ADAPTATION FUND BOARD SECRETARIAT TECHNICAL REVIEW OF PROJECT/PROGRAMME PROPOSAL

PROJECT/PROGRAMME CATEGORY Regular-sized Project Concept

Country/Region: Bosnia and Herzegovina (BiH)
Project Title: Increasing Climate Change Resilience in the Agricultural sector of Bosnia and Herzegovina - Staza
Thematic Focal Area: Agriculture
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
AF Project ID: AF00000364
IE Project ID: **Requested Financing from Adaptation Fund (US Dollars):** 10,000,000
Reviewer and contact person: Neranda Maurice-George **Co-reviewer(s):** Imen Meliane
IE Contact Person: Ms Janie Rioux j.rioux@ifad.org

Technical Summary	The project "Increasing Climate Change Resilience in the Agricultural sector of Bosnia and Herzegovina - Staza" aims 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. This will be done through the three components below: Component 1: Participatory assessment and territorial planning (USD1,450,000); Component 2: Adoption of approaches for climate change adaptation at territorial level (USD 6,400,000); Component 3: Policy support and knowledge enhancement for a climate-resilient agriculture (USD492,978.00). Requested financing overview: Project/Programme Execution Cost: USD 873,612 Total Project/Programme Cost: USD 9,216,590.00

	Implementing Fee: USD 783,410.00 Financing Requested: USD 10,000,000.00 The initial technical review raises some issues, such as cost effectiveness, alignment with applicable national standards, demonstrating full cost of adaptation and sustainability as is discussed in the number of Clarification Requests (CRs) and Corrective Action Requests (CARs) raised in the review.
Date:	30th October 2023

Review Criteria	Questions	Comments	Response from Implementing Entity
Country Eligibility	1. Is the country party to the Kyoto Protocol, or the Paris Agreement?	**Yes.**	
	2. Is the country a developing country particularly vulnerable to the adverse effects of climate change?	**Yes**. The key vulnerabilities identified in the proposal relate to the impact of climate change on precipitation and temperature, manifesting specifically in droughts, extreme rainfall and increased temperatures resulting in food insecurity and adverse impacts on water resources.	
Project Eligibility	1. Has the designated government authority for the Adaptation Fund endorsed the project/programme?	**Yes.** As per the endorsement letter dated 24th July 2023.	
	2. Does the length of the proposal amount to no more than Fifty pages for the project/programme concept, including its annexes?	**Yes.**	

	3. Does the project / programme support concrete adaptation actions to assist the country in addressing adaptive capacity to the adverse effects of climate change and build in climate resilience?	**Yes.** The project activities are suited to address the climate change vulnerabilities identified as well as targeting some of the vulnerabilities in the systems and processes which are required to facilitate this climate action. Some of the concrete actions include activities under outcomes 2.1 and 2.2. Activities to strengthen the enabling environment, improve adaptive capacity. These feed into or are supported by outcomes 2.1 and 2.1 will be conducted under outcome 1.1 and 3.1 respectively. There appears to be internal coherence among the various components and the outputs suggest that the project will yield substantial tangible outcomes. It is noted that additional work and consultations will be undertaken to facilitate the elaboration of the fully developed proposal. The Theory of Change (TOC) presented is somewhat coherent and outputs are responsive to AFs strategic outcomes. However, the TOC can be strengthened. An area of lack of clarity for example is on output 3.1.3. Will these institutions be the same ones identified at 3.1.2? Will 3.1.3 be linked to output 2.1.2, i.e., will the research grants provide innovative	**CR1:** We acknowledge the importance of clearly identifying and justifying Unidentified Sub-Projects (USPs) within the proposal. In response to this comment, we have incorporated specific information in Activity 2.2.2: Rehabilitation and Construction of Rural Adaptive Infrastructure, outlining the types of infrastructure that may be established or rehabilitated. This includes Multipurpose Water Storage Systems, flood management-related infrastructure such as Storm Basins and Drainage Systems, as well as the rehabilitation of open markets. These infrastructure components are integral to the overall project objectives, contributing to climate change adaptation, enhancing agricultural resilience, and supporting local economies. This addition provides a clearer understanding of potential USPs and their relevance to the project's activities. **3.1.3. relation with 3.1.2. and 2.1.2.:** The institutions supported under the output 3.1.3. should be different ones identified at 3.1.2. Under 3.1.2. STAZA would support universities. Instead, under 3.1.3.

		ideas for 2.1.2 or are the streams unrelated? In the fully developed proposal, please strengthen the TOC by providing further clarity on the various outputs and their inter-relatedness. **CR1:** The proposal contains USPs, however their use is not fully acknowledged or justified in the concept. Please indicate which of the project activities may contain USPs (once the fully developed proposal completed) and justify their use. Please note the revised guidance on USP available here. Fully unidentified USP are not allowed. The fully-developed proposals should provide more detailed information on the activities and partially identify the USP (e.g. providing a menu of potential measures, identifying the locations etc).	STAZA would support laboratories and specialized institutes. Furthermore, the 3.1.3. will support the 2.1.1. by allowing better analysis of results (among others, soil moisture content and soil fertility) and therefore will support 2.1.2. by giving reliable information to extension services and farmers and promote specific practices accessible under the grants.
	4. Does the project / programme provide economic, social and environmental benefits, particularly to vulnerable communities, including gender considerations, while avoiding or mitigating negative impacts, in compliance with the	**Yes.** The project concept provides a preliminary gender assessment which indicates that minimum of 30 percent of the beneficiaries will be women and indicates that a comprehensive gender assessment	**CR2:** An initial estimate of the number of beneficiaries of the project was added to the document in this section and in the components section. Also added information for the exchange visits (activity 1.1.3) and the demonstration plots (subcomponent

	Environmental and Social Policy and Gender Policy of the Fund?	alongside stakeholder engagement and analysis will be conducted at the fully developed proposal stage. Marginalized communities will be targeted through the project interventions. The economic, social and environmental benefits are summarized in the project concept. However, although the concept acknowledges that further work will be undertaken with respect to environmental and social benefits, additional work is also required for economic benefits. **CR2:** Please provide initial quantitative estimates for all benefits where possible, and in particular an initial estimate of the number of beneficiaries of the project. Please note that additional information and more detailed quantification of the economic, environmental and social benefits will be required <u>in the fully developed proposal</u>.	2.1). The number of hectares of agricultural land for subcomponent 2.2 was already presented. Additional information and more detailed quantification of the economic, environmental and social benefits will be included in the fully developed proposal.
	5. Is the project / programme cost effective?	**Not clear.** The current section describing cost effectiveness seems skewed towards how the project will provide cost effectiveness downstream for components 1 and 3 i.e. after	**CAR1:** A table was created, summarizing the cost effectiveness by sub-component/outcome in comparison with alternative options.

		implementation e.g. component 1 "will provide a foundation for cost-effective decision making". The project concept indicates that a cost effectiveness analysis will be done to facilitate the elaboration fully developed proposal. **CAR1:** Please provide additional information to demonstrate how the proposed project activities under components 1 and 3 are cost effective, in comparison with alternative options.	
	6. Is the project / programme consistent with national or sub-national sustainable development strategies, national or sub-national development plans, poverty reduction strategies, national communications and adaptation programs of action and other relevant instruments?	**Yes.** A number of key national documents have been identified. Bosnia and Herzegovina's 4th National Communication was produced in October 2021. Please consider updating the information on the relevant sectors based on this publication where necessary within the fully developed proposal.	
	7. Does the project / programme meet the relevant national technical standards, where applicable, in compliance with the Environmental and Social Policy of the Fund?	**Not clear.** A listing of key legislation and standards that are applicable is provided in the project concept but	**CAR2:** A paragraph was added in "II.E. National Technical Standards and Environmental and Social Policy" with additional information

		there is no information on how the project will be responsive to those. **CAR2.** Please provide additional information for compliance with AF ESP guidance to indicate how the projects will meet the national standards identified.	for compliance with AF ESP guidance.
	8. Is there duplication of project / programme with other funding sources?	**No.** Although the project builds on previous projects and it is expected to utilized systems and processes as well as staff previously employed under previous projects, no duplication in foreseen. The synergies and complementarities with some major projects are outlined in the concept.	
	9. Does the project / programme have a learning and knowledge management component to capture and feedback lessons?	**Yes.** Knowledge management is visible in all three components of the proposed project.	
	10. Has a consultative process taken place, and has it involved all key stakeholders, and vulnerable groups, including gender considerations in compliance with the Environmental and Social Policy and Gender Policy of the Fund?	**Yes.** Consultations have been undertaken to develop the project concept and further consultations are envisioned to facilitate the elaboration of the fully developed proposal. Workshops are expected to engage and seek active participation of the most vulnerable, including women and youth.	

	11. Is the requested financing justified on the basis of full cost of adaptation reasoning?	**Not clear.** As presented, the concept does not specifically indicate that the project will be fully funded though AF resources. Paragraphs 124 and 126 further compound the lack of clarity. **CR2:** Please clarify if the AF resources represent the totality of resources for the successful implementation of the project.	**CR2:** The requested financing for Staza is justified on the basis of a full cost of adaptation reasoning, and the project is intended to be fully funded through Adaptation Fund resources. The section has been clarified to emphasize that the AF resources represent the totality of resources for the successful implementation of the project.
	12. Is the project / program aligned with AF's results framework?	**Yes.** **CAR3**: Please amend table 7 to accurately reflect the outcome and output indicator wording contained in the Adaptation Fund revised strategic results framework adopted in 2019 https://www.adaptation-fund.org/wp-content/uploads/2019/10/Adaptation-Fund-Strategic-Results-Framework-Amended-in-March-2019-2.pdf Specifically, outcome indicators 5 and 6 as well as output indicators for output 6 (6.2 seems appliable) and 7.1.	**CAR3:** Modification were done based on the suggestions in the results framework.
	13. Has the sustainability of the project/programme outcomes been taken into account when designing the project?	**Partly.** Components 2 provides grants to support the strengthening/continuity for small-holder farms. The concept does not adequately demonstrate how this work will be sustained after	**CR3:** The section "II.H. Project Sustainability" has been revised to include the suggestions.

