will benefit from Biotechnical Measures for Ecosystem Protection and Rehabilitation and Construction of Rural Adaptive Infrastructure. Women will be 3.360 beneficiaries.

391. Women's informed engagement in decision-making processes on related matters (e.g. livelihood adaptation, natural resource management) – both at community and household levels – will be facilitated; Dedicated staff will be tasked to organised separate consultations and engagement with women.

392. Opportunities for women's social and economic empowerment, as well as their leadership and decision-making opportunities, will be identified and supported. The project will target women and women head of households to participate at decision-making level in the MSP and for the LCAPs It is expected that 50% of MSP participants will be women. Gender sensitive value chains will also be consider to ensure activities respond to production areas where majority of women are engaged.

393. Needs for women's capacity enhancement on relevant topics will be addressed and acted upon, and all trainings will take gender issues into consideration in the modules, selection of participants, communication and mobilization channels, selection of venues and logistical issues. Dedicated attention will be given to issues such as GBV and duly integrated into trainings delivered at all level to train all beneficiaries, project staff and government staff on gender issues. This will be the responsibility of gender and social inclusion specialists at APCU/PCU.

394. Gender equality and mainstreaming are adequately introduced to the target communities, project staff and other stakeholders; all communication materials and project messages address gender aspects and use gender-sensitive languages.

395. The project, through the inclusive participation of stakeholders will support the strengthening of gender mainstreaming in the policy dialogue. Gender and climate change study will be prepared and finding disseminated through gender workshops at national level involving key stakeholders engaged in policy formulation.

396. Knowledge management of the project mainstreams gender, and the project will monitor and evaluate gender-differentiated outputs and outcomes through sex-disaggregated M&E indicators and other tools. Gender impact assessment will also be conducted.

397. Staff in the project units (PCU and APCU) will ensure that the gender and social inclusion specialists will oversee the gender mainstreaming of STAZA and implementation of GAP. They will be responsible to supervise implementation of GAP and provide all necessary trainings as required.

Principle 6: Core Labour rights

398. BiH has been a member of International Labour Organisation (ILO) since 1993 and has ratified **83** Conventions and **1** Protocol. The project will ensure that at all times international labour standards will be applied. Complaints if any will be addressed through the Grievance redress mechanism.

399. No further assessment is required. Activities throughout the project are targeted at reducing inequality and raising gender awareness for gender equality to overcome traditional stereotypes regarding the role of women in society. The relevant international and national labour laws guided by ILO labour and standards will be followed throughout project implementation. The project will respect, promote, and realize the principles mentioned in the ILO Declaration of Fundamental Principles and

Rights at Work, and ensure that they are respected and realized in good faith by the Executing Entity and other contractors.

400. IFAD has a longstanding partnership agreement with ILO dating back to 1979. The Project will furthermore not engage child labour in any of its activities. The prohibition of child labour will be part of the agreement with the beneficiaries and will be a non-negotiable provision of the agreement. IFAD is also an equal opportunities employer and as such it works to ensure that all its projects are free of discrimination in respect of employment and occupation.

Principle 7: Indigenous Peoples

401. As there are no indigenous groups in BiH, the project will not involve any particular indigenous group. This aspect is hence not applicable and does not require further assessment for ESP compliance.

Principle 8: Involuntary resettlement

402. No involuntary resettlement is foreseen in any circumstance during project implementation. As such, this aspect is not applicable and does not require further assessment for ESP compliance.

Principle 9: Protection of Natural Habitats

403. The project is not expected to have any negative impact on critical natural habitats including those that are (a) legally protected; (b) officially proposed for protection; (c) recognised by authoritative sources for their high conservation value, including as critical habitat; or (d) recognised as protected by traditional or indigenous local communities.

404. The Municipalities in which the project will be implemented have been selected based on a vulnerability index (see Annex 4) and are large rural areas where the households are more prone to climate, economic and environmental shocks. The exact project site locations however will be the result of a detailed mapping, resulting from the clustering of value chains and participatory mapping of climate vulnerabilities at local level. While protected areas are included in the Northern region where the project will focus its activities, such areas will be excluded from project site selection.

405. The stimulus for economic diversification of rural farmer clusters is not expected to result in conversion of natural habitat a local level. Protected areas will de facto be excluded from project interventions, and activities on the fringes of protected areas will respect the legal framework that limit human activities in such buffer zones.

406. As such, every effort will be made to avoid the natural habitat areas that are considered critical. To this effect and as part of the ESMP, the PCU/APCU will ensure that the project is not implemented in protected areas, and monitor that the project implementation will not engage in the unjustified conversion or degradation of other critical habitat areas (including those that are officially proposed for protection; recognized by authoritative sources for their high conservation value, including as critical habitat; or recognized as protected by local communities). The project will screen the project areas against the list of national protected areas and other critical habitats and potential species[106], and report in the PPR. Relevant mitigation measures will be proposed for their protection as well as an explanation as to why they cannot be avoided if it is the case.

407. The project will also deploy a number of measures benefitting natural habitats, including measures to reduce erosion (natural assisted regeneration, reforestation and afforestation) and investment in multipurpose water storage facilities (for animal drinking water, for irrigation and facilitating fast intervention in case of fire and alleviating the mobilization).

408. STAZA is also fully aligned with the principles of environmental protection and sustainable development, instruments and measures for the protection of life and environment regulated by the Law on Waters (Official Gazette of RS 50/06, 92/09, 121/12; Official Gazette of FB&H 70/06), Law on Environmental Protection and Law on Nature Protection (adopted in 2002 in RS and in 2003 in FBiH).

Principle 10: Conservation of Biological Diversity

106 IUCN Convention on Biological Diversity

409. The project is not expected to have any negative impact on critical biological diversity. To mitigate any possible risks the project will screen the project areas for critical biodiversity[107] to ensure there is no overlap, this screening will be reported on in the PPR. In the event of overlap mitigation measures will be established, and they will be monitored and reported on by the PCU/APCU. The project will not be exposed to any risks related to conservation and biodiversity and care will be taken to not endanger any fauna or flora habitats particularly endangered endemic species listed in the table below.

List of Endangered Endemic Fauna and Flora

Description	Class and name
Fauna red list of endemic endangered species	***Mammalia**: Cricetus cricetus* ***Gastropoda**: Marstoniopsis vrbasi, Travunijana tribunicae,* ***Actinopterygii**: Anguilla Anguilla, Acipenser naccarii* ***Aves**: Numenius tenuirostris*
Flora red list of endemic endangered species	***Bryopsida :**Fruchtbares Schlafmoos*

410. The project objectives and activities are designed to support water and soil conservation practices as means of adapting to the weather extremes that are increasingly being felt as a result of climate change: investment in multipurpose water storage and antierosive hedges will increase landscape heterogeneity and provide niche shelters for multiple plants and animals. Particular attention will be given to the selection of species for afforestation or reforestation, to ensure selection of native and adaptive species. Invasive species will be excluded.

Principle 11: Climate Change

411. STAZA is the result of a thorough assessment of the climate change adaptation needs and recommended course of action, contributing directly to priorities outlined in the NDC and the FNC, and addressing the adaptation needs mapped through the vulnerability assessment conducted in section I. A and detailed in Annex 4.

412. GHG emission. BiH is actively pursuing climate change policy both nationally and internationally, as one of the 197 state parties to the United Nations Framework Convention on Climate Change, to which it has been a party since 2000. GHG emissions in Bosnia and Herzegovina in 2014, which is at the same time the last year for which the inventory was made up to now, amounted to 26,062 Gg CO2eq..[108] In 2014, GHG emissions from the agriculture sector represented 9% (compared to 14% in 1990) and came essentially from livestock (enteric fermentation and manure management).[109] The agriculture sector was the lowest contributor to GHG emissions in BiH in 2019, with a 7.5% share (the first sector being energy with a 64% share).[110]

413. STAZA does not promote any drivers of climate change (energy, transport, heavy industry, building materials, large-scale agriculture, large-scale forest products, and waste management). The project will directly contribute to both national mitigation measures for the agriculture sector include support for organic agriculture production and support for manure management.

414. The project is designed to be, on the whole, a net carbon sink, even though the project might support, under subcomponent 2.1, some dairy and meat value chains. Many measures have been taken to further reduce the GHG emission of cattle. Research shows[111][112][113][114] that subsistence farming has a low productivity mainly due to low feed quality, with low protein and energy intakes particularly during drier periods that also leads to higher GHG emissions. STAZA will contribute to improving feeding practices with minimal usage of herbicides and chemical fertilisers and the

107 Red list platform: https://www.iucnredlist.org/search/map?landRegions=BA&searchType=species
108 Revised First National Determined Contribution (2021).
109 Ibid.
110 Ibid.
111 FAO (2013) Tackling climate change through livestock.
112 Gaitán L, Läderach P, Graefe S, Rao I, van der Hoek R (2016) Climate-Smart Livestock Systems: An Assessment of Carbon Stocks and GHG Emissions in Nicaragua. PLOS ONE 11(12).
113 Dr, Jan Dijkstra (2015) Large impact of grass quality on methane emission. Wageningen University.
114 T.V. Vellinga and I.E: Hoving. Maize silage for dairy cows: mitigation of methane emissions can be offset by land use change. April 2011, Volume 89, Issue 3, pp 413–426.

promotion of the use of manure as compost. Mitigation measures rely notably on the benefits brought by improved pasture management (as a possible demonstration plot under subcomponent 2.1), access to water and improved health and welfare of animals. Overall, and thanks also to the promotion of EbA, STAZA is expected to be a net carbon sink.

415. **GHG offsetting**. The targeted rural areas have been identified as being the most vulnerable in the country. The project will introduce water saving technologies and soil management techniques, awareness raising, capacity building, improved access to water and mainstreaming agroecology and other climate resilient practices. The environmental benefits of agroecology are well documented as the combination of composting (including composting of manure), no-till, mulching, intermediate crops, and crop rotation significantly increases the resilience of agriculture to drought, improves soil conditions through lowering of soil temperatures, increasing soil humidity and crop yields in comparison with traditional ploughing practices. Through these benefits agroecology also contributes a number of other environmental co-benefits from the local to global levels. Notably, reduced/no till, agriculture residues as mulching and crop rotation improve soil carbon stocks and reduce CO2 emissions into the atmosphere. The promotion of Nature based Solutions at landscape level through the use of biotechnical measures also enhances carbon storage in the soil by restoring degraded soils and avoiding further erosion (including landslides). Practices such as assisted natural regeneration, afforestation and reforestation also create carbon sinks.

Principle 12: Pollution Prevention and Resource Efficiency

416. The project will not pose any significant risks to resource efficiency (in particular water) or pollution risks and no further assessments will be required beyond the procedures already integrated into the project. As stated under Principle 11, the project will not be a net emitter of GHG's additionally it will bring environmental benefits in sustainable resource management, through the collection of water and promotion of efficient practices with regards to water use (micro-irrigation, soil and water conservation practices through agroecology and biotechnical measures). STAZA will support the restoration of degraded land, through the use of anti-erosive practices (biotechnical measures), afforestation, reforestation and natural assisted regeneration. Overall, these activities should improve the availability of ecosystem services (and carbon storage), or at least limit their expected loss due to extreme climate events. The stimulus for economic diversification of rural farmer clusters is not expected to result in excessive pressure from human activities (e.g. small-scale processing industries). No increased use of pesticides is expected from the project, which will actually support adoption of agroecology and other climate resilient practices. Through training on improved composting and fertility management, STAZA will also reduce the risk of manure spills/dumping in rivers.

417. **Potential risks**. Exploitation of resources from the forest (NTFP), if retained amongst the diversification options, will comply with the relevant legislation (and in particular the Law on Forests[115]).

Principle 13: Public Health

418. Although public health is not the primary focus of activities promoted in the STAZA project, it is not expected to cause adverse effect on this matter either and no further assessment is required. The WHO explains that many factors combine together to affect the health of individuals and communities. Whether people are healthy or not, is determined by their circumstances and environment. To a large extent, factors such as where people live, the state of their environment, genetics, income and education levels, and our relationships with friends and family all have considerable impacts on health, whereas the more commonly considered factors such as access and use of health care services often have less of an impact. The main overarching determinants of health are: (i) the social and economic environment, the physical environment, and the person's individual characteristics and behaviours.

[115] For RS: Law on Forests (Official Gazette of RS 70/2020): https://leap.unep.org/en/countries/ba/national-legislation/law-amending-and-supplementing-forest-law
For FBiH, Forest Regulations (Official Gazette of FBiH 83/2009): https://leap.unep.org/en/countries/ba/national-legislation/forest-regulations-federation-bih

419. The project will improve all the determinants of health presented in the screening table below and as listed by the WHO. STAZA will have a positive contribution to public health, by supporting livelihoods and local economies, improved diets and reduced vulnerability to climate shocks. Access to equipment reducing women's workload will also benefit their health. Reduction in the risk of forest fires will also decrease exposure to toxic fumes and respiratory problems for nearby inhabitants. Finally, by encouraging nutritional health through diversification of available edible products and supporting the livelihoods of poor rural households, quality of life should improve as well, which is recognised as having a positive effect on overall health.

Determinants of health	Health risk	Mitigation measures	Impact on health
Income and social status	Lower income and social status are linked to worse health	The project will target the most vulnerable and marginalised to provide them sustainable avenues for livelihood development. The project will reduce the risk on health posed by low income and social status.	Positive
Education	Low education levels are linked with poor health, more stress and lower self-confidence.	STAZA relies on capacity building and awareness raising activities that will increase the knowledge and confidence of targeted smallholders and other stakeholders.	Positive
Physical environment	Hazards in the physical environment can lead to health risks (e.g. toxic fumes from forest fires) Employment and working conditions – people out of employment are less healthy.	STAZA will promote integrated land management approaches that will reduce or mitigate hazards such as landslides, forest fires and droughts. The project will also reduce unemployment and increase livelihood possibilities by linking producers to MSP and value chain clusters. The project will directly support the alleviation of women workload.	Positive
Social support networks	Greater support from families, friends and communities is linked to better health	STAZA relies on participatory approaches that have demonstrated their relevance in increasing social capital. The project will also directly support networks of women and youth.	Positive
Health services	Access and use of services that prevent and treat disease influences health	Through improved livelihoods and employment, the beneficiaries will also have improved access to healthcare that will be beneficial for their health.	Positive
Land use	Changes in land use, soil quality, choice of crop have impact on health	The implementation of EbA practices at farm or ecosystem level should result in the protection/rehabilitation of close to 4,950 ha of land.	Positive
Unsustainable farming	Unsustainable farming including chemical and energy use, biodiversity, organic production methods, and diversity of foods produced	The project will promote agroecology and other climate resilient practices, which are sustainable forms of farming relying on limited to no chemical inputs.	Positive
Water	Irrigation use and its impact on river/water-table levels and production outputs can have negative impacts on health.	STAZA will support water storage infrastructure and efficient use of water (e.g. using micro irrigation techniques). This will have a direct impact on reducing water table extraction rates and combined soil and water conservation practices, improve productivity and human health.	Positive

Principle 14: Physical and Cultural Heritage

420. There is no risk that the project will impose adverse impacts on the physical and cultural heritage. BiH ratified the Convention Concerning the Protection of World Cultural and Natural Heritage in 1993 and extensive consultations have shown there to be no national cultural heritage sites in the project area, the project area also does not contain UNESCO World Heritage Sites.

Principle 15: Lands and Soil Conservation

421. The project will not have negative impacts on lands and soil conservation. The project has been designed in a fashion that reduces any risk posed by it to the environment, it is also not expected to pose any risks to lands as well as promote soil conservation.

422. The subcomponent 2.2. of STAZA relies on landscape approaches, recognizing that the stakeholders of a given value chain interact in a local territory that can be identified as the "landscape", and that within this landscape, key climate vulnerabilities can be mapped, in particular in relation with the flow of water at the scale of the watershed (with impacts in terms of drought/water availability, erosion, and flooding). As such, STAZA will support local communities in integrating all elements of their territorial unit and preparing local actions to address the current and potential impacts of climate change.

423. STAZA will promote the Nature based Solutions (NbS) approach which repairs degraded ecosystems and allows agriculture and other livelihoods to become resilient to climate change.[116] NbS is defined as actions to protect, sustainably manage and restore natural and modified ecosystems in ways that address societal challenges effectively and adaptively, to provide both human well being and biodiversity benefits (IUCN Resolution WCC 2016 Res 069). NbS is applicable in many situations: (i) conservation of agrobiodiversity to provide specific gene pools for crop and livestock adaptation to climate change; (ii) establishment of diverse agroforestry systems to cope with increased risk from changed climatic conditions; (iii) conservation and restoration of forests to stabilize land slopes and regulate water flows; (iv) sustainable management of upland wetlands and floodplains for maintenance of water flow and quality; etc. Improved agricultural productivity through NbS lessens flood damages, makes water available year-round, sustains itself under extreme weather, enhances biodiversity, strengthens watershed/landscape functions and improves food security.

424. By promoting NbS at both farming system (under subcomponent 2.1. through mainstreaming of agroecology) and landscape level (using biotechnical measures under subcomponent 2.2.), and through its integrated approaches, STAZA will ensure the comprehensive conservation of lands and soil in its intervention areas. It is expected that these interventions will enable the protection and/or rehabilitation of close to 3,275 hectares of land.

IV. Environment and Social Management Plan

i) Safeguards and Screening Procedures

425. The project has been designed in full compliance with relevant BiH Laws relevant safeguard procedures have been fully mainstreamed into the selection procedures of the project. All provisions outlined in the relevant Spatial Plans (national, regional or municipal, as applicable) will be respected. The project will also map all the areas of protected natural and cultural heritage, as well as map the presence of critical biodiversity in its intervention areas. These elements will be reported in the PPR tracker accompanying report. As part of the PPR tracker the project will also report on all the indicators (including gender and youth), identifying those indicators that are not meeting their targets and proposing the corrective measures being taken by the PCU/APCU. Below is a consolidated EMSP table synthesizing project safeguards for each priority of the Adaptation Fund's ESP and GP and reporting plan.

SUMMARY MANAGEMENT AND REPORTING PLAN	
ESP	**Management Plan and Reporting Requirements**
ESP 1 Compliance with the Law	**A) The project will identify:** Relevant Laws concerned by contracts with service providers, and include provisions to ensure these Laws are complied with, with the direct support of the project Legal Officer.
	B) Monitoring: The PCU/APCU, Municipalities and members of concerned clusters will ensure that the relevant laws are complied with by service providers.
	C) Reporting: The project will submit biannual progress reports; annual supervision reports to IFAD as well

116 Kapović Solomun, Marijana. "Enhancing Nature-Based Solutions in Bosnia and Herzegovina: The role of ecosystems in disaster risk reduction and climate change adaptation." IUCN Grey Literature, IUCN Regional Office for Eastern Europe and Central Asia (ECARO), Gland, 2022.

	as the annual PPR to the Adaptation Fund; MTR and final evaluation and completion survey.
ESP 2 Access and Equity	**A) The project will establish:** A targeting strategy, a gender and social inclusion action plan, and mechanisms for a clear and transparent communication about eligibility criteria and project procedures based on the targeting strategy and gender and social inclusion plan presented in this proposal. Responsibility for the development of these tools will lie with the Gender Targeting and Social Inclusion specialist of PCU and APCU
	B) Monitoring: Participation of the project target groups will be closely monitored through the M&E system. The Grievance Redress Mechanism will also represent an avenue for reporting in case individuals and/or communities feel excluded or marginalized from project benefits.
	C) Reporting: The project will submit biannual progress reports; annual supervision reports to IFAD as well as the annual PPR to the Adaptation Fund; MTR and final evaluation and completion survey. These reports will highlight any incident notified through the GRM, and reflect progress on sensitization activities (information campaigns and social inclusion trainings)
ESP 3 Marginalized and Vulnerable groups	**A) The project will establish:** A targeting strategy, a gender and social inclusion action plan, and mechanisms for a clear and transparent communication about eligibility criteria and project procedures, notably with regards to vulnerable groups (low income and poorest families, women and youth). These mechanisms will include: social inclusion trainings, broad information campaigns and outreach events targeting women and youth, and transparency on the public call processes. Affirmative actions will also include dedicated consultation with women's groups. Responsibility for the development of these tools will lie with the Gender Targeting and Social inclusion specialist (PCU/APCU).
	B) Monitoring: Participation of the project target groups will be closely monitored through the M&E system. Strong monitoring of the selection and validation process (regularly conducted by implementing partners) will also be conducted to ensure the right beneficiaries are included and to minimize the risk of elite capture. The Grievance Redress Mechanism will also represent an avenue for reporting in case individuals and/or communities feel excluded or marginalized from project benefits. The PCU (and in particular the Gender, Targeting and SI Specialist), Municipalities and members of concerned clusters will ensure that: targeting objectives are met and most vulnerable smallholders are indeed included in all project activities; questionnaires are able to capture dimension of socio-economic vulnerability accordingly; verification and validation of project's beneficiaries is regularly conducted, including hhs visits and spot verification. The specific indicators, responsibilities and costs associated with the project's Gender Action Plan are outlined in Annex 5.
	C) Reporting: The project will submit biannual progress reports; annual supervision reports to IFAD as well as the annual PPR to the Adaptation Fund; MTR and final evaluation and completion survey.. These reports will track beneficiaries' numbers by category and present progress with regards to the indicators of the Gender Action Plan (see Annex 5 for details). A dedicate gender impact assessment will also be conducted at project completion.
ESP 9 Protection of Natural Habitats	**A) The project will identify:** i. The presence in or near the project area of natural habitats; ii. The potential of the project to impact directly, indirectly, or cumulatively upon natural habitats.
	B) If critical natural habitats exist and there is a potential of the project to impact the habitat, the project will: i. Describe the location of the critical habitat in relation to the project and why it cannot be avoided, as well as its characteristics and critical value. ii. For each affected critical natural habitat, provide an analysis on the nature and the extent of the impact including direct, indirect, cumulative, or secondary impacts; the severity or significance of the impact; and a demonstration that the impact is consistent with management plans and affected area custodians.
	C) Reporting It is unlikely the project will have any negative impact on critical natural habitats, as protected areas will be de facto excluded from project activities. The project will submit biannual

	progress reports; annual supervision reports to IFAD as well as the annual PPR to the Adaptation Fund; MTR and final evaluation and completion survey.
ESP 10 Conservation of Biological Diversity	**A) The project will identify:** i. The presence in or near the project area of critical biodiversity; ii. The potential of the project to impact directly, indirectly, or cumulatively upon critical biodiversity; iii. Native and adaptive tree species to be used for afforestation/reforestation, excluding non-native and potentially invasive species.
	B) If critical biodiversity exists and there is a potential of the project to impact the habitat, the project will: i. Describe the elements of known biological diversity importance in the project area, using any relevant sources of information, such as protection status, status on the IUCN Red List of Threatened Species and other inventories[117], recognition as a UNESCO Man and the Biosphere Programme reserve[118], Ramsar site[119], etc. ii. Describe why the biological diversity cannot be avoided and what measures will be taken to minimize impacts.
	C) Reporting It is unlikely the project will have any negative impact on protected species. The project will conduct the screening and reporting as soon as the project specific areas have been determined. In the unlikely event that the project is expected to have a negative impact on biodiversity conservation, the project will develop an ESMP in relation to ESP 10 and monitor and report in the biannual progress reports; annual supervision reports to IFAD as well as the annual PPR to the Adaptation Fund; MTR and final evaluation and completion survey.
ESP 11 Climate Change	**A) Monitoring** The project will monitor the implementation of agricultural practices and document their (favorable) impact on the local landscape, in terms of preservation and sustainable management.
	B) Reporting The project will report both biannually for the progress reports, as well as annually in the PPR to the AF. It will report on: (i) implementation of agricultural practices; and (iii) implementation of other practices that result in carbon storage (e.g. biotechnical measures, manure management).
ESP 12 Pollution prevention and resource efficiency	**A) Exploitation of resources from the forest** NTFP, if retained amongst the diversification options, will comply with the relevant legislation (and in particular the Law on Forests).
	B) Monitoring The PCU/APCU, Municipalities and members of concerned clusters will ensure that the relevant laws are complied with and that (i) no facility rehabilitated by the project results in pollution to the environment; and (ii) exploitation of resources from the forest is done in a way that does not endanger ecosystems and forest functions.
	C) Reporting The project will submit biannual progress reports; annual supervision reports to IFAD as well as the annual PPR to the Adaptation Fund; MTR and final evaluation and completion survey.
ESP 14 Physical and cultural heritage	**A) The project will identify:** i. The presence in or near the project area of areas of physical and cultural heritage ii. The potential of the project to impact directly, indirectly, or cumulatively upon areas of physical and cultural heritage
	B) If such physical and cultural heritage exist and there is a potential of the project to impact upon it, the project will: i. Provide an inventory of the physical and cultural heritage present in the wider project area that enjoys recognition at community, national, or international levels. Describe the cultural heritage, the location and the results of a risk assessment analyzing the potential for impacting the cultural heritage. ii. Describe the measures to be taken to ensure that cultural heritage is not impacted, and if it is being accessed by communities, how this access will continue.
	C) Reporting

