
President's memorandum
Proposed additional financing to
Bosnia and Herzegovina
Rural Enterprises and Agricultural Development
Project (READP)

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Action: The Executive Board is invited to approve the recommendation for the proposed additional financing contained in paragraph 50.

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Financing summary

Initiating institution:	IFAD
Borrower/recipient:	Bosnia and Herzegovina
Executing agency:	Ministry of Agriculture, Water Management and Forestry of the Federation of Bosnia and Herzegovina, and the Ministry of Agriculture, Forestry and Water Management of Republika Srpska
Total project cost:	EUR 56.4 million (equivalent to approximately US\$65.2 million) ¹
Amount of original IFAD loan:	EUR 11.8 million (equivalent to approximately US\$14.5 million)
Terms of original IFAD financing:	Ordinary, with a maturity period of 18 years, including a grace period of 3 years, subject to interest at a rate equal to the IFAD reference interest rate including a variable spread
Amount of additional IFAD loan:	EUR 13.8 million (equivalent to approximately US\$15.0 million)
Terms of additional IFAD financing:	Ordinary, with a maturity period of maximum 20 years, including a grace period of maximum 5 years, subject to interest at a rate equal to the IFAD reference interest rate including a variable spread
Contribution of borrower:	EUR 8.5 million (in cash and equivalent to approximately US\$9.8 million) of which EUR 4.2 million (equivalent to approximately US\$5.2 million) for original financing and EUR 4.3 million (equivalent to approximately US\$4.6 million) for additional financing
Contribution of municipalities:	EUR 6.2 million (equivalent to approximately US\$7.1 million) of which EUR 2.3 million (equivalent to approximately US\$2.9 million) for original financing and EUR 3.9 million (equivalent to approximately US\$4.2 million) for additional financing
Contribution of beneficiaries and farmers' organizations:	EUR 5.5 million (equivalent to approximately US\$6.5 million)
Contribution of private sector:	EUR 10.6 million (equivalent to approximately US\$12.3 million)
Amount of additional IFAD climate finance:	EUR 5.1 million (equivalent to approximately US\$5.5 million)
Cooperating institution:	Directly supervised by IFAD

¹ Conversions EUR to US\$ at the International Monetary Fund's exchange rate of the last day of January 2024 for this additional financing, while the exchange rate applied for the original IFAD loan and related cofinancing is the one applied at approval (March 2018).

I. Background and project description

A. Background

1. The Rural Enterprises and Agricultural Development Project (READP) was approved on 13 April 2018 ([EB 2018/LOT/P.2/Rev.1](#)) and entered into force on 8 July 2021. Its first disbursement was made on 11 March 2022. The project aims to boost rural economic development and reduce poverty by improving livelihoods, generating revenue and enhancing living standards for target households. It seeks to increase the income of rural poor households and youth through profitable agribusiness and employment opportunities. The original completion and closing dates are 30 September 2026 and 31 March 2027.
2. READP's total cost is EUR 56.4 million, with an IFAD loan of EUR 25.6 million (EUR 11.8 million being the original loan and EUR 13.8 million the additional financing). Cofinancing from Bosnia and Herzegovina's authorities amounts to EUR 8.5 million for taxes and duties. The contributions of the private sector and municipalities are EUR 10.6 million and EUR 6.2 million, respectively. Contributions from beneficiaries and farmers' organizations (FOs) total EUR 5.5 million.
3. READP builds on the starter package model of the Rural Competitiveness Development Programme (2017–2022), which significantly benefited impoverished households, women and youth. Each dollar invested in the project generated US\$3.16 in benefits, increasing household income by 27.4 per cent and crop yields by 26.6 per cent, with notable gains in crop value and returns. Motivated by these achievements, Bosnia and Herzegovina's authorities requested EUR 15 million in additional financing under the Borrowed Resource Access Mechanism (BRAM) to scale up READP. IFAD is thus providing an additional US\$15 million loan through BRAM under the Twelfth Replenishment of IFAD's Resources' investment cycle. The borrower is also seeking an additional US\$10 million from the OPEC Fund for International Development (OPEC Fund) for which discussions are ongoing.

B. Original project description

4. READP targets rural poor and very poor women, men and youth, integrating them into profitable value chains for commodities such as berries, fruit, vegetables, forest products, honey, medicinal plants and dairy.
5. The project had two main components:
 - (i) **Component 1: Enhancement of economic opportunities and integration of smallholders into value chains** is structured into three subcomponents.
 - **Subcomponent 1.1: Development and implementation of pro-poor business plans** aims to increase production, productivity, marketing and profitability of target households using the public-private-producer partnership business model. The subcomponent focuses on the development and implementation of business plans by small and medium-sized agroenterprises. Additionally, it supports a youth apprenticeship programme to create jobs for rural young people.
 - **Subcomponent 1.2: Development of farmers' organizations** focuses on strengthening FOs to facilitate market integration and evolve into inclusive institutions, providing seed capital and capacity-building.
 - **Subcomponent 1.3: Enabling infrastructure support** aims to enhance market access through production and marketing infrastructure like irrigation and cooling/packing facilities, co-managed by municipalities, FOs and the private sector.
 - (ii) **Component 2: Project management and coordination.** Project coordination and management are handled by the project coordination unit

(PCU) in Sarajevo under the Ministry of Agriculture, Water Management and Forestry (MAWMF) in the Federation of Bosnia and Herzegovina (FBiH), and by the agricultural project coordination unit (APCU) in Banja Luka in Republika Srpska (RS) under the Ministry of Agriculture, Forestry and Water Management (MAFWM).

II. Rationale for additional financing

A. Rationale

6. **Increase agricultural productivity and competitiveness by scaling up READP's activities.** The supervision mission carried out in May 2023 found that the project starter packages have boosted crop productivity by 30 to 50 per cent and incomes by 30 to 40 per cent. Over 90 per cent of beneficiaries are poor people, with 50 per cent of these being women and 18 per cent youth. Starter packages have also improved asset ownership and enhanced climate resilience. The additional financing will further increase agricultural productivity and competitiveness.
 7. **Enhance smallholders' readiness to tap into the benefits of European Union (EU) integration.** Bosnia and Herzegovina (BiH) became an EU candidate in 2016, with membership expected in 8 to 10 years, aligning with READP's closure. Reduced donor presence in the country heightens READP's relevance. The additional financing, in line with the country strategy note (2024–2025), will boost smallholders' competitiveness, integrating them into cluster platforms and preparing them for EU financing under such programmes such as LEADER.²
 8. **Support sustainability of the innovative project initiatives and smooth exit.** READP's success relies on innovations such as starter packages, cluster platforms and youth apprenticeships, which need time to stabilize. Additional financing will help these innovations mature and align with the EU rural development framework, ensuring a smooth project exit.
- Special aspects relating to IFAD's corporate mainstreaming priorities.**
9. READP engages youth in agribusiness and employment, addressing their constraints. A 2021 survey demonstrated high likelihood of migration among youth in Bosnia and Herzegovina, and consultations were held in 2023 to address youth employment needs. The additional financing will increase youth outreach from 18 to 22 per cent, meeting the youth sensitivity criteria. Agriculture in Bosnia and Herzegovina is highly impacted by climate change. READP will tackle environmental issues through good agricultural practices, climate adaptation and resilient infrastructure. In line with IFAD's mainstreaming commitments, the project has been validated as:

- Including climate finance
- Including adaptive capacity

B. Description of geographical area and target groups

10. READP is implemented nationwide in 12 clusters and 137 municipalities (five clusters in FBiH and seven in RS). The geographical targeting strategy focuses on poverty pockets and underserved groups, following the original strategy.
11. The additional financing will target women, men and young people who are borderline poor, poor or very poor and are members of FOs in agricultural value chains. Selection criteria are based on monthly income and land tenure.
12. The original READP aimed to benefit 14,150 individuals (with women representing 30 per cent and youth 18 per cent) from 8,650 households. Additional financing

² LEADER: Liaison entre actions de développement de l'économie rurale [Links between actions for the development of the rural economy].

will increase the beneficiary numbers to 50,327 individuals from 23,083 households, with targets of 30 per cent for women and 21 per cent for youth. If the OPEC Fund cofinancing materializes, total outreach could increase to 94,820 individuals from 39,270 households.