		the end of the project and enable replication and scaling up with other funds after its end. It is hard to judge the sustainability of the project given the lack of details on the proposed activities, and what they would entail (if any infrastructure, machinery or technology are involved). The proposal states that “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 is a general statement and does not substantiate how the activities and approaches will be maintained beyond the project life or provides assurances on the uptake of these approaches by the farmers. **CR3:** Please provide more information on all aspects of project sustainability economic, social, environmental, and financial.	
	14. Does the project / programme provide an overview of environmental and social impacts / risks identified, in compliance with the Environmental and Social Policy and Gender Policy of the Fund?	**Partly.** The project has been identified as category C. A checklist has been completed against the Fund’s environmental and social principles. The concept proposal presents initial findings, but further work is required for the elaboration of the fully	**CAR4:** A specific paragraph on USPs was added to the section “II.I. Environmental and Social Impacts and Risks”

		developed proposal on social, environmental and gender element. The concept proposal indicates the need for environmental screening and assessment; an environmental and social and climate management plan and an environmental and social assessment. **CAR4:** The proposal contains USPs and the concept indicate that these would only be identified following the implementation of component 1. The assessment of the environmental and social risks and impacts should acknowledge the use of USP and provides a justification of their use. More detailed justification for their use should be provided at the fully developed proposal stage along with a process of ESP risk identification and management during the project implementation. Please refer to the updated guidance document on USPs https://www.adaptation-fund.org/wp-content/uploads/2021/05/Updated-guidance-on-USPs-.pdf In addition, please ensure that the fully developed proposal a more detailed assessment that substantiates all the risks findings (with estimations of likelihood and	

		impacts for all principles) before any mitigation measures.	
Resource Availability	1. Is the requested project / programme funding within the cap of the country?	**Yes.**	
	2. Is the Implementing Entity Management Fee at or below 8.5 per cent of the total project/programme budget before the fee?	**Yes.**	
	3. Are the Project/Programme Execution Costs at or below 9.5 per cent of the total project/programme budget (including the fee)?	**Yes.**	
Eligibility of IE	1. Is the project/programme submitted through an eligible Implementing Entity that has been accredited by the Board?	**Yes.**	
Implementation Arrangements	1. Is there adequate arrangement for project / programme management, in compliance with the Gender Policy of the Fund?	n/a at concept stage	
	2. Are there measures for financial and project/programme risk management?	n/a at concept stage	

	3. Are there measures in place for the management of for environmental and social risks, in line with the Environmental and Social Policy and Gender Policy of the Fund?	n/a at concept stage	
	4. Is a budget on the Implementing Entity Management Fee use included?	n/a at concept stage	
	5. Is an explanation and a breakdown of the execution costs included?	n/a at concept stage	
	6. Is a detailed budget including budget notes included?	n/a at concept stage	
	7. Are arrangements for monitoring and evaluation clearly defined, including budgeted M&E plans and sex-disaggregated data, targets and indicators, in compliance with the Gender Policy of the Fund?	n/a at concept stage	
	8. Does the M&E Framework include a break-down of how implementing entity IE fees will be utilized in the supervision of the M&E function?	n/a at concept stage	
	9. Does the project/programme's results framework align with the AF's results framework? Does it include at least one core outcome indicator from the Fund's results framework?	n/a at concept stage	

	10. Is a disbursement schedule with time-bound milestones included?	n/a at concept stage	

ADAPTATION FUND

CONCEPT NOTE 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:

x This concept has been submitted before

This is the first submission ever of the concept proposal

In case of a resubmission, please indicate the last submission date: 18/08/2023.

Please note that concept note documents should not exceed 50 pages, including annexes.

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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
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
TNC - Third National Communication
SWG - Standing Working Group
TNC - Third 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

Project/Programme Background and Context:

A. Geography

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).

B. Governance and administration

2. 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[1], 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.

C. Economy

3. 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 average[1]. 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. Moreover, the COVID-19 pandemic has had a significant impact on BiH's economy, resulting in loss of lives, decreased welfare, and limited economic opportunities. 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

[1] Eurostat: https://ec.europa.eu/eurostat/databrowser/view/tec00114/default/table?lang=en Accessed June 2023

political obstructions, gridlocks, and hindered economic policy coordination and reform efforts. Additionally, excessive bureaucracy and a segmented market have discouraged foreign investment.

4. 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%).[2] 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[3]. 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.

D. Population

5. 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).[4] However, with a GNI per capita of US$ 6,810 in 2021, the country stands at the lower end of upper-middle classification.

6. With a Gini coefficient of 0.33 (2021)[5] 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.[6] **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.[7] 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.

E. Biodiversity and forestry

7. 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

[2] OECD (2021). Multi-dimensional Review of the Western Balkans: Assessing Opportunities and Constraints.
[3] World Bank Databank: Bosnia and Herzegovina country profile. Accessed May 2023.
[4] World Bank - Country Overview. Accessed May 2023.
[5] World Bank Databank: Bosnia and Herzegovina country profile. Accessed May 2023.
[6] UNDP - Human Development Report 2021/2022.
[7] UNDP (2022). Human Development Report 2021/2022.

for only about 2.28% of the total land area (3.24% in the FBiH and 1.30% in the RS)[8], 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).

8. 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.

9. 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.

10. 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).[9] 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.[10]

F. Water resources

11. Bosnia and Herzegovina boasts abundant water resources, 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 km^3, with an average annual precipitation of 1250mm/year.[11] 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

[8] Sixth National Report of Bosnia and Herzegovina to the Convention on Biological Diversity (2019)
[9] Sixth National Report of Bosnia and Herzegovina to the Convention on Biological Diversity (2019)
[10] Convention of Biological Diversity https://www.cbd.int/nbsap/about/latest/#ba (retrieved May 2023)
[11] National Adaptation Plan (NAP) of Bosnia and Herzegovina (2021)

larger rivers experience torrential flow with rapid concentration. 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.

12. 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**.[12] 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**.

G. Agriculture and food security

13. 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[13]. 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[14].

14. 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.[15] 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%.

15. 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).

F. Climate change

16. 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

[12] Interview with Herzegovina-Neretva Canton and Una-Sana Canton
[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] Idem
[15] World Bank Databank: Bosnia and Herzegovina country profile. Accessed May 2023.

"Education" and "Innovation" in Readiness.[16] 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

17. 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.[17] 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

18. 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 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.[18]

[16] 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.
[17] Climate Risk Profile: Bosnia and Herzegovina (2021): The World Bank Group.
[18] An analysis of the snow dynamic in BiH will be done during full design using the data from NASA MODIS MOD10A2 V.6

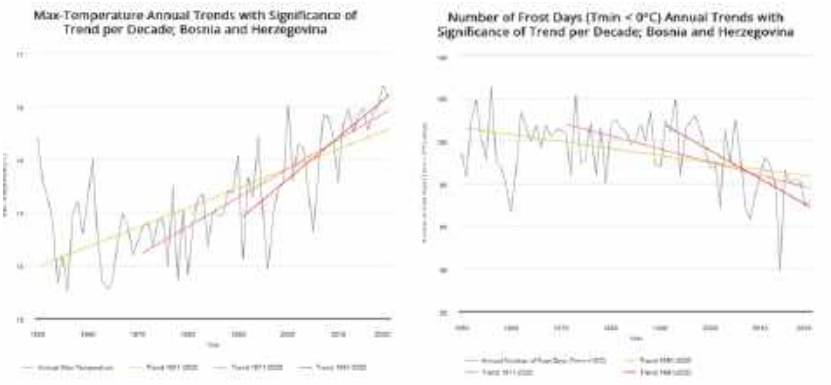

Figure 1: Max-Temperature (left) & Number of Frost Days (Tmin<0°C) (Right). Annual Trends with Significance of Trend per Decade in Bosnia and Herzegovina 1990-2020. Source: CCKP.

19. 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).

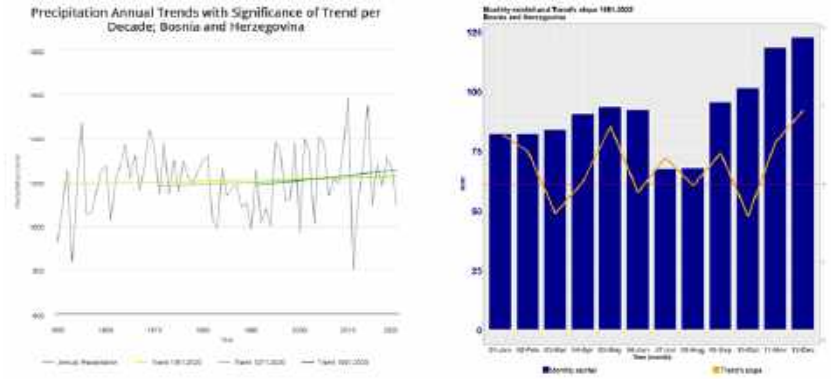

Figure 2: Precipitation Annual Trends with Significance of Trend per Decade in BiH 1990-2020 (left). Source: CCKP. Monthly rainfall and Trend's slope in BiH 1981-2022. Source: CHIRPS.

20. 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 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.

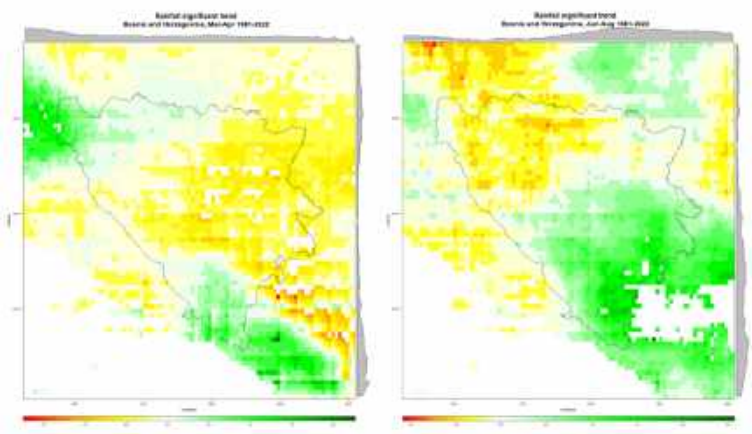

Figure 3: Precipitation significant trend in Mar-Apr (left) and Jun-Aug (right) in BiH, 1981-2022. Source: CHIRPS.

21. 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 the cantons within the FBiH and the regions 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.[19] Furthermore, there is a concentration of precipitation during that specific periods of the year.

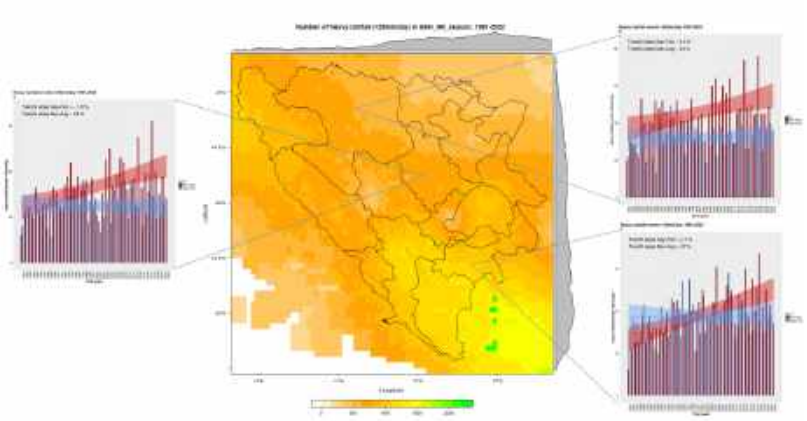

Figure 4: Number of heavy precipitation events (>20mm/day) accumulated (map, center) and seasonal trend Mar-Aug (red) and Sep-Feb (Blue) (graphs, left and right) in BiH, 1981-2022. Source: CHIRPS.

