# JILIFAD Investing in rural people

#### **Executive Board**

# President's memorandum Proposed additional financing Democratic Republic of Sao Tome and Principe Commercialization, Agricultural Productivity and Nutrition Project

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Action: The Executive Board is invited to approve the recommendation for the

proposed additional financing contained in paragraph 50.

**Technical questions:** 

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| Project delivery team               |                           |
|-------------------------------------|---------------------------|
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#### **Financing summary**

Initiating institution: IFAD

Borrower/recipient: Democratic Republic of Sao Tome and Principe

**Executing agency:** Ministry of Agriculture, Fisheries and Rural

Development

Total project cost: EUR 19.2 million

Amount of original IFAD loan: EUR 0.97 million (equivalent to approximately

US\$1.07 million)

**Terms of original IFAD financing:** The loan is extended on highly concessional terms,

exempt from interest but with a fixed service fee and a repayment term of 40 years. The principal of the loan will be repaid at a rate of 2 per cent of the total principal amount per annum commencing in year 11 and up to year 20, and at a rate of 4 per cent of the total principal amount per annum commencing in year 21 and up to year 40.

Amount of original IFAD Debt

Sustainability Framework (DSF) grant:

EUR 3.88 million (equivalent to approximately

US\$4.26 million)

Additional grants: EUR 0.422 million from the Rural Poor Stimulus

Facility (equivalent to US\$0.444 million)

EUR 0.636 million from the Norwegian Agency for Development Cooperation (equivalent to US\$0.699

million)

Amount of additional IFAD Debt Sustainability Framework grant:

EUR 4.442 million (equivalent to approximately

US\$4.5 million)

Cofinanciers: Global Environment Facility, Adaptation Fund.

International Labour Organization, private sector

Amount of cofinancing: Global Environment Facility: EUR 3.8 million

Adaptation Fund: EUR 3.2 million

International Labour Organization: EUR 0.8 million

Private sector: EUR 0.24 million

Terms of cofinancing: 100 per cent grant

Contribution of borrower/recipient: EUR 0.37 million

Amount of original IFAD climate finance: EUR 0.48 million

Amount of additional IFAD climate

finance:

EUR 0.44 million

**Contribution of beneficiaries:** EUR 0.44 million

#### I. Background and project description

#### A. Background

- 1. The Commercialization, Agricultural Productivity and Nutrition Project (COMPRAN) in Sao Tome and Principe was approved by the Executive Board on 23 January 2020. It came into force on 16 June 2020 for a period of six years; the completion date is 30 June 2026. The project's initial cost was estimated at EUR 19.2 million. IFAD's contribution is EUR 4.8 million, composed of a loan of EUR 0.97 million and a grant of EUR 3.88 million. Cofinancing, mainly from the Adaptation Fund and the Global Environment Facility (GEF), is estimated at EUR 8.15 million; the Government's initial contribution at EUR 0.4 million; and the contribution of the beneficiaries at EUR 0.5 million. The project was designed with a financing gap of EUR 5.3 million, which was expected to be covered under the Twelfth Replenishment of IFAD's Resources (IFAD12) allocation cycle or by other cofinancing.
- 2. During implementation, the project received three additional grants that were not initially planned to finance additional key activities targeting the same project beneficiaries: two grants from the Rural Poor Stimulus Facility (RPSF) totalling US\$444,295 to strengthen the resilience of beneficiary households after the COVID-19 pandemic; and a grant of US\$699,949 in 2022 from the Norwegian Agency for Development Cooperation (NORAD) to strengthen nutrition-sensitive investments.
- 3. The Government has requested to use the overall IFAD12 allocation to the country, in the amount of US\$4.5 million, or EUR 4.44 million, to fill the financing gap of the COMPRAN project. The additional financing is expected to cover the main project costs after midterm as per the original cost tables and to finance the planned activities to deliver the expected outcomes of the project.

#### **B.** Original project description

- 4. **Development objective and main outcomes.** COMPRAN is aligned with the country strategy notes for 2019–2021 and 2022–2024 and the IFAD Strategic Framework 2016–2025. It is intended to sustainably improve incomes and food and nutrition security for smallholder producers, particularly women and young people, in Sao Tome and Principe.
- 5. Upon completion of the COMPRAN project cycle, the expected outcomes are as follows:
  - (i) **Wealth creation:** (i) economic and commercial partnerships; (ii) funding of 35 business plans of cooperatives bringing together 6,500 smallholder farmers; (iii) promotion of 1,500 microprojects in food and nutrition security and income-generating activities; and (iv) support for 700 youth microenterprise initiatives.
  - (ii) **Food and nutrition security:** (i) 80 per cent of women of reproductive age in the target group are consuming at least 5 of the 10 standard food groups (minimum food diversity for women) each day; (ii) 2,500 people are benefiting from nutritional support; and (iii) supported households are sensitized to nutritional issues and adopting good practices.

#### II. Rationale for additional financing

#### A. Rationale

6. The project was designed with a financing gap of EUR 5.3 million, which was expected to be filled by the IFAD12 allocation cycle or other cofinancing. In June 2022, the Government requested to use the total amount of the country IFAD12 allocation of US\$4.5 million (equivalent to EUR 4.441 million) to cover the financing gap of COMPRAN.