13. The changes in READP's outreach resulting from additional financing compared to existing plans are summarized below.

	<i>Original IFAD</i>	<i>IFAD additional financing</i>	<i>Total (FBiH + RS)</i>
Target number of persons receiving project services	14 150	36 177	50 327
Targeted number of households	8 650	14 433	23 083
Targeted number of households members	36 330	41 856	78 186

Note: Outreach estimates for the original READP design did not include expected beneficiaries of infrastructure projects, but such expected outreach has been included in the additional financing estimates. Furthermore, the latest official household size statistics register 2.9 members per household, down from 4.2 at the time of READP's design.

C. Components, outcomes and activities

14. Under the additional financing, READP will maintain its original structure with two components: (i) enhancement of economic opportunities and integration of smallholders into value chains, focusing on technical aspects; and (ii) project management and coordination, overseeing organizational, administrative and knowledge management aspects.
15. Expected outcomes are: (i) improved production, productivity, marketing and profitability of target households based on the public-private-producer partnership model; (ii) enhanced FOs for better market integration; and (iii) improved market access for target households through better infrastructure. The additional financing will prioritize sustaining and scaling these outcomes.
16. **Component 1: Enhancement of economic opportunities and integration of smallholders into value chains.** Expected outcomes align with the original design, with refinements in subcomponents as follows:
- **Subcomponent 1.1: Development and implementation of pro-poor business plans**
 - **Starter package support.** Additional financing will increase the target to 13,568 packages. It will prioritize farm productivity (e.g. greenhouses, tunnels, microirrigation kits) for diverse commodities, market responsiveness and climate resilience. Smallholders will access repeat packages for continued production, focusing on perennial crops with minimal yearly pre-financing needs to ensure market linkages after project closure.
 - **Strengthening cluster platforms.** Additional financing will continue supporting the 12 cluster platforms from the Rural Competitiveness Development Programme, integrating smallholders into value chains and positioning these platforms as territorial institutions, especially in RS. They will become comprehensive one-stop shops for rural youth in agribusiness, offering job and entrepreneurship information, training, apprenticeships, business support, seed capital, financial networking and coaching. Platforms will encourage youth group formation, which will help young people voice their priorities and secure seed capital for group enterprises. The creation of youth-led FOs will also be promoted.
 - **Youth apprenticeships.** The additional financing will expand the youth apprenticeship programme into a youth apprenticeship and entrepreneurship programme in order to addressing youth migration from rural areas. Key changes include higher apprenticeship salaries to

attract skilled youth and broader support for businesses in agriculture and the wider rural sector. A total of 630 job placements are foreseen youth through apprenticeships and business start-up grants.

- **Subcomponent 1.2: Development of farmers' organizations**

Additional financing will increase outreach to 1,190 direct beneficiaries, expand engagement with cooperative unions, support youth-led start-up FOs with seed capital, enhance capacity development and ensure EU regulation compliance. Seed capital support will increase to EUR 30,000 in FBiH and EUR 50,000 in RS.

- **Subcomponent 1.3: Enabling infrastructure support**

Additional financing will increase market, processing or storage facilities to 65 (from 28), benefiting 15,070 households, and will more than double rural road rehabilitation to 37 km (from 16 km). The financing will follow the original principles, focusing on a demand-driven approach, eligibility for infrastructure, business plan application and selection, cost-sharing and implementation methods. Cofinancing ratios will be adjusted to align better with government partners' capacity, with READP contributing 70 per cent and municipalities/cooperatives 30 per cent.

Component 2: Project management and coordination

17. **Project management.** Project management is implemented at the level of the entities – the Federation of Bosnia and Herzegovina and Republika Srpska – by two separate coordination units, the PCU and APCU, established as autonomous legal entities under the ministries of agriculture. The PCU in FBiH may be incorporated into MAWMF structures, while the APCU in RS remains unchanged.
18. The additional financing will strengthen monitoring and evaluation, learning, knowledge management, strategic communication and policy development roles. This will enhance collaboration with the Bosnia and Herzegovina authorities and stakeholders, integrating project achievements and lessons into their programmes. This approach will ensure a smooth project exit and prepare target groups for integration within the EU common agricultural policy framework.

D. Costs, benefits and financing

19. The total project cost is estimated at EUR 56.4 million (table 1) including the original financing of EUR 27.7 million and additional financing of EUR 28.7 million. Recurrent costs represent 6.8 per cent of total project cost and 12.3 per cent of IFAD's total investment, respectively.

Table 1

Original and additional financing summary

(Thousands of euros)

	<i>Original financing</i>	<i>Additional financing</i>	<i>Total</i>
IFAD	11 787	13 841	25 628
Municipalities	2 348	3 877	6 225
Beneficiaries	2 843	1 940	4 782
FOs	309	384	693
Private sector	6 168	4 384	10 552
Bosnia and Herzegovina authorities (entities)	4 229	4 279	8 508
Total	27 683	28 703	56 386

Table 2
Project costs by component, subcomponent and financier
 (Thousands of euros)

Component/subcomponent	Original IFAD loan		Additional IFAD loan		Municipalities		Beneficiaries			FOs		Private sector		Government		Total	
	Amount	%	Amount	%	Cash	%	Cash	In-kind	%	Cash	%	Cash	%	Cash	%	Amount	%
1. Enhancement of economic opportunities and integration of smallholders into value chains																	
1.1. Development and implementation of pro-poor business plans (FBIH)	3 443	18.1	3 236	17.0	1 291	7	1 554	1 036	14	23	0	5 493	29	2 926	15	19 002	33.7
1.1. Development and implementation of pro-poor business plans (RS)	2 328	15.2	2 729	18	1 041	7	1 255	837	14	23	0	4 668	31	2 390	16	15 270	27.1
1.2. Development of farmers' organizations (FBIH)	526	32.4	459	28	116	7	2	1	0	239	15	2	0	276	17	1 621	2.9
1.2. Development of farmers' organizations (RS)	388	25.9	557	37	97	7	-	-	-	199	13	-	-	254	17	1 496	2.7
1.3. Support for enabling infrastructure (FBIH)	2 279	22.5	3 138	31	3 002	30	37	24	1	166	2	341	3	1 153	11	10 140	18.0
1.3. Support for enabling infrastructure (RS)	1 398	34.3	1 216	30	678	17	21	14	1	42	1	49	1	654	16	4 072	7.2
Subtotal	10 361	20.1	11 336	22.0	6 225	12.1	2 869	1 913	9.3	693	1	10 552	19	7 652	14.8	51 600	91.5
2. Project management and coordination																	
2.1. Project coordination unit (FBIH)	801	27	1 472	49	-	-	-	-	-	-	-	-	-	738	25	3 010	5.3
2.2. Agricultural project coordination unit (RS)	625	35	1 033	58	-	-	-	-	-	-	-	-	-	118	7	1 776	3.1
Subtotal	1 426	29.8	2 505	52.3	-	-	-	-	-	-	-	-	-	856	17.9	4 786	8.5
Total	11 787	21	13 841	25	6 225	11	2 869	1 913	8.5	693	1	10 552	19	8 508	15	56 386	100

Table 3
Project costs by expenditure category and financier
 (Thousands of euros)