[19] 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

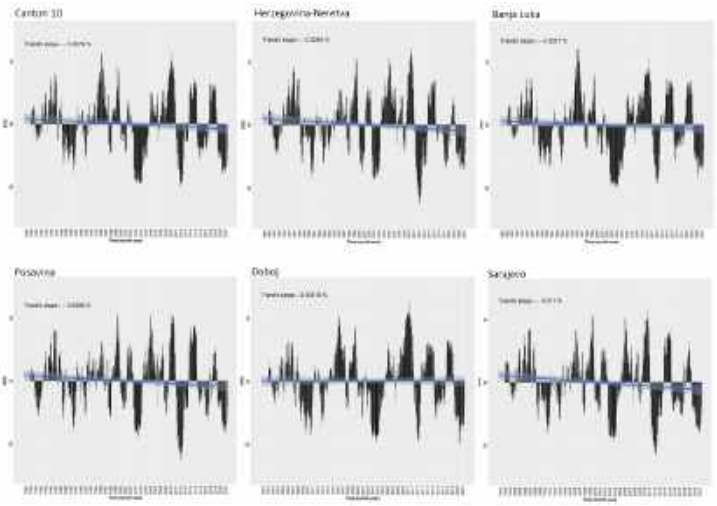

Figure 5: Monthly long term Drought index[20] (SPEI 18 months) for the Canton 10, Herzegovin-Nereta canton, Banja Luka region, Posavina canton, Doboj region and Sarajevo canton for the period 1981-2021. Source: CHIRPS, TerraClimate.

22. 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, Banka Luka, Doboj, Foca, Herzegovina-Neretva, 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

23. 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).

[20] 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].

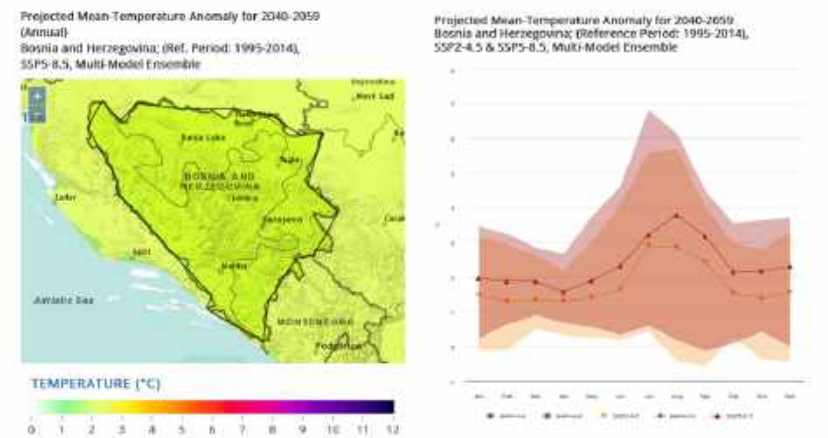

Figure 6: Projected Mean Temperature Anomaly for 2040-2059 in BiH compared to the reference period 1955-2014, SSP2-4.5 and SSP5-8.5, Multi-Model Ensemble. Source: CCKP.

24. 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.

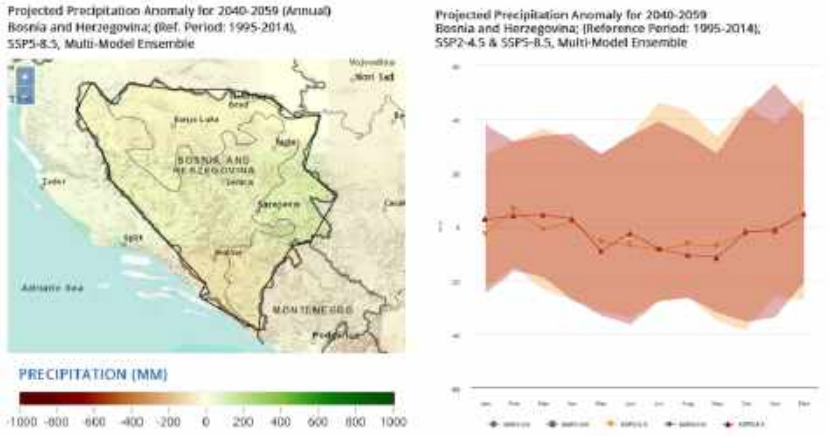

Figure 7: Projected Precipitation Anomaly for 2040-2059 in BiH compared to the reference period 1955-2014, SSP2-4.5 and SSP5-8.5, Multi-Model Ensemble. Source: CCKP.

25. 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.

26. 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).

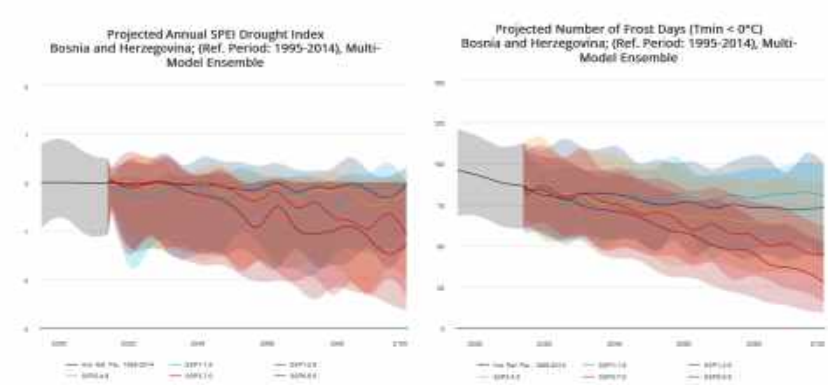

Figure 8: Projected Annual SPEI Drought Index and Number of Frost Days (Tmin<0°C) in BiH (Reference period 1995-2014), Multi-Model Ensemble. Source: CCKP.

H. Impacts of Climate Change on agriculture and water resources

27. 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. 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.[21] Besides, climate change-induced land degradation has become extreme in BIH, as a consequence of more frequent floods, drought and wildfires in recent decades.[22]

28. 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

[21] National Adaptation Plan (NAP) of Bosnia and Herzegovina (2021)
[22] 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

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. Additionally, prolonged periods of drought and heat waves affected the region in 2011, 2012, 2013, 2015, 2016, 2017, 2020, 2021 and 2022[23] 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.[24] Depletion of the groundwater table and decrease of the springs discharge are some aspects influenced by the recent climate change.[25] 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.

29. 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.

30. 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.

31. 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.

32. 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

[23] Copernicus: https://climate.copernicus.eu/all-content (retrieved June 2023)
[24] MOFTER. Godišnji Izvještaj iz Oblasti Poljoprivrede, Ishrane i Ruralnog Razvoja Bosne i Hercegovine za 2017. Sarajevo, BiH. 2018.
[25] Nistor, Mărgărit-Mircea. Geo-Spatial Information Science; Wuhan Vol. 22, Iss. 4, (Dec 2019): 345-358. DOI:10.1080/10095020.2019.1613776

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.

33. 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[26]), 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.

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

1. 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.
2. 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.
3. 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.
4. 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.

I. Vulnerabilities in the national strategy to tackle climate change

35. 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**.[27] 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.

[26] FAO AQUASTAT: https://www.fao.org/aquastat/en/geospatial-information/global-maps-irrigated-areas/irrigation-by-country/country/BIH
[27] Interview with Herzegovina-Neretva Canton and Una-Sana Canton.

36. 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**.[28] Climate change adaptation measures are essential to minimize future drought occurrences and their severity in BiH.

37. 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.

J. Agroecology as an approach to adapt to climate change

38. 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.[29] Notably, private sector entities investing in the agrifood sector are increasingly acknowledging the significance of agroecology in promoting sustainable and responsible investments 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.[30]

39. Agroecology is not widely recognized or integrated across sectors in BiH, making its presence relatively weak as of today. However, studies[31,32] 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 concept note mission 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.

[28] The NAP also presents budgets needs related to the activities.
[29] 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).
[30] Global Alliance for the Future of Food : https://futureoffood.org/
[31] Mapping the Development of Agroecology in Europe Country Reports Series volume 1 (2023). Wezel A. - Grard B. - Gkisakis V. Agroecology for Europe (AE4EU).
[32] 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

40. Adopted by the FAO Council in December 2019, the 10 Elements of Agroecology[33] 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.

41. As part of the multi-agency Scaling Up Agroecology Initiative[34] – 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[35], IFAD undertook a stocktake covering 207 projects with completion dates between 2018-2023[36]. 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.

42. 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.

43. 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.

44. 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.

45. In the context of climate change adaptation, agroecology offers valuable strategies. By promoting diverse cropping systems, agroforestry, and agrobiodiversity, it enhances the

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

[34] 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.

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

[36] 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

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.

46. 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. To effectively address these challenges, the project adopts an innovative and transformative agroecological approach, seeking to integrate ecological principles into agricultural practices. The adoption of agroecological principles and practices in BiH presents a transformative opportunity to foster sustainable and climate-resilient agriculture. Through the agroecological approach, Staza aims to build adaptive capacity, conserve precious natural resources and enhance food security while preserving local knowledge and cultural heritage (See Part II – A. Project components). This holistic approach, integrating scientific understanding, social engagement, and sustainable practices, demonstrates immense promise in addressing the challenges posed by climate change in the agricultural sector.

K. Project Area and Target Groups

47. **Project target area and Geographical targeting.** Staza will be implemented in the two entities, namely FBiH and RS. At the concept stage, Staza is planned to cover all the cantons in FBiH and all the municipalities (grouped in clusters) in RS. This geographic targeting could be revised during the full design process to reflect specific aspects of the BiH adaptation to climate change strategies and plans[37] and/or to focus specifically on the most vulnerable areas of the two entities. Taking lessons from the previous IFAD project READP[38], Staza will employ a territorial approach, employing clusters in RS and cantons in FBiH. During the concept mission, the decision was made to prioritize cantons in FBiH based on the government of BiH's recommendation, as they are deemed more functional and inclusive. In contrast, clusters were chosen as the entry point in RS due to the absence of third tiers of governance in the entity and the successful functioning of clusters under READP.

48. **Target groups and targeting strategy.** The concept employs a combination of targeting strategies, including geographic, self-targeting, and the integration of various approaches, to effectively address the diverse needs of rural communities. IFAD primarily focuses on the rural poor and smallholder farmers as its target groups. While during the project design stage, it will be crucial to actively engage local communities and stakeholders and base the targeting strategy on project-specific studies and consultations. The initial estimate of the number of direct beneficiaries of Staza is 6,000 HHs, or around 17,500 people. Based on the socio-economic assessment and the SECAP Review Note, Staza should target the following groups:

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[37] National Adaptation Plan (NAP) of Bosnia and Herzegovina (2021)
[38] Rural Enterprises and Agricultural Development Project (READP) https://www.ifad.org/en/web/operations/-/project/2000001813

(i) Smallholder farmers: particularly those near or below the poverty line, facing economic challenges in climate-affected areas. Special attention should be given to smallholder farmers with limited access to land, including those with inadequate entitlements or land size, as this hampers their potential, access to subsidies, and economic opportunities.;
(ii) Low-income rural families: Focus on regions at risk, including landless households and those with limited access to land and resources, relying on part-time or seasonal work. Additional consideration should be given to families with many children, considered in the poorest quintile;
(iii) Vulnerable groups with intersecting vulnerabilities such as ethnic minorities, and HH and individuals with disabilities supporting equal access to resources, skills development, and employment opportunities;
(iv) Rural youth: addressing unemployment, migration and exclusion challenges;
(v) Rural women and women-headed households as one of the most vulnerable farmer groups. Target female farmers and unemployed/self-employed women, especially those without entitlements to land and natural resources as detailed below.