117 IUCN Red List of Threatened Species: https://www.iucnredlist.org/
118 United Nations Educational, Scientific and Cultural Organization, www.unesco.org/new/en/natural-sciences/environment/ecological-sciences/man-and-biosphere-programme
119 Convention on Wetlands of International Importance, called the Ramsar Convention, www.ramsar.com

	It is unlikely the project will have any negative impact on physical and cultural heritage. The project will conduct the screening and reporting as soon as the precise project areas have been determined. In the unlikely event that the project would be expected have a negative impact on biodiversity conservation, the project will develop an ESMP in relation to ESP 14 and monitor and report in the biannual progress reports; annual supervision reports to IFAD as well as the annual PPR to the Adaptation Fund; MTR & final evaluation and completion survey.

ii) Environmental and Social Management System: Unidentified Sub-Projects (USP) Screening and ESMP Procedures

426. The nature of STAZA project activities has been formulated to the extent that pre-identification of environmental and social risks is possible, and project intervention areas have been thoroughly identified at design stage. However and because STAZA is a community-based project, exact site locations for project activities cannot be determined at design stage, and will be during implementation. As such, investments resulting from the participatory-based approach are recognized as USPs. These activities include:

- Under component 1: The pre-identification of investments in the Participatory Local Climate Adaptation Plans.
- Under component 2, subcomponent 2.1 which aims at providing grants under three windows, for vulnerable smallholders and SMEs in order to sustainably develop resilient value-chains and strengthening market access; subcomponent 2.2 with the implementation of bio-technical measures to protect the landscape from erosion and flood risks and the rehabilitation and construction of rural adaptive infrastructure.

427. Building on the ESMP in this proposal, an Environmental and Social Management System (ESMS) is proposed for the project activities considered as USPs (see above). The present section of the ESMP establishes the framework to ensure each USP is screened against the 15 Environmental and Social Principles prior to its implementation to identify potential site-specific risks and adopt appropriate mitigation measures to be captured by relevant ESMPs for implementation, monitoring and reporting, in line with the recommendations of the USP guidance document[120]. These specific EMPs will be developed following the Adaptation Fund's ESP and GP guidelines, and will also comply with IFAD's SECAP guidelines and standard processes.

428. For each USP, the review process during implementation will include the following steps: (1) identification of environmental and social risks according to the 15 ESP principles following an evidence-based, comprehensive and commensurate process; (2) assessment of anticipated impacts for those risks that have been identified; (3) identification of adequate measures to avoid, minimise or manage such impacts; (4) establishment of a plan (ESMP) to apply and implement these measures. Consultation and gender considerations will constitute essential elements of this process. The ESMP and Environment and Social Impact (ESI) screening for each USP under activities identified as USP (e.g. a single grant provided under the Value-Chain Fund) may rely on the indicative templates provided in Appendix 1 and 2. The assessed sub-projects will then be integrated in a single ESMP to ensure coherence and harmonization among management measures, avoidance, mitigation, as well as enhancements that would be implemented during the monitoring and implementation phases of the project.

a) Process for the identification and management of ESP and GP related issues for USPs

429. USPs will have three layers of environmental and social safeguards where project interventions will be implemented: The adoption of a General Environment and social Policy by the project in line with the provisions and eligibility restrictions presented in the table below.

Policy issue	Project General Environmental and Social Policy
ESP 1 Compliance with the Law	The project interventions will comply with relevant national environmental laws, policies and regulations. STAZA will ensure that Rapid Environmental Impact

[120] https://www.adaptation-fund.org/wp-content/uploads/2019/04/AFB.B.32-33.7_Compliance-with-ESP_Update-of-PPR_and_Guidance-for-USPs_revised-1.pdf

	Assessments are conducted for all relevant investments, even where EIAs are not requested.
ESP 2 Access and Equity	The project will ensure equal access to training, equipment, infrastructure and services. Gender equity, integration of youth and environmental sustainability were pursued as key cross-cutting themes in the project design.
ESP 3 Marginalised and Vulnerable Groups.	The Project will not fund in the target areas any intervention that could have a negative impact on marginalize and vulnerable groups.
ESP 4 Human Rights	The project will ensure to respect and adhere to all the relevant conventions on human rights
ESP 5 Gender Equality and Women's Empowerment	The project recognizes the different impact that project investments might have according to gender, and will only finance gender-responsive measures to address the needs and constraints of women and men, such as quotas for investment grants to enhance women's opportunities in formal sector employment; investments in skill training, market information, and improved market access.
ESP 6 Core Labour Rights	The project interventions directly or indirectly supporting job opportunities will ensure compliance with relevant national labour laws guided by the ILO labour standards.
ESP 7 Indigenous People	Not applicable as there are no Indigenous People in BiH.
ESP 8 Involuntary Resettlement	The project will not fund in the target areas any intervention that leads to or gives rise to possibility of involuntary resettlement.
ESP 9 Protection of Natural Habitats	The Project will not fund in the target areas any intervention that encroaches into any declared or proposed protected area of natural habitats or that result in the conversion of natural habitat to other purposes.
ESP 10 Conservation of Biodiversity	The project will not fund in the target areas any intervention that negatively affects wild species populations and conservation status.
ESP 11 Climate Change	The project will not fund in the target areas approaches and techniques that are not compliant with the adaptation priorities proposed by Fourth National Communication to the UNFCCC and other governmental documents.
ESP 12 Pollution Prevention and Resource Efficiency	The project will not fund in the target areas any intervention that overexploits, damages and/or degrades key resources such as freshwater, soil, vegetation cover, and agro-biodiversity such as local breeds and crop species and varieties.
ESP 13 Human Health	The project will not adversely affect human health in among other areas of income and social status; education; physical environment; social support networks; health services; land use; unsustainable farming; and water.
ESP 14 Physical and Cultural Heritage	The project will not fund in the target areas any intervention that displaces, damages, makes it inoperative and/or inaccessible any physical and human resource that is of historical or cultural significance.
ESP 15 Lands and Soil Conservation	The project will not fund in the target areas measures and technologies that increase the risk of land degradation.

430. The conformation of the ESMP to the relevant technical guidelines and specifications, including but not limited to: the Law on Environmental Protection of both RS and FBiH (and the associated Rulebook on projects for which an EIA is carried out and the criteria for deciding on the need to carry out and the scope of an EIA), the Law on Agriculture of both RS and FBiH, theLaw on Spatial Planning and Construction of RS, the Law on Spatial Planning of FBiH, the Law on Seeds and Planting Material of BiH, the Law on Seeds and Planting Material of FBiH, the Law on Planting Material of RS, the Law on Nature Protection of both RS and FBiH, the Water Law of both RS and FBiH.

431. The ESI Screening and ESMP preparation (as per the four steps below).

(1) Identification of environmental and social risks according to the 15 ESP principles

432. At design stage, risks associated with the Unidentified Sub-Projects have been screened against the 15 Environmental and Social Principles (see below). During implementation, specific risks pertaining to each individual investment and their locations will be assessed using the Adaptation Fund checklist.

(2) Assessment of anticipated impacts for those risks that have been identified

433. Anticipated impacts for the risks identified under each ESP should be assessed, based on the specific sites where the project will intervene. At design stage, a preliminary impact assessment for the risks that could be pre-identified is included and will be updated during implementation, if specific risks arise based on the specific intervention sites of the project. Individual ESI Screening of specific investments will be prepared and presented in the indicative format provided in Appendix 1 included at the end of this Annex.

(3) Identification of adequate measures to avoid, minimise or manage such impacts

434. Each USP will comply with the provisions and eligibility restrictions presented above, further to the adoption by the project of a General Environment and Social Policy. While initial mitigation measures have been identified at design stage for the risks identified under each ESP (see below), these may be completed during implementation further to the exact identification of project intervention sites, and will be done as part of the systematic ESI Screening of individual investments (indicative format provided in Appendix 1).

(4) Environmental and Social Management Plan

435. The Environmental and Social Management Plan included at the beginning of this section will be further refined during implementation and based on the specific risks identified during the screening of each specific USP investment and associated site. Individual ESMP Screening of specific investments will be prepared and presented in the indicative format provided in Appendix 2 included at the end of this Annex.

(5) Consultative Process

436. Consultations of key stakeholders will be undertaken as part of the ESI Screening for Unidentified Sub-Projects, once the specific locations of the activities are defined. The aim of consultations will be to: (i) disseminate information about the sub-project; (ii) verify the identification of potential impacts (ESI) and their proposed mitigation plan (ESMP); (iii) verify the significance of the impacts and the mitigation measures; and (iv) allow the stakeholders to express their concerns and opinion about the project activities. The consultations will be conducted at settlement, municipal level and national level. Specific arrangements for consultations related to each USP are defined below.

(6) Independent Environmental and Social Audit

437. IFAD will ensure Independent Environmental and Social Audits of the ESMS and resulting ESI and ESMP screenings are conducted each of the first three years of implementation and as relevant documentation is produced following the identification of exact sites of relevant investments. Costs for these Audits will be covered by the IE fee.

(7) ESMS costs

438. All costs related to the ESMS implementation are fully covered by the project and IE fee budgets. Consultation costs are part of the project activities, screenings to be performed with the support of project staff will be conducted as part of their regular duties. Instances that will contribute to the screenings (such as the Independent Investment Committee or Project Steering Committee) will be established as part of the overall project implementation arrangements. If specific complementary trainings are needed, IFAD will provide the necessary backstopping to the PCU/APCU and relevant stakeholders as part of its duties and using the IE fee. Trainings on AF procedures and requirements are also planned at the beginning of project implementation for the PCU/APCU.

b) Preliminary assessment of risks, impacts and mitigation measures for the ESP and GP related issues for each USP

1) Subcomponent 2.1- Matching grants

439. **Environmental and social risks identified at design stage**. Pre-identified risks at design stage for this USP include:

- A low risk with regards to ESP1: where relevant, compliance with the Law on Environmental Protection of both RS and FBiH (and the associated Rulebook on projects for which an EIA is carried out and the criteria for deciding on the need to carry out and the scope of an EIA), the Law on Agriculture of both

RS and FBiH, the Law on Seeds and Planting Material of BiH, the Law on Seeds and Planting Material of FBiH, the Law on Planting Material of RS, the Law on Nature Protection of both RS and FBiH, the Water Law of both RS and FBiH will need to be ensured.

- A low risk with regards to ESP2: recommended principles on transparency and selection criteria will be applied to the grant windows and their procedures, and social inclusion trainings as well as information campaigns will raise awareness about the project's targeting criteria.
- A low risk with regards to ESP3: the project's targeting strategy, and in particular the eligibility criteria for the first Window put most vulnerable producers at the centre of project activities. Women and youth participation will also be promoted thanks to a system of points increasing the likelihood of their responses to public calls being selected (Women have 10% extra matching as compared to men), and establishment of quotas (50% women beneficiaries, 20% youth), in line also with the project's Gender Strategy and Gender Action Plan.
- A low risk with regards to ESP 11: The project will monitor the implementation of agricultural practices and document their impact on the local landscape, in terms of preservation and sustainable management. Dairy and meat production are essential agricultural activities in rural areas, and STAZA will support these value-chains under small grants. Intensification of livestock production may result in limited additional greenhouse gas emissions.
- A low risk with regards to ESP 12: minor risks of may be posed by the NTFP, if retained amongst the diversification options, and will comply with the relevant legislation (and in particular the Law on Forests).

440. **Preliminary environmental and social impact assessment and mitigation measures**. The PCU/APCU will ensure that commercial pickers are formally registered as per the provisions of the Law on Forest in the case where NTFP would be retained as a value chain. In compliance with the Water Law, Water conditions and/or no-objections will be sought in the following unlikely cases: adjunction of specific equipment to water storage facilities or cases where facilities which can have significant impact in terms of water pollution (to be considered for barn improvements and facilities for housing livestock). STAZA will follow the national procedure for Environmental Impact Assessments (EIAs), which requires the project bearer (MAWMF and MAFWM in the case of STAZA) to confirm the need for an EIA with the competent authority (Municipalities in the case of works foreseen under STAZA) for the construction of infrastructures. These pre-identified mitigation measures have been included in the project's ESMP.

441. **Proposed implementation arrangements**. The matching grants are instruments that have been put in place under the ongoing READP, and structured procedures for their implementation already exist. ESP compliance can easily be integrated in these procedures as follows:

- Local consultations screening for the eligible activities and overall approaches against the 15 ESP can be undertaken at the level of the Multi-Stakeholder Meetings organized regularly as part of the cluster strengthening process, in the context of information campaigns conducted prior to calls for applications. These participatory instances and the associated increased social capital are the most relevant space for consultations. The Gender targeting officer will facilitate discussions on the social principles, including through the organization of dedicated discussions with women, youth and marginalized groups. The Environmental and Climate Specialist will take the lead for discussions on environmental principles. Local authorities at municipal and cantonal level will also be engaged.
- STAZA will apply the same successful approach as READP to crowd-in these vulnerable and poor producers under the matching grants (see below), by designing the windows to match the needs and capacities of these producers; by defining specific eligibility criteria applicable to the targeted VCs; as well as by establishing rating systems to add value to marginalized groups (women, youth) applications. As done in the case of READP, the STAZA implementation team will engage local stakeholders for a full year before public calls, to map and identify relevant targets (poorest and most vulnerable producers) to facilitate their engagement and prepare to mobilize the counterpart for the matching grants. This approach demonstrated its relevance to ensure poorest people could access the grants during READP implementation. As such, STAZA will leave no one behind.

- Using the matching grants standard screening processes that is part of national public-calls, each individual grant application will be screened in terms of risks, possible impacts and mitigation measures against the 15 ESPs (during the appraisal of proposals process), based on the exact location where the grant investment will be used. Identification of High risks or of risks that cannot be mitigated is extremely unlikely but will constitute an elimination criteria, in line also with the eligibility restrictions presented above (e.g. in the extremely unlikely event that the investment would be proposed for use in a national park). Grant application forms will include request for information relevant to perform the screening. These decisions will be reviewed by an independent committee (details to be included in the Project Implementation Manual) that approves decisions on grant allocation.
- The overall matching grants will be screened for ESI and ESMP using the templates provided in Appendix 1 and Appendix 2. The resulting ESMP may be updated based on the regular consultation process and information compiled through the grant application and screening process for the matching grants. Key conclusions will be brought to the Project Steering Committee for validation.

2) Implementation of Biotechnical Measures for Ecosystem Protection

Environmental and social risks identified at design stage. Pre-identified risks at design stage for this USP include:

- A low risk with regards to ESP1: Where relevant, compliance the Law on Environmental Protection of both RS and FBiH (and the associated Rulebook on projects for which an EIA is carried out and the criteria for deciding on the need to carry out and the scope of an EIA, the Law on Spatial Planning and Construction of RS, the Law on Spatial Planning of FBiH, the Law on Seeds and Planting Material of BiH, the Law on Seeds and Planting Material of FBiH, the Law on Planting Material of RS, the Law on Nature Protection of both RS and FBiH, the Forest Law of RS and the Forest Regulations of FBiH, the Water Law of both RS and FBiH will need to be ensured.
- A low risk with regards to ESP2: recommended principles on transparency and selection criteria will be applied to ensure transparency on the priorization of measures to be implemented, thanks also to the participatory process determining the selection of sites for project activities.
- A low risk with regards to ESP3: biotechnical measures and reforestation/afforestation activities will generate public goods to the benefit of the whole community.
- A low risk with regards to ESP 10: Attention will be given to avoid use of invasive or non-native species for afforestation/reforestation and biotechnical measures.

442. **Preliminary environmental and social impact assessment and mitigation measures**. In compliance with the Law on Water of both RS and FBiH, in accordance with regulations, water management plans, and previously obtained approvals will be sought in the unlikely event where dedicated facilities are constructed to reduce erosion. Selection of tree species will be done in conformity with the , the Forest Law of RS and the Forest Regulations of FBiH. These pre-identified mitigation measures have been included in the project's ESMP.

443. **Proposed implementation arrangements**. Biotechnical measures and reforestation/afforestation activities will be prioritized as part of the Local Climate Adaptation Plans, developed themselves through a participatory process similar to that of the clusters. This process will be the entry point through which compliance with the 15 ESPs is ensured:

- Local consultations screening for the specific biotechnical measures and reforestation/afforestation activities to be adopted and exact sites where these may be implemented will take place as part of the development of Local Climate Adaptation Plans. The consultation process will include discussions on the compliance of proposed measures with the 15 ESPs. The Gender targeting officer will facilitate discussions on the social principles, including through the organization of dedicated discussions with women, youth and marginalized groups. The Environmental and Climate Specialist will take the lead for discussions on environmental principles. Local authorities at municipal level will also be engaged.
- Each Local Climate Adaptation Plan will include a specific ESMP (using the templates provided in Appendix 1 and Appendix 2), screening individual recommended investments against the 15 ESPs.

Identification of High risks or of risks that cannot be mitigated is extremely unlikely but will constitute an elimination criteria, in line also with the eligibility restrictions presented above (e.g. in the extremely unlikely event that no native nor non-invasive species are available to implement the bio-technical measures). The consultant in charge of consolidating the LCAP together with the Gender targeting officer and the Environment and Climate Specialist will conduct the risk analysis, impact assessment and propose mitigation measures to be consolidated within each LCAP ESMP, which will in turn be validated both at Municipal and Project Steering Committee level.

3) Rehabilitation and Construction of Rural Adaptive Infrastructure

444. **Environmental and social risks identified at design stage**. Pre-identified risks at design stage for this USP include:

- A low risk with regards to ESP1: where relevant, compliance with the Law on Environmental Protection of both RS and FBiH (and the associated Rulebook on projects for which an EIA is carried out and the criteria for deciding on the need to carry out and the scope of an EIA), with the Water Law of both RS and FBiH, with the Law on Spatial Planning and Construction of RS and with the Law on Spatial Planning in FBiH will need to be ensured.
- A low risk with regards to ESP2: recommended principles on transparency and selection criteria will be applied to ensure transparency on the priorization of infrastructure to be established, thanks also to the participatory process determining the selection of sites for project activities.
- A low risk with regards to ESP3: establishment of multi-purpose rural water supplies and markets is a common good that should benefit the whole community. Number of women, youth and vulnerable beneficiaries will be included as part of the selection criteria.

445. **Preliminary environmental and social impact assessment and mitigation measures**. STAZA will follow the national procedure for Environmental Impact Assessments (EIAs), which requires the project bearer (MAWMF and MAFWM in the case of STAZA) to confirm the need for an EIA with the competent authority (Municipalities in the case of works foreseen under STAZA) for the construction of infrastructures. These pre-identified mitigation measures have been included in the project's ESMP.

446. **Proposed implementation arrangements**. Multi-purpose rural water supplies and open markets measures will be pre-identified as part of the Local Climate Adaptation Plans, developed themselves through a participatory process similar to that of the clusters. Local communities from the targeted municipalities or groups of rural inhabitants structured in a cluster will then be invited to submit budgeted requests to fund multipurpose water storage capacities or multipurpose open markets to their Municipalities, who will relay them through a public call. Compliance with the 15 ESPs will be ensured through both LCAP elaboration and screening of individual requests in response to the public calls:

- Local consultations screening for the choice of exact sites and techniques to recommend the creation of multi-purpose rural water supplies and open markets will take place as part of the development of Local Climate Adaptation Plans. The consultation process will include sensitization on the compliance of proposed investments with the 15 ESPs, in view of individual requests for funding to be submitted in response to Public Calls. The Gender targeting officer will facilitate discussions on the social principles, including through the organization of dedicated discussions with women, youth and marginalized groups. The Environmental and Climate Specialist with support of the Technical advisor will take the lead for discussions on environmental principles. Local authorities at settlement and municipal level will also be engaged.
- Each Local Climate Adaptation Plans will include a specific ESMP (using the templates provided in Appendix 1 and Appendix 2), screening proposed individual investments against the 15 ESPs. Identification of High risks or of risks that cannot be mitigated is extremely unlikely but will constitute an elimination criteria (e.g. request for boreholes would be de-facto excluded as non-rainwater harvesting investments). The consultant in charge of consolidating the LCAP together with the Gender targeting officer, the Environment and Climate Specialist, and the Civil Engineer (in-house for APCU,

outsourced fo PCU) will conduct the risk analysis, impact assessment and propose mitigation measures to be consolidated within each LCAP ESMP, which will in turn be validated both at Municipal and Project Steering Committee level.