Expenditure category	Original IFAD loan		Additional IFAD loan		Municipalities		Beneficiaries			FOs		Private sector		Government		Total	
	Amount	%	Amount	%	Cash	%	Cash	In-kind	%	Cash	%	Cash	%	Cash	%	Amount	%
I. Investment costs																	
A. Civil works	3 485	25.4	4 345	32	3 435	25.0	58	38	1	208	1.5	390	3	1 765	13	13 723	24.3
B. Equipment, materials and vehicles	166	44	149	39	-	-	-	-	-	-	-	-	-	64	17	379	0.7
C. Grants	5 386	16	5 079	15	2 545	7.6	2 798	1 866	14	426	1.3	9 967	30	5 522	16	33 589	59.6
D. Technical assistance	1 327	33	1 916	47	245	6.1	-	-	-	28	0.7	176	4	359	9	4 051	7.2
E. Training and workshops	295	37	336	42	-	-	13	9	3	30	3.8	20	2	91	11	793	1.4
Total investment costs	10 658	20.3	11 825	22.5	6 225	11.8	2 869	1 913	8	693	1.3	10 552	19	7 801	14.8	52 535	93.2
II. Recurrent costs																	
A. Operations and maintenance	71	19	245	64	-	-	-	-	-	-	-	-	-	65	17	380	0.7
B. Salaries and allowances	1 059	30	1 771	51	-	-	-	-	-	-	-	-	-	642	18	3 472	6.2
Total recurrent costs	1 129	29.3	2 016	52.3	-	-	-	-	-	-	-	-	-	707	18.4	3 852	6.8
Total	11 787	21	13 841	25	6 225	11	2 869	1 913	8.5	693	1.2	10 552	19	8 508	15	56 386	100

Table 4
Project costs by component, subcomponent and project year (PY)
 (Thousands of euros)

Component/subcomponent	PY1		PY2		PY3		PY4		PY5		PY6		PY7		PY8		PY9		PY10		Total	
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
1. Enhancement of economic opportunities and integration of smallholders into value chains																						
1.1. Development and implementation of pro-poor business plans (FBiH)	1 122	45	3 961	44	4 314	42	1 270	30	640	34	2 430	53	2 302	36	1 525	20	1 095	14	343	14	19 002	34
1.1. Development and implementation of pro-poor business plans (RS)	753	31	2 616	29	2 850	28	897	22	449	24	1 196	26	2 025	32	2 014	27	2 017	26	453	18	15 270	27
1.2. Development of farmers' organizations (FBiH)	120	5	275	3	319	3	111	3	13	1	143	3	381	6	256	3	3	0	-	-	1 621	3
1.2. Development of farmers' organizations (RS)	93	4	216	2	200	2	82	2	13	1	80	2	257	4	249	3	253	3	53	2	1 496	3
1.3. Support for enabling infrastructure (FBiH)	-	-	1 155	13	1 256	12	966	23	295	16	-	-	632	10	2 263	30	2 939	38	674	27	10 140	18
1.3. Support for enabling infrastructure (RS)	-	-	568	6	1 012	10	532	13	124	7	4	0	185	3	642	8	822	11	182	7	4 072	7
Subtotal	2 088	85	8 750	98	9 952	97	3 859	92	1 535	82	3 852	84	5 783	91	6 948	92	7 129	92	1 704	68	51 600	92
2. Project management and coordination																						
2.1. Project coordination unit (FBiH)	227	9	89	1	172	2	176	4	181	10	437	10	365	6	445	6	381	5	537	22	3 010	5
2.2. Agricultural project coordination unit (RS)	154	6	75	1	134	1	139	3	152	8	273	6	195	3	198	3	204	3	252	10	1 776	3
Subtotal	381	15	164	2	306	3	315	8	334	18	710	16	560	9	643	8	585	8	789	32	4 786	8
Total	2 468	100	8 914	100	10 258	100	4 174	100	1 869	100	4 562	100	6 343	100	7 591	100	7 714	100	2 493	100	56 386	100

20. In line with IFAD's climate-related commitments and as per the multilateral development banks' methodologies for tracking climate change adaptation and mitigation finance, the total amount of IFAD financing contributing to climate change adaptation is calculated at around EUR 5.08 million (equivalent to US\$5.5 million), i.e. 36.7 per cent of the total amount of IFAD's additional financing. All climate financing is considered as adaptation finance.

Financing and cofinancing strategy and plan

21. A total of EUR 25.6 million (BAM 50.2 million) of IFAD financing is expected to be mobilized for READP over the 10-year implementation period, of which IFAD's original financing accounts for EUR 11.8 million and additional financing accounts for EUR 13.8 million. The Bosnia and Herzegovina authorities are in discussions with other potential cofinanciers, such as the OPEC Fund, to mobilize more resources to complement the project activities. This is represented as additional potential cofinancing (OPEC Fund) of EUR 9.3 million, mostly to cover further infrastructure investments in both entities and additional starter packages (only applicable in FBiH). The remaining cofinancing includes: (i) EUR 10.6 million from the private sector; (ii) EUR 8.5 million from the Bosnia and Herzegovina authorities (entities); (iii) EUR 6.2 million from the municipalities; (iv) EUR 4.8 million from beneficiaries; and (v) EUR 0.7 million from FOs.
22. The additional financing proposal is strategically designed so that these resources become effective from early 2027. This timing will create a two-year window between approval at the end of 2024 and the effective availability of these resources in early 2027. This interval is purposefully designed to accommodate the time needed for Bosnia and Herzegovina's ratification process concerning the additional financing resources, thereby facilitating READP's smooth transition into the new financing phase. Nevertheless, the two-year gap between the approval and implementation of the additional financing will not disrupt ongoing implementation. This continuity was safeguarded through the midterm review of the original design which took place in June 2024. The midterm review undertook a restructuring of the original budget and its distribution across the upcoming years so as to ensure that sufficient resources from the original design are available for project implementation during 2025 and 2026.
23. The overall project (original and additional financing) is expected to be financed according to the following allocations: (i) 45.5 per cent from IFAD loans; (ii) 11 per cent from municipalities; (iii) 8.5 per cent from beneficiaries; (iv) 1.2 per cent from FOs; (v) 18.7 per cent from the private sector; and (vi) 15.1 per cent from Bosnia and Herzegovina authorities (entities). The Bosnia and Herzegovina authorities will finance taxes and duties on imported goods, value added tax and income tax on salaries for a total amount of EUR 8.5 million, and this will be considered as the cash contribution of the Government of Bosnia and Herzegovina.

Disbursement

24. An amendment to READP's financing agreement will be signed between IFAD and the Ministry of Finance and Treasury of Bosnia and Herzegovina (MoFT/BiH) to include the additional financing. Two additional designated accounts will be opened in the name of the borrower at commercial banks, in euro, for the implementing entities to receive their allocations from the additional financing. On the basis of sub-agreements, MoFT/entities will be delegated by the MoFT/BiH to operate the designated accounts for the execution of expenses under the additional financing, through lead project agencies and the PCU and APCU. IFAD funding to READP will not be used to finance duties, value added tax or income taxes on salaries; these will be cofinanced (in cash) by the entities. The designated accounts will follow revolving fund arrangements based on quarterly interim financial reports (IFRs) and cash forecasting. IFRs and a withdrawal applications for justification of expenses and fund advances will be submitted through the IFAD Client Portal.

Summary of benefits and economic analysis

25. READP will target rural poor men, women and youth, benefiting 23,080 households (78,180 members) over 10 years. It aims to support very poor and poor groups by enhancing their participation in value chains. Targeting will be achieved through: (i) geographical measures focusing on areas with high concentrations of poor households; (ii) self-targeting by selecting crops and enterprises appealing to target groups; and (iii) direct targeting of rural youth and women-headed households.
26. The project's success will be measured by the following indicators: (i) 23,083 households or 78,186 individuals reached; (ii) 13,568 starter packages distributed (an increase of 5,268); (iii) 74 FOs provided with seed capital (an increase of 34); (iv) 630 youth apprentices (an increase of 280); (v) 37 km of roads constructed or rehabilitated (an increase of 21 km); and (vi) 65 market, processing or storage facilities constructed or rehabilitated (an increase of 37).
27. The economic internal rate of return (EIRR) of READP is estimated at 22 per cent with a net present value (NPV) of EUR 73.3 million, compared to the design estimates of an EIRR of 35 per cent and NPV of EUR 16 million. The lower EIRR and higher NPV are due to changes in the cost of capital and higher investment costs. If the Government secures additional OPEC Fund cofinancing, the project's EIRR is estimated at 25 per cent with an NPV of EUR 96.4 million.