49. **Preliminary gender assessment.** Women's contributions to value chains often go uncompensated, as they are confined to familial support roles, and gender disparities persist in land and property ownership, limiting women's economic opportunities. In rural areas, female-headed households face financial challenges and limited opportunities compared to their male counterparts. Widowed female heads of households have restricted income sources and less livestock. Male-headed households have larger land plots across all categories except for fishponds. The average land size owned by female-headed households is smaller, influenced by patrilineal land ownership patterns and the lack of resources available to women. These disparities highlight the gendered aspects of poverty and inequality in rural areas. Efforts to address these issues include raising awareness about women's formal property rights and improving data collection on farm ownership. Particular attention should be paid to female farmers and women who are unemployed or those with low incomes in self-employment or smallholder value chains. Many women's agricultural production intended to be managed as a business remains unregistered due to difficulties in meeting eligibility criteria, or need assistance in navigating the process.[39]

50. Women and girls experience the greatest impacts of climate change, which amplifies existing gender inequalities and poses unique threats to their livelihoods, health, and safety. Across the world, women depend more on, yet have less access to, natural resources and BiH is not an exception. Climate change affects women in BiH in various ways: they are more vulnerable due to existing gender inequalities and social norms, hindering their ability to adapt to climate change. Economic disparities limit women's access to economic opportunities, ensuring diversification of income and livelihood opportiunities, particularly in sectors like agriculture. Women are underrepresented in politics, limiting their influence in climate change decision-making. Gender disparities in land ownership restrict women's economic opportunities and ability to adapt to climate change impacts. Gender-based violence, already prevalent, can be further exacerbated by climate change. Through dedicated studies, consultation processes and specific targeting measures, the project design should be able to identify entry points to promote gender inclusion, address disparities, and create a more equitable and inclusive environment for women in project activities, ultimately enhancing their resilience to climate change impacts.To address these challenges, Staza will incorporate targeted activities and conduct a comprehensive gender analysis during its full design phase.[40]

51. As part of the preliminary gender assessment, Staza aims to promote gender equity and women's empowerment through its targeting strategy. This includes ensuring alignment with the gender inclusion policies of both the Adaptation Fund and IFAD during the development of the

[39] UN Women (2021). Country Gender Equality Profile of Bosnia And Herzegovina.
[40] At full design, an Annex on Gender Assessment, Strategy and Action Plan will be developed.

comprehensive project proposal. In line with these policies, Staza will consider the percentage of women engaged in the agricultural sector in BiH to promote gender equality. Staza sets a target of having a minimum of 30 percent of the beneficiaries be women, adhering to the principles outlined in project targeting.

52. To address gender-related issues, Staza will conduct a gender analysis along with stakeholder engagement and analysis. This will enable the recognition and addressing of the rights, needs, and opportunities of women and men, as well as their different needs, roles, and barriers. Active participation of women will be ensured in the planning process through methods such as focus group discussions. Gender aspects will be integrated into the project's assessments of climate change and related plans and activities at the territorial level (see Part II –A). Staza will also facilitate women's involvement in policy formulation and discussion processes through committees representing specific groups or communities. Through these measures, Staza aims to prioritize gender inclusion and create a more equitable and inclusive environment for women in the agricultural sector of BiH.

Project Objectives:

53. **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.

54. **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.

Project Components and Financing:

Table 1: Project components and financing

Project/Programme Components	Expected Outcomes	Expected Concrete Outputs	Amount (US$)
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	1,125,000
		Output 1.1.2. Participatory Local Climate Adaptation Plans developed/ included in existing strategies	250,000
		Output 1.1.3. Exchange visits	75,000
2. Adoption of approaches for climate change adaptation at territorial level	**Outcome 2.1.** Enhanced resilience of smallholders' livelihoods to climate change	**Output 2.1.1**. Adaptive capacity of farming systems strengthened	600,000
		Output 2.1.2. Grants to adaptive activities provided	1,600,000
	Outcome 2.2. Improved resilience of ecosystems	**Output 2.2.1**. Ecosystem protecting measures implemented	2,200,000

	and infrastructures assets	**Output 2.2.2**. Rural adaptation collective infrastructure rehabilitated or constructed	2,000,000
3. Policy support and knowledge enhancement for a climate-resilient agriculture	**Outcome 3.1.** Support to 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	167,978
		Output 3.1.2. Relevant institutions supported in the creation of curriculum for master students	75,000
		Output 3.1.3. AE research grants on pilots, and soil and water specialized institutions supported	250,000
4. Project/Programme Execution cost			873,612 USD
5. Total Project/Programme Cost			**9,216,590 USD**
6. Project/Programme Cycle Management Fee charged by the Implementing Entity (8.5%)			783,410 USD
Amount of Financing Requested			**10,000,000 USD**

Projected Calendar:

Table 2: Project milestones

Milestones	Expected Dates
Start of Project/Programme Implementation	2024
Mid-term Review (if planned)	2027
Project/Programme Closing	2029
Terminal Evaluation	2029

PART II: PROJECT/PROGRAMME JUSTIFICATION

A. Project components

Component 1: Participatory assessment and territorial planning (USD 1,450,000).

55. The impacts of climate change on production systems extend beyond drought and heat cycles to include hail, late spring frost, and an increase in pests and diseases. To address these challenges, the climate rationale of Component 1 emphasizes the need for resilient agricultural strategies at territorial level in BiH (cantons/municipalities). As noted previously, despite recent national-level documentation, strategies and need for budget to adapt to climate change in the country, the cantonal and municipality levels do not adequately address specific climate threats, with a tendency to prioritize short-term strategies over medium to long-term planning. This lack of clarity and alignment hinders the effective implementation of measures to enhance resilience and adaptability in agriculture and water sectors. To effectively address climate change impacts, it is crucial to assess threats, prioritize medium to long-term strategies at the level of the canton

(in FBiH) and municipalities (through the clusters in RS), and allocate investments accordingly. Besides, climate data monitoring, assessment, and targeted interventions at the farm and landscape level are essential for tackling these challenges and increasing the resilience of affected areas. Furthermore, the planning of sustainable agriculture practices integrates the planning of other sectors and the Component 1 will actively engages local stakeholders who may have competing interests over shared resources such as irrigation and hydropower. This integrated planning approach allows for the evaluation of synergies, trade-offs, and complementarities for the benefit of local sustainable development. Indeed, the community mobilization efforts should not solely focus on climate change in agriculture and water but should also encompass the broader objective of integrated planning that promotes local sustainable development.

56. Component 1 of Staza aims to address the trade-offs associated with climate change and make informed decisions at the territorial level. This involves mapping areas where people and climate considerations intersect, and understanding the potential actions that can be taken while taking into account the impacts on agriculture. The focus is on identifying and implementing strategies that integrate sustainable agricultural practices and climate change adaptation, considering the specific conditions and challenges of each territory. By assessing the impacts on agriculture Staza seeks to determine what is feasible and appropriate in order to promote sustainable and resilient agricultural systems.

Outcome 1.1. Enhanced Community Mobilization and Improved Knowledge for Climate Change Adaptation

1.1.1. Multi-stakeholder platforms established and facilitated in clusters/cantons;
1.1.2. Participatory Local Climate Adaptation Plans developed/included in existing strategies;
1.1.3. Exchange visits.

57. Staza will use a territorial approach by engaging stakeholders within specific territories, promoting inclusiveness, and prioritizing vulnerable groups. Arrangements for component 1 should build on the existing multi-stakeholder platform experience from previous IFAD projects in clusters (RS, where clusters are well established, each cluster representing several municipalities of the entity) and cantons (FBiH, where the use of cantons as multi-stakeholder platforms is preferred to the existing clusters), and creating new ones, considering the frequency of meetings, the nature of the management board, and the meeting agenda. Indeed, the assessment of the overall situation, current practices, and potential solutions for improvement represents a crucial and valuable output of Outcome 1.

58. In addition, multi-stakeholder platform should actively involve farmer's associations, cooperatives, private companies, and municipalities, the cluster/cantons women's organizations, youth representatives, and ethnic group's representatives. The cluster manager, as used under previous IFAD projects in the country, will serve as a dynamic facilitator, ensuring collaboration and close connections with farmers, with special attention to engaging individual small-scale farmers. Established clusters should include good representation of women and youth participation, along with representation of ethnic minority groups and persons with disability.

59. Staza will conduct climate change analysis at the cluster/cantonal level through comprehensive analysis of historical and future scenarios, including watershed basins analysis[41]. The analysis will involve partnerships with faculties and institutes, identifying key climate change themes and adaptive solutions for each territory and include them in agricultural and water management

[41] Several municipalities (represented by clusters) and cantons might share watershed basins. The project will ensure that the plans at cluster/cantonal level encompass the intricate dynamics within these watershed basins, effectively integrating their complexity and promoting holistic management approaches.

plans. The climate change analysis will provide a deep understanding of the implications of climate change for agriculture and the environment in different agro-ecological zones.[42] By identifying primary impacts such as droughts and floods, we can examine their geographical distribution, temporal patterns, and intensity levels. These key themes will serve as the foundation for extensive discussions focused on adaptive solutions at the cluster/canton level.

60. These solutions will address both farm-level and landscape-level strategies and activities for the project. They can furthermore contribute to discussions on prioritization of actions for the water management and agricultural plans (existing at entity and cantonal level) in the context of climate change adaptation. To ensure the use of up-to-date data, the analysis will be conducted twice during Staza's lifespan[43], with each iteration focusing on a specific theme and proposing responsive solutions tailored to the respective agro-ecological zone.

61. At the territorial level, there is a wealth of available data from faculties and ministries (e.g. NAP) that can support the analysis. Collaboration with the Hydrometeo institute will be beneficial. While faculties can provide data advisory and act as data providers, they may not be able to animate the multi-stakeholder platform within the clusters/cantons, which might be taken by the cluster manager. The cluster manager will support clusters/cantons in including decisions in plans at territorial levels. Therefore, agricultural and water plans could be revised or updated to integrate climate change considerations and promote climate-resilient agricultural practices.[44]

62. Unidentified sub-projects (USPs) could be identified during Component 1 (part of the agricultural and water plans) and will contribute to the activities in Component 2 (specifically under 2.2.2. Rural adaptation collective infrastructure rehabilitated or constructed).