- Using the screening process that is part of national public-calls, each individual application will also be screened again in terms of risks, possible impacts and mitigation measures against the 15 ESPs, based on the exact location where the grant investment will be used (and relying on the analysis conducted in the LCAP).
- The LCAP ESMPs may be updated based on the regular consultation process and information compiled through the screening process for the public call.

iii) Consultation

447. **Design consultations**. An in-country design mission took place from October 30th to November 10th, 2023. During this period, the STAZA design team engaged with a diverse array of stakeholders at the national, municipal, and local levels. The mission involved interactions with approximately 120 individuals, as per recorded attendance lists, including 50 women (42%) and 20 individuals below 40 years of age (16%). Stakeholders interviewed represented various sectors, including the public sector (ministries, agencies), academia (faculties, institutes), and the private sector (farms, cooperatives, associations, SMEs, companies). This encompassed a diverse group of participants, such as youth, women, men, farmers, researchers, advisors, entrepreneurs, managers, and civil servants. Special attention was given to ensuring a gender and youth focus in these consultations. Thus, institutions dealing with gender and youth issues, both public and from civil society, were consulted, including the Gender Centre at federal and entity levels, meetings with UN Women, meetings with gender focal points of the Ministry of Agriculture, and discussions with women's associations and women members of cooperatives. The consultative process focused on identifying key challenges, potential solutions, and lessons learned to be adequately captured in the design process. Male and female potential beneficiaries and stakeholders were consulted both separately and in mixed groups. Additionally, the appropriateness of the time and location of consultation meetings, especially for women, was taken into account. More detail on the consultative process, including lists of stakeholders consulted, is available in Annex 2.

448. **ESMP Consultations**. Project consultations will at all times be gender-sensitive and inclusive of vulnerable and marginalised groups, including as part of any screening and mitigation measures that could be needed for ESP 9, 10, and 14. The project will have regular consultations with beneficiaries throughout the project: beneficiaries will be extensively consulted as part of the rural clustering process under component 1, and participatory mapping for the LCAPs under component 1. More generally, continuous stakeholder engagement and consultation will take place throughout the implementation. Consultations of key stakeholders will be undertaken as part of the Environment and Social Impact (ESI) Screening for Unidentified Sub-Projects, once the specific locations of the activities are defined, as explained in the previous section.

iii) Grievance Mechanism[121]

449. The project will utilize the existing IFAD's grievance mechanism to allow affected to raise concerns in case the project is not complying with its social and environmental policies or commitments. The consultative process with the community and beneficiaries aims to ensure prevention of grievances that might arise from the project activities. However, if at all, there are any grievances, the below redress mechanism is proposed:

450. Grievance redress mechanism would be shared with the community during the project inception workshop and subsequent meetings and consultations with the beneficiaries;

451. As part of the grievance redress mechanism, the contact details of relevant project partners (project coordinator, field coordinators and extension services) will be made available to stakeholders including project beneficiaries and local communities. Contact numbers will be displayed at common or predominant places along with the project details. This is expected to promote social auditing of

[121] The redress mechanism is described in section III. D.

project implementation. The grievance mechanism will be available to the entire project intervention areas. However, the functionality of the mechanism rests with the beneficiaries considering that the project including the grievance mechanism is envisaged to be a bottom up approach.

452. Grievances are aimed to be addressed at the field level by the project team which will be the first level of redress mechanism. If the grievance is not resolved at the field level, it will be escalated to the PCU/APCU and then to IFAD who will be responsible for addressing grievances related to violation of any of the provisions of Environmental and Social Policy of the Adaptation Fund. All grievances received and action taken on them will be put up before the PCU/APCU and Steering Committee meetings and will also be included in the progress reports for reporting and monitoring purposes.

V. Monitoring and Evaluation Arrangements

453. As described in section III. E of the project proposal, STAZA will have a comprehensive monitoring and reporting system that will include quarterly reports, technical reports, annual project reports, the AF PPR tracking, annual IFAD supervision mission reports, a Mid-term Review and a final evaluation and completion survey.

454. The monitoring and reporting of the ESMP will be commensurate with the limited ESMP required for the project. As presented in section IV. i) ESP compliance for ESPs 9, 10 and 14 will be reported on through the annual PPR and supervision missions to verify the presence of any critical natural habitats, critical biodiversity and physical cultural heritage in the project area. Risks posed in terms of GHG emissions in ESP 11 will be monitored and reported on, assessing implementation of practices that result in carbon storage (biotechnical measures, agroecology, etc.).

455. As part of ESP 12, compliance with provisions of the Water Law of both RS and FBiH in case of pollution risk from barn improvements and facilities for housing livestock will be closely monitored through the PCU/APCU and supervision missions, together with compliance with provisions of the Forest Law of RS and Forest Regulations of FBiH regarding commercial use of NTFP should those be retained as investments under STAZA. These elements will be reported on in the annual supervision missions and PPR reports, the MTR and the final evaluation.

456. The project will update the ESMP of the project with the following information for each USP it has identified during the relevant reporting period. The updated ESMP will be attached to the PPR report[122]:

- A brief description of the fully formulated USP, with details on (i) the characteristics of the USP and (ii) the specific environmental and social setting in which the USP will be implemented. This information needs to be provided to an extent sufficient to appreciate the effectiveness of the risks identification that was carried out;
- The outcome of the ESP risks identification process, using the same structure as that of Section II.K, identifying risks according to each of the 15 ESP principles, justifying the risk findings, and showing that this is the outcome of an evidence-based and comprehensive effort;
- For each of the identified risks, a description of the subsequent impact assessment that was undertaken and the findings thereof, showing that the assessment was commensurate with the risks identified;
- The findings of the impact assessments, and the safeguard measures that have been formulated to avoid, mitigate or manage undesirable impacts;
- The updated detailed safeguard arrangements in the implementation component of the ESMP, identifying and allocating roles and responsibilities to implementation partners for the application of the ESMP. This should include an assessment or a confirmation of the required capacity and skills with the relevant implementation partners;
- Information on the consultations that were held on the risks identification and impact assessments outcome as well as on any proposed management measures, and how any feedback was responded to;

[122] More detailed information is available in the templates provided in Appendix 1, Appendix 2 and Appendix 3.

- Gender-disaggregation of the information used in the risks identification and subsequent safeguards actions;
- Information on disseminating information to stakeholders on the grievance mechanism.

i) Implementation schedule

457. The implementation schedule of ESMP will be as follows:

Activities	Time				
	PY1	PY2	PY3	PY4	PY5
Development of technical guidelines for the project	Q1				
Capacity building of project team	Q1				
Specific ESMPs for USPs	Q1-Q4	Q1-Q4	Q1-Q4	Q1-Q4	Q1-Q4
Environmental and Social Screening	Q1-Q4	Q1-Q4	Q1-Q4	Q1-Q4	Q1-Q4
ESMP of project infrastructures		Q1-Q4	Q1-Q4	Q1-Q4	Q1-Q4
Implementation of ESMP	Q1-Q4	Q1-Q4	Q1-Q4	Q1-Q4	Q1-Q4
Monitoring and reporting of ESMP	Q1-Q4	Q1-Q4	Q1-Q4	Q1-Q4	Q1-Q4

ii) Cost for ESMP

458. The preparation and implementation of ESMP will have costs that have been built into the project budget. The cost implications and their source of funds will be as follows:

ESMP related activity	Source of funding to cover costs
Development of technical guidelines for the project	Built-in the Project Costs
Capacity building of project team	Built-in the Project Costs
Specific ESMPs for USPs	Built-in the Project Costs
Environmental and Social Screening	Built-in the Project Costs
ESMP of project infrastructures	Built-in the Project Costs
Implementation of ESMP	Built-in the Project Costs
Monitoring and reporting of ESMP	Built-in the Project Costs

459. The institutional arrangements include the distribution of roles and responsibilities in the preparation of Screening and in the implementation of ESMP. The key players and their responsibilities will be as follows:

Organisation/designation	Responsibility
Ministry of Agriculture, Water Management and Forestry (MAWMF) in the Federation of Bosnia and Herzegovina and the Ministry of Agriculture Forestry and Water Management (MAFWM) of the Republika Srpska	Submission of application for the decision on need for EIA for all project infrastructures, as per the procedures set out in the Law on Environmental Protection of both RS and FBiH and compliance on provisions of the Law according to the outcome of the decision.
Project Steering Committee	Review of USP specific ESMPs
Municipalities	Decision on need for EIA for all project infrastructures Decision on attribution of Water Conditions and Water No Objections Review of USP specific ESMPs
IFAD/PCU/APCU – Project Coordinator, Environment and Climate Specialist, and Procurement Officer	Consolidation of information from monitoring at local/municipal level; Verification of compliance with relevant laws. Preparation of USP specific ESMPs
PCU/APCU Field Staff	Preparation of USP specific ESMPs Presentation of Screening and ESMP in the MSM meetings and vulnerability mapping meetings at cluster level. Implementation of the ESMP at the local level. Facilitation of USP specific consultations. <u>At Municipal level</u> Identification of project risks related to ESP 9, 10 and 14 (identification of areas of interest and proposition of mitigation solutions); Monitoring of risks of pollution; Verification of compliance with relevant Laws.

	Facilitation of USP specific consultations.
Extension services and other implementation partners	At local level Identification of project risks related to ESP 9, 10 and 14 (with regards to site locations); Contribution to the preparation of USP specific ESMPs; Monitoring of risks of pollution; Verification of compliance with relevant Laws.

Appendix 1 – Indicative Format of ESI Screening

1. Project Description

1.1 Description of the proposed operations and capacity building activities
1.2 Risk exposure maps of project intervention zones (watersheds) and interrelation diagrams of project stakeholders
1.3 Territories covered by economic stimulus (clusters, better accessibility)
1.4 Landscape areas for which intervention improved resilience to climate risks
1.5 Socio-demographic description of Settlements that will be affected

2. Baseline Condition

2.1 Description of existing environmental and social condition
2.2 Maps and other data that has been collected

3. Environment Impacts and Risks

The Screening will be in terms of (a) Direct Environmental Risks; (b) Direct Environmental Impacts; (c) Indirect Environmental Risks; and (d) Indirect Environmental Risks on the following issues.

- Compliance with the Law
- Protection of Natural Habitats
- Conservation of Biological Diversity
- Climate Change
- Pollution Prevention and Resource Efficiency
- Public Health
- Physical and Cultural Heritage
- Land and Soil Conservation

4. Social Impacts and Risks

The screening will be in terms of (a) Direct Social Risks; (b) Direct Social Impacts; (c) Indirect Social Risks; and (d) Indirect Social Risks on the following issues.

- Compliance with the Law
- Access and Equity
- Marginalized and Vulnerable Groups
- Human Rights
- Gender Equity and Women's Empowerment
- Core Labour Rights
- Involuntary Resettlement
- Public Health
- Physical and Cultural Heritage

5. Analysis of Alternatives

Description of alternatives that were identified and their Screening in terms of:

(a) Direct and Indirect Environment and Social Impact
(b) Opportunities for enhancing environmental and social benefits

6. Recommendations Risk Management options in terms of:

(i) Preventing Risk
(ii) Avoiding Risk
(iii) Mitigating Risk
(iv) Transferring Risk
(v) Absorbing Risk

6. Process Note for the preparation of ESI Screening

6.1 Consultations held with different stakeholders in the community
6.2 Consultations held with women and youth
6.3 Consultations held with settlement representatives
6.4 Consultations held with relevant municipal authorities and services

Appendix 2 – Indicative Format of ESMP

1. Management Plan

Environmental and Social Risk Screening	Mitigation Measure	Implementation Schedule for the Mitigation Measure	Responsibility for execution of the mitigation measure
Compliance with the law spatial plans and other protection schemes			
Access and equity			
Marginalized and vulnerable groups			
Human rights			
Gender equity and women empowerment			
Core labour rights			
Ethnic diversity			
Involuntary resettlement			
Protection of natural habitat			
Conservation of biological diversity			
Climate change			
Pollution prevention and resource efficiency			
Human Health			
Physical and cultural heritage			
Lands and soil conservation			

2. Consultation and public disclosure

The plan for consultation and public disclosure of the ESMP will be recorded here. The plan will be for:

(a) Consultations for preparation and implementation of ESMP
(b) Consultation with women of the settlement
(c) Notification to settlement when will the activities be implemented
(d) Disclosure of Monitoring and Sub-Project Completion report

3. Monitoring Plan

The monitoring plan will comprise of the parameters for monitoring and the frequency with which the monitoring will be carried out. The recording and reporting procedures will also form part of the monitoring plan.

Environmental and Social Risk Screening	Monitored parameter	Responsibility for monitoring	Recording and frequency
Compliance with the law and spatial plan			
Access and equity			
Marginalized and vulnerable groups			
Human rights			
Gender equity and women empowerment			
Core labour rights			
Ethnic diversity			
Involuntary resettlement			
Protection of natural habitat			
Conservation of biological diversity			
Climate change			
Pollution prevention and resource efficiency			
Human Health			
Physical and cultural heritage			
Lands and soil conservation			

4. External Audit and Verification

4.1 Conduct of Environment Audit
4.2 Conduct of Social Audit
4.3 External Verification processes

5. ESMP Completion Report

Annex 4: Climate Vulnerability analysis in BiH

The information presented in this Annex aims at completing the climate exposure and vulnerability analysis conducted in section I. A. of the project proposal.

Climate change impacts on Agriculture and Water in BiH

460. Climate variability and hazards and potential impacts on agriculture and on water in Montenegro as characterized by the TNC are presented in the tables below.

Climate variability and hazards and potential impacts on agriculture in BiH. Source: Third National Communication of the of Bosnia and Herzegovina under the UNFCCC, 2016.

Climate variability and hazards	Potential impacts
Increase in temperature	- Shift of vegetation periods towards the beginning of the year - spring crops will be at risk due to high temperatures and water shortages during the summer months. - Increases in crop yields (and land productivity) up to a point, followed by decreases - The extension of the growing period due to the increase in the winter and early spring temperatures leads to greater opportunities for the development of diseases and pests. - mild winters can contribute to spreading of harmful insects (e.g. more intense spreading of Capondis tenebrionsis, from the southern regions to the northern ones) - Animal thermal (heat) stress, which leaves negative consequences both in terms of animal production and in terms of the quality of animal products
Increase in heavy rainfall and strong winds (storm)	- Decrease in the yield and the quality of pasture, feed (particularly of spring crops) - Depletion of pastures - Accelerated processes of land erosion
Decrease in precipitation	- Decreases in crop yields (and land productivity) - Decreased irrigation water supply - Increased irrigation water demand
Droughts	- Accelerated processes of land erosion - Limited plant growth, and therefore substantial reduction in yields - A decrease in the content of organic matter in soils - Increasing dependency on insufficiently developed irrigation systems - Reduction in the production of fodder for livestock feed
Floods	- Loss of crop yield - Increased plant diseases and weeds - Increase in crop damage - Loss of livestock due to difficulty of evacuation

461. **Climate Adaptation in Rural Development (CARD) projection**. The CARD[123] assessment tool enables easy access to peer-reviewed modelling results for crop yields under climate change. It has been developed by the West and Central Africa Division of the International Fund for Agricultural Development (IFAD) with funding from Phase II of the Adaptation for Smallholder Agriculture Programme (ASAP2).

462. The CARD tool allows a choice between three risk settings, each setting impacting the way the underlying crop-climate models are analysed:

- **Median**: This setting reflects a “best guess” of the uncertainties reflected in the models. The models are aggregated using the median.
- **Pessimistic**: This setting reflects a pessimistic consideration of the uncertainties reflected in the models. The models are aggregated using the 10th percentile of all underlying crop yield projections (i.e. close to the model with the largest decline, or smallest increase, in crop yields).
- **Optimistic**: This setting reflects an optimistic consideration of the uncertainties reflected in the models. The models are aggregated using the 90th percentile of all underlying crop yield predictions (i.e. close to the model with the least decline, or largest increase, in crop yields).

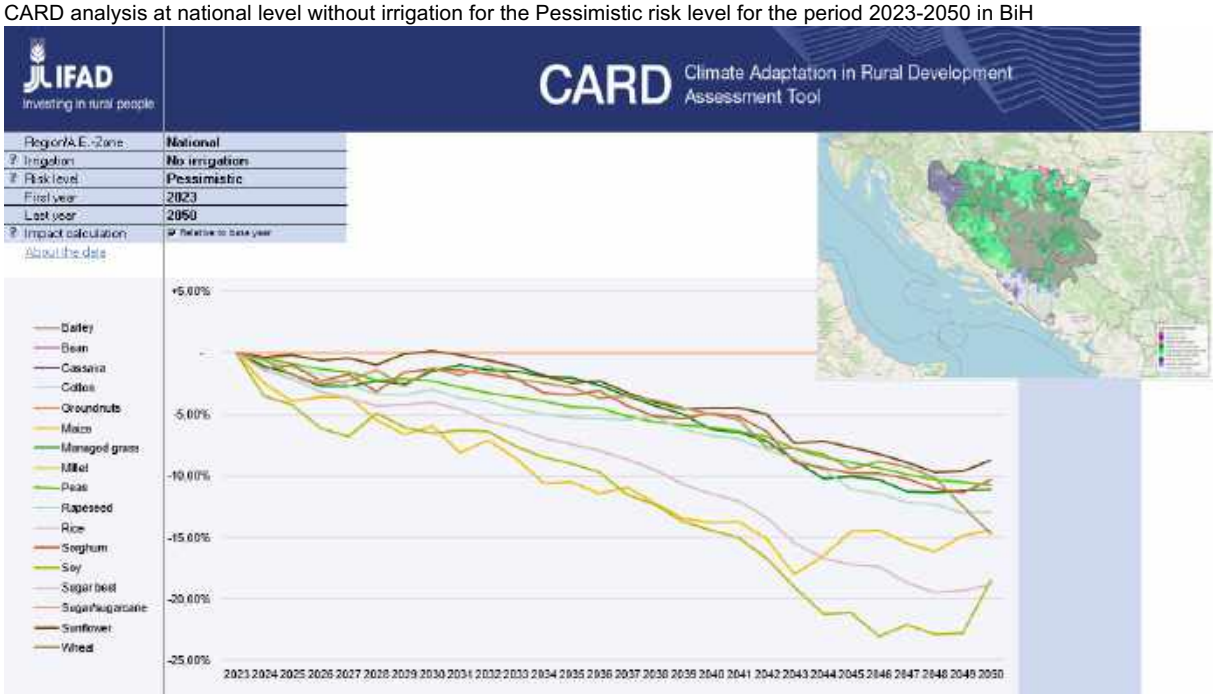
463. **Main findings**. The main findings of the CARD analysis (as shown in the figures below) are:

- At national level, for both the median and pessimistic risk levels, there is a clear downward trend in production for the analysed crops after 2040 and 2030 respectively.

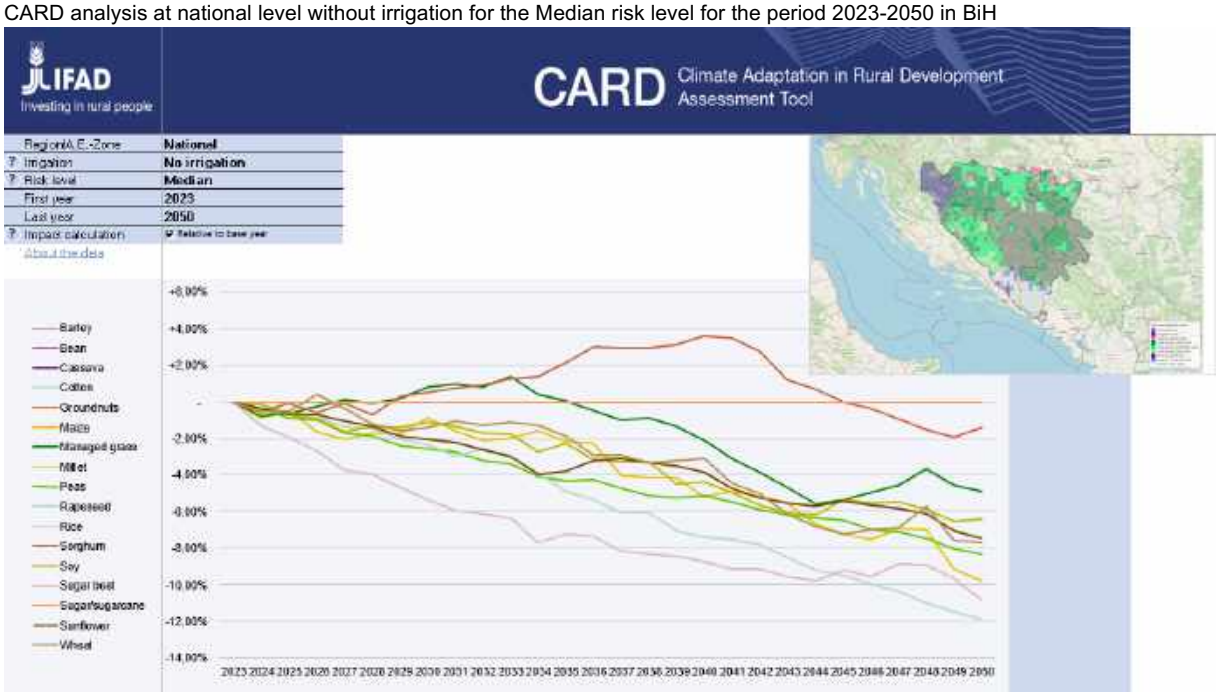
[123] https://www.ifad.org/documents/38714170/41085512/Card_usermanual_W.pdf/e867a16c-e581-8038-aa6f-1767a10629a3

- Similar trend is shown for both RS and FBiH.
- The most affected crops in the long term are Wheat, Maize, Soy and Sugar beet, with expected decrease in yield up to 15%, 18%, 23% and 19% respectively at national level under the Pessimistic risk level.