Exit strategy and sustainability

28. READP's exit strategy aims for long-term impact and self-sufficiency through strategic linkages, institutional strengthening and policy engagement. The additional financing will enhance marketing linkages, beneficiary competitiveness, modern farming technologies and infrastructure. It will also allow time for policy integration of the starter package approach into agricultural subsidy programmes and prepare smallholders for EU common agricultural policy financing by integrating them into sustainable FOs and cluster platforms, reinforcing their EU integration capacities.
29. Cluster platforms in RS have become innovative territorial institutions. The IFAD country strategy note (2024–2025) emphasizes investing in their institutional strengthening. Additional financing will enhance these platforms, modelling them on EU Local Action Groups. They will serve as youth hubs, provide technical assistance for EU projects and facilitate regional policy dialogue. Strengthened platforms will support scaling up of READP through the Instrument for Pre-accession Assistance for Rural Development grants and future EU financing such as the LEADER programme.
30. The exit strategy for the FO development component involves transforming producer associations into cooperatives and strengthening them through partnerships with cooperative unions and cluster platforms. The additional financing will support policy interventions and provide technical assistance to FOs and their members, enhancing their business and institutional activities.

III. Risk management

A. Risks and mitigation measures

31. **Governance risk.** The complex governance structure of Bosnia and Herzegovina requires parliamentary approval at multiple levels, causing delays in project effectiveness and start-up. To mitigate this, a two-year buffer is included between IFAD's project approval and start of implementation on 1 January 2027. Adequate resources for country programme supervision will ensure enhanced monitoring, early detection and resolution of governance issues.

32. **Cofinancing risk.** The project design includes US\$10 million potential cofinancing from partners such as the OPEC Fund. The risk of unconfirmed cofinanciers is mitigated by allocating these resources mainly to infrastructure and some starter packages, ensuring they are independent of IFAD-funded activities. Separate economic analysis and logical framework targets for these resources allow independent tracking of outcomes. Effectiveness of cofinancing is planned for 2027, giving Bosnia and Herzegovina authorities time for ratification.
33. **Financial management risk.** The project's financial management risk is moderate, and mainly at the FBiH level. Integrating the PCU into the MAWMF structure may put knowledge retention and performance continuity at risk. Proper control over funds requires adequate accounting segregation. Any organizational changes need IFAD's prior no objection. Delayed government contributions could impact liquidity, project implementation and IFAD's reputation. Lack of counterpart funds could lead to ineligible cross-financing practices.

B. Environment and social category

34. The additional financing includes new activities, therefore the project was rescreened using the 2021 Social, Environmental and Climate Assessment Procedures (SECAP). It is classified as moderate for environmental and social risks, with site-specific impacts unlikely to be significant. The project is expected to positively affect environmental and social conditions by reducing pressure on natural resources and encouraging sustainable resource management practices.
35. Potential risks are associated with agrochemical use, irrigation and infrastructure (occupational safety and health risk, traffic and worker influx). To manage these, the Environmental, Social and Climate Management Plan has been updated for the additional financing per SECAP 2021 requirements.

C. Climate risk classification

36. The project covers areas with diverse pedoclimatic conditions, leading to varying climate change hazards. Using IFAD's standardized climate risk screening, the project's climate risk is assessed as moderate.
37. Bosnia and Herzegovina faces climate-related risks such as wildfires, landslides, floods, extreme heat, water scarcity and agricultural droughts. Climate models predict rising temperatures and changing precipitation by 2040–2059, intensifying these hazards. The agricultural sector, vital for rural livelihoods, is at risk from climate variability affecting crop and livestock productivity. Socioeconomic factors such as poverty, education and resource access amplify these vulnerabilities, highlighting the need for targeted adaptation measures.

IV. Implementation

A. Compliance with IFAD policies

38. The original design fully conformed to IFAD policies. The additional financing aligns with IFAD's Strategic Framework 2016–2025 and the Bosnia and Herzegovina country strategy note 2024–2025, aimed at boosting smallholders' competitiveness and their future integration into the EU common agricultural policy framework. The expanded READP adheres to IFAD's targeting policy, the mainstreaming priorities of gender equality, youth, environment and natural resources management, climate change, thereby meeting the eligibility criteria for additional financing.

B. Organizational framework Management and coordination

39. Republika Srpska will continue to coordinate and manage project activities through the existing APCU in Banja Luka. In the Federation of Bosnia and Herzegovina, these functions are currently handled by the PCU within MAWMF. This PCU may be incorporated into the MAWMF. Both the PCU and APCU will be led by project

directors who will also serve as the secretaries of the project steering committee. The additional financing will strengthen knowledge management and focus on policy dialogue within the coordination units.

Financial management, procurement and governance

40. **Financial management.** The implementation of the additional financing will be carried out by the existing READP organizational structure and the same financial management arrangements will be adopted. The project implementation manual will be amended to integrate the additional financing. Preparation of separate annual workplans and budgets will follow the entities' budget cycles and be subject to respective approval from the project steering committees of the lead project agencies and IFAD's no objection. Current internal control at PCU/APCU assures sufficient segregation of duties and control over project expenditure, including matching grant schemes to beneficiaries. Accounting will be performed through the existing stand-alone accounting software and follow the International Public Sector Accounting Standards' cash basis for quarterly IFR reporting to IFAD, and for yearly financial statement (FS) preparation. External audit of the project's FS will be carried out by a private firm to be appointed by the Ministry of Finance and Treasury of Bosnia and Herzegovina, following International Standards on Auditing, based on the audit terms of reference approved by IFAD. The additional financing will be integrated into the financial statements for yearly scrutiny.
41. **Governance.** In 2023, Bosnia and Herzegovina ranked 108th out of 180 countries in the Corruption Perceptions Index, scoring 35/100, showing a decline of seven points since 2013 and indicating substantial risk. Granted EU candidate status in December 2022, Bosnia and Herzegovina still needs major reforms in rule of law, fundamental rights and governance. Procurement reforms are crucial as many contracts are awarded non-competitively, raising costs and corruption risks. The public financial management system of Bosnia and Herzegovina is complex, with separate state and entity levels, resulting in four different public financial management systems and no centralized financial data.
42. **Procurement.** Procurement for the additional financing will be carried out by the existing READP organizational structure; the PCU in FBiH and the APCU in RS will be responsible for all procurement, each for their corresponding part of the project, in line with their respective annual workplans and budgets and private placements. Procurement review and supervision arrangements currently in place for project procurement under READP will continue to be implemented following the principles and procedures of IFAD's project procurement framework and other relevant documents, taking into account any recommendations emerging as part of supervision and procurement reviews undertaken by IFAD.

C. Monitoring and evaluation, learning, knowledge management and strategic communication

43. **Monitoring and evaluation.** The project's monitoring and evaluation (M&E) will remain consistent with the original READP design, relying on annual planning and reporting and the current M&E system. A combined baseline and midterm outcome survey was conducted for the midterm review.
44. **Knowledge management.** Additional financing will build on knowledge from READP and previous IFAD projects. Regular communication among project team members and business plan implementers will facilitate knowledge exchange. Cluster platforms will mediate between the project and stakeholders at regional and local levels. There will be increased focus on disseminating lessons and best practices across the Government, businesses, academia and civil society via digital media, presentations, workshops, etc. An annual IFAD/Bosnia and Herzegovina Forum will be held to discuss lessons learned and support EU accession efforts.

45. **Strategic communication and policy development.** Additional financing will help transform clusters into territorial action groups, similar to the EU's Local Action Groups, using community initiatives like LEADER to address rural needs. The project will fund technical assistance and thematic studies, with the IFAD/Bosnia and Herzegovina Forum serving as a platform for discussions on agricultural and rural development policies. Other demand-driven assistance will be supported through cluster mediation, based on experience and knowledge from READP implementation.