63. Staza will support the organization of exchange visits between cantons/clusters and within the region with other countries as a valuable tool to foster synergy and facilitate the transfer of knowledge. These exchanges provide an opportunity for representatives from different cantons or clusters to visit and interact with one another and with other countries and projects involved in climate-resilient agriculture and agroecology, creating a space for learning, collaboration, and the exchange of ideas. During these visits, stakeholders have the chance to share their experiences, best practices, and innovative approaches related to various aspects of their work. This can include sharing insights on climate change adaptation strategies, agroecological practices, market access initiatives, policy support measures, and more. By engaging in discussions and knowledge-sharing activities, participants can gain valuable insights into successful approaches implemented in other places. 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.

Component 2: Adoption of approaches for climate change adaptation at territorial level (USD 6,400,000).

64. As presented in the *Part I: Project/Programme Background and Context*, agroecology can increase the resilience capacities of small-scale producers in the face of climate change challenges, reduce their costs and dependency on external inputs and improve their access to nutritious and safe food. The traditional knowledge of farmers in the region combined with scientific innovation in practices and the sustainable use of technologies are at the core.

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[42] Including a focused economic assessment to determine the losses in agricultural productivity due to climate change and potential returns achievable through the implementation of adaptive measures.
[43] E.g. First analysis at the beginning of year 2 and second analysis at the beginning of year 4.
[44] 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.

Agroecology-based cultivation practices maintain high crop and livestock diversity integrated in a farming ecosystem conserving soil and water resources and with a diversity of outputs. These practices create resilience by spreading risks and improving the water and nutrient buffer capacity in the soil system. At the same time, these systems can contribute to the conservation of biodiversity, and reverse land degradation trends.

65. Under component 2 Staza will be promoting the adoption of approaches for climate change adaptation at territorial level. It will do so through two entry points (at farmers' level and at territorial entity) and through scaling up, replicating sustainable adoption of climate change adaptation practices with an agroecological approach.

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

2.1.1. Adaptive capacity of farming systems strengthened
2.1.2. Grants to adaptive activities provided

66. The entry point at farmers' level includes a comprehensive approach that combines training and capacity building with participatory innovative agroecological pilots. The pilot initiative integrates community-owned research with the support of university faculties (under Component 3), access to grants for the widespread adoption of innovative agroecological solutions among farmers, and market access. The aim is to actively engage farmers in the development and implementation of innovative solutions while enhancing their skills and knowledge, ultimately fostering resilient agricultural practices based on agroecology and facilitating market opportunities for sustainable livelihoods. Finally, under this entry point, Staza will be promoting market access integration of smallholders supported with revitalization of local and regional markets, farmer-to-consumer linkages through the facilitation of app-developed sales systems and support for fairs and local market opportunities.

67. Staza will adopt the EU's approach of "living labs" as participatory innovation pilots to fast-track the adoption of sustainable and adaptive practices. In these living labs, real farms will serve as experimental grounds where farmers and stakeholders work together as equal partners to create, test, refine, and promote solutions that address their specific climate related challenges. The solutions developed will be based on the climate change threats identified in Component 1 of Staza, as well as the discussions facilitated by the cluster manager, bringing stakeholders together to exchange ideas and find effective strategies. Various topics of interest include agroecology principles, integrated pest management (IPM), local community seed banks, pasture revitalization, organic fertilizer development (composting, vermicomposting and micro-organisms), good agricultural practices for water conservation in soil, good practices for NTFP harvesting, and anti-hail and anti-frost measures following agro-ecological techniques, including agroforestry. It is expected that the adoption of agroecology and other climate resilient practices at farm level could contribute to the resilient management of up to 1400 hectares of agricultural land.

68. The successful implementation of Staza will depend on the support and collaboration of local extension services, whether they are from municipal/cantonal or private entities. Currently, the cantonal/municipal services lack the capacity to equip farmers with the necessary knowledge and skills for climate change adaptation and agroecological practices in agriculture. This deficiency stems from lack of specific training and financial resources. Therefore, there is a need to increase the number of specialized extension officers at the municipality, town, and cantonal levels.[45] In the previous READP initiative, extension services played a crucial role as intermediaries between farmers and private companies involved in processing and distribution, and as important local stakeholders. Under the current project, their role will be further strengthened to build their capacities and ensure sustainable improvement in the services they

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[45] Interview with Herzegovina-Neretva Canton and Una-Sana Canton

provide to clusters/cantons and the entire community. The extension services will receive training to enhance local knowledge on agroecology and other identified climate-resilient practices, as well as develop skills in business and market development. Building upon the dissemination tools used in previous IFAD projects, Staza will utilize phone apps[46] as communication tools between farmers and extension services, facilitating support for production, weather information, monitoring plant and animal diseases and other relevant activities.[47]

69. Besides, this component will facilitate access to grants aimed at promoting the widespread adoption of innovative agroecological solutions among farmers. These grants will be implemented concurrently with the pilots and will empower farmers to initiate their own projects, expanding the pilots, with the technical support of extension services. Three types of grants will be available to individual and groups of individuals: (i) Grants directly benefiting own farm primary production, with the goal of adapting production to climate change threats[48]; (ii) Grants benefiting the community, for individual/group of individuals willing to produce inputs such as organic fertilizer, biological inputs or seeds to support other farmers; (iii) Grants for SME investments in post-harvest handling, storage, processing, marketing, etc. Moreover, Staza will place emphasis on establishing connections between its activities and the existing grants for youth and rural women that have been developed by the government of BiH[49]. 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.

70. Staza places a strong emphasis on improving market access for small farmers as part of its climate change adaptation efforts. Various strategies will be implemented to support farmers in this regard. Firstly, Staza aims to promote nutritious food and enhance market branding through targeted interventions within the clusters/cantons. Staza recognizes the importance of engaging children in initiatives that promote nutritious, local, and possibly organic food. Continuing the efforts done under previous IFAD projects in the country, workshops targeting consumer awareness will be conducted, leveraging the influential role of children in shaping food choices. Furthermore, Staza aims to explore partnership opportunities with existing local supermarket brands (such as "Houses of products" from the region) to facilitate the sales of local agricultural products within the country. By establishing connections between farmers implementing good practices and these supermarkets, market access for small-scale producers will be strengthened. Additionally, Staza will foster direct connections between farmers and consumers by facilitating the implementation of app-based sales systems and providing support for agricultural fairs. 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.[50] Finally, as it has been done under the previous IFAD project READP, cluster managers will provide valuable information on branding strategies, empowering farmers and facilitate the certification of geographical indications for specific traditional products to effectively position their products in the market. Guidelines and procedures provided by UNESCO and the FAO will be utilized, with efforts focused on identifying interested municipalities/farmers/cooperatives for certifying their unique agricultural production.

[46] Such as "Viber" or other type of communication app.
[47] Already partially implemented under previous IFAD READ project.
[48] E.g. Investments for water efficiency such as small size rainwater harvesting ponds, investments for soil improvement, small machinery, live material, etc.
[49] 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.
[50] 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.

Outcome 2.2. Improved resilience of ecosystems and infrastructures assets.

2.2.1. Ecosystem protecting measures implemented

2.2.2. Rural adaptation collective infrastructure rehabilitated or constructed

71. At the territorial entity level, the proposed project recognizes the importance of prioritizing Natural Resource Management (NRM) investments to effectively address the impacts of climate change within the clusters and cantons. 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.

72. 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 NRM 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. During the concept stage, the estimated outcome for 2.2. entails the protection of approximately 2,750 hectares, achieved through the implementation of biotechnical measures covering an area of 550 hectares.

73. Recognizing the importance of water management in the face of climate change, the proposed project will support the rehabilitation and construction of collective rural infrastructure.

74. Under this activity, 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. 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.

75. Such category of investments is excluding deviation and storage from permanent rivers or drilled wells and pumps for irrigation schemes. The project will also include the rehabilitation of 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.

76. 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.

Component 3: Policy support and knowledge enhancement for a climate-resilient agriculture (USD 492,978).

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Deleted: This includes the establishment of storm basins, which will significantly improve water flow management during heavy precipitation events. By effectively capturing and redirecting excess rainfall, storm basins can help prevent flooding and minimize potential damages to infrastructure and agricultural areas. Additionally, Staza will invest in water collecting infrastructure to support farmers during drought periods, ensuring that they have access to adequate water resources for irrigation and sustaining their livelihoods even in times of water scarcity.¶

77. Under this component, the proposed project seeks to integrate adaptation strategies and mechanisms into local and national policies. By disseminating knowledge, fostering educational development, and supporting research grants, Staza aims to enhance the adaptive capacity of BiH's agricultural sector, ultimately contributing to the resilience of communities and ecosystems in the face of climate change.

Outcome 3.1.: Support to Knowledge and Research for integrating adaptation strategies and mechanisms at cantons/municipal and national policy levels, drawing on project approaches and implementation lessons.

3.1.1. Knowledge products are effectively created and shared with key stakeholders to provide policy support
3.1.2. Relevant institutions supported in the creation of curriculum for master students
3.1.3. AE research grants on pilots, and soil and water specialized institutions supported

78. Staza recognizes the importance of effective policy measures in addressing climate change adaptation, particularly in the agriculture and water management sectors. At concept note stage, gaps in policy making in the sector were identified, along with related barriers that the activities of this component aim to address. These barriers include limited access to biological inputs[51], inadequate incorporation of climate change considerations into spatial planning[52], and outdated data and measures concerning climatic shocks. The activities of this component will focus on facilitating access to necessary biological inputs, ensuring the integration of climate change considerations into spatial planning processes, and updating data and measures to effectively address the challenges posed by climatic shocks. By targeting these specific gaps and barriers, the component aims to enhance policy making in the sector and promote more effective adaptation strategies.[53] During the full design phase, areas requiring policy support will be pre-identified. Throughout Staza's duration, careful selection and prioritization of necessary policies will take place to ensure long-term sustainability and alignment with the country's climate change agenda.

79. 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 into plans and strategies are important policy objectives. Staza recognizes the challenging aspect of insurance coverage for climate-related agricultural disasters, specifically hail, for which a direct solution may not be readily available. However, Staza aims to enhance clusters/cantons through a multi-stakeholder platform and foster stronger relationships among farmers, cooperatives, farmer associations, municipalities, and private entities. By doing so, Staza seeks to exert influence on insurance companies through policy advocacy. Additionally, Staza explores the possibility of leveraging the IFAD INSURED programme[54], which provides implementation support on agricultural insurance and climate risk insurance to governments and partners worldwide. This avenue of collaboration with INSURED could offer valuable assistance in addressing the need for climate-related disaster coverage for farmers, contributing to Staza's objectives.