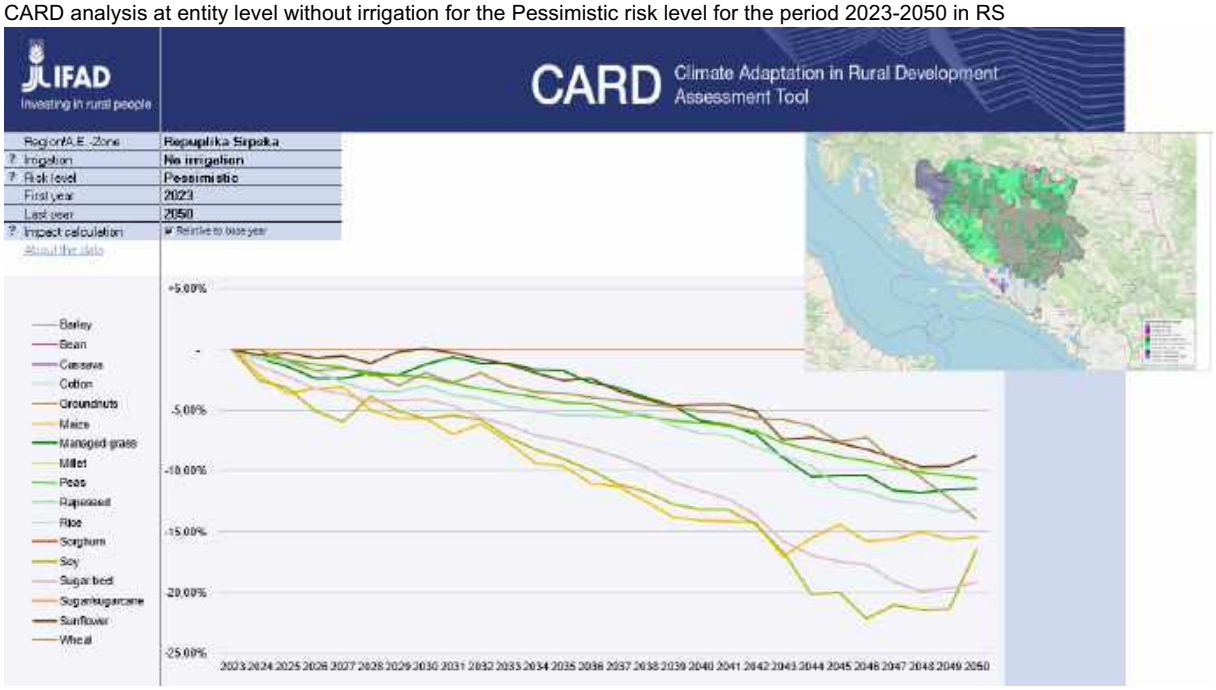
CARD analysis at national level without irrigation for the Pessimistic risk level for the period 2023-2050 in BiH



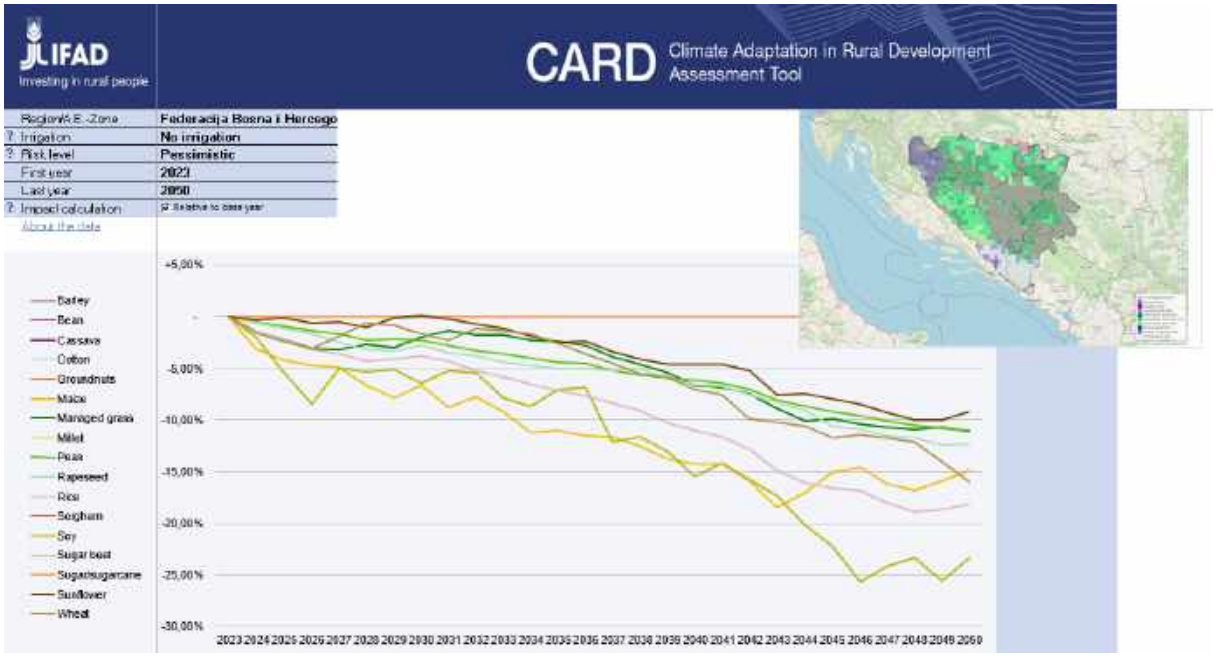
CARD analysis at national level without irrigation for the Median risk level for the period 2023-2050 in BiH



CARD analysis at entity level without irrigation for the Pessimistic risk level for the period 2023-2050 in RS



CARD analysis at entity level without irrigation for the Pessimistic risk level for the period 2023-2050 in FBiH



Climate Vulnerability analysis in BiH for geographic targeting

464. IFAD conducted a vulnerability analysis to assess BiH's vulnerability to climate change. Vulnerability refers to the propensity of exposed elements to suffer adverse effects when impacted by hazard events. The analysis is based on official statistics and data[124], improved with additional data[125] and analyses to increase the evidence base and knowledge on how climate change affects rural populations. Climate vulnerability is defined as a function of exposure, sensitivity, and adaptive capacity:

- **Exposure** is typically conceptualized as the type and intensity of the hazard event affecting a system.

[124] Committee on emergency, PPRC, NDC, IPCC
[125] Remote sensing analysis undertook by IFAD and EO4SD Atlas.

- **Sensitivity** is the predisposition of a system to suffer harm, loss, or damage as a consequence of a hazard event.
- **Adaptive capacity** is defined as "the ability of a system [human or natural] to adjust to climate change (including climate variability and extremes) to moderate potential damages, to take advantage of opportunities, or to cope with the consequences' (Intergovernmental Panel on Climate Change (IPCC) Working Group 2, 2001).

465. Climate vulnerability and the size of affected populations is location specific and derives from unique interactions of different biophysical and socioeconomic variables so that different levels of vulnerability characterize different places. The indicators used to assess exposure, sensitivity and adaptive capacity were chosen on the basis of the socio-economic, climatic and environmental analysis presented in section I. A. of the project proposal. These indicators are presented in the below table and in the below section "Mapping of Climate Vulnerability":

Exposure	Sensitivity	Adaptive Capacity
• **Storm** - Daily heavy rains (number of events; >20mm/day; 1981-2022) • **Drought** - Trend of Standardized Precipitation-Evapotranspiration Index – SPEI (1981-2021). • **Temperature**-Trends of Min temperature in cold months (Nov-Apr) 1958-2021	• **Erosion** - Revised Universal Soil Loss – RUSLE (<200tn/ha/year) • **Rural Population** (<250 hab/km^2) • **Poverty** - Human Development Index • **Agriculture** - Presence of agricultural land	• **Electricity** - Proximity to main electric lines • **Youth** population (<35y) • **Access** - Proximity to main roads

466. Natural provide vital services including water, forest, carbon storage and cultural values. People in and around rural areas depend on these services for livelihood, income generation, food, health and wellbeing. As presented below, the main direct impacts of climate change are precipitation changes such as erratic rainfall, drying up springs and more frequent storms and increasing flood weather induced by the increasing heavy precipitation events. The main indirect impacts are the decrease in pollinator diversity and the climate induced hazards such as landslides and mudflows. As a results of these impacts, the conditions of the ecosystems are altered, decrease in crop yield can occur (see above CARD analysis). Climate change is likely to lead to a decrease in quality and quantity of agricultural products which will result in vulnerable households falling further into poverty and lead to food, nutrition and health insecurity with related outmigration.

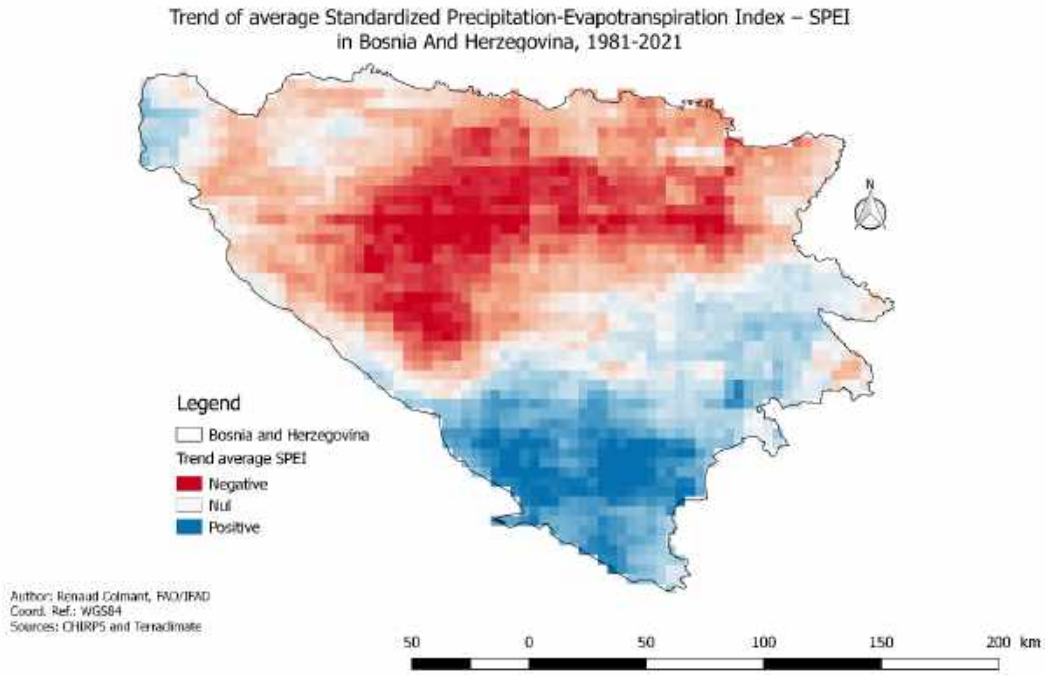
467. **Exposure**. Analysis of historical climate trends shows that the country has experienced considerable warming in its climate over the past century, with an acceleration over the past 50 years. The minimum temperature is the one with the highest increase in time and is particularly affecting the North-west and the South of the country with higher temperature in winter and in early spring (associated with an early onset of vegetation, putting crops at risk in case of late frost).

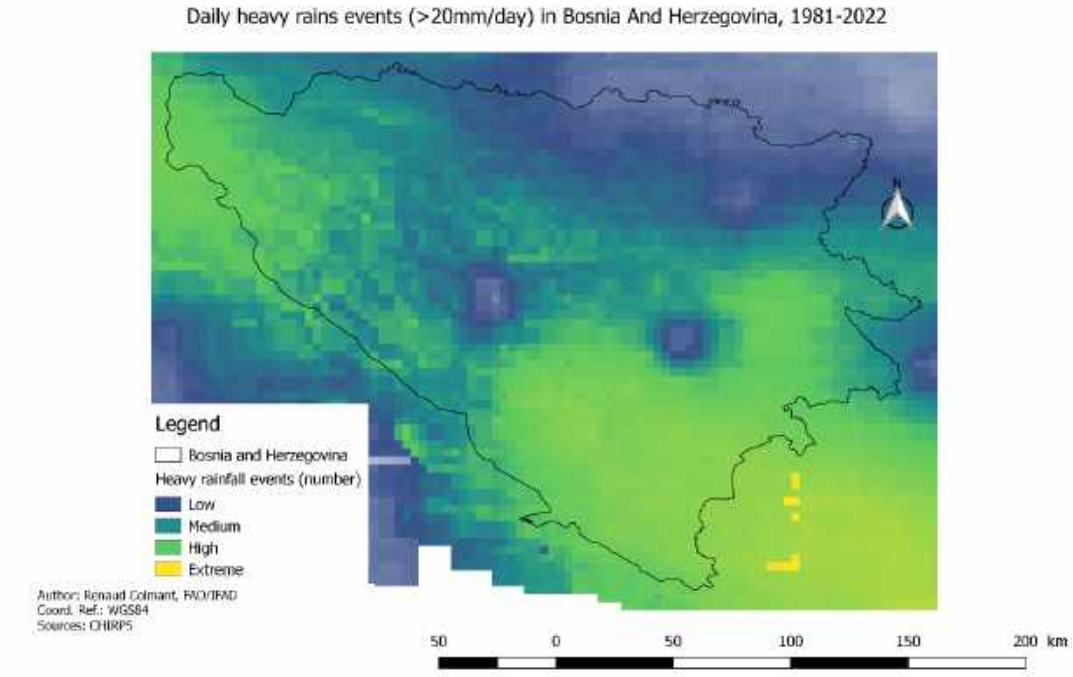
468. Climate change in Bosnia and Herzegovina (BiH) is manifesting through a series of concerning trends in precipitation patterns, with implications for both drought and heavy rainfall events. While there has been a slight upward trend in annual precipitation over the past few decades, the distribution of rainfall across the country is not uniform. Specifically, a troubling negative trend in precipitation during the months of March, April, June, and October raises significant concerns about water availability.

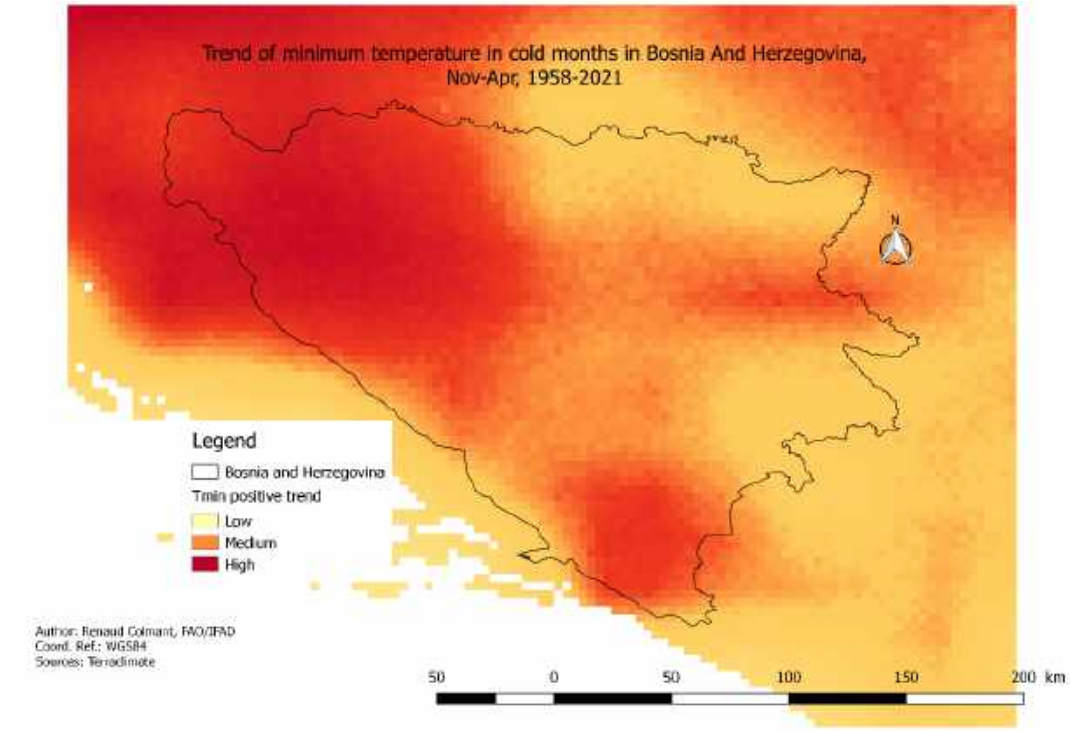
469. Moreover, there has been a notable increase in the frequency of heavy precipitation events, particularly from March to August, since 1981. This change in the distribution of precipitation, with concentrated events during specific periods of the year, adds a layer of complexity to the overall precipitation scenario in BiH. Geographical variations further contribute to distinct impacts, with the central-eastern part experiencing a decrease in precipitation during the spring months, while the north-west faces challenges during the summer months when precipitation levels tend to decline.

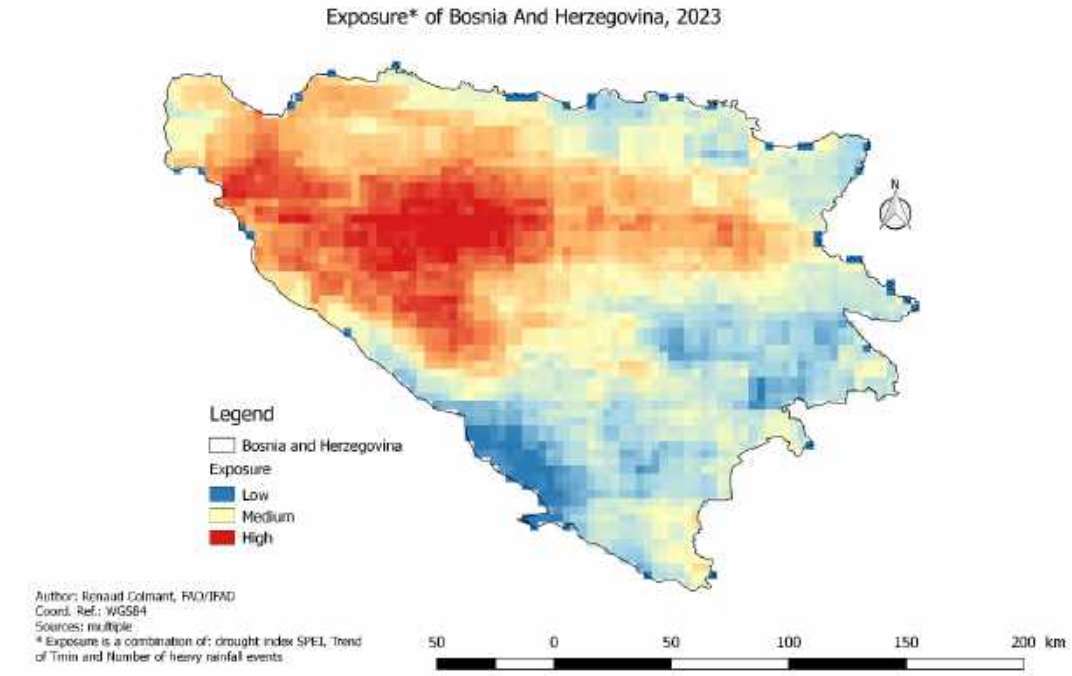
470. The analysis of the drought index (SPEI) since 1981 reveals an alarming trend of increased frequency of drought occurrences, particularly since 2010. This trend is not uniform across the country,

with certain regions, including Canton 10, Banja Luka, Doboj, Foca, Herzegovina-Neretva, Posavina, West Herzegovina, and Sarajevo, facing adverse effects on groundwater reserves and overall water availability. These prolonged drought periods pose a severe challenge to the affected areas, impacting agriculture, water supply for communities, and the socio-economic well-being of the population. Future climate scenarios are following similar trends, further aggravating system exposure as presented above.