D. Proposed amendments to the financing agreement

46. Subject to the Executive Board's approval, the existing financing agreement will be amended to incorporate the additional financing of EUR 13.8 million which, together with the IFAD original financing, will be part of the overall investment of EUR 56.4 million contributed by IFAD, the Government of Bosnia and Herzegovina, other cofinanciers from the private sector and beneficiaries.

V. Legal instruments and authority

47. The signed financing agreement will be amended following approval of the additional financing. The financing agreement between Bosnia and Herzegovina and IFAD will constitute the legal instrument for extending the proposed financing to the borrower/recipient.
48. Bosnia and Herzegovina is empowered under its laws to receive financing from IFAD.
49. I am satisfied that the proposed additional financing will comply with the Agreement Establishing IFAD and the Policies and Criteria for IFAD Financing.

VI. Recommendation

50. I recommend that the Executive Board approve the additional financing in terms of the following resolution:

RESOLVED: that the Fund shall provide a loan on ordinary terms to Bosnia and Herzegovina in an amount of thirteen million eight hundred thousand euros (EUR 13,800,000) and upon such terms and conditions as shall be substantially in accordance with the terms and conditions presented herein.

Alvaro Lario
President

I. Updated logical framework incorporating the additional financing

Results Hierarchy	Indicators				Means of Verification			Assumptions
	Name	Baseline	Mid-Term	End Target	Source	Frequency	Responsibility	
Outreach Outreach of the Project in terms of beneficiaries, corresponding households reached and estimated number of HHs members based on average size of 3 members per HH (revised)	1 Persons receiving services promoted or supported by the project				M&E system: Beneficiary database	semester/annual	PMU	
	Males - Males	0	5448	35229				
	Females - Females	0	2759	15098				
	Young - Young people	0	1472	10470				
	Total number of persons receiving services - Number of people	0	8207	50327				
	1.a Corresponding number of households reached				M&E system	semester/annual	PMU	
Households - Households	0	5017	23083					
1.b Estimated corresponding total number of households members				M&E system	annual	PMU		
Household members - Number of people	0	21071	78186					
Project Goal Contribute to sustainable rural economic development in Bosnia and Herzegovina	Percentage increase in the household assets ownership index (combining durable, productive, and livestock assets)				COI survey	BL, MT, End	PMU-Service provider	
	HH Asset index - Percentage (%)	1.17	2	4				
Development Objective To increase the income of rural youth and poor households by fostering their engagement in profitable agribusiness and employment opportunities	Supported households reporting increase in income of at least 25% compared to the baseline income level				HH outcome and impact surveys	Baseline & completion		
	Households - Number	0	5770	11541				
	Households - Percentage (%)	0	25	50				
Outcome Outcome 1: Production, productivity, marketing and profitability of target group	2.2.2 Supported rural enterprises reporting an increase in profit				COI outcome survey	BL, MT End		
Number of enterprises - Enterprises	0		0					

households improved based on 4P models	Percentage of enterprises - Percentage (%)	0	50	75			
	2.2.1 Persons with new jobs/employment opportunities				COI Outcome Survey	BL, MTR, End	
	Males - Males	0	101	262			
	Females - Females	0	101	263			
	Young - Young people	0	203	525			
	Total number of persons with new jobs/employment opportunities - Number of people	0	202	525			
	3.2.2 Households reporting adoption of environmentally sustainable and climate-resilient technologies and practices				COI HH survey	BL, MT, End	
	Total number of household members - Number of people	0	0	1640			
	Households - Percentage (%)	0					
	Households - Households	0	0	1640			
Output Output 1.1 Development and implementation of Business Plans	Number of pro-poor BPs approved and implemented by Business Leaders				M&E system	semester/annual	
	Business plans - Number	0	87	230			
	Number of targeted farming households engaged in 4Ps				M&E system	semester/annual	
	Households - Number	0	4814	13768			
Output Output 1.2 Provision of start-up packages	1.1.3 Rural producers accessing production inputs and/or technological packages				M&E system	semester/annual	
	Males - Males	0	3370	9638			
	Females - Females	0	1443	4130			
	Young - Young people	0	1252	3527			
	Total rural producers - Number of people	0	4813	13768			

Output Output 1.3 Youth Apprentice Programme	Number of youth supported by the Youth Apprentice Programme			M&E system, training records	semester/annual			
	Total number - Number of people	0	203					630
	Males - Males	0	101					315
	Females - Females	0	101					315
Outcome Outcome 2: Enhanced FOs for increased integration of farmers in markets.	2.2.4 Supported rural producers' organizations providing new or improved services to their members			COI Outcome Survey	BL, MT, End			
	Number of POs - Organizations	0	60					80
	Total number of POs members - Number of people	0	371					1184
	Males POs members - Males	0						829
	Females POs members - Females	0						355
	Young POs members - Young people	0						237
Output Output 2.1 FOs seed capital financing	Number of FOs provided with seed capital financing			M&E system	semester/annual			
	Farmers' Organisations - Number	0	30					74
Output Output 2.2 FOs capacity development	2.1.2 Persons trained in income-generating activities or business management			M&E system	semester/annual			
	Males - Males	0	1218					3631
	Females - Females	0	522					1556
	Young - Young people	0	348					1147
	Persons trained in IGAs or BM (total) - Number of people	0	1740					5187
Outcome Outcome 3: Market access	2.2.6 Households reporting improved physical access to markets, processing and storage facilities			COI outcome surveys	BL, MT, End			

of target group households enhanced through improved market infrastructure	Households reporting improved physical access to markets - Percentage (%)	0	18	30				
	Young people - Number	0	8310	13850				
	Households reporting improved physical access to storage facilities - Percentage (%)	0	18	30				
	Households reporting improved physical access to markets - Households	0	4155	6925				
	Households reporting improved physical access to storage facilities - Households	0	4155	6925				
	1.2.3 Households reporting reduced water shortage vis-à-vis production needs				COI HH Survey	BL, MT, End		
Households - Percentage (%)	0							
Households - Households	0							
Total number of household members - Number of people	0							
Output Output 3.1 Production and marketing support	2.1.6 Market, processing or storage facilities constructed or rehabilitated				M&E System	Semester/annual		
	Total number of facilities - Facilities	0	4	16				
	Market facilities constructed/rehabilitated - Facilities	0	2	6				

Storage facilities constructed/rehabilitated - Facilities	0	2	10			
2.1.5 Roads constructed, rehabilitated or upgraded				M&E system	annual	
Length of roads - Km	0	10	37			
1.1.2 Farmland under water-related infrastructure constructed/rehabilitated				M&E system	semester/annual	
Hectares of land - Area (ha)	0	0	1647			
Water irrigation facilities and other small rural infrastructures				M&E system	semester/annual	PMU
Irrigation infrastructures facilities - Number	0	0	6			
Village water supply - Number	0	0	5			
Small bridges - facilities - Number	0	0	3			
Other small infrastructures - Facilities - Number	0	0	7			
3.1.1 Groups supported to sustainably manage natural resources and climate-related risks				M&E system	semester/annual	
Total size of groups - Number of people	0	0	14066			
Groups supported - Groups	0	0	19			
Males - Males	0	0	9846			
Females - Females	0	0	4220			
Young - Young people	0	0	3156			

II. Updated summary of the economic and financial analysis:

Scenario 1 (Additional Financing and financing gap)

Introduction

READP's goal is to contribute to rural economic development and poverty reduction by improving livelihood, generating revenue and enhancing the living standards of target households. READP's development objective is to increase the income of rural poor households and rural youth by engaging them in profitable agribusiness and employment opportunities.

Expected Project Benefits

The achievement of the project objectives at the end of the project will be measured by the following indicators, (i) total expected outreach of the project is estimated at 39,270 households equivalent to 125,127 HH members (compared to design phase: increase of 30,620 HH); (ii) 16,990 start up packages distributed during the project lifecycle (compared to design phase: increase in 8,690 start up packages; (iii) 74 FOs provided with seed capital financing (compared to design phase: increase of 34 FOs); (iv) 630 youth apprentice (compared to design phase: increase for 280 youth apprentice); (v) 70 km of roads constructed or rehabilitated (compared to design phase: increase for 54km); (vi) around 121 market, processing or storage facilities constructed or rehabilitated (compared to design phase: increase of 93).