80. The Ministry of Foreign Trade and Economic Relations of BiH (MoFTER)) will coordinate with the competent entity Ministries in gathering information and documents on Staza from both RS and FBiH to support specific policy changes in agriculture and water management related to

[51] Such as natural insects predators, present in the country naturally but not produced nationally for agronomic purpose.
[52] It was observed that climate change is not consistently integrated into spatial planning in BiH, highlighting a gap in the current practices. Stakeholders expressed a need for support in addressing this issue and incorporating climate change considerations into the spatial planning framework.

[54] IFAD INSURED Programme: https://www.ifad.org/en/insured

climate change. Technical experts involved in Staza will contribute to identifying gaps and bottlenecks in regulations and laws, providing valuable input for policy makers and supporting the development of on-going process of laws and strategies. The integration of policies and plans related to water management, agricultural production and climate change is partially incorporated through the measures and activities of the Agriculture and Rural Development Strategy (2021-2027). Staza's results and lessons learned will therefore inform the next Strategy on Agriculture and Rural Development, covering the period from 2028 to 2032, with an increased focus on adaptation to climate change.

81. Besides, to promote policy support and enhance the country's climate change efforts, Staza will introduce an innovative curriculum focused on climate change and on adaptive approaches such as agroecology (for specialized careers) at the university master's level. This cross-cutting specialization will be offered in disciplines such as agriculture, forestry, natural resource management, spatial planning, social science and more. It is important to note that currently, climate change is not incorporated into any master's program in the country. 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 Stazas will offer them an opportunity to utilize pilot cases for their master 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.

82. Finally, in order to enhance the understanding of water and soil dynamics under output 2.1.1., Staza will provide support to specialized laboratories and institutes focused on soil and water. This support will include the provision of specific equipment, such as tools for soil micro-biome analysis, ICT water and soil sensors and the installation of piezometers[55]. By strengthening the capabilities of these institutions, Staza aims to improve the assessment and management of water resources and soil health, thereby contributing to more sustainable agricultural practices and better overall water resource management.

B. Economic, Social and Environmental Benefits

83. 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.

84. In terms of **economic benefits**, Staza empowers local communities and smallholder farmers by promoting sustainable agricultural practices and enhancing the resilience of their livelihoods. Through the implementation of innovative agroecological solutions, farmers are equipped with the knowledge and resources to adapt their production systems to climate change threats. Farmers can improve the quality, specificity (such as Geographic Indications) and quantity of their agricultural output. This, in turn, leads to increased market support and better access to

[55] E.g. The project may support the expansion of the piezometers network, which would improve the understanding of underground water levels and the water cycle. This expansion will directly impact water understanding for both the local population and agricultural activities, contributing to more sustainable water resource management.

local markets, as their products align with the growing demand for sustainably produced goods. With improved market access, farmers can command better prices for their products, resulting in enhanced income opportunities and improved economic conditions for rural communities. Moreover, Staza's focus on natural resource management contributes to better and steadier access to vital resources such as water and land. By implementing water management strategies and infrastructure, farmers benefit from more reliable access to water resources for irrigation, reducing the risks associated with water scarcity during drought periods. Additionally, the establishment of such infrastructure protects agricultural lands from erosion, ensuring the long-term sustainability of farming activities and preserving the quality of soil resources. By strengthening the resilience of agricultural systems, enhancing market support, and providing better access to natural resources, Staza fosters economic growth in rural areas.

85. Staza places a strong emphasis on **social inclusivity and community engagement**, actively involving vulnerable groups such as women and youth. Their participation and access to project activities, as well as their involvement in decision-making processes, are ensured. By incorporating their perspectives and addressing their needs, Staza promotes social equity, empowers marginalized communities, and enhances the well-being of individuals and families. Furthermore, Staza facilitates knowledge sharing and capacity building, leveraging the expertise of universities and master students to evaluate innovative adaptive practices on farms. This not only strengthens Staza's impact but also contributes to the dissemination of agroecological and climate change knowledge throughout the country**.**

86. Furthermore, Staza's **environmental benefits** are significant. It promotes the sustainable use of natural resources, preservation of biodiversity, increase of carbon sinks and effective water management practices. Through measures such as the restoration of storm basins, implementation of green infrastructure projects like afforestation and windbreaks, and establishment of rainwater harvesting systems, Staza mitigates the negative impacts of climate change on the environment.

87. Staza's consultative process involved engaging with a wide range of stakeholders and the full design mission will adopt systematic approach to continue the consultative process, 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.

88. 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 (see Section K). 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 Social and Climate Management Plan (ESCMP) will be developed and regularly updated throughout Staza's lifespan to identify and address potential adverse impacts on the population and ecosystem (see Part III: Implementation Arrangements).

89. 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

90. 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 the table below.

Table 3: Cost-effectiveness and alternatives to project

Benefits generated – losses averted	Alternative to project
Outcome 1.1. Enhanced community mobilization and improved knowledge for climate change adaptation	
- Improved sustainability of benefits of farmers participating in 12 MSPs, benefitting from services related to agroecology and other sustainable agricultural practices, business development, marketing opportunities and access to land. **- Agricultural land protected or under improved management practices** **- Increased stability of income** **-Training in social inclusion** **- Improved resilience of ecosystems and infrastructure assets thanks to the development Participatory Local Climate Adaptation Plans**	*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 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.
Outcome 2.1. Enhanced resilience of smallholders' livelihoods to climate change	
- Rural enterprises reporting an increase in profits **- Economic benefit from grant windows** **- Net present value of investments** **- Agricultural land protected or under improved management practices.**	*- 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

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	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.
Outcome 2.2. Improved resilience of ecosystems and infrastructures assets	
- Implementation of biotechnical measures over 550 hectares to protect over 2,750 hectares of land. **- Natural assets maintained or improved under climate change and variability-induced stress** **-Rain-harvesting structures constructed or rehabilitated** **- Improved landscape restoration and conservation** **- 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**	*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 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.
Outcome 3.1. Support to Knowledge and Research for integrating adaptation strategies and mechanisms at cantons/municipal and national policy levels, drawing on project approaches and implementation lessons	
- Systematizing results, generating relevant knowledge, and creating policy products to facilitate the scaling up of lessons learned. **- National Universities and Research and Development institutes in agriculture/environment topics are expected to be benefited from the knowledge generated by the project.** **- Promoting sustainability and fostering broader replicability at the municipal level**	*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.

D. Strategies

91. 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. With a strong emphasis on targeting the most vulnerable populations living in rural areas, particularly in those areas 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

Deleted: <#>The proposed project demonstrates a high level of cost-effectiveness, considering the integrated nature of its components and the utilization of nature-based solutions (NBS) within Staza design. ¶
<#>Component 1, focuses on comprehensive climate change analysis, provides a foundation for cost-effective decision-making. By conducting a thorough assessment of historical and future climate scenarios at the territorial level, Staza gains a deep understanding of climate change implications for agriculture and the environment across different agro-ecological zones. This knowledge enables targeted interventions and resource allocation, maximizing the efficiency of adaptation efforts.¶
<#>Component 2, which includes on-farm agroecological activities and grants for farmers, presents a cost-effective approach. By facilitating access to grants aimed at promoting the adoption of innovative agroecological solutions, Staza empowers farmers to initiate their own projects. This decentralized approach not only reduces implementation costs but also leverages the technical support of extension services to reach a wider audience. The grant system, encompassing both individual farm-focused grants, community-oriented grants for producing inputs as well as grants for processors optimizes the use of resources and fosters collective action within the farming community. ¶
<#>Additionally, Staza's emphasis on NBS at territorial level aligns with evidence demonstrating their cost-effectiveness in climate change adaptation. According to the World Bank's Climate Change Action Plan 2021-2025, NBS offer a promising approach to address climate change by focusing on the protection, sustainable management, and restoration of ecosystems. The use of green infrastructure, such as wetlands and watersheds, can provide cost-effective strategies for managing water resources and reducing disaster risks. By harnessing the benefits of NBS, Staza not only complements traditional grey infrastructure[56] but also reduces reliance on costly engineering interventions. The restoration of forests and other landscape ecosystems further enhances cost-effectiveness by simultaneously contributing to climate change mitigation and adaptation efforts. NBS play a crucial role in adaptation efforts as they help safeguard livelihoods and built structures from the impacts of floods, storm surges, and droughts.¶
<#>Component 3, focused on policy support and knowledge integration, contributes to the cost-effectiveness of Staza. By incorporating the results of discussions and learnings from Components 1 and 2 into policy formulation, Staza ensures that adaptation measures are aligned with broader national strategies. This integration minimizes duplicative efforts, enhances coordination, and streamlines resource allocation, resulting in a more cost-effective and coherent approach. Furthermore, Staza places a strong emphasis on equipping future generations with a comprehensive understanding of climate change issues and the ... [38]

strategies included in the **Third National communication (TNC, 2016)**, and subsequent **National Determined Contribution (NDC, 2021)** and **National Adaptation Plan (NAP, 2021)**.

92. 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.

93. 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)**[57], 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).

94. Staza is aligned with the SPRR BiH[58] 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).

95. 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.

96. 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)** at the Summit in Sofia in 2020, and subsequently the **GAWB Action Plan**, 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

[57] 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.
[58] 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.

friendly agriculture. The **EU's Common Agricultural Policy (CAP)** emphasizes the promotion of agroecological approaches, biodiversity conservation, and ecosystem services.

97. 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 pesticides by 50% across the European Union by 2030.[59] 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.

98. 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

99. Staza aligns with relevant national technical standards and complies with the Environmental and Social Policy of the Adaptation Fund (refer to ESP risk assessment summary in section II. I, a detailed Environmental&Social assessment will be conducted for the full design proposal, and a full Environmental and Social Management Plan will be done at Start-up) and has been crafted to minimize any adverse environmental impact, resulting in a net gain of environmental benefits. Staza's design process is conducted collaboratively with the country's government, ensuring active participation from the relevant entities (RS and FBiH). Through this inclusive approach, Staza activities are carefully aligned with established guidelines and regulations, including those related to environmental assessment and building codes, as applicable. As an accredited agency, IFAD ensures adherence to the Environmental and Social Policy of the Adaptation Fund by implementing its Social, Environmental, and Climate Assessment Procedures (SECAP). Through the utilization of SECAP, IFAD aligns its practices with the Adaptation Fund's policy to uphold environmental and social standards throughout its projects.

100. Staza will adhere to BiH's national and RS and FBiH's entities technical standards as stipulated in its laws and regulations. The procedure for Environmental Impact Assessments (EIAs) necessitates the project bearer (MAFWM and MAWMF in the case of Staza) to affirm the necessity of an EIA with the competent authority (Municipalities in the case of works anticipated under Staza). Drawing on the experience of READP, where this inquiry is routinely conducted as part of relevant Public Calls, and given that none of the planned works under the project are deemed "complex," it is anticipated that EIAs will not be required. The project will consistently conduct Rapid Environmental Impact Assessments for all works. Staza will observe and adhere

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[59] 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 .

to the national and entities laws and codes of BiH, RS and FBiH with particular emphasis on compliance with the following:

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101. The proposed project is aligned to the **Law on agricultural land** of both entities as well as the **Law on Agriculture, Food and Rural Development in BiH** of both entities which regulates the objectives, principles and mechanisms for the development of frame policies and strategies in BiH. It is also aligned to the **Law on Gender Equality** (adopted in 2003 and amended in 2009), which specifically addresses education, employment, labour and access to resources, equal representation among others and provides the framework for the gender institutional mechanisms that implement the Law and monitor its implementation. The **Law on Agriculture, Food and Rural Development** in BiH also provides the definitions of traditional manufacturing and traditional products based on plant and animal components, and provides the definitions of indigenous species and breeds of animals. According to Article 4 of this law, one of the sectoral goals in BiH is to ensure rational use and protection of natural resources and biodiversity.