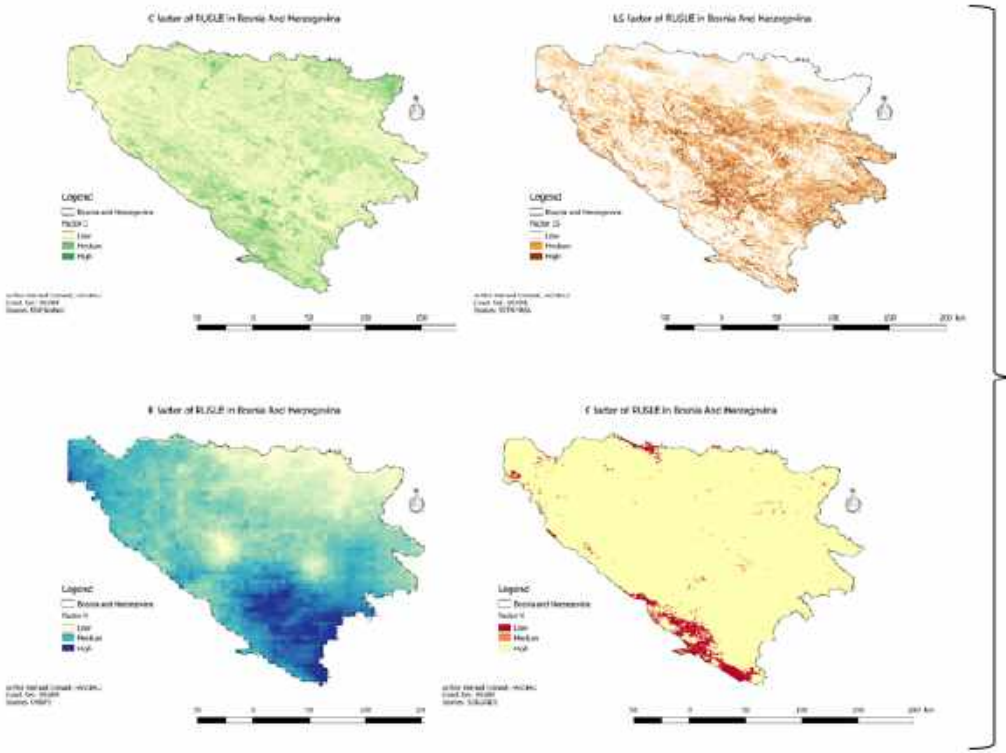


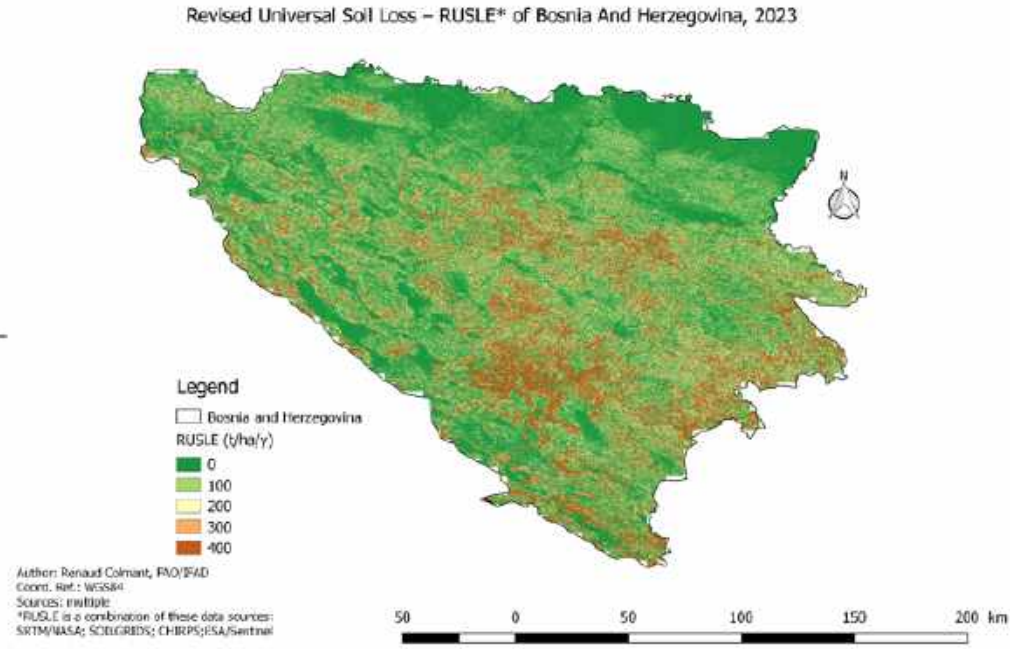


471. **Sensitivity**. Sensitivity to climate change impacts in BiH exhibits variations across different regions, with particular challenges in several hotspot areas (see Sensitivity map below).

472. An in-depth study of soils in BiH, utilizing the Revised Universal Soil Loss Equation (RUSLE), has allowed for the identification of areas prone to erosion and landslides with high precision. Soil erosion, influenced by both natural and anthropogenic factors, is observable throughout the country, particularly in the mountainous regions. The patterns of erosion correlate with rainfall and are influenced by factors such as vegetation cover and soil conservation practices, including forests, agroforestry, and physical infrastructure.

473. Given that sensitivity is intricately linked to the socio-economic context, the analysis incorporates the Human Development Index. This index is cross-checked with demographic, including the presence of agricultural land and the rural population, which tends to be more vulnerable than the urban population to climatic shocks. Understanding the specific sensitivities of different regions in BiH is crucial for developing targeted climate adaptation strategies that address the socio-economic conditions and environmental characteristics unique to each area.



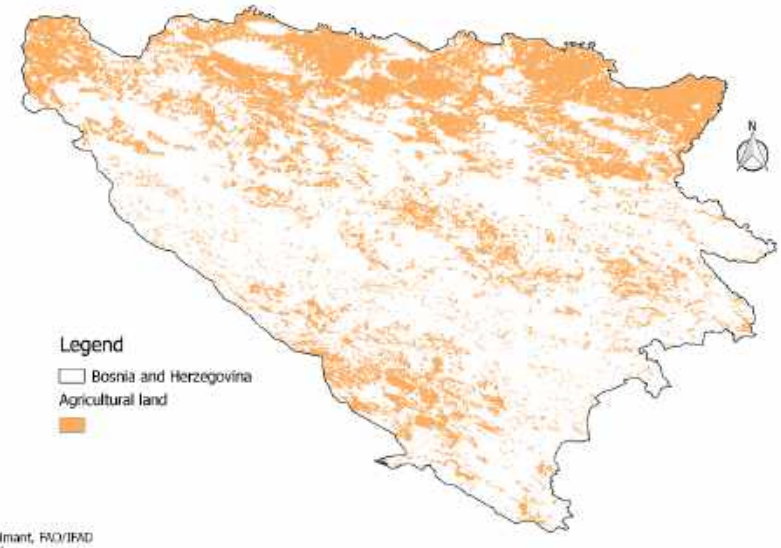


RUSLE – EU Joint Research Center (JRC):

https://web.jrc.ec.europa.eu/policy-model-inventory/explore/models/model-rusle2015/

factor P=1

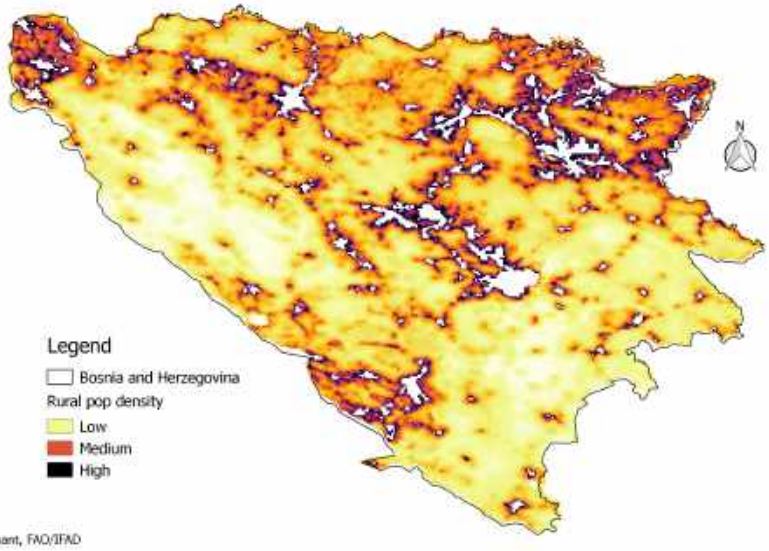
Agricultural land in Bosnia And Herzegovina, 2018



Author: Renaud Colmant, FAO/IFAD
Coord. Ref.: WGS84
Sources: ESA/CCI

50 0 50 100 150 200 km

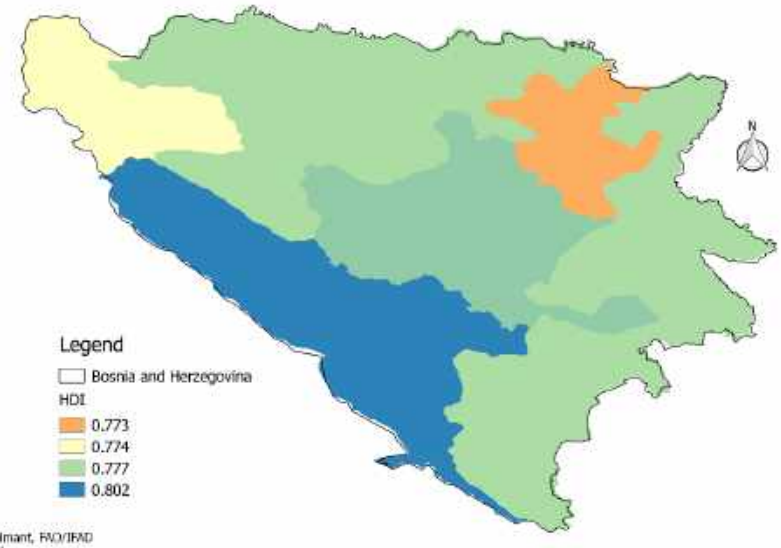
Rural Population* in Bosnia And Herzegovina, 2020



Author: Renaud Colmant, FAO/IFAD
Coord. Ref.: WGS84
Sources: Worldpop
* <250hab/km2

50 0 50 100 150 200 km

Human Development Index in Bosnia And Herzegovina, 2021



Author: Renaud Colmant, FAO/IPAD
Coord. Ref.: WGS84
Sources: DGL/UNDP

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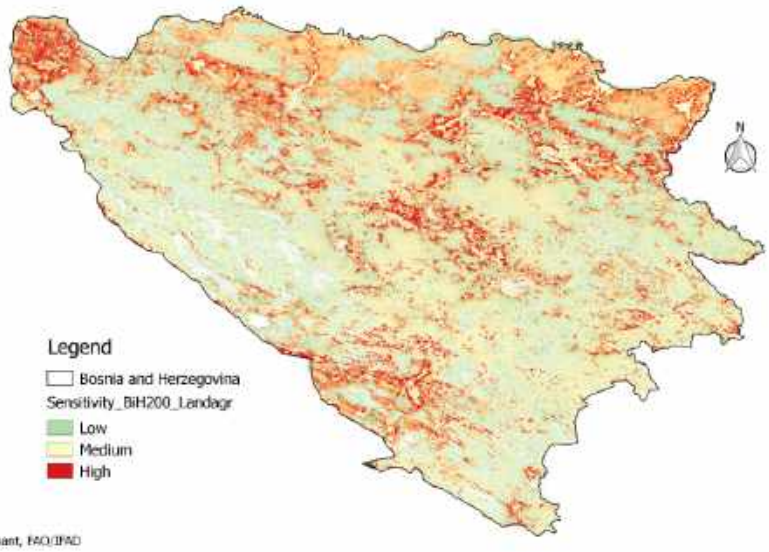
Sensitivity to climate change* in Bosnia And Herzegovina, 2023

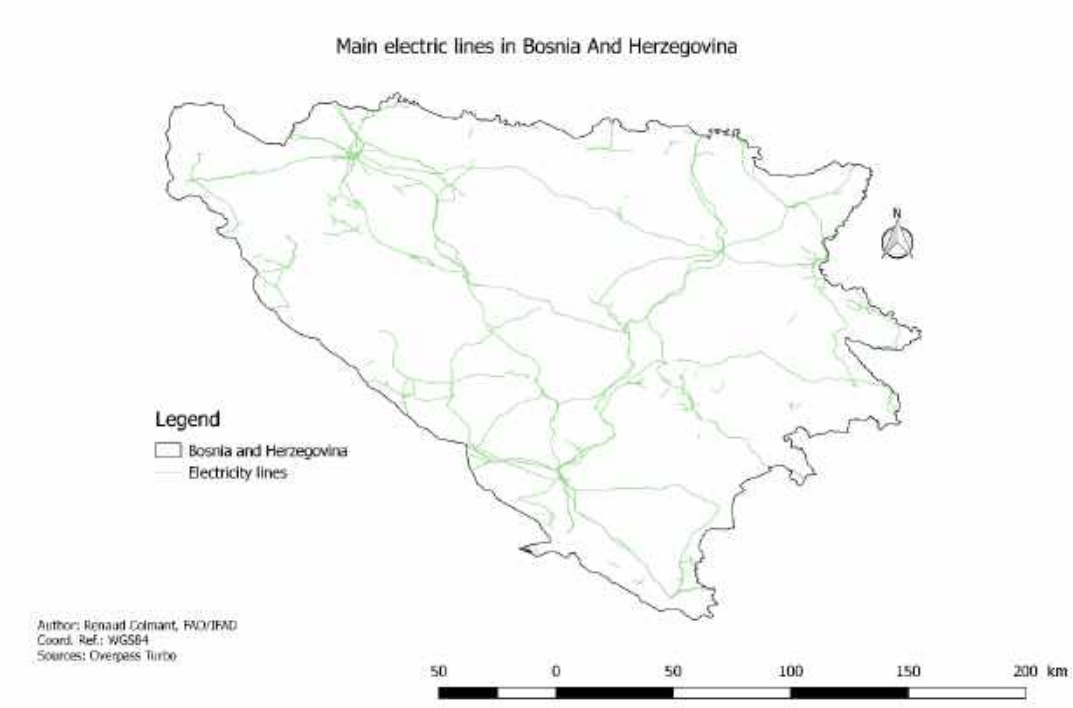


Author: Renaud Colmant, FAO/IPAD
Coord. Ref.: WGS84
Sources: multiple
* Sensitivity is a combination of: RUSLE (<200tn/ha/year), Rural Population (<250 hab/km2), Human Development Index, Presence of agricultural land

50 0 50 100 150 200 km

474. **Adaptive Capacity**. The ability of a system (human or natural) to adapt to climate change, including climate variability and extremes, to moderate potential damage, to take advantage of opportunities or to cope with consequences is highly dependent on the basic infrastructure and means of communication of the population (in the case of a human system).

475. In the rural areas of BiH, limited access to electricity is constraining some households' access to information and ability to communicating. In the event of a disaster (e.g. forest fire, flood, earthquake and major drought), the response will depend on the information known and shared. Adaptive capacity also depends on road connectivity. Rural areas are less well connected than the rest of the country. In the event of a climatic disaster (e.g. landslide, fire or prolonged event such as drought), access to key areas (e.g. villages, crops, and services such as schools or medical centres) is crucial for the population. For farmers, access to both crops and market is essential for their adaptive capacity. Finally, the youth population was taken as a proxy of the adaptive capacity of the population to react to climate change on the long term.

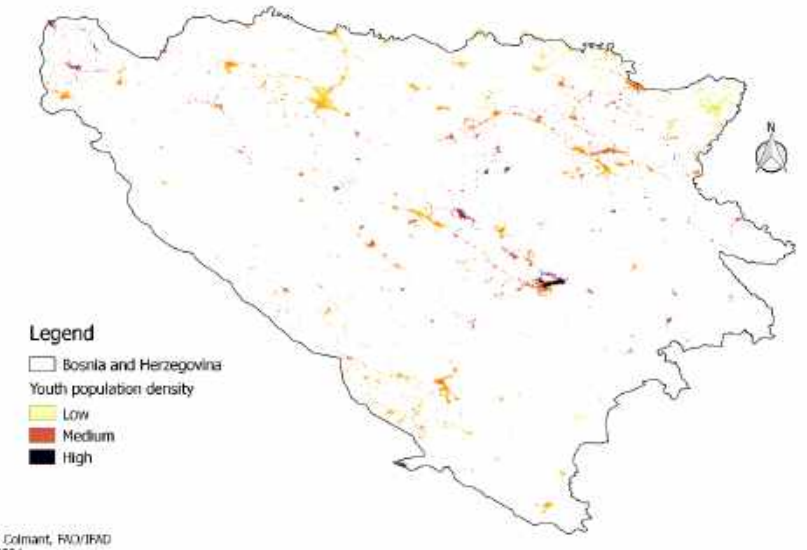


Main roads in Bosnia And Herzegovina

Author: Renaud Colmant, FAO/IRAD
Coord. Ref.: WGS84
Sources: Global Roads Open Access Data Set (gROADS)/NASA

50 0 50 100 150 200 km

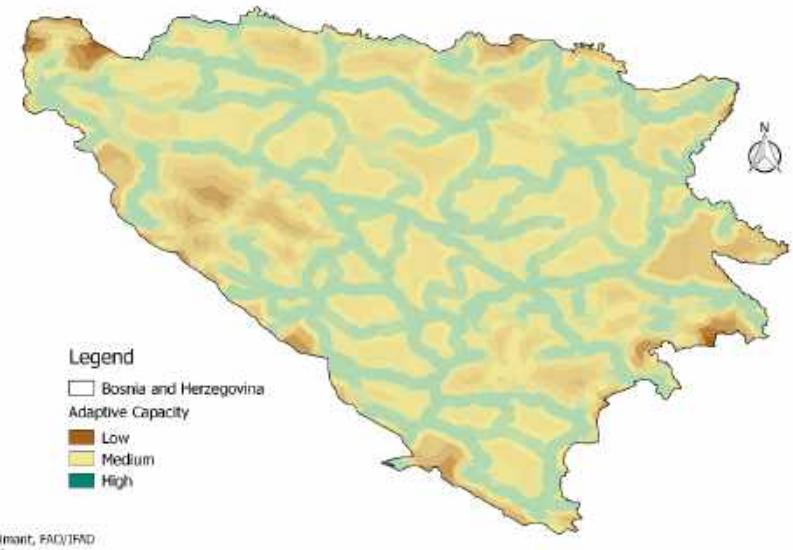
Youth population (<35y) in Bosnia And Herzegovina, 2020



Author: Renaud Colmant, FAO/IRAD
Coord. Ref.: WGS84
Sources: Worldpop

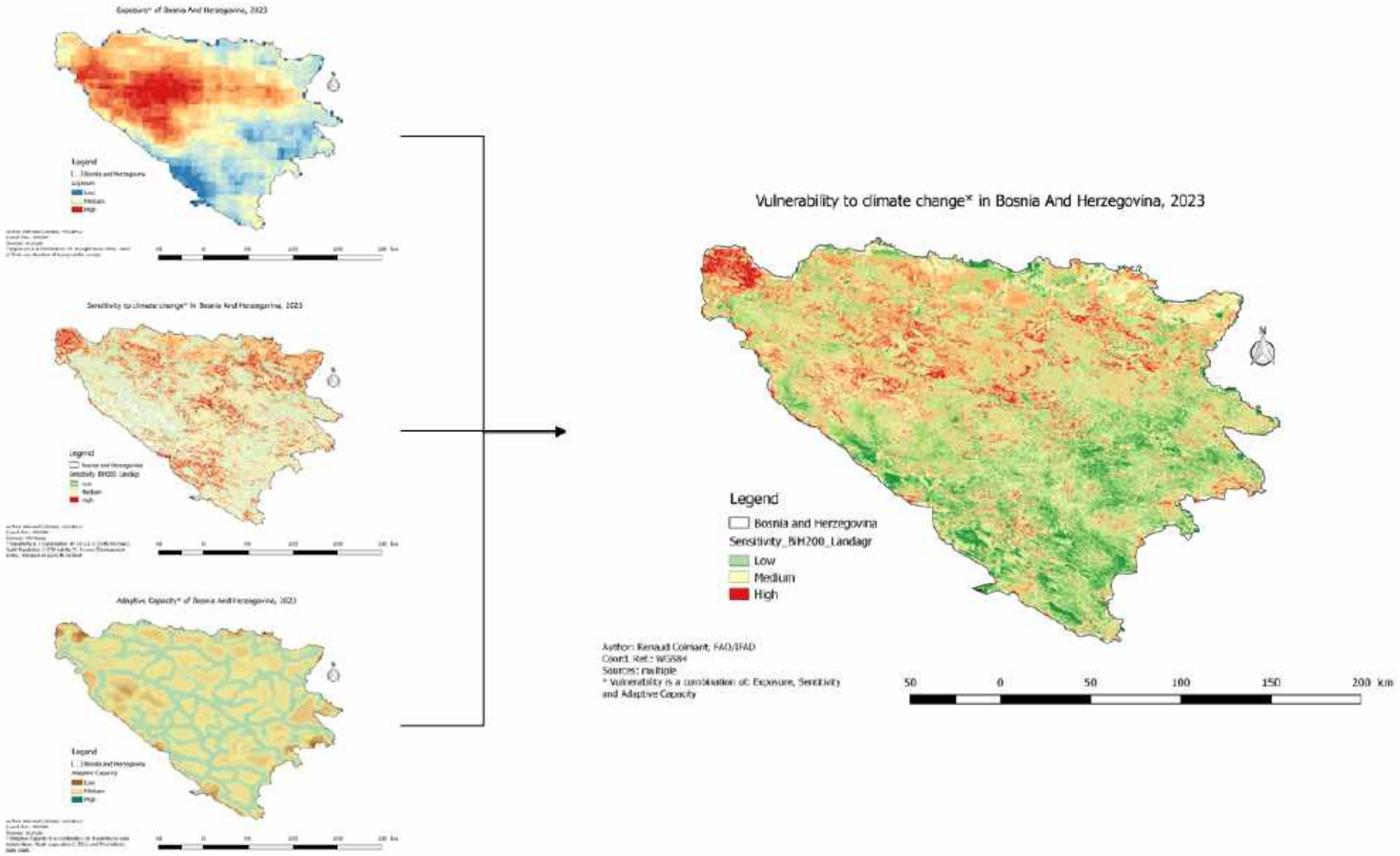
50 0 50 100 150 200 km

Adaptive Capacity* of Bosnia And Herzegovina, 2023



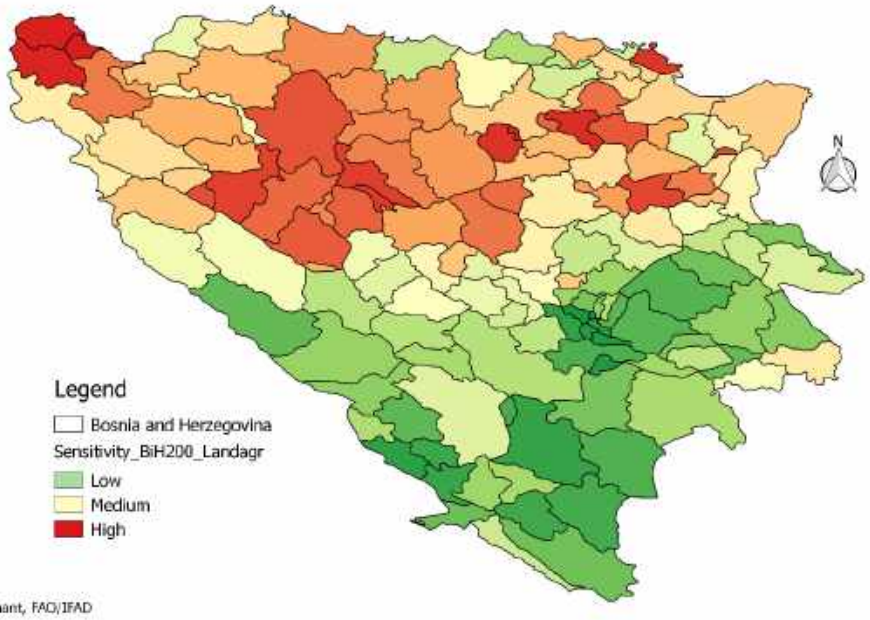
Author: Renaud Colmant, FAO/FAD
Coord. Ref.: WGS84
Sources: multiple
* Adaptive Capacity is a combination of: Proximity to main electric lines, Youth population (<35y), and Proximity to main roads.