Target groups

READP direct beneficiaries will be rural poor population, men, women and youth. The project would target 39,270 direct households (125,127 HH members) over a period of 10 years, providing support to the target groups of the very poor and poor, and support greater participation in targeted value chains. In order to reach the target group READP will adopt (i) geographical targeting measures to reach those areas with higher concentration of targeted households; (ii) self-targeting means by selecting crops and enterprises suitable enough and of interest to the target groups; (iii) direct targeting actions to include rural youth and women headed households.

A. Financial analysis

Methodology. The aim of the financial analysis is to examine the financial viability and incentives for the Project target group as a result of their engagement in Project activities.

Twelfth financial models were developed: (i) strawberry; (ii) raspberry; (iii) cherry & strawberry; (iv) gherkin; (v) pepper; (vi) tomato with plastic greenhouse; (vii) honey production; (viii) livestock/milk production 3-5 cows (ix) livestock/milk production 5-10 cows; (x) marigold; (xi) mint; and (xii) wild mushrooms.

The analysis compares a "without project" and "with project" situation for one dunum (1000 m²) of land. "Without project" scenario has been calculated based on the prevailing traditional average potato production. "Without project" scenario is adjusted for purpose of the comparison to "with project". The adjustment is made taking into consideration number of labour working days needed in those two scenarios. It has been taken net income on 1 dunum/year divided by the number of labour working days needed for the potato production (12 days) and multiplied with the number of labour working days needed for the "with project" crop scenario. The WOP scenario considers production of average 1.8 tons of potato annually resulting in a net annual income of BAM 705.

Project support includes co-financed starter packages for production on one dunum. Most smallholders are producing between 1 and 2 dunum of fruits and vegetables, depending on the type of product, market access and availability of family labour and suitable land.

Project Target Beneficiaries. The broad target group for the Project will be non-commercial farmers of the four sub-sectors a) fruit; b) vegetables; c) NTFP/MAPs and d) dairy. The final decision on the value chains will be market-led. The project will have a poverty focus and it is estimated that the number of beneficiaries directly supported with starter packages for production will be 16,990. In addition, 630 beneficiaries will be supported through youth apprentice activities.

Opportunity Cost of Capital. A discount rate of 4.3% has been used in this analysis to assess the viability and robustness of the investments in order to consider the profitability of the foreseen investments with market alternatives. The average cost per beneficiary has been estimated at is 617 EUR and 1,965 EUR per household.

Table 1. Financial Analysis

F I N A N C I A L A N A L Y S I S	PRODUCTION						FARM MODELS		MAP MODELS			
	Fruit model 'net incremental benefits (01 ha) (in "000 of BAM)			Vegetable model'net incremental benefits (0.1 ha) (in "000 of BAM)			Milk Production's net incremental benefits (0.1 ha (in "000 of BAM)		MAP Model's net incremental benefits (in "000 BAM)			
	Strawberries	Raspberries	Strawberries+C herries \a	Pepper	Gherkins	Tomato	Livestock/milk production , 2-5 cows	Livestock/milk production, 5- 10 cows	Honey Production, 50 hives	Marigold	Mint	Mushrooms
PY1	124	(5,037)	(4,813)	112	(1,033)	(1,632)	(4,914)	(23,102)	(6,429)	(153)	(554)	2,545
PY2	2,294	578	(203)	252	279	1,665	(4,470)	7,638	(3,842)	68	356	2,545
PY3	2,244	1,478	(713)	1,122	627	1,612	1,530	7,638	3,588	68	146	2,545
PY4	574	2,978	(88)	1,122	699	2,161	1,530	7,638	3,588	68	556	2,545
PY5	2,144	2,678	3,852	1,122	567	1,612	1,530	7,638	3,588	68	346	2,545
PY6	2,394	2,978	7,162	1,122	699	2,161	1,056	7,638	3,588	68	556	2,545
PY7	574	678	7,212	1,122	699	1,612	1,055	7,638	3,588	68	346	2,545
PY8	2,144	978	7,452	1,122	627	2,161	1,054	7,638	3,588	68	556	2,545
PY9..	2,394	678	7,212	1,122	699	1,612	1,053	7,638	3,588	68	346	2,545
PY20	574	978	7,452	1,122	627	2,161	1,042	7,638	3,588	68	556	2,545
NPV (BAM)	21,489	8,557	81,266	13,086	6,756	21,325	4,323	71,626	31,053	683	4,712	33,686
NPV (EUR)	10,987	4,375	41,551	6,691	3,454	10,903	2,210	36,622	15,877	349	2,409	17,224
B/C	2.3	2.3	2.5	2.6	1.8	1.9	1.8	2.0	1.3	2.0	2.1	-

Table 2. Main Assumption and Shadow Prices

MAIN ASSUMPTIONS & SHADOW PRICES					
FINANCIAL	Output (kg or l)		Price (EUR)	Input prices	Price (EUR)
	Strawberry		1.53	Fertilizer	2.30
	Raspberry		2.05	Pesticides	20.45
	Cherry		2.05	Rural wage \p.d.	25.00
	Pepper		0.72	Greenhouse with drip (50 m2)	1,534
	Gherkin		0.82		
	Tomato		0.77		
	Honey		12.78		
	Milk		0.41		
	Marigold		0.92		
	Mint		0.51		
	Fresh Mushrooms (boletus)		5.11		
	Dried Mushrooms(boletus)		51.13		
	ECONOMIC	Official Exchange rate (OER)	1.96	Discount rate (opportunity cost of capital)	3.7%
Shadow Exchange rate (SER)		2.03	Output conversion factor	1.16	
Standard Conversion Factor		1.04	Input Conversion factor	0.87	
Labour Conversion factor		0.87			

Table 3. Financial analysis of the crop models (2024)

Model	Average Yield kg/dunum*	Production & investment cost, including labour (year 1) BAM/dunum	Average Production & investment cost, including labour BAM/dunum	Average Revenue per year BAM/dunum	Average Net Income per year BAM/Dunum	Net income (before labour costs) (year 5) BAM/dunum	Net income (after labour costs) (year 5)	Average Incremental income BAM/dunum	Incremental income, (year 5) BAM/dunum
Strawberry	2,560	4,665	3,322	7,680	6,666	7,105	4,855	1,647	2,144
Raspberry	1,505	2,520	2,704	6,020	6,666	7,495	5,195	800	2,144
Cherry Strawberry	2,746	9,190	3,722	12,263	11,198	8,575	6,975	5,418	3,852
Gherkin	4,000	3,350	2,994	5,520	4,042	4,182	2,450	699	567
Pepper	2,940	1,644	1,554	4,200	3,872	3,956	2,656	1,122	1,122
Tomato	2,915	5,182	2,444	5,148	3,564	3,466	2,616	1,699	1,612
Honey Production*	1,250	12,108	9,791	14,138	4,347	5,219	4,469	2,715	3,588
Marigold	445	430	392	801	659	670	420	57	68
Mint	1,150	890	500	1,150	875	1,020	820	386	556
Wild Mushrooms, Boletus (Porcini)***	330	53	53	6,000	6,000	6,000	3,250	2,545	2,545
Milk Production, 3-5 cows (I)*	9,600	12,491	7,030	14,880	7,850	8,833	7,464	547	1,530
Milk Production, 5-10 cows (I)*	22,400	40,851	11,648	31,200	19,552	21,089	19,035	6,101	7,638

Profitability results: A summary of the results is presented in Tables 3 to 4 below. All financial models indicate that profitability of the targeted interventions is good; benefits/costs ratio for all models is robust and viable and ranges between 1.30 to 2.55 for the different crop models (details is table 5 below). It can be concluded that investments and diversification in the fruits, vegetables, MAP and livestock subsectors provide the required leverage to reduce rural poverty and to improve financial viability of smallholder's farmers. The highest NPV is for livestock production (5-10 cows) estimated at 71,626 BAM; with B/C ratio 1.98, while lowest is for marigold 683 BAM, with B/C ratio of 2.00.