102. In terms of meeting national technical standards, Staza incorporates infrastructure investments at the territorial level that comply with relevant guidelines. The investments will align with established standards under the **Law on physical planning and land use** of both entities for improving water infrastructure and prescribed criteria for sustainable land management and disaster risk reduction. Furthermore, the establishment of rainwater harvesting systems, such as tanks, to support farmers during drought periods, takes into consideration the applicable standards for water resource management and conservation included in the **Law on Water** of both entities. This approach not only addresses the immediate water needs of farmers but also adheres to relevant regulations related to water storage and usage.

103. Staza is aligned with the **Law on Environment Protection**. Given that the competences in the sector of nature protection in BiH are conferred on the entity level (RS and FBiH), the principal legal enactments related to environment are defined in the **Law on Environment Protection ("Official newspaper of FBiH" No. 33/03, 38/09)**[60] **of FBiH**, the **Law on Environmental Protection ("Official Gazette of Republika Srpska" No. 71/2012, 79/2015, 70/20)**[61] **of RS**.

104. Moreover, Staza ensures compliance with the Environmental and Social Policy of the Adaptation Fund which emphasizes the importance of sustainable development, environmental safeguards, and social considerations. Staza integrates these principles by incorporating agroecological practices, which promote ecological balance, biodiversity conservation, and the sustainable use of natural resources. It also engages local communities, promoting social inclusiveness and fostering their participation in decision-making processes.

105. By meeting relevant national technical standards and complying with the Environmental and Social Policy of the Adaptation Fund, Staza ensures that its activities are carried out in a manner that is environmentally sustainable, socially inclusive, and aligned with the country's established guidelines and policies.

F. Duplication

106. After first set of consultations within the country, Staza concept note mission 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, which included a detailed analysis of synergies and potential overlaps with other projects (to be concluded during full design

[60] https://www.fmoit.gov.ba/bs/zakoni/zakoni-na-razini-fbih
[61] https://www.vladars.net/sr-SP-Cyrl/Vlada/Ministarstva/mgr/PAO/Pages/Akti.aspx

process). The findings, presented in the table below, demonstrate that the majority of Stazas and initiatives either have complementary activities or do not have geographical overlap with Staza's targeted intervention area.

107. 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 4: 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 Competitiveness Project	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 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.	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 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. The proposed project's teams will be in constant contact with the WB project team to ensure complementarity in implementation.

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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.	The proposed project 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 and the main information available is found in its Country Development Cooperation Strategy for 2020-2025. The USAID strategy indicates a broader approach to incorporating climate change risks into various activities, including livelihoods, tourism, and SME development.	The proposed project and USAID can collaborate synergistically to enhance their respective efforts. They can exchange knowledge, share best practices, and communicate information on climate risks. Additionally, there is potential for collaboration in capacity-building activities. In particular, USAID's focus on tourism aligns well with the objectives of the proposed project. By diversifying the activities of farmers and enhancing their resilience to climate change, USAID can complement the activities of the proposed project.
IFAD: Rural Enterprises and Agricultural Development Project (READP)	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 households through their active participation in profitable agribusiness ventures and employment opportunities. It aligns with the country's objectives to modernize the	The proposed project 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 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

	agricultural sector, enhance food security, and boost the incomes of both commercial and non-commercial farmers, as well as on- and off-farm enterprises.	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.[62]

G. Learning, Knowledge Management and Lessons Learned

108. 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.

109. 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/cantons) and through existing effective communication media.[63]

110. 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 specialized institutions (water and soil) such as the expansion of the piezometers network 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.

111. 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.

112. 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[64], facilitating broader knowledge sharing and collaboration with European partners.

113. 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.

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

[63] 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.

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

F. Consultative Process

114. During Staza's preparation phase, a comprehensive consultative process was undertaken in compliance with the Environmental and Social Policy and Gender Policy of the Adaptation Fund, as well as the mandate of IFAD to support the most vulnerable people. The consultative process began with a concept mission visiting both the FBiH and the RS entities. The mission team engaged with a range of stakeholders, including public sector counterparts, environmental protection and agriculture authorities, faculties, farmers, farmer associations, cooperatives, civil society organizations, academic institutions, and relevant sectoral experts. Online meetings were also organized with additional stakeholders after the mission in the country. A detailed list of individuals met during these engagements is provided in the Annex 1.

115. To ensure effective communication and collaboration, briefing sessions were organized between the mission team and the respective Ministers of Agriculture, Forestry, and Water Management and of Agriculture, Water Management, and Forestry in both RS and the FBiH. These sessions allowed for direct dialogue and information sharing with key decision-makers.

116. To conclude the in-country activities, a State-level wrap-up meeting took place with the National Designated Authority. Representatives from the staff of the Ministry of Agriculture, Forestry, and Water Management from RS and the Ministry of Agriculture, Water Management and Forestry from FBiH, as well as staff from the Project Units (PCU/APCU) of the ongoing IFAD READ project, were present at this meeting.

117. Moving forward, the full design mission will continue the consultative process, ensuring the active participation of the most vulnerable groups, including women and youth, in discussions and engagements through workshops. By prioritizing their inclusion, Staza aligns with the IFAD mandate to support the most vulnerable people and promotes inclusivity and gender considerations. These efforts are in line with the Environmental and Social Policy and Gender Policy of the Adaptation Fund.

G. Justification for Funding

118. 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).

119. 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.

120. 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.

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121. According to the United Nations Convention to Combat Desertification, investing in the restoration of degraded land in Bosnia and Herzegovina can yield significant returns[65]. 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.

122. 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.

123. 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.[66] 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.

124. 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.

H. Project Sustainability

125. 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:

126. 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.

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[65] United Nations – Bosnia and Herzegovina : https://bosniaherzegovina.un.org/en/211435-reversing-land-degradation-neutrality-sustainable-land-management-and-sustainable-forest

[66] World Bank Group - Climate Change Action Plan (CCAP) 2021 - 2025

127. 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.

128. Outcome 3.1.: Support to 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.

129. Staza's alignment with the findings and recommendations from the IFAD agroecology stocktake study[67] 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.[68]

I. Environmental and Social Impacts and Risks

130. 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. During the project preparation phase, the proposal will undergo assessments in accordance with both the Adaptation Fund and IFAD Social, Environmental and Climate Assessment Procedures (SECAP), as well as gender policies. To ensure transparency and inclusivity, the full design mission will engage 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 will be maintained as evidence of all consultations conducted.

[67] 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

[68] 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.

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Deleted: Outcome 3.1.: *Support to 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. Finally, this outcome highlights the significance of supporting research on climate change adaptation and agroecology, particularly with a focus on smallholders and women. By supporting the creation of a curriculum focused on climate change and agroecology for master students at local and national institutions, Staza ensures the continuity of knowledge transfer and capacity building in sustainable agricultural practices and natural resources management adaptive to climate change. This curriculum will equip future professionals with the necessary skills and understanding to contribute to long-term sustainability, specifically in the agriculture sector. Furthermore, to foster innovation and advance climate adaptive and agroecological practices, Staza supports research grants for master students that focus on piloting new approaches (under Component 2), and acquiring necessary equipment for soil laboratories. These grants enable the exploration and implementation of cutting-edge solutions, further enhancing Staza's long-term sustainability.

131. **Unidentified Sub-Projects (USPs):** It is acknowledged that USPs could emerge during Component 1 (participatory LCAPs). These USPs will contribute to the activities in Component 2, specifically under 2.2.2 - Rural adaptation collective infrastructure rehabilitated or constructed. The identification of USPs is anticipated as a dynamic aspect of the project, particularly under Component 1. The project recognizes the need for a more detailed justification for the use of USPs, which will be provided at the fully developed proposal stage. The process of ESP risk identification and management during project implementation will be outlined comprehensively in the fully developed proposal, aligning with the updated guidance document on USPs provided by the Adaptation[69]. The fully developed proposal will include a more detailed assessment that substantiates all risk findings, including estimations of likelihood and impacts for all principles, before proposing mitigation measures. This approach ensures a robust and comprehensive evaluation of environmental, social, and gender impacts and risks throughout the project lifecycle.

132. 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 5: Adaptation Fund Environmental and social checklist

Checklist of environmental and social principles	No further assessment required for compliance	Potential impacts and risks – further assessment and management required for compliance
Compliance with the Law		**No risk** As part of the ESA and ESCMP, the full project proposal will carry out an analysis of relevant laws and detail the project's compliance with said laws.
Access and Equity		**Low/no risk** When designing and planning the activities, ensure that any activity with communities targets vulnerable groups such as women and youth. Throughout its implementation, Staza will collaborate with the national authorities, specifically the Ministry of Agriculture, Water Management and Forestry (MAWMF) and the Ministry of Agriculture, Forestry and Water Management (MAFWM), to ensure that vulnerable and marginalized groups are not negatively impacted. To ensure inclusivity, Staza will engage in participatory consultative processes, enabling all individuals to have a voice and address any concerns they may have. Additionally, IFAD will widely promote its grievance procedures, providing a means for anyone who believes they have been involuntarily displaced to seek