50 0 50 100 150 200 km


Vulnerability to climate change* in Bosnia And Herzegovina, 2023
Legend
Bosnia and Herzegovina
Sensitivity_BiH200_Landagr
Low
Medium
High
Author: Renaud Coinsart, FAO/IFAD
Coord. Ref.: WGS84
Sources: multiple
* Vulnerability is a combination of: Exposure, Sensitivity and Adaptive Capacity
50 0 50 100 150 200 km

Type	Indicator	Period	Source	Link
Exposure	Daily heavy rains (number of events ; >20mm/day)	1981-2022	CHIRPS	https://www.chc.ucsb.edu/data/chirps
	Trend of Standardized Precipitation-Evapotranspiration Index – SPEI.	1981-2021	CHIRPS Terraclimate	https://www.chc.ucsb.edu/data/chirps https://www.climatologylab.org/terraclimate.html
	Trends of Min temperature in cold months	Nov-Apr, 1958-2021	CRU	https://www.uea.ac.uk/groups-and-centres/climatic-research-unit
Sensitivity	Revised Universal Soil Loss – RUSLE (<200tn/ha/year)	1981-2023	SRTM/NASA SOILGRIDS CHIRPS ESA/Sentinel	https://soilgrids.org/ https://www.chc.ucsb.edu/data/chirps https://code.earthengine.google.com/
	Agricultural land (presence)	2018	ESA/CCI	https://www.esa-landcover-cci.org
	Rural Population (<250 hab/km^2)	2020	Worldpop	https://www.worldpop.org/
	Human Development Index	2021	DGL/UNDP	https://globaldatalab.org/shdi/
Adaptive Capacity	Youth population (<35y)	2020	Worldpop	https://www.worldpop.org/
	Proximity to main electric lines	2023	Overpass Turbo	https://overpass-turbo.eu/
	Proximity to main roads	2010	Global Roads Open Access Data Set (gROADS)/NASA	https://sedac.ciesin.columbia.edu/data/set/groads-global-roads-open-access-v1

Vulnerability to climate change* in Bosnia And Herzegovina by municipality, 2023



Author: Renaud Colmant, FAO/IFAD
Coord. Ref.: WGS84
Sources: multiple
* Vulnerability is a combination of: Exposure, Sentitivity and Adaptive Capacity

50 0 50 100 150 200 km

Annex 5: Gender Assessment, Strategy and Action Plan

476. The Adaptation Fund conceptualises the Gender Assessment (GA) as a tool for identifying the differences and providing empirical evidence in the form of qualitative and quantitative data for gender roles, activities, needs, and available opportunities and challenges or risks for men and women within a particular context or sector. It is required under the GP as part of the project proposal development to ensure the integration of gender-responsive implementation and monitoring arrangements, including gender-responsive indicators. The information and data generated by the GA are the basis for possible subsequent gender mainstreaming actions throughout the project cycle. It informs the project planning and design and helps identify the gender-responsive activities needed in the implementation stage, in budgeting and in monitoring and evaluation.

477. The gender analysis is necessary in order to establish a data baseline at the project start against which implementation progress and results can be measured later. In general, the AF requires that gathering and collecting data should be gender-responsive and reflect the realities of women and men by breaking down the data not only by gender, but ideally also by age and other diversity factors such as ethnic origin and in response to questions that consider existing gender concerns and differentials.

Situational analysis

Demography, Education and Health

478. **Demographics**. Gender inequality for Bosnia and Herzegovina (BiH) is ranked 38th out of 191 countries by the UNDP 2021-22 Human Development Report and with an index of 0.136.[126] Women in BiH make up 50.8% of the general population[127] and on average women make up 41.1% of the labour force, with 22 % of women employed in agriculture (vs 13% men), 16 per cent in industry and 61% services[128]. Women in rural and remote areas are more vulnerable to poverty as they suffer most from the lack of access to and control over productive resources such as land, property, financial resources, education, marketable skills, and access to information and modern technology[129].

479. **Education**: The rate of adult literacy is 97% for women and 99% for men[130]. On the whole, rural residents have lower educational levels compared with the urban population: about 25 % fewer years of education. Women, in both rural and urban areas, have about 15% less education than men. Rural women's lack of formal education severely limits their employment opportunities, which are already fewer than for women in urban centers[131].

480. There is gender parity in enrolment rates at the primary and secondary school levels. Differences in female and male enrolment rates are observed in terms of type of secondary educational institutions, as well as in the choice of subjects that girls and boys, and women and men, pursue after their general education. In terms of educational attendance and attainment, there are differences based on both gender and on settlement type (urban vs rural).

481. The clearest gender differences in educational enrolment are in vocational education and training. The number of young women entering vocational education and training has been increasing, from 67.5 % of all female secondary students in 2010 to 70 % in 2018 (*European Training Foundation, 2019*).

126 UNDP (2022), The 2021 - 2022 Human Development Report (https://hdr.undp.org/content/human-development-report-2021-22)
127 World Bank (2022) https://data.worldbank.org/indicator/SP.POP.TOTL.FE.ZS?locations=BA (accessed Nov. 2023)
128 ILOSTAT (2019) https://ilostat.ilo.org/data/ (accessed Nov 2023)
129 UNWOMEN (2021): Country Gender Equality Profile (BiH).
130 World Bank (2021) https://data.worldbank.org/indicator/SE.ADT.LITR.MA.ZS?locations=BA
131 FAO- UNWOMEN (2021) National Gender Profile of Agriculture and Rural Livelihoods

However the female employment rate for VET graduates is considerably lower than it is for male VET graduates (only 31.1 % for women compared with 53 % for men)[132].

482. **Health**: Maternal mortality rates have fallen from 16 per 100,000 live births in 2000 to 6 in 2020.[133] The infant mortality rate decreased from 9 deaths in 1000 livebirths in 2000 to 5 deaths in 1000 births in 2021[134]. Life expectancy at birth, which in 2000 was 77 years for women and 71 for men, increased in 2020 to 78 and 73 years respectively[135].

483. The most problematic issue for rural communities is not necessarily poor health indicators but difficulties in accessing healthcare. According to FAO-UN Women gender profile[136] limited access to healthcare refers to the distance between rural settlements and healthcare providers, and particularly to specialized and preventative healthcare that women need (for example, gynecological medicine or cervical and breast cancer screening). Women in rural areas are disproportionately represented among those who are not in formal work or education, and they therefore often fall outside of health insurance schemes.

484. The area of healthcare is particularly challenging for women with disabilities, as health professionals are rarely educated on how to provide care to them, and they cannot always receive proper medical examinations, due to the lack of the necessary equipment. Women with disabilities who live in rural areas face even greater difficulties in acquiring proper medical care, as health centers are located in the city, and proper transport is not available[137].

Food and nutrition security

485. In terms of food security, Bosnia and Herzegovina has low levels of undernourishment, and levels have decreased from 3.2 % of the population in 2004 to less than 2.5 % in 2018[138]. However, Bosnia and Herzegovina does exhibit some negative trends in terms of the relatively high prevalence of both stunting (8.9%) and overweight (17.4) in children younger than five years, which are signs of the double burden of malnutrition. Overweight and obesity rates have also increased among adults over the last 15 years, reaching 19.4% with differences appearing for women and men, and children and adults.

486. Rates of overweight and obesity have increased for all groups, but the rates of overweight are higher for males than for females. The overall increasing overweight and obesity rates could be related to factors such as over consumption of calorie dense foods, lack of knowledge about nutrition, and a decline in physical activity. Women also have a particular malnutrition burden of anemia (24% women in reproductive age), which indicates the existence of micronutrient deficiencies. Since 2000, levels of anaemia have decreased minimally for pregnant women (from 31% to 27%)[139].

487. The results of a survey conducted by UNDP[140] among 175 individuals and 250 households country-wide revealed that the current economic instability caused a rise in food insecurity among the most vulnerable as compared to the pandemic years. As many as 77 % of respondents are at risk of food deprivation and food insecurity, while 32 % of respondents define themselves as “food insecure,” due to frequent food deprivation. The assessment also showed that persons who are left out of the social

132 Ibidem
133 https://data.worldbank.org/indicator/SH.STA.MMRT?locations=BA (Accessed Nov 2023).
134 https://data.worldbank.org/indicator/SP.DYN.IMRT.IN?locations=BA (Accessed Nov 2023)
135 https://data.worldbank.org/indicator/SH.STA.MMRT?locations=BA (Accessed Nov 2023)
136 FAO- UNWOMEN (2021) National Gender Profile of Agriculture and Rural Livelihoods. https://www.fao.org/3/cb5472en/cb5472en.pdf
137 UNWOMEN 2021, Country gender equality profile. https://eca.unwomen.org/en/digital-library/publications/2021/7/country-gender-equality-profile-bih
138 FAO, 2019. Regional Overview of Food Security and Nutrition in Europe and Central Asia. https://www.fao.org/publications/card/en/c/CA7153EN
139 World Bank 2019, https://data.worldbank.org/indicator/SH.PRG.ANEM?locations=BA
140 A rapid country-wide assessment was conducted in 2022-23 by UNDP with a goal to get a deeper understanding of the level of food deprivation among the vulnerable population groups, including those who fall “between the cracks” of the social protection system and are left to their own devices in relation to daily food intake.

protection system are at a higher risk of chronic food insecurity than those in the system and are left to their own devices when it comes to securing the next meal[141].

488. For all sub-regions of Europe and Central Asia, women, more often than men, experience food insecurity at severe or moderate levels. The gender gap in food security is greater among the less-educated, poor and urban populations, and for women discrimination and marginalization also play a role[142].

Gendered division of labour

489. According to the 2019 Labour Force Survey, unemployment affects women to a greater extent in B&H: the average unemployment rate is 15.7% (13.6% men; 18.8% women), particularly affecting the 15–24 cohort (31.3% for young males and 37.9% for young females). The employment and activity rates show a similar gender difference: 35.5% women and 42.1% men.

490. Low activity and employment rates are key features of the labour market in Bosnia and Herzegovina. Although significantly reduced in recent years, albeit mainly as a result of emigration flows, unemployment is still extremely high (15.7%). According to all labour market indicators, women are in a less favorable position compared to men (17 and 11 % respectively).

491. Among employed women (26,7 % employment rate), 13 % of women are in agriculture; 19 % in industry and 67% services (WB, modelled ILO estimate 2021)[143]. Informality is especially high in the agricultural sector. Much of the day-to-day farm work is performed by women, with contributions from other family members. Rural men also work informally, mainly in construction. Both women and men engage in informal market trade and service sector work, and handicrafts, and women also undertake informal cleaning and childcare jobs. For women, however, informal and unpaid work often overlap. Their contributions to family-owned businesses and farms, which they undertake in addition to domestic chores, tend to be both unregistered and unpaid, and accrue no benefits (such as pensions, health insurance, maternity and childcare leave).

492. When it comes to achieving gender equality in the economic environment in BiH, major challenges pertain to *gender-based discrimination in employment and the labor market.* Women still experience discrimination in hiring procedures, promotion, and termination of employment. In addition, *the burden of unpaid domestic work and lack of accessible care services* restricts women from taking up paid jobs, pursuing advanced education and skills training, and participating in public life.

493. Time poverty is a material factor that affects women´s opportunities for being active in the labour market and with capacity to generate income and wealth as women traditionally also are the ones in charge of domestic chores and taking care of family dependents in particularly children and elders. The UN Women baseline study on care economy indicates that women use about 11.7 hours a week taking care of children. This is followed by activities such as cooking, baking and preparing meals, on which women spend 10.5 hours a week. Working women spend about 9.5 hours on activities such as cleaning and tidying up the house, apartment or yard. When it comes to laundry, ironing and sewing, women use an average of 5 hours per week on these activities[144].

494. Women's unpaid domestic and care work has long been recognized as a driver of gender inequalities, and has a direct link to wage inequalities, lower income, poorer education outcomes and physical and mental health stressors experienced by women. The Committee on the Elimination of Discrimination against Women (CEDAW) notes with concern that rural women and girls bear a

141 UNDP, 2023, Rapid food security assessment for the vulnerable population groups in Bosnia and Herzegovina. https://www.undp.org/bosnia-herzegovina/publications/rapid-food-security-assessment-vulnerable-population-groups-bosnia-and-herzegovina
142 FAO- UNWOMEN (2021) National Gender Profile of Agriculture and Rural Livelihoods.
143 WB, 2021 https://data.worldbank.org/indicator/SL.IND.EMPL.FE.ZS?locations=BA&view=chart
144 UNWOMEN, 2023, Baseline study on care economy in BiH.

disproportionate burden of unpaid work at home and in agriculture, which prevents many girls from completing secondary education. The Committee is concerned about the limited focus on the economic empowerment of rural women in rural development strategies and plans of the Federation of Bosnia and Herzegovina, as well as their participation in all spheres of life[145].

495. **Trainings:** the capacity of women to attend trainings and enhance their skills based on labour market requirement is constrained as extensions services favor the head of the households. This prevent them from competitively engaging in the labour market. On the other hand, private business service providers have limited awareness of the importance of targeting women.

496. **Women in agriculture:** men and women have specific responsibilities on the farm, based on skills, physical ability, and traditions, while other tasks are done by both women and men, depending on availability and family structure.

497. Women are more often engaged in manual labour and tasks at the lowest end of value chains, such as harvesting fruit and vegetables, milking cows and preparing agricultural products for sale. They are less involved in sales and marketing that involve greater decision-making about and control over income earned from agriculture. Furthermore, women have limited access to appropriate gender sensitive and time-saving agricultural technology, equipment and machinery.

498. In livestock, for instance, care and milking are joint tasks, while milk processing is typically done by women. Similarly, cropping decisions are usually made jointly, but women are more likely to decide on the kinds of vegetables grown in greenhouses. Typical female tasks identified in high value crop production are seedling preparation, fertilizing, weeding, disease control, harvesting, grading, and conditioning, as well as management of the greenhouse drip irrigation system.

499. Women's on-farm responsibilities have broadened with an increase of males seeking off-farm work. In addition to working on their family farm, male family members pursue employment off-farm, where income is typically higher, often on a permanent basis near the home, but also seasonally, or abroad with long absences from the farm. Women in those households often take on additional farm responsibilities that typically would have been carried out by men.

Gender Based Violence (GbV)

500. Gender-based violence impacts on a large number of women and girls in Bosnia and Herzegovina, and it is an issue that has received considerable state attention. As a member of the Council of Europe, Bosnia and Herzegovina was among the first countries to ratify the Convention on preventing and combating violence against women and domestic violence (the Istanbul Convention). The country has also adopted the Law on Protection against Family Violence, as well as a National Action Plan for ending violence against women and trafficking of women. In addition to the gender specific laws, the state level Law on Prohibition of Discrimination on different grounds, employment and social protection laws offer de jure framework of equal opportunities. In July 2015, Council of Ministers adopted the Framework Strategy for Implementation of the Istanbul Convention about prevention and fight against violence against women and domestic violence 2015-2018- but little is done on its implementation. The Committee on the Elimination of Discrimination against Women in the concluding observations on the sixth periodic report of Bosnia and Herzegovina (2019) remains concerned about the continued high prevalence of gender-based violence against women, including domestic violence[146].

[145] CEDAW, 2019, Concluding observations on the sixth periodic report of Bosnia and Herzegovina https://www.ohchr.org/en/documents/concluding-observations/cedawcbihco6-committee-elimination-discrimination-against-women

[146] CEDAW, 2019, Concluding observations on the sixth periodic report of Bosnia and Herzegovina https://www.ohchr.org/en/documents/concluding-observations/cedawcbihco6-committee-elimination-discrimination-against-women

501. An OSCE-led survey on violence against women from 2019[147] shows that 48 % of women in Bosnia and Herzegovina have experienced some form of abuse, including intimate partner violence non-partner violence, stalking and sexual harassment, since the age of 15. The rate of partner violence is at 35 %. The most common psychological consequence of violence against women is fear, reported by 55 % of women survivors of current partner violence and 70 % of survivors of previous partner violence. Despite this, 84 % of women do not report violence to the police, and when asked why 38 % said that it was too minor and that they considered it to be a family matter (33%).

502. CEDAW notes that despite the legal, policy and institutional measures taken by the State party to address discriminatory stereotypes, there remains concerns to be addressed: Underreporting of cases of gender-based violence, including domestic violence, by women and girls owing to social stigma and their lack of trust in the law enforcement authorities; (b) The fact that judges, prosecutors, lawyers, police officers, health professionals and staff of the centres for social welfare who work with victims of gender-based violence lack specialized knowledge on gender issues; (c) The low prosecution and conviction rates in cases of non-physical violence against women, such as psychological violence, and the lack of disaggregated data on all forms of gender-based violence.

503. Violence against women is also relevant for planning and policymaking around agriculture, because domestic violence has a direct link to food security and poverty. Women who experience violence in the home are disempowered and economically dependent, leading to further household poverty.

Access to Resources

504. **Land:** Around 44 % of the territory of Bosnia and Herzegovina is agricultural land (22 million hectares out of a total of 51.2 million hectares) and an additional 43 % is forest area. Of the agricultural land in Bosnia and Herzegovina, 46.5 % is arable (the rest is pastures, meadows, orchards and vineyards). The approximately 1.5 million hectares of arable land is distributed between approximately 364,000 agricultural households; on average, each household has 4.20 hectares of arable land. Cultivated land is primarily used for growing cereals (60 %), followed by forage crops (24 %), vegetables (13 %), industrial crops (2.7 %), aromatic and medicinal plants (0.2 %) and berries (0.08 %).

505. There is a significant gender gap in land and property ownership in favour of men in Bosnia and Herzegovina. From 2003 to 2013, men consistently represented over 70 % of land owners, with a marginal increase in women's land ownership from 24.7 % to 26.8 % across the decade. The situation has improved since 2013, however, which could be a result of varied initiatives to facilitate land registration processes. In 2019, 38.3 % of land registry records indicated women as owners or co-owners. Only 12 % of women in rural areas are the sole owners of a dwelling; the situation varies slightly in urban areas where women constitute 19 % of sole owners[148].

506. Women remain the minority of registered land owners, and they also tend to have (or to have use of) smaller parcels of land. According to farm registry data, the average size of the agricultural plot for female-headed households is 1.61 hectares, compared with 2.60 hectares in male-headed households. The pattern is similar in Republika Srpska where the average household farm in the official registry includes 4.47 hectares of agricultural land, but the average FHH has only 2.75 hectares.

507. Women's property ownership rights are enshrined in the law, but in practice, traditional attitudes prevail in which property is inherited by male family members. Traditional patrilineal patterns of property ownership mean that women in rural areas are heavily engaged in farming but have limited rights over the very land they are using, in terms of being able to sell/rent land or other property, or use it as collateral for loans. This leaves them in an economically vulnerable and dependent position.

[147] OSCE. Well-Being and Safety of Women – Bosnia and Herzegovina Results Report, 2019. https://www.osce.org/secretariat/423470

[148] FAO- UNWOMEN (2021) National Gender Profile of Agriculture and Rural Livelihoods.

508. **Water:** Virtually all households use improved sources of drinking water, most often piped into the home. This pattern differs little between rural and urban areas, but a few rural households use water piped into their yard, water from wells and springs or water piped to a public tap. Almost all rural households use private improved sanitation facilities.

Gender-based Power Structures

509. Women are still at a disadvantage in terms of participation in positions and decision-making forums. Women remain excluded from major political processes, which has been the trend since the signing of the Dayton agreement that also characterizes the current process of the European integrations. Despite the fact that the legal framework is set up to include women in the decision-making processes, in practice women remain underrepresented both in decision-making positions and in the main bodies of political parties. For example, although the Law on Gender Equality prescribes the 40 % threshold for the underrepresented sex in all government bodies (legislative, executive and judiciary) in Bosnia and Herzegovina, while the Election Law of BiH obliges political parties to include 40 % of women on their electoral lists, women make up around 20% in all legislative and executive bodies.

510. **Political and Public Life**: Concerns about participation of women in political and public life are also expressed by the Committee on the Elimination of Discrimination against Women (2019). Of major concern are: (i) the underrepresentation of women in parliaments and governments at the national and local levels despite the minimum quotas of 40 per cent (ii) the lack of training on political leadership, negotiation and campaigning skills for women candidates and the limited representation of women in the State party in the foreign service, the judiciary and international organizations.

511. In the 2016 local elections, although women voted in equal proportion as men and they made up to 41 % of candidates for the local councils, only 18.2 % were elected. The trend of women not running for mayoral positions continues in 2020 as only 29 women were candidates for 2020 Local Elections, i.e. 6.8 % of the total number of candidates.

512. Results of the October 2018 general elections in BiH resulted in insufficient representation of women. At the level of Bosnia and Herzegovina, in the Parliamentary Assembly of Bosnia and Herzegovina, the House of Representatives, out of 42 representatives only 11 are women (26 %) and in the House of Peoples out of 15 just 3 are women (20 %); at the level of the House of Representatives of the FBiH Parliament, out of 98 representatives only 25 are women (25.5 %); and at the level of the National Assembly of the RS out of 83 representatives only 14 are women (16.8 %).

513. **Civil society organizations (CSOs)**: They offer rural women opportunities to unite around common interests. Women's CSOs have a long history in Bosnia and Herzegovina, and such organizations are diverse, undertaking lobbying, conducting research and providing services. There are also examples of CSOs that represent specific groups of women, and which focus on rural development. Civil society organizations cooperate and interact with local government in various ways (for instance, in the financing of CSO-led projects, co-organizing educational and public events, and providing support for specialized services, such as safe houses for victims of domestic violence). However, the influence of CSOs on the broader reform agenda concerning gender equality, rural development or support for women in agriculture is not enough.

514. **Women in farmer's organizations.** On average, women are significantly less likely to be members of Producers Organizations. The number of women cooperatives have increased, however, they are less likely to be vertically integrated into value chains. Female entrepreneurship is very low, explained by women's preference for formal and public employment, lack of availability to childcare services, no access to maternity leave and benefits if in self-employment, social attitudes discouraging women to open a business, limited skills and confidence. The situation is reversed for female headed households; i.e. better participation of women in production as well as marketing functions since the ownership of land and other farms level productive assets are in the name of the women.