Table 4. Financial profitability indicators (2024)

Model	Net income (year 5) BAM/dunum	Net present value BAM/dunum	B/C Ratio	Return to family labour (BAM/day)	Average Incremental Income BAM/dunum	Incremental income, (year 5) BAM/dunum
Strawberry	7,105	21,489	2.28	145.10	1,647	2,144
Raspberry	7,495	8,557	2.26	187.38	800	2,144
Cherry Strawberry \a	8,575	62,419	2.49	266.70	5,418	3,852
Gherkin	4,182	6,756	1.76	130.70	699	567
Pepper	3,956	13,086	2.55	152.14	1,122	1,122
Tomato	3,466	21,325	1.92	236.20	1,699	1,612
Honey Production	5,219	31,053	1.30	347.93	2,715	3,588
Marigold	670	683	2.00	134.00	57	68
Mint	1,020	4,712	2.07	255.00	386	556
Wild Mushrooms (boletus/porcini)	6,000	33,686	-	109.09	2,545	2,545
Livestock Production, 3- 5 cows	8,833	4,323	1.78	82.76	547	1,530
Livestock Production, 5- 10 cows	21,089	71,626	1.98	108.70	6,101	7,638

B. Economic analysis

Objective. The objectives of the economic analysis are: (i) to examine the overall Programme viability, and (ii) to assess the Project’s impact and the overall economic rate of return; and (iii) to perform sensitivity analyses to assess the benefits from a broad welfare perspective.

Key Assumptions. The physical inputs and productions established in the financial analysis provided the basis to determine the viability of the programme investment in terms of opportunity costs and quantifiable benefits to the economy as a whole. The estimate of the likely economic returns from project interventions are based on the following assumptions: (i) Project life has been assumed at 20 years; (ii) Project inputs and outputs traded are valued at their respective market prices, and goods are expected to move freely within the Project area in response to market demand; (iii) an economic discount rate of 11% has been used; (iv) The economic analysis is based on direct costs and benefits, while social and indirect benefits have not been taken into account of the “average farmer” compared to the best farmer.

Project Economic Costs and Benefits. The economic analyses include the investment and incremental recurrent costs of Project components. The Project financial costs have been converted to economic values by removal of price contingencies, taxes and duties. In order to avoid double counting, the final aggregation considered only those costs that were not included in the financial models. Furthermore, it has been assumed that after the 10th year, the incremental net benefits of each model will be the same as for the incremental net benefits obtained after the fifth year of the Project, when the cost of replacing/maintaining of some specific equipment is considered for most of the models.

Project Phasing. Table 5 shows the phasing and adoption rate of producers assuming 90% of the beneficiaries of starter packages adopt the measures.

Table 5. Beneficiary Adoption Rate and Phasing

BENEFICIARIES, ADOPTION RATES AND PHASING											
	PY1	PY2	PY3	PY4	PY5	PY6	PY7	PY8	PY9	PY10	Total
Strawberries	45	45	45	45	45	45	45	179	224	179	895
Adjusted (adoption rate)	34	34	34	34	34	34	34	134	168	134	671
Raspberries	75	75	75	75	75	75	75	300	375	300	1,500
Adjusted (adoption rate)	56	56	56	56	56	56	56	225	281	225	1,125
Cherries+Strawberries	25	25	25	25	25	25	25	100	125	100	500
Adjusted (adoption rate)	19	19	19	19	19	19	19	75	94	75	375
Pepper	125	125	125	125	125	125	125	500	625	500	2,500
Adjusted (adoption rate)	94	94	94	94	94	94	94	375	469	375	1,875
Gherkin	150	150	150	150	150	150	150	600	750	600	3,000
Adjusted (adoption rate)	113	113	113	113	113	113	113	450	563	450	2,250
Tomato	75	75	75	75	75	75	75	300	375	300	1,500
Adjusted (adoption rate)	56	56	56	56	56	56	56	225	281	225	1,125
Honey Production	29	29	29	29	29	29	29	114	143	114	570
Adjusted (adoption rate)	21	21	21	21	21	21	21	86	107	86	428
Livestock Production (3-5)	75	75	75	75	75	75	75	300	375	300	1,500
Adjusted (adoption rate)	56	56	56	56	56	56	56	225	281	225	1,125
Livestock Production (5-10)	10	10	10	10	10	10	10	40	50	40	200
Adjusted (adoption rate)	8	8	8	8	8	8	8	30	38	30	150
Marigold	175	175	175	175	175	175	175	700	875	700	3,500
Adjusted (adoption rate)	131	131	131	131	131	131	131	525	656	525	2,625
Mint	110	110	110	110	110	110	110	440	550	440	2,200
Adjusted (adoption rate)	83	83	83	83	83	83	83	330	413	330	1,650
Wild Mushrooms (boletus)	25	25	25	25	25	25	25	100	125	100	500
Adjusted (adoption rate)	19	19	19	19	19	19	19	75	94	75	375
Youth Apprentice	32	32	32	32	32	32	32	126	158	126	630
Adjusted (adoption rate)	24	24	24	24	24	24	24	95	118	95	473
Infrastructure	205	1,064	1,183	894	2,797	2,740	4,470	5,364	1,067	490	20,275
Adjusted (adoption rate)	154	798	887	671	2,098	2,055	3,353	4,023	800	368	15,206
o. of Targeted Beneficiaries											39,270

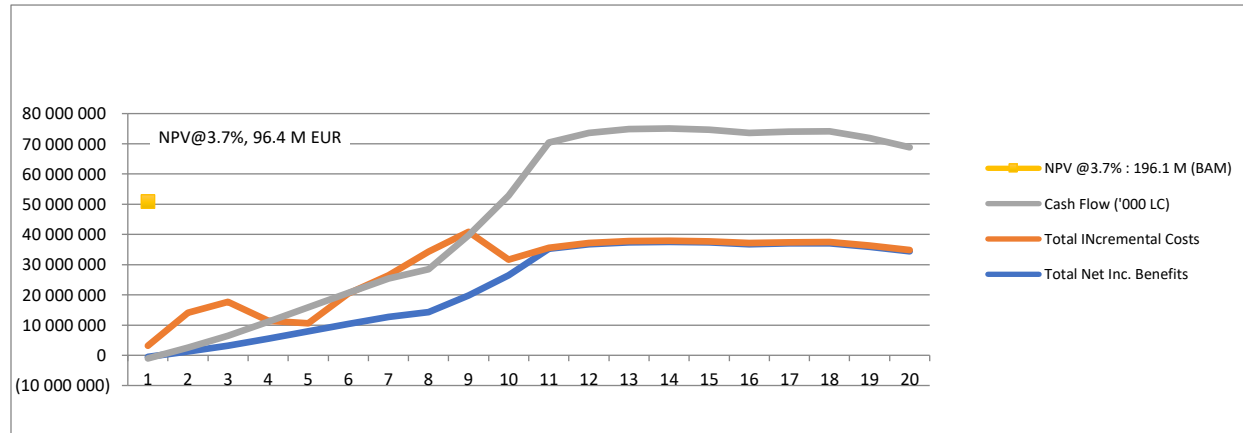
Economic Pricing: Economic pricing was undertaken using the following assumptions: (a) the opportunity cost of labour is EUR 43.65 /day, or 80% of financial cost of labour; (b) the shadow exchange rate (SER) has been calculated at 1 EUR= 2.0338 BAM and (c) the standard conversion factor for the exchange rate has been calculated at 1.04; (d) the conversion factors for outputs and inputs have been calculated starting from FOB and CIF prices when data were available; when data were not available CFs were calculated starting from the financial price, deducting any duty or tax and multiplying it by the SCF; overall all CF vary between 0.87 (for imported inputs) and 1.16.