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

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		appropriate remedies. By prioritizing transparency and accountability, Staza aims to mitigate any adverse effects on affected individuals and ensure their rights are protected.
Marginalized and Vulnerable Groups		**Low/no risk** Marginalized and vulnerable groups – especially women - will be consulted during the proposal development process to ensure that their identified threats, priorities and mitigation measures are reflected. This project will empower vulnerable groups to make decisions on concrete adaptation actions, valuing their traditional and local knowledge. This project will create a space for women, and youth to choose adaptation activities in a transparent and participatory manner. Additionally, this project will respect land, property and customary rights.
Human Rights	X	**Low/no risk** This project affirms the rights of all people and does not violate any pillar of human rights.
Gender Equality and Women's Empowerment		**Low/no risk** Staza will promote gender equity and women's empowerment through its targeting strategy (See Part I-K.). During the development of the comprehensive project proposal, Staza will ensure alignment with the gender inclusion policies of both the Adaptation Fund and IFAD. This alignment will be reflected by considering the percentage of women engaged in the agricultural sector in BiH. To promote gender equality, Staza aims to have a minimum of 30 percent of the beneficiaries be women, adhering to the principles outlined in project targeting. Furthermore, specific measures will include conducting gender analysis along with stakeholder engagement and analysis to recognize and address the rights, needs, and opportunities of women and men, as well as their different needs, roles, and barriers. Active participation of women will be ensured in the planning process through methods such as focus group discussions. Staza will also facilitate women's involvement in policy formulation and discussion processes through committees representing the interests of specific groups or communities. Additionally, gender aspects will be mainstreamed in Staza's assessment of climate change at the territorial level in Component 1 and applied in Component 2. By prioritizing gender inclusion, Staza aims to create a more equitable and inclusive environment for women in the agricultural sector of BiH.
Core Labour Rights	X	**Low/no risk** Staza will ensure respect for international and national labour laws and codes, as stated in IFAD's policies.
Indigenous Peoples	X	**No risk** There are no indigenous people in BiH.
Involuntary Resettlement	X	**Low/no risk** Staza has no plans for resettlement.
Protection of Natural Habitats		**Low/no risk** During the full IFAD/AF project design IFAD will carry out a SECAP and ESA that will identify and exclude national parks ensuring that Staza will not directly or indirectly impact negatively protected areas or high value conservation areas.
Conservation of Biological Diversity		**No risk** The activities of this project will not adversely impact the conservation of biological diversity. During the full IFAD/AF project design IFAD will carry out a SECAP and ESA that will ensure that Staza will not directly or indirectly impact negatively biological diversity.
Climate Change	X	**No risk** Staza will not generate any significant emissions of greenhouse gases and will not contribute to climate change in any other way.
Pollution Prevention and Resource Efficiency	X	**Low/Moderate 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.
Public Health	X	**No risk** No adverse impact on public health related issues is envisaged.
Physical and Cultural Heritage		**No risk** During the SECAP carried out by IFAD in the full project design mission and the ESA, full analyses will be carried out on the potential impact on the physical and cultural heritage of the project areas.
Lands and Soil Conservation	X	**Low/no risk** Staza will promote sustainable land management practices at territorial and farm level.

J. Grievance and Redress Mechanism

133. The proposed project will establish a dedicated Grievance and Redress Mechanism (GRM) based on IFAD's grievance mechanism[70] to allow affected to raise concerns that the proposed project is not complying with its social and environmental policies or commitments. Multiple GRM channels should be used, depending on the context and group inclusion barriers. However, if at all, there are any grievances, the below redressal mechanism is proposed:

- Grievance redressal mechanism would be communicated and shared with the communities, beneficiaries and other stakeholders during the project inception workshop and subsequent meetings.
- As part of the grievance redress mechanism, the contact details of the project partners - Cluster Coordinator/ Project Manager would 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 of project implementation. The grievance mechanism will be available to the entire project intervention areas, and GRM % of resolution will be reflected and reported in M&E system. 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.

134. Grievances are aimed to be addressed at the field level by the project team which will be the first level of the 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 to the National Implementing Entity for reporting and monitoring purposes.

PART III: IMPLEMENTATION ARRANGEMENTS

A. Project implementation

135. Based on the discussions held during the mission for the design of the proposed project concept note, the decision was made to adopt a successful approach for the overall responsibilities and management structures of Staza, building upon the models utilized in previous and ongoing IFAD-supported operations. This approach offers the advantage of economies of scale, particularly during the initial 18 months of proposed project implementation,

[70] Accountability and complaints procedures: https://www.ifad.org/en/accountability-and-complaints-procedures

as it aligns with and complements the implementation of the READ project. Therefore, the proposed institutional arrangements were discussed and agreed with the NDA:

136. **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.

137. **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.

138. **Project Steering Committee (PSC)**. A Project Steering Committee (PSC) chaired by the entity Ministry of Agriculture or its designated representative would be set up in each Entity to provide overall guidance to Staza at Entity level.

139. **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.

140. **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 through its SECAP.

141. **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.

B. Project Risk Management

Table 6: Risk Management

Risk	Impact	Probability of Occurrence			Mitigation Measures
		Low	Medium	High	
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	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

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hailstorms. These abrupt changes in weather patterns can directly impact crops and cause damage to critical infrastructure.					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.
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

142. The objective of the SECAP is for the full mainstreaming of environmental, social and climate issues throughout the IFAD project cycle. It analyses the potential risks and provides information to strengthen the social, environmental and climate dimensions of programmes and projects; and maximizes the social, environmental and climate change adaptation and mitigation benefits, and avoids or minimizes the negative impacts. During the full project design, planned in November 2023, Staza will conduct an environmental screening and assessment that will meet both IFAD's requirements under SECAP and the Adaptation Fund's requirements in accordance to the Fund's Environmental and Social Policy, namely the Environmental and Social Assessment (ESA) as well as designing the Environmental, Social and Climate Management Plan (ESCMP).

143. The aforementioned assessment will strengthen Staza proposal as the purpose of the project will also be the fulfilment of the recommendations set out in the SECAP of the project. In strengthening the social and environmental aspects of the concept, the concept aims to create an enabling environment for climate change adaptation at the institutional level and to contribute to increasing the resilience of local communities (in particular young women and men).

D. Monitoring and Evaluation Arrangements

144. **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).

145. **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.

146. 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.

147. **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.

148. **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.

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

150. **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.

151. **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.

152. **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.

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

154. **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.

Table 7: Breakdown of M&E fee utilisation

IE Fees Breakdown of M&E Supervision	Responsibility	Timeframe	Budget (USD)
Inception Workshop	PCU/APCU	After Workshop	0 (as completed by PCU/APCU)

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Report			
Baseline Study	PCU/APCU	First Year (2025)	20,000
Supervision Visits	IFAD, PCU/APCU, government	Annual/Biannual	55,000
Annual Work Plans and Budget	PCU/APCU	Annual	0 (as completed by PCU/APCU)
Semi-Annual Progress Report	PCU/APCU	Semi-annual	0 (as completed by PCU/APCU)
Annual Project Report	PCU/APCU	Annual	0 (as completed by PCU/APCU)
Final Evaluation	IFAD, ext.consultants	2029	25,000
TOTAL			100,000

E. Results Framework

Table 8: Results framework & 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	1,450,000
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	2,200,000
Outcome 2.2. Improved resilience of ecosystems and infrastructures assets	Number of hectares of land protected or under improved 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	4,200,00 0
Component 3. Policy support and knowledge enhancement for a climate-resilient agriculture				
Outcome 3.1. Support to Knowledge and Research for integrating adaptation strategies	Number of existing/new laws, regulations, policies or strategies proposed to policy	**Outcome 7:** Improved policies and regulations that promote and enforce	**7.** Climate change priorities are integrated into national development strategy	492,978

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and mechanisms at cantons/municipal and national policy levels, drawing on project approaches and implementation lessons	makers for approval, ratification or amendment	resilience measures		
Project Outputs	**Project Outputs indicators**	**Adaptation Fund Output**	**Adaptation Fund Output Indicator**	**Grant Amount (USD)**
Component 1. Participatory assessment and territorial planning				
Output 1.1.1. Multi-stakeholder platforms established and facilitated in clusters/cantons	Number of functioning multi-stakeholder platforms supported	**Output 6:** Targeted individual and community livelihood strategies strengthened in relation to climate change impacts, including variability	**6.2.1.** Type of income sources for households generated under climate change scenario	1,125,000
Output 1.1.2. Participatory Local Climate Adaptation Plans developed/included in existing strategies	Number of territorial analysis on CC impacts on agriculture and water management Number of agriculture and water management plans modified			250,000
Output 1.1.3. Exchange visits	Number of exchange visits between cantons/clusters			75,000
Component 2. Adoption of approaches for climate change adaptation at territorial level				
Output 2.1.1. Adaptive capacity of farming systems strengthened	Number of pilots installed Number of households accessing services provided by the cantons/clusters	**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)	600,000
Output 2.1.2. Grants to adaptive activities provided	Number of individual farm grant recipients Number of community services investments			1,600,000
Output 2.2.1. Ecosystem protecting measures implemented	Number of green infrastructure established			2,200,000
Output 2.2.2. Rural adaptation collective infrastructure rehabilitated or constructed	Number of water harvesting structures (grey) constructed or rehabilitated	**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)	2,000,000
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	**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	167,978

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Output 3.1.2. Relevant institutions supported in the creation of curriculum for master students	Number of institutions supported		development strategies with incorporated climate change priorities enforced	75,000
Output 3.1.3. AE research grants on pilots, and soil and water specialized institutions supported	Number of students receiving research grants Number of equipment received			250,000

F. Disbursement Schedule

Table 9: Disbursement schedule

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Budget Disbursement (USD)	**Y1**	**Y2**	**Y3**	**Y4**	**Y5**	**Total**
Project funds	1,843,318	1,843,318	1,843,318	1,843,318	1,843,318	9,216,590
Implementing Entity Fee (8.5%)	156,682	156,682	156,682	156,682	156,682	783,410
Total	**2,000,000**	**2,000,000**	**2,000,000**	**2,000,000**	**2,000,000**	**10,000,000**

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

A. Record of endorsement on behalf of the government*:*

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

BOSNA I HERCEGOVINA
MINISTARSTVO FINANCIJA/
FINANSIJA I TREZORA

БОСНА И ХЕРЦЕГОВИНА
МИНИСТАРСТВО ФИНАНСИЈА
И ТРЕЗОРА

BOSNIA AND HERZEGOVINA
MINISTRY OF FINANCE
AND TREASURY

Number: 06-21-1-7384-4 /23
Sarajevo, July 24, 2023

The Adaptation Fund Board
c/o Adaptation Fund Board Secretariat
Email: Secretariat@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 the Ministry of Agriculture, Forestry and Water Management (MAFWM) in the Republika Srpska.

Sincerely,

The Deputy Minister
National Designated Authority
The Cabinet of the Deputy Minister
Ministry of Finance and Treasury B&H

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: 28 November 2023	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

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Annex 1 - Mission schedule and list of people met

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	READP
	Fatima Memčić	Business Leader	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	Za plod Cooperative
	Basic Asmia	Farmer	ZLATNA KAP cooperative
	Draško Bašić	Director and producer	Agricultural Cooperative "Plodovi Slatine"
Prijedor, 11 May	Dalibor Jović	Director and producer	Agricultural Cooperative Kooperativa, Prijedor
	Ognjen Siđak	Cluster Manager	Agricultural Cluster Una-Sana, Prijedor
Laktaši, 11 May	Bojan Ćikić	Cluster Manager	Agricultural Cluster GLS, Laktasi
	Petar Nikolić	Assistant Professor	Agricultural Faculty of Banja Luka
	Bojana Petrović	Coordinator	Agricultural Cluster GLS, Laktasi
	Radomir Vukelić	Director and producer	Agricultural Cooperative Klekovaca, Petrovac
	Miloš Galić	Cluster Manager	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
	Amina Smajić	Head of service	MAWMF of Herzegovina-Neretva Canton
	Alma Hidić	Officer	MAWMF of Herzegovina-Neretva 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

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Page 28: [38] Deleted **Renaud Colmant (CFI)** **13/11/2023 18:08:00**