Differentiated Climate Change Impacts on Gender

515. An increasing body of research has shown that climate-related disasters have impacted human populations in many areas including agricultural production, food security, water management and public health. The level of impacts and coping strategies of populations depends heavily on their socio-economic status, socio-cultural norms, access to resources, poverty as well as gender. Women in general, especially those living in rural areas are affected by climate change related risk and frequent disasters (floods and drought), particularly those dependent on agriculture.

516. Since rural women suffer from a lack of appropriate social services to enable their participation in the labour market, they are more likely to spend time carrying out unpaid activities within the household. The poor and disempowered people are generally more vulnerable to climate change due to limited access to resources needed for adaptation to disruptions in the immediate environment. Women are at a higher risk of poverty and have less political and socio-economic power than men. Although both men and women suffer the negative consequences of climate change, compounded social inequalities put women at a further disadvantage. Women in developing countries such as B&H are particularly vulnerable to climate change and natural disasters, since they are often poor and are usually the primary users and managers of natural resources.

517. The National Adaptation Plan (NAP) for BiH[149] highlights that women commonly face higher risks and greater burdens from the impacts of climate change in situations of poverty. They participate unequally in decision- making processes but can play a critical role in responding to climate change. It also underlines the importance of using gender indicators, such as the number of women in agricultural cooperatives or the percentage of women in innovation.

518. A gender sensitive study on the 2014 floods impact[150] demonstrates that the greatest impact of hazards on livelihoods tends to be felt in the informal economy where women make up a large part of the workforce. Besides, women tend to be less able to respond in case of emergency because of the role of caregivers they often assume in accordance with traditional gender roles. In the Western Balkans, such norms contribute to an increase in women's uptake of unpaid care work when recovering from disasters and in situations of – even temporary – displacement, which further limits their opportunities for emancipation and employment[151].

519. The Low Carbon Development Strategy of B&H (Strategy) incorporates a gender dimension stating that climate change mitigation and adaptation measures are gender responsive and will incorporate specific measures to ensure that the most vulnerable groups of the population receive adequate support. The strategy recognizes the fundamental goal of achieving equal representation of both sexes in the processes of planning, decision-making and implementation of programmes related to sustainable environment and strengthening capacities of government institutions dealing with the environment, so that a gender perspective is systematically introduced into the creation of policy on integrated protection of the environment. Risks associated with climate change threaten to reinforce gender inequalities and have the potential to erode the progress made towards gender equity.

Gender legal framework

520. The Constitution of BiH enshrines human rights and fundamental freedoms as some of the key constitutional pillars and principles, and discrimination based on sex is prohibited. Over the years there were several initiatives that have resulted in proposals for amendments of the Constitution of BiH in

[149] https://unfccc.int/sites/default/files/resource/NAP-Bosnia-and-Herzegovina%20.pdf (Accessed November 2023)
[150] Climate change and natural hazards in Bosnia and Herzegovina: a gender equality, social equity and poverty reduction lens, SEI 2021: https://www.sei.org/wp-content/uploads/2021/10/bih-esap-db-gesep-and-climate-change-final-eng.pdf

relation to gender equality. Furthermore, an analysis of the gender legal framework is presented in the table below summarising gender-related laws, policies and international agreements.

521. Progress of Bosnia and Herzegovina in respecting and promoting gender equality is highlighted in a series of international commitments and in Bosnia and Herzegovina's (BIH) legal and policy frameworks. Gender institutional mechanisms and legal provisions guaranteeing women's rights and gender equality are largely in place. Normative achievements that influence the institutional practice in promoting gender equality in BIH include Gender Equality Law (GEL), amendments to the Election Law instituting candidacy quotas, ratification of the Istanbul Convention and adoption of the strategic framework for implementation of the Convention, adoption of the recently expired BIH Gender Action Plan and Action Plan for the implementation of UNSCR 1325, both expected to be revised in the coming period.

522. Bosnia and Herzegovina (BiH) is in the process of acceding to the European Union (EU) and over the past years has successfully set up the legislative and policy framework for gender equality in a pre-accession perspective. BIH is a signatory to a number of important and binding international documents, which guarantee the equality of men and women and prohibit gender-based discrimination. Yet, the main challenge in this sense mainly consists with the lack of an effective implementation of the legal and policy framework on gender equality, which negatively impacts on the real equality experienced by women and men, as well as on development outcomes in general.

Gender Legal Framework	
Laws	
The Law on Gender Equality in BiH[152]	The Law on Gender Equality in BiH (GEL) was adopted in 2003 and was amended 2009. In 2010, an official consolidated version of the Law was published, which is the version that is currently in force. In its structure, GEL is mainly based on CEDAW. The main aim of GEL is to regulate, promote and protect substantive gender equality and to guarantee equal opportunities to all citizens, in public as well as private life. The Law has a dual function – it prohibits discrimination of the grounds of gender (and sexual orientation), and it establishes legal standards in the area of gender equality. The Law mandates that equal representation of men and women exists when one sex is represented with at least 40 % in the public sector bodies at all levels of authority in Bosnia and Herzegovina (state, entity, cantonal and municipal levels). This provision applies to legislative, executive, and judicial branches, political parties, legal persons with public authorities and others that work under the auspices of the state, entities, cantons, cities, and municipalities
Law on Protection from Domestic Violence	Laws on Protection from Domestic Violence adopted in both the Federation of Bosnia and Herzegovina and in the Republika Srpska further enhance protection of women and girls from family violence through the adoption of special protective measures. The Law on Protection against Domestic Violence was adopted in May 2005 in the Federation of Bosnia and Herzegovina and in December 2005 in the Republika Srpska and later amended to aligned to Istanbul Convention. The law contains provisions regarding protective measures against family violence (i.e. by the use of protection orders), and sanctions for perpetrators of violent actions. The purpose of this law is to ensure the prevention and suppression of domestic violence, to ensure that efficient measures are taken to persuade the perpetrators do not commit violence again, to remove the consequences of the violence committed by prescribing protective measures, and to remove the circumstances that encourage and stimulate repeated violence in the family. The protective measures that can be prescribed against perpetrators of domestic violence

[152] According to the Law on Gender Equality in Bosnia and Herzegovina the Agency for Gender Equality of Bosnia and Herzegovina has the main coordination role in the area of gender equality. The Agency is mandated to perform following tasks within its jurisdiction (among others):Present and analyze status of gender equality in Bosnia and Herzegovina ; Determine methodology for developing report on gender equality in Bosnia and Herzegovina; Initiate and coordinate development of the Gender Action Plan of Bosnia and Herzegovina, Monitor implementation of this Law, and together with the Gender Centre of the Federation of Bosnia and Herzegovina and the Gender Centre of the Republika Srpska; Cooperate within its jurisdiction with non-governmental organizations that deal with protection of human rights and freedoms.

	are the same for both Laws on Protection from Domestic Violence in the Federation of Bosnia and Herzegovina and in the Republika Srpska.
Law on prohibition of discrimination	The Law on Prohibition of Discrimination was adopted in 2009 and amended in 2016 and its main goal is to strengthen BiH mechanisms to fight discrimination, including discrimination on the grounds of sex.
Criminal Code (2016)	In 2016, the Law on Amendments to the Criminal Code of the Federation of Bosnia and Herzegovina (FBiH) was adopted. The Article 210 “Incitement to Prostitution" is now in line with the provisions of the Criminal Code of BiH and new provisions are made in Article 210a “Trafficking in Human Beings” and Article 210b “Organized Human Trafficking”, in line with the relevant provisions of the Criminal Code of Bosnia and Herzegovina (BiH) (that criminalizes trafficking in human beings). The Law also outlines the definition of a hate crime as any criminal offence committed on the grounds of, among other, gender, sexual orientation or gender identity of another person. The Criminal Code of the RS was also adopted. Harmonized with the standards of Istanbul Convention, it includes three new criminal offences, to wit: female genital mutilation, stalking and sexual harassment. These offences have not yet been introduced in the Criminal Code of the FBiH.
The Labour Law	The Labour Law, Section 4, sub-paragraph a) regulates the protection of women and maternity in public institutions, public enterprises, associations and foundations, cross-entity corporations and other institutions assuming additional responsibilities conferred on Bosnia and Herzegovina. According to new Labour Code entered into force on 14 April 2016. Article 60(1) of that Code provides that an employer may not refuse to employ a woman on account of her pregnancy. Nor can the employer terminate an employment contract during an employee’s pregnancy or maternity leave, during the period when she may exercise her right to part-time work from the end of her maternity leave until the child has turned three years of age, or during the period when she is absent for the purpose of breastfeeding. The same rules apply to all employees, in both the public and private sectors.
Labour Law and sexual harassment	With regard to harmonization of Gender Equality Law of Bosnia and Herzegovina (GEL BiH), especially the parts related to the area of labour and employment, the Labour Laws of Federation of Bosnia and Herzegovina (FBiH) and Republika Srpska (RS), were adopted in 2016 and additionally amended in 2018. These new laws for the first time treat gender based sexual harassment, violence and mobbing and determine the legal protection for such cases. With regard to sexual harassment and gender based violence, it is determined that the employee has the right to seek protection from the employer and in case the employer does not satisfy such request, the employee can file a lawsuit to the relevant court.
Policies	
Gender Action Plan of Bosnia and Herzegovina 2018-2022	The Gender Action Plan of Bosnia and Herzegovina is a comprehensive medium-term strategy for gender equality and empowerment of women in Bosnia and Herzegovina. This strategy is based on the national legal framework for gender equality and the binding and recommended international documents, including the Sustainable Development Goals of the UN, CEDAW, Beijing Declaration and Platform for Action, and others. The goal of the GAP is to guide ministries and other institutions in mainstreaming gender equality principles in their work in accordance with the Law on Gender Equality. The BiH institutions are expected to adopt annual operation plans to enable systematic and coordinated action in the process of mainstreaming gender into the work of institutions based on the GAP. The first GAP that was implemented in the period of 2006-2011 was followed by the second GAP for the period of 2013-2017 which covered similar areas as the first GAP and placed significant focus on strengthening gender institutional mechanisms, as well as monitoring and reporting on the implementation of the GAP. The third and current GAP was adopted for the period of 2018-2022 as a document detailing strategic goals, programs and measures towards gender equality in all spheres of social life and labor with three strategic goals: (1) developing, implementing and monitoring programs for advancement of gender equality in government institutions, in accordance with priority areas, (2) establishing and strengthening the system, mechanisms and instruments for achieving gender equality, and (3) establishing and strengthening cooperation and partnerships.
Action Plan (AP) for Implementation of the UN Security Council Resolution 1325 on	The third Action Plan for implementation of the UNSCR 1325 in BiH for the period 2018-2022 was adopted in 2018 with the aim of consistent, high quality, and effective implementation of the UNSCR 1325 in BiH, and it was developed in consultation with the non- governmental organizations. The strategic objectives of the Action Plan for the implementation of the

"Women, Peace and Security",	UNSCR 1325 (2018-2022) are as follow: (1) Increased participation of women in the military, police and peacekeeping missions, including participation in decision-making places, (2) Increased human security through the prism of gender equality, and (3) Improved conditions and access to the implementation of the Action Plan on UNSCR 1325.
International Agreements	
Council of Europe Convention on preventing and combating violence against women and domestic violence 2011	BiH is amongst the first countries in Europe (2013) to ratify the Council of Europe Convention on preventing and combating violence against women and domestic violence (Istanbul Convention). Towards the implementation of the Istanbul Convention, Bosnia and Herzegovina enacted the 2015 Framework Strategy for the implementation of Istanbul Convention in Bosnia and Herzegovina for the period 2015-2018.
Convention on the Elimination of All Forms of Discrimination against Women (CEDAW) 1980	Bosnia and Herzegovina has ratified a number of international commitments on gender equality, including the UN (CEDAW) Convention on the Elimination of All Forms of Discrimination against Women (1980), later reinforced by the Beijing Declaration and Platform for Action (1995), committing participating states to take steps towards achieving gender equality.

Project Responses to Climate Change Gender Inequalities

Gender Strategy

523. In view of the differentiated vulnerability of all beneficiaries in the project area to the interlinked challenges of climate change, it is critical to address the developmental needs of increased drought, access to water, land degradation and gender discrimination. This will help develop and implement a more enabling and gender sensitive environment for addressing climate change.

524. While promoting positive shifts in the natural resource management through policy instruments, capacity building and investments for adaptation and mitigation, STAZA presents a major opportunity to mainstream gender empowerment of women and eliminate, where possible, gender stereotypes and patriarchal attitudes in the agriculture sectors whereby gender equality and women's rights have faced a number of challenges.

525. The gender strategy of STAZA is informed by the Gender Assessment and recognizes that rural women in BiH play a key role in the natural resource management, and that they have a high stake in both climate change adaptation and mitigation measures. It also reflects the understanding that women's equal participation as active actors and agents of change in the project needs to be facilitated through a set of specific measures.

526. **Three strategic pathways** for gender equality and women's empowerment will be as follows:

- Promote economic empowerment to enable rural women and men to have equal opportunities to participate in and benefit from profitable economic activities;
- Enable women and men to have an equal voice and influence in rural institutions and organizations; and,
- Achieve a more equitable balance of workloads and the sharing of economic and social benefits between women and men.

527. **Underlying principles and key features of the gender strategy are as follows**:

- Women will equally participate in the project implementation at all levels and benefit from its opportunities. Women will be 10.463 direct beneficiaries, considering also women households members. It is expected that 50% of grant support beneficiaries will be women and this correspond to 5.220 of them as the package intends to benefit 3.600 HHs. It is expected that 400 women will be grants applicants from grant windows (on-farm primary production) and a top-up support for women's applicants considered (10 to 20% more). It is

also expected that 800 women will participate in Strengthening Adaptive Farming Systems trainings at demo-plots and 180 women will be participating in exchange visits. It is also expected that a total of 6.720 HHs will benefit from Biotechnical Measures for Ecosystem Protection and Rehabilitation and Construction of Rural Adaptive Infrastructure. Women will be 3.360 beneficiaries.

- Women's informed engagement in decision-making processes on related matters (e.g. livelihood adaptation, natural resource management) – both at community and household levels – will be facilitated; Dedicated staff will be tasked to organised separate consultations and engagement with women.
- Opportunities for women's social and economic empowerment, as well as their leadership and decision-making opportunities, will be identified and supported. The project will target women and women head of households to participate at decision-making level in the MSP and for the LCAPs It is expected that 50% of MSP participants will be women. Gender sensitive value chains will also be consider to ensure activities respond to production areas where majority of women are engaged.
- Needs for women's capacity enhancement on relevant topics will be addressed and acted upon, and all trainings will take gender issues into consideration in the modules, selection of participants, communication and mobilization channels, selection of venues and logistical issues. Dedicated attention will be given to issues such as GBV and duly integrated into trainings delivered at all level to train all beneficiaries, project staff and government staff on gender issues. This will be the responsibility of gender and social inclusion specialists at APCU/PCU.
- Gender equality and mainstreaming are adequately introduced to the target communities, project staff and other stakeholders; all communication materials and project messages address gender aspects and use gender-sensitive languages.
- The project, through the inclusive participation of stakeholders will support the strengthening of gender mainstreaming in the policy dialogue. Gender and climate change study will be prepared and finding disseminated through gender workshops at national level involving key stakeholders engaged in policy formulation.
- Knowledge management of the project mainstreams gender, and the project will monitor and evaluate gender-differentiated outputs and outcomes through sex-disaggregated M&E indicators and other tools. Gender impact assessment will also be conducted.
- Staff in the project units (PCU and APCU) will ensure that the gender and social inclusion specialists will oversee the gender mainstreaming of STAZA and implementation of GAP. They will be responsible to supervise implementation of GAP and provide all necessary trainings as required.

528. **Component 1, Participatory assessment and territorial planning**. It is expected that communities will be mobilized to participate in local adaptation plan exercises and also study tours. As part of the planning process, separate consultations will ensure women: (i) are properly informed about the Local Climate Adaptation Plans and their inputs/feedback is included; (ii) have the opportunity to discusses need and priorities (public and private investments as well as type of technologies they are interested, demo-plots, exposure visits); (iii) women representatives are identified and capacitated to actively participate in relevant decision-making processes; (iv) participate in exchange visits on an equal basis. It is expected that 180 women (or 50% target) will participate in exchange visits and learn about

existing and effective adaptive practices already implemented in the country and also at regional level. Through these activities women smallholders will be able to acquire knowledge and make evidence based and informed decision for the LCAP development.

529. Women will be trained to form groups and their leadership and negotiation skills will be strengthened to enable them to make informed decisions during the community planning process. It is expected that women in representative positions will be 50%. Dedicated staff will be deployed to properly mobilize women and ensure the target is met.

530. **Component 2: Enhancing Climate Change Adaptation at the Territorial Level.** Through *Strengthening Adaptive Farming Systems*, it is expected that 800 women (50% of target 1600) will receive trainings on improved adaptive capacities. They will be organized into groups centered around customized demonstration plots. These plots will be tailored to their specific needs and preferences in terms of frequency, duration, timing, and location, while aligning with various livelihoods. Women will receive training in climate-adaptive agricultural practices, gaining knowledge about new techniques and technologies on an equal basis as men. Similarly, it is expected that under *Grants for scaling up Climate-Adaptive Initiatives*, women benefiting from the support will be 5,220 (considering this is HHs support). Women's applicants are expected to be around 400 (50% of target for individual grant support 800) and receive a top up support (10 to 20% more). Furthermore, as part of Component 2, STAZA will enhance the resilience of ecosystems and infrastructure assets. It is expected that they will benefit from *Biotechnical Measures for Ecosystem Protection* and *Rehabilitation and Construction of Rural adaptive infrastructures* (Multipurpose Water Storage Systems). As this is an activity benefiting the household, it is expected that women beneficiaries will be 3.360.

531. Gender-awareness trainings (including Gender-based Violence – GbV) will be mainstreamed into all training to men and women will be carried out at both household and community levels, including village leaders. The project will ensure that training modules for project staff and extension services include specific sections related to gender sensitive topics. The project will produce/adapt and oversee the training modules and curricula that will be delivered to targeted communities/ households and the work of community facilitators and all project staff. This will be the responsibility of the PCU/APCU gender and SI specialists.

532. **Component 3. Policy support and knowledge enhancement for a climate-resilient agriculture**. The project, through the inclusive participation of stakeholders will support the strengthening of gender mainstreaming in the policy dialogue. Gender and climate change study will be prepared and findings disseminated through gender workshops at national level involving key stakeholders engaged in policy formulation.

533. The goal of the gender and climate change analysis is to better understand the national context, particularly focusing at gender equality issues in key climate sectors from a gender and climate change perspective. The study will provide concrete short term and long-term recommendations as part of: (i) policy dialogue and policy formulation to enhance gender and climate change agenda and (ii) detailed technical solutions to be provided to poor rural women in order to minimize the negative impact of climate change and strengthen their resilience. The main findings and recommendations will be discussed during thematic workshops on gender and climate change at national level for policy makers to ensure CC and NRM policies/ legal frameworks consider gender-specific recommendations. The study will then be published to contribute to wider dissemination of knowledge.

534. **Implementation arrangements**. Gender and Social Inclusion (SI) aspects of the project will be managed by the PCU/APCU Gender, Targeting and Social Inclusion Specialist, who will be responsible for: overseeing the implementation of the gender strategy, building the capacity of staff and helping colleagues to address considerations related to gender equality and women's empowerment in their operations (including trainings), knowledge management, M&E, indicators and measurement of results

from a gender perspective. Dedicated budget has been allocated to address these issues, as well as to ensure the mainstreaming of gender considerations into all of project's activities.