Economic Rate of Return. On the basis of the above assumptions, the EIRR of READP would be 25% with NPV of 96.1 EUR million (design phase estimates: 35%; NPV 16 EUR millions). The lower EIRR and higher NPV when compared to design is partially justified through change of cost of capital and higher investment costs. In a case of second scenario (with additional financing sources and excluding Financing Gap financier) READP would be slightly lower 22% with NPV of 73.3 EUR million (design phase estimates: 35%; NPV 16 EUR millions).

Table 6. Economic Analysis

E C O N O M I C A N A L Y S I S	Net Incremental Benefits																	CASH FLOW ('000 BAM)	
	Strawberries	Raspberries	Cherries+Straw berries	Pepper	Gherkin	Tomato	Honey Production (50 hives)	Livestock/milk production, 2-5 cows	Livestock/milk production, 5-10 cows	Marigold	Mint	Mushrooms	Youth Apprentice	Irrigation Systems	Cold Storages	Rural Roads	Total Benefits ('000 BAM)		Net Incremental Eco costs ('000 BAM)
Y1	81,842	(242,833)	11,465	104,848	4,901	(2,111)	(104,820)	(651,110)	(122,074)	10,450	(23,817)	59,446	216,311	83,928	0	55,039	(518,536)	3,677,751	(4,196,287)
Y2	229,566	(116,197)	97,901	224,857	167,247	162,483	(164,449)	(529,220)	(42,890)	52,776	27,237	118,892	216,311	587,494	131,237	110,077	1,273,320	12,801,688	(11,528,368)
Y3	374,403	73,680	175,049	436,438	377,098	329,175	(85,723)	(407,331)	36,295	95,102	63,159	178,338	216,311	923,204	262,474	165,116	3,212,790	14,433,578	(11,220,789)
Y4	473,692	356,262	249,879	648,020	594,025	524,411	(6,997)	(285,442)	115,480	137,428	133,274	237,784	216,311	1,007,132	918,660	220,155	5,540,073	5,839,842	(299,769)
Y5	615,600	624,112	414,450	859,601	797,980	691,102	71,729	(163,552)	194,664	179,754	188,256	297,230	216,311	1,258,915	1,181,134	495,349	7,922,637	2,617,929	5,304,709
Y6	766,253	906,695	650,278	1,071,183	1,014,907	886,338	150,455	(41,663)	273,849	222,080	258,371	356,676	216,311	1,510,698	1,312,371	770,542	10,325,345	10,057,309	268,035
Y7	865,542	1,044,590	893,269	1,282,764	1,231,834	1,053,030	229,181	57,563	353,034	264,407	313,353	416,122	216,311	1,762,481	1,443,608	1,265,891	12,692,981	13,820,249	(1,127,268)
Y8	1,252,976	468,718	1,174,445	1,808,889	1,456,389	1,241,934	(6,553)	(1,796,596)	65,996	338,081	572,946	653,907	865,242	2,098,192	2,231,031	1,816,279	14,241,874	20,116,522	(5,874,648)
Y9	1,928,642	743,687	1,688,208	2,485,345	2,165,254	1,900,296	(211,534)	(1,982,924)	260,660	517,836	971,545	951,137	1,081,553	2,182,120	3,280,928	1,871,317	19,834,069	21,024,832	(1,190,763)
Y10	2,528,326	1,835,414	2,241,404	3,346,833	3,162,104	2,762,312	148,561	(745,200)	778,657	719,017	1,073,333	1,188,921	1,188,921	2,182,120	3,280,928	1,926,356	26,429,086	5,239,049	21,190,037
Y11	2,643,661	3,855,628	2,655,374	3,845,510	4,027,633	3,525,251	1,021,101	2,323,909	1,583,693	846,523	305,177	1,188,921	1,188,921	2,182,120	3,280,928	1,926,356	35,211,784	36,823	34,847,962
Y12	2,583,595	3,949,139	3,047,807	4,211,800	4,207,043	3,590,730	1,574,522	2,300,965	1,583,693	846,523	320,308	1,188,921	1,188,921	2,182,120	3,280,928	1,926,356	36,794,451	363,823	36,430,628
Y13	2,598,112	3,781,553	3,781,066	4,211,800	4,222,373	3,647,818	1,574,522	2,277,964	1,583,693	846,523	305,177	1,188,921	1,188,921	2,182,120	3,280,928	1,926,356	37,408,926	363,823	37,045,103
Y14	2,649,477	3,232,268	4,528,757	4,211,800	4,228,269	3,590,730	1,574,522	2,186,918	1,583,693	846,523	320,308	1,188,921	1,188,921	2,182,120	3,280,928	1,926,356	37,531,590	363,823	37,167,767
Y15	2,606,857	2,741,910	4,862,605	4,231,631	4,289,010	3,647,818	1,574,522	2,072,983	1,583,693	846,523	305,177	1,188,921	1,188,921	2,182,120	3,280,928	1,926,356	37,341,053	363,823	36,977,230
Y16	2,598,112	2,311,701	4,898,838	4,231,631	4,274,859	3,590,730	1,574,522	1,981,431	1,583,693	846,523	320,308	1,188,921	1,188,921	2,182,120	3,280,928	1,926,356	36,790,673	363,823	36,426,850
Y17	2,649,477	2,471,120	4,908,053	4,231,631	4,260,708	3,647,818	1,574,522	1,980,306	1,583,693	846,523	305,177	1,188,921	1,188,921	2,182,120	3,280,928	1,926,356	37,037,352	363,823	36,673,529
Y18	2,624,304	2,571,612	4,905,389	4,231,631	4,274,859	3,590,730	1,574,522	1,979,181	1,583,693	846,523	320,308	1,188,921	1,188,921	2,182,120	3,280,928	1,926,356	37,081,077	363,823	36,717,254
Y19	2,621,374	1,384,545	4,916,242	4,231,631	4,260,708	3,647,818	1,574,522	1,978,056	1,583,693	846,523	305,177	1,188,921	1,188,921	2,182,120	3,280,928	1,926,356	35,928,613	363,823	35,564,790
Y20	2,666,923	(133,391)	4,911,941	4,231,631	4,274,859	3,590,730	1,574,522	1,976,931	1,583,693	846,523	320,308	1,188,921	1,188,921	2,182,120	3,280,928	1,926,356	34,422,995	363,823	34,059,172
															NPV @3.7% (million BAM)		196,114		
															NPV @3.7% (million EUR)		96,427		
															EIRR		25%		

Graph 1. Economic Incremental Cash Flow



Sensitivity Analysis. A sensitivity analysis shows that the EIRR drops to 21% with an increase in costs of 20%. With an increase of costs by 50% to 16%, the project is still economically worthy. The decrease of benefits from 20% to 50% still yields a higher EIRR, and a delay of project aggregate benefits by 1 to 2 years still yields a higher EIRR. Finally, the analysis shows that the economic viability of the project remains attractive by preserving positive NPV and EIRR in each case.

Table 7. Sensitivity Analysis (2024)

SENSITIVITY ANALYSIS (SA)					
		Δ%	Link with the risk matrix	IRR	NPV (EUR M)
Base scenario				25%	96,427
Project benefits		-10%	Combination of risks affecting output prices, yields and adoption rates	23%	91,984
Project benefits		-20%		20%	87,541
Project benefits		-50%		11%	25,999
Project costs		10%	Increase of construction material prices	23%	91,984
Project costs		20%		21%	87,541
Project costs		50%		16%	74,212
1 year lag in ben.			Risks affecting adoption rates and low implementation capacity	20%	83,509
2 years lag in ben.				17%	70,707
Production costs		10%	Low management & negotiating capacity of farmers groups	24%	82,341
Production costs		20%		21%	68,256
Investment prices		10%	Market price fluctuations	25%	28,480
Investment prices		20%		24%	27,337
Adoption rates		-10%	Extension services outreach is limited, low uptake of good practices, vaccination uptake is low, epidemic diseases	24%	25,275
Adoption rates		-20%		22%	20,926