STAZA Gender Action Plan (GAP)

STAZA Gender Action Plan				
Component 1. Participatory assessment and territorial planning				
Outcome 1.1.: Enhanced community mobilization and improved knowledge for climate change adaptation				
Output 1.1.1. Multi-Stakeholder platforms established and facilitated in clusters/cantons				
Output 1.1.2. Participatory Local Climate Adaptation Plans developed/ included in existing strategies				
Output 1.1.3. Exchange visits				
Activities	Indicators and Targets	Timeline	Responsibilities	Costs / Gender sensitive budget based on women participation
Gender activity (Component activity 1.1.1) Assessment is conducted in a gender sensitive way and the methodological approach includes any specific reference about negative impact for women (specific if any) and adaptive measure. The assessment should include results that demonstrate how CC is negatively impacting women. The methodological approach for the assessment should include women as key interlocutors on a 50% basis and through FGDs as relevant. A final gender assessment report is produced as a result of the consultation.	Assessment report gender Target: 1	By end of Y 1	Gender person from APCU/PCU and additional consultant during assessment preparation if need be.	$ 35,700 Cost of the Gender expert coordinating and conducting the assessment with support of junior consultants conducting and collecting data.
Gender Activity (Component activity 1.1.1) Gender- awareness trainings/messages for local institutions, community members, including women's groups as part of stakeholders platforms. This is part of communication and mobilization activities taking place to inform and mobilize key stakeholders (cluster and canton level).	Number of training on gender awareness conducted at cluster level/canton Target: 9 gender specific training and gender messages communicated (1 training in each cluster)	By end of Year 1	Cluster Field Officers and cluster managers supported by Gender Experts of APCU/PMU Gender team where present at municipal level	50% budget for workshops and campaigns activities under Component activity 1.1.1 are gender sensitive.
Gender Activity (component activity 1.1.2) Organize separate consultations (meetings) with women in target municipalities for their input in the Climate Adaptation Plans (during the period after the plan is drafted and before it is published publicly for public consultation) and get inputs from women on the plans and also preliminary discussion (and identification) of their priorities (public and private investments as well as type of technologies they are interested and demo-plots which will be more investigated as a second level in depth consultative process under C2).	Percentage of Climate Adaptation Plans includes inputs from women Target: at least 70% of the plans have been shared with women groups and receive inputs (e.g. a page of inputs to be incorporated).	By end of Year 1	Field Officers and PCU/APCU Gender Expert and in collaboration with gender teams where existing at municipal level.	50% budget for Activity 1.1.2: assessment, planning and design is gender sensitive.
Gender Activity (component activity 1.1.2) Promote women's representation through their inclusion in validation of Local climate Adaptation Plans.	Percentage of women from existing groups participating in validation o of LCAPs Target: Women comprise a	By end of year 1	Community Field Officers Gender Experts PCU/APCU	As above

	minimum of 30 % of workshop/public event participants to validate LCA Plans.			
Gender activity (component activity 1.1.3) Women participate in exchange visits.	Number of women included in exchange visits Target: 180	By end of year 1	Implementing entities (MAWMF in the FBiH and the MAFWM in the RS) and led by Gender experts (APCU/PCU and gender focal persons MAWMF and MAFWM).	50% of the budget for sub-activity 1.1.3 on exchange visits is gender sensitive
Component 2: Adoption of approaches for climate change adaptation at territorial level				
Outcome 2.1. Enhanced resilience of smallholders' livelihoods to climate change				
Outcome 2.2. Improved resilience of ecosystems and infrastructures assets				
Output 2.1.1. Adaptive capacity of farming systems strengthened				
Output 2.1.2. Grants to adaptive activities provided				
Output 2.2.1. Ecosystem protecting measures implemented				
Output 2.2.2. Rural adaptation collective infrastructure rehabilitated or constructed				
Activities	Indicators and Targets	Timeline	Responsibilities	Costs / Gender sensitive budget based on women participation
Gender Activity (Component activities 2.1. 1) Consultation with women for the definition of activities and based on women's need and priorities (public and private investments as well as type of technologies they are interested and demo-plots- part of this will also results after women get ideas through study tours (under C1).	Percentage of activities identified respond to women's needs and priorities. Target: 50% women's priorities included	By end of Y1	Filed Officers Gender Expert and in collaboration with gender teams where existing	Cost is included in the activity 2.1.1
Gender activity (component activity 2.1.1): demo-plots/trials respond to women's needs . they are also customized to suit women's specific needs and preferences in terms of frequency, duration, timing, location but most importantly livelihoods women are more engaged, e.g. vegetables).	Number of demo-plots responding to women's priorities and production activities Target: 20	Year 2 to 4	Implementing entities	50% of the budget for activity 2.1.1 (roll out of demo-plots/trials/living labs) is gender sensitive.
Gender activity (component activity 2.1.1) Training women and women head of households (WHHs) in climate adaptive agricultural practices.	Number of women participants in trainings Target 800	Year 2 to 4	Implementing entities and extension agents.	As above
Gender activity (component activity 2.1.2) Women access Grant Financing Opportunities for adaptive activities . Women have 10% extra matching as compared to men.	Percentage of approved grants for women Target: 50%.	Year 2 to 4	Implementing entities	50% of the budget For grants (2.1.2) is gender sensitive
Component 3: Policy support and knowledge enhancement for a climate-resilient agriculture				
Outcome: Improved Knowledge and Research for integrating adaptation strategies and mechanisms at cantons/municipal and national policy levels, drawing on project approaches and implementation lessons				
Output 3.1.1. Knowledge products are effectively created and shared with key stakeholders to provide policy support				

Output 3.1.2. Relevant institutions supported in the creation of curriculum for master students				
Output 3.1.3. AE research grants on pilots, and soil and water specialized institutions supported				
Activities	Indicators and Targets	Timeline	Responsibilities	Costs / Gender sensitive budget based on women participation
Gender activity (component activities 3.1.1) production of knowledge product, gender specific Recruit gender expert (retainer contract) for (i) field work to collect information on case studies, lesson learned to have knowledge products on gender and CC / adaptation and work on a final comprehensive report.	Number of gender case studies: gender and climate change for policy briefs and to be used during conferences, workshops with decision making players Target: 1 knowledge products	Y4	APCU/PCU gender and SI experts	$ 21,484 (100% budget gender sensitive)
Gender activity (component sub-activity 3.1.1) Thematic workshops on gender and climate change adaptation at national level for policy makers (through dissemination of findings from gender study, gender assessment) to ensure CC and NRM policies/ legal frameworks consider gender-specific recommendations.	Number of thematic workshops on gender and climate change are organized. Target: 2 events	Y 5	Executing Entity, led by: Gender expert APCU/ PCU in collaboration with gender center at all levels and relevant international partners (e.g. UN-Women)	$ 5,370 (100% budget gender sensitive)
Gender activity (component activity: 3.1.1.) Publication: Gender and Climate Change Adaptation (based on STAZA experience).	Number of Publications Target 1	Y 5	Gender expert APCU/PCU	$ 5,000 (100% budget gender sensitive)
Project Management				
Gender Consultant APCU/PCU		Y 3-5	Staff	$ 145,742
Senior gender consultants for impact assessment	Gender Impact assessment conducted Target: 1	Y 5	Consultant	$ 41,774

Annex 6: Lessons learned from the previous Projects in BiH

535. Two recently completed IFAD projects in BiH are the Rural Competitiveness Development Programme (RCDP) and Rural Livelihoods Development Project (RLDP). Key lessons learned from implementation **RLDP** and **RCDP**, are:

- **Gender, targeting and social inclusion:** Future and ongoing project **should tailor activities to women and youth** and assist them in organising themselves. Additional top-up for women and youth led PAs/ACs in starter packages and equipment is recommended, as it has been foreseen in RCDP proved to be a good model. Also, it was observed that both project units and implementing partners need additional technical on successful implementation of sustainable off-farm activities for women and youth.
- The government and beneficiaries **support financially significantly infrastructural interventions** in the RS (due to the absence of an OFID loan) and had the effect of increasing the scope of the project and showed a high level of ownership by the government, municipalities and beneficiaries..
- There is a need to take into consideration the **not sufficient financial capacity of the beneficiaries for the matching grants mechanism** to be effective in reaching the rural poor. This lesson was generated from the low interest/capacity among FOs/ACs to co-finance equipment prior to the MTR.
- The organisation of farmers through FOs is an efficient means to assist farmers in improving production, accessing markets, applying for subsidies and empowerment. In future projects field officers and service providers should put enough emphasis on **building the organisational capacities of FOs.** Additionally, attention is needed on advising farmers on how to sustainably transform to commercial agriculture through farming as a business skill. Farmers say they know how to produce, but claim they do not sufficiently know how to market and sell their products.
- Once a farmer is linked to a value chain, where the farm system renders it opportune, it is advisable to **promote diversification** and link the farmer to value chains of additional commercial crops/produce to increase farm resilience.
- The low performance of both project implementation units to systematically document the process and outcome of interventions has prevented the managements to make evidence based decision to both prove impacts, and improve interventions' implementation. It is recommended for both entities **to develop a KM strategy** under the ongoing and the forthcoming IFAD projects. These strategies would strengthen further knowledge, learning and sharing processes and improve integrating knowledge management into all aspects of Programme management, ensuring that **knowledge generated is put to good use and disseminate to external users**.
- Bosnia and Herzegovina has a **complex political structure**. Complexity of country context has led to late effectiveness of the RLDP. Significant delays in project start and implementation required review of approaches on their appropriateness and refining the implementation process to respond to changes in the project environment. Delays also risk a **fast (and not enough targeted) implementation** of rural finance component.
- Assistance is needed for **PAs to transform themselves into cooperatives** or SMEs in the necessary institutional alignment to maximize the benefits of commercialization. PAs are non-profit bodies facing challenges in profit-making and at the same time unable applying for bank loans for investments. Future projects should further emphasise on developing tools/methodologies to assist PAs in the necessary institutional transformation process.
- **Matching grants** with a small portion of project funding proved to be conducive to initiate investments. Initially both PCUs were not in favour of matching grant provision, the pilot projects showed the need for co-financing to stimulate investments. The outreach of pre-financing investments agreements was depending on the financial liquidity of the buyer as well as to the processing capacities of the companies.

- **Beneficiary participation** is important in the implementation of project interventions: The quality of stakeholder and beneficiary participation has improved as there was significant interest amongst them to participate in project interventions and especially municipalities were supportive in the implementation of project interventions.
- The cooperation with direct beneficiaries should be based on **joint business plans** or written agreements (Memorandum of Understanding) on implementation modalities. The same applies for cooperation with municipalities as partners in matching grant financing and infrastructure projects. Joint planning and MoU would facilitate cooperation allowing also a regular assessment/update.
- **Institutionalizing the public-private dialogue** is sustainable instrument to ensure follow up and replication. The commitment of the involved municipalities differs: in most municipalities the local authorities became seriously engaged with own financial contribution, but in some municipalities PAs reported of a lack of commitment of their local authorities. On these grounds, public-private dialogue platforms on communal level (as well as on central level) would have been suitable instruments to jointly develop visions and strategies to foster local economic development.
- **Regulatory framework** is required to ensuring a quality competitive products. Furthermore, a system of **more adequate health and hygiene control** along the whole value chain with efficient phytosanitary and hygiene authorities is required to ensure competitiveness and to avoid any contamination. The same applies for the dairy sector.
- Project approaches and methodologies should be made very explicit and clear also to provide guidance for the PCUs in implementation. **Capacity building of PCUs** and partner institutions will permit to sustain approaches applied and experiences gained in the project into the future.
- The approach of the APCU in **cooperating with the local extension services** has a positive impact on the implementation of the activities as well as on the sustainability of the project support since the recruited staff will be re-integrated in the extension service department. Recruiting personnel from the extension service for training and consultancy allows a more tailor-made support to farmers and their groups alongside capacity building for the extension officers. The PCU with its approach of exclusively **contracting service providers** for project implementation allows strengthening the local NGOs.
- **The weak M&E has serious impact on reporting**. The performance of the M&E system was a problem. Despite improvements, the relevance of the M&E system for decision-making was limited. Continuing capacity building and direct support from IFAD is required to improve the performance.
- The success of the RCDP starter packages in integrating very poor households in commercial value chains can strengthen government participation and increase the effectiveness of government subsidies to the private sector. The co-financing partnership forged through the starter packages not only enabled municipalities to reach poor and very poor households, but also ensured higher income for these social segments through **improved production and marketing support**.
- Properly incentivized **agribusinesses are willing to partner with smallholder farmers**, however complementary support from development partners is crucial in forming the initial connection and mobilizing the partnership. In RCDP, these partnerships proved crucial as agribusiness leaders had a significant role and involvement in improving the yield and quality of products produced by smallholders, thus ensuring increased outputs translated into increased value-added and income as agribusiness leaders played the dual roles of marketing partner and input supplier.
- The responses to climate change cannot be addressed in an ad hoc manner but must be planned and integrated into strategies of agricultural production adaptation. The same applies to new projects as the need for **appropriate measures for adaptation to climate change** is becoming more pronounced.

536. Key lessons learned from implementation from the ongoing **READP** are:

- **Targeting:** The RLDP and RCDP project's self-targeting approach applying inclusive value chains has been crucial in not only targeting poorer households but also attracting women's participation (greenhouse vegetable production, berries, gherkins etc.) and youth inclusion (blueberries, beekeeping etc.). Likewise, direct targeting measures have proven effective in increasing the outreach to women and youth by allowing a 10% top-up granted to vulnerable categories. As a result the outreach even increased up to as high as 56.5% of women inclusion and 17% of youth inclusion.
- The ongoing READP project is upscaling the same methodology and successes are observable in the ground based on women's participation in activities and VCs: The current value chains envisaged through the project are attractive to women's participation. In RS Number of women farmers who received start-up packages is 38% while in FBiH is 52%. The presence in the number of women farmers, who became contract holders is relevant and is also due to the 10% top-up co-financing for start-up package for women. Anecdotal observations from the field indicates that women have control over the income generated through the increased production and they can access timely advisory services.
- **Poverty Targeting:** Both RLDP, RCDP and READP apply a strong pro-poor targeting focus. Building on successes of RLDP and RCDP in reaching the poor and most vulnerable households, the ongoing READP puts poverty at the centre of the targeting methodology. The geographic focus is on underdeveloped municipalities and concentrates attention where majority of poor and underserved people are. Selection of beneficiaries (households) is successfully conducted according to the poverty categories of very poor, poor and borderline poor, in line with monthly incomes per HHs member and land tenure/usage as main criteria for selection.
- **Eligibility criteria and selection process**: In READP the income thresholds for eligibility of beneficiaries is set as the monthly income per household member on the basis of which categorization is made into three groups: **very poor** (below 200 KM per household member) **poor** (201-400 KM per household member) and **borderline poor** (401-500 KM per household member). This categorization (among other criteria) has being used to assess the eligibility of beneficiaries for inclusion in the submitted business plans (BP). Questionnaire and application forms successfully capture the main socio-economic elements of the HHs, including livelihood, land, income, disability.

Annex 7 Domestic contributions leveraged by STAZA

537. **Project costs and financing.** The overall cost of the Project is estimated at US$13.78, which will be disbursed over five years. Of this total financing, the Adaptation Fund (AF)'s contribution amounts to US$10.00 million (of which US$9.22 million for project costs and US$0.78 million for project cycle management implementing entity fee). The Government of Bosnia and Herzegovina's contribution is estimated at US$1.03 million. The beneficiaries will contribute to the Project with US$0.48 million. Finally, the Project will have a contribution from the Municipalities of US$3.05 million.

538. **Additional contributions that may be leveraged** by STAZA are exclusively domestic, and not brought by external donors. The largest part potential leveraged financing is under Outcome 2.1. Enhanced resilience of smallholders' livelihoods to climate change, which would thus represent 39.8% of the total project cost and be financed at 50.6% with national resources, including beneficiaries, municipalities, and government contribution.

539. The specific contributions that can be leveraged or valued during project implementation include:

- Matching grants, both from private sources and SMEs, for a total of EUR 482,963. Considering the demand for such grants, that are specifically designed for most vulnerable producers, no issue will arise with regards to the unrolling of this output. As an extra measure to ensure 100% of the target is reached, public calls for proposals will consider more requests than the targeted number of grants for the year, as it is the current READP practice.
- Contribution to ecosystem restoration with Municipalities' support to biotechnical measures and associated equipment and services that may be valued for a total of EUR 228,086. Municipalities may contribute to 15% of the net cost of works related to biotechnical measures and reforestation/afforestation, including by availing required equipment and work-force as part of their regular budget (for an estimated equivalent of EUR 80,117). Works will also be supported by volunteers from local communities whose engagement will be facilitated by the participatory process under Output 2.2.1.Biotechnical Measures for Ecosystem Protection.
- Additionally, Municipalities may support these activities by providing counterpart (matching grants for an estimated amount of EUR 2,414,236 to monitoring, prevention, risk management and early intervention equipment.
- The rehabilitation and Construction of Rural Adaptive Infrastructure under outcome 2.2.2, would have a contribution from the Municipalities to works (15% of the total cost, amounting EUR 276,087). Municipalities would contribute with a 40% of the total cost of organizing fairs for strengthening market access (EUR 32,102).
- Considering the high demand for such investments, Municipalities are very interested in partnering with the project and directly contribute to investments (READP experience shows that communities and Municipalities are ready to mobilize such contributions). As for all public calls under the project, and to ensure 100% of the target is reached, calls for proposals will consider more requests than the targeted number of grants for the year. In-kind contributions (e.g. availing existing buildings) will also be valued. Adaptation Fund budget allocated to these investments is sufficient to allow meaningful interventions even in the absence of counterpart contributions.

540. The table below shows how the project costs may be revised based on leveraging of domestic contributions. The following table further evidences the potential source of Domestic contributions.

Item/activity	Note	Total AF (US$)	Domestic contributions (US$)	Grand total (US$)
Component 1. Participatory assessment and territorial planning				
Outcome 1.1. Enhanced Community Mobilization and Improved Knowledge for Climate Change Adaptation				
Output 1.1.1. Supporting	Environmental & climate			

Clusters strengthening	specialist	250,779	-	250,779
	Project coordinator/manager	177,329	-	177,329
	M&E Officer	153,418	-	153,418
	Technical advisor/secretary	87,572	-	87,572
	Gender targeting officer	133,809	-	133,809
	Vehicle	28,816	5,902	34,718
	Training and workshops	83,828	-	83,828
	Senior consultant to develop final report on women consultation and development of training materials /a	26,762	-	26,762
	(2) Junior consultants	8,921	-	8,921
	Workshop on multistakeholder platform	10,132	-	10,132
	Organizing campaigns (using existing modules at municipality level)	157,611	-	157,611
	Field officer for cluster	316,282	-	316,282
Sub-total Output 1.1.1		*1,435,259*	*5,902*	*1,441,161*
	Climate change assessment (one per cluster)	661,304	-	661,304
	Climate change workshop	39,678	-	39,678
Output 1.1.2. Development of Participatory Local Climate Adaptation Plans (LCAP)	Participatory Local Climate Adaptation Plans (LCAP) - consultants	59,517	-	59,517
	Workshop for dissemination Participatory LCAPs	39,678	-	39,678
Sub-total Output 1.1.2		*800,177*	-	*800,177*
Output 1.1.3. Exchange visits	Exchange visits	107,049	-	107,049
Sub-total Output 1.1.3		*107,049*	-	*107,049*
Total Cost Component 1		2,342,485	5,902	2,348,387
Component 2.Enhancing Climate Change Adaptation at the Territorial Level				
Outcome 2.1. Enhanced resilience of smallholders' livelihoods to climate change		2,225,527	3,257,650	5,483,177
Output 2.1.1. Strengthening Adaptive Farming Systems	Inclusive business specialist	73,926	-	73,926
	Training of extension services	15,777	-	15,777
	Demo-plots	344,862	-	344,862
	Demo visits and training	139,692	-	139,692
Sub-total Output 2.1.1		*574,257*	-	*574,257*
Output 2.1.2. Grants for scaling up Climate-Adaptive Initiatives	Grant type I - on farm (primary production)	701,279	1,411,007	2,112,286
	Grant type II - circular economy	701,279	1,411,007	2,112,286

Sub-total Output 2.1.2		*1,402,558*	*2,822,014*	*4,224,572*
Output 2.1.3. Strengthening Market Access	Fairs	48,153	32,102	80,255
	Grant type III - short value chain	200,559	403,534	604,093
Sub-total Output 2.1.3		*248,712*	*435,636*	*684,348*
Outcome 2.2. Improved resilience of ecosystems and infrastructures assets		3,210,810	1,206,964	4,417,774
Output 2.2.1. Biotechnical Measures for Ecosystem Protection	Feasibility Study of Biotechnical Measures at the Landscape Level	100,681	20,621	121,302
	Biotechnical measures- Works	513,471	214,341	727,812
	Supervision of biotechnical measures	78,480		78,480
	Biotechnical measures- equipment and services	559,293	233,468	792,761
Sub-total Output 2.2.1		*1,251,925*	*468,430*	*1,720,355*
Output 2.2.2. Rehabilitation and Construction of Rural Adaptive Infrastructure	Civil engineer	77,932	-	77,932
	Feasibility study	52,851	-	52,851
	Construction/Rehabilitation of multipurpose rural adaptative infrastructure	1,769,222	738,534	2,507,756
	Supervision of water storage/drainage	58,880		58,880
Sub-total Output 2.2.2		*1,958,885*	*738,534*	*2,697,419*
Total Cost Component 2		5,436,337	4,464,614	9,900,951
Component 3. Policy support and knowledge enhancement for a climate-resilient agriculture				
Outcome 3.1. Improved Knowledge and Research for integrating adaptation strategies and mechanisms at cantons/municipal and national policy levels, drawing on project approaches and implementation lessons				
Output 3.1.1. Effective Knowledge Sharing for Policy Support	Assistance in the preparation of amendment of legal policy documents	51,731	-	51,731
	Digital platform	9,557	829	10,386
	Thematic conferences	34,487	-	34,487
	National consultant for developing gender climate change study	21,484	-	21,484
	Publication of the gender climate change study - printout	4,161	852	5,013
	Thematic workshop on gender and climate change adaptation	5,371	-	5,371
	Senior international consultant to develop gender impact assessment	41,774	-	41,774
Sub-total Output 3.1.1		*168,564*	*1,681*	*170,245*
Output 3.1.2. Supporting Educational Institutions in Curriculum Dev	Training university staff	45,442	-	45,442
	Master thesis student for doing research in the field	18,350	-	18,350
Sub-total Output 3.1.2		*63,792*	*-*	*63,792*
Output 3.1.3. Supporting Agricultural Research Grants	Business to Research (B2R) Workshop (in year2) one per cluster	25,380		25,380

and Specialized Institutions for Climate, Soil and Water	Evaluators for concept note and project proposals	22,721		22,721
	Research project - research of priorities and B2R whop	257,463	52,733	310,196
	Demonstration of new varieties and technologies	134,500		134,500
	Training of advisors - national consultant providing the training to the local advisors	20,278		20,278
	Training of advisors - international consultant providing the training to the local advisors	30,417		30,417
	Award fund for best students for all levels	12,137	2,486	14,623
Sub-total Output 3.1.3		*502,896*	*55,219*	*558,115*
Total Cost Component 3		735,250	56,900	792,150
Project Execution Costs				
Procurement officer/manager		161,979	-	161,979
Financial specialist-/manager		163,033	-	163,033
Interpreter/secretary		67,136	-	67.136
Procurement asssitant		52,419	-	52,419
Driver		46,810	,	46,810
Travelling and allowances		35,859	,	35,859
Sub-total Salaries and Allowances		*527,236*	-	*527,236*
Equipment and Goods (computer, printer, peripherials and other office equipment, software licensee)		6,967	1,427	8,394
Baseline survey, Project Completion (final) survey, Completion report, and Translation		63,624	13,031	76.655
Operating costs (vehicle O&M, fuel, insurance, registration and maintenance, other operational costs)		104,691	21,443	126,134
Total execution costs		702,518	35,901	738,419
Total project costs		**9,216,590**	**4,556,317**	**13,779,907**
Project Cycle Management Implementing Entity Fee				
Financial Management (General financial oversight, support audits and quality control, manage, monitor and track AF funding including allocating and monitoring expenditure based on agreed work plans; financial management compliance with AF requirements; financial reporting compliance with AF standards; procurement support and compliance with Government procurement rules).		170,048	-	170,048
Programme Support (Technical support in project implementation; methodologies, identification of experts; troubleshooting and support implementation missions as necessary; portfolio management, reporting; Independent Environmental and Social Audit s and policy programming and implementation support services).		315,088	-	315,088
Technical support (Supervision missions and implementation support, risk, management, programming; guidance in establishing performance measurement processes; technical support on methodologies, TOR, validation, identification of experts, results validation, and quality assurance; troubleshooting, and support evaluation missions as necessary; support on technical issues in programme implementation).		298,274	-	298,274
Total Project Cycle Management Implementing Entity Fee		783,410	-	783,410
Amount of financing requested		**10,000,00**	**4,556,31**	**14,556,31**

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