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- 7. The additional financing completes the financing plan approved at design and will not exceed the total cost of the project.
- 8. The additional financing is expected to cover the main project costs after midterm as per the original cost tables. It will therefore be fully utilized to finance the planned activities and to ensure the delivery of the expected outcomes of COMPRAN. The funds will be used to strengthen and consolidate the development of the last area available in the country for high-altitude coffee-growing to ensure the employment of youth and women and sustainable income. This additional financing will also allow the consolidation and scaling up of the nutrition-sensitive investments financed through the NORAD grant, which will be completed in 2023, and will support supplementary policy and strategy development processes related to fisheries, irrigation and cooperative regulatory frameworks, as planned during the project design.
- 9. Building on lessons learned from previous IFAD operations, the additional financing will allow continuity in long-term support IFAD aimed at enabling rural households to rise out of poverty and gain access to both improved food production and higher incomes through steady long-term support to value chains. The additional financing will also allow similar continuity in building up sustainable national capacities (at the strategy and policy level, in participatory sector management and in service delivery to smallholder farmers), limiting additional pressure on public budgets and tackling the key issues in the country's rural development.
- 10. Furthermore, the IFAD additional financing is essential to maintain the management structure necessary for the implementation of investments funded by GEF and the Adaptation Fund until 2027.
- 11. COMPRAN is an existing, well-performing project and its activities have been implemented in compliance with all relevant IFAD policies. The project implementation performance was rated moderately satisfactory during the last supervision mission in December 2021. However, as the procurement component is rated moderately unsatisfactory, the project's performance in this respect will be strengthened through capacity-building benefiting: (i) the procurement officer (continuous support by an IFAD consultant; group and peer training with other Portuguese-speaking procurement officers); and (ii) all persons and public agents involved in the procurement process, through regular clinical workshops.
- 12. As for the disbursement rate, the indicators of potential impact delivery and the quality of implementation were rated as moderately satisfactory, while financial management was rated as satisfactory. As at 15 September 2022, IFAD original financing had been disbursed at 50.8 per cent. As a means of improving the project's disbursement rating, IFAD has put in place a new disbursement and reporting procedure requiring projects to maintain accurate cash forecasting reports to serve as a basis for disbursement. The project has an inherent risk rating of substantial and a residual risk rating of moderate. Should the inherent risk rating be found to have improved during the upcoming supervision mission, COMPRAN will benefit from straight-through disbursement processing, which is expected to reduce withdrawal application processing time.
- 13. During the first year of implementation in 2021, COMPRAN supported 181 households with 724 members (45 per cent of which are women-headed households). An additional 3,500 households will receive support from the project for agricultural activities and 150 households will receive support for nutrition-related activities in 2022. In addition, to respond to the negative impacts of the COVID-19 pandemic, 3,476 households (38 per cent headed by women and 26 per cent by youth) are receiving tailored support in the form of quality agricultural inputs to strengthen their resilience and food security through the RPSF funding granted in 2021 and 2022.

#### Special aspects relating to IFAD's corporate mainstreaming priorities

- 14. In line with IFAD's mainstreaming commitments, the project has been validated as:
  - ☑ Including climate finance;
  - ⊠ Gender transformational;
  - ⋈ Nutrition-sensitive;
  - ☑ Youth-sensitive. **Climate change.** As a small island economy, Sao Tome and Principe is highly vulnerable to climate change. Rising sea levels and intensifying climate disturbances pose risks to the country. Higher temperatures and coastal erosion are the most tangible manifestations of this phenomenon. Agricultural systems, which are closely adapted to each of the multiple agroclimatic niches created by insularity and geographic relief, are being challenged, particularly by the prolongation of the long dry season. The increase in the frequency and intensity of torrential rains has intensified the threats to soils and plant cover, including in the biosphere reserves that cover a third of the country.
- 16. **Gender and social inclusion.** The Government adopted a national strategy on gender equity in 2007 and has set up a National Institute for the Promotion of Gender Equality and Equity to implement it. Nevertheless, the objectives, results and targets set have not been translated into concrete policies and programmes that would attenuate the imbalances between the sexes. Women represent just over 50 per cent of the population, and one third of all households are headed by women. Women's presence in parliament, government, diplomatic missions, decision-making bodies of political parties and as chief executive officers of businesses remains marginal.
- 17. **Nutrition.** The nutritional situation in Sao Tome and Principe is such that children under 5 have a stunting rate of 17.2 per cent, and the prevalence of emaciation is 4 per cent. Micronutrient deficiency rates are alarming, with 96 per cent of preschool children and 18 per cent of girls and pregnant women suffering from vitamin A deficiencies. Anaemia among children under 5 is 67.5 per cent, rising to 72 per cent in Principe.
- 18. **Youth.** The national unemployment rate is 13.6 per cent, and young people (aged 15 to 34) account for 69 per cent of those without work. Among unemployed youth, 32.7 per cent are under 24 and 59.6 per cent are under 34. A lack of qualifications and skills and a lack of economic opportunities are among the causes of youth unemployment.

#### B. Description of geographical area and target groups

- 19. **Intervention area**. The initial project scope will remain unchanged. Activities will be implemented in rural areas on both islands of Sao Tome and Principe.
- 20. **Target groups.** The project will reach 8,000 rural households and 700 young promoters of economic initiatives, totalling 34,800 people, of whom 40 per cent will be women and 50 per cent young people. The number and structure of the initial target groups remain unchanged.

<sup>&</sup>lt;sup>1</sup> National Institute of Statistics. 2016. Sao Tome and Principe Multiple Indicator Cluster Survey 2014, Final Report

<sup>&</sup>lt;sup>2</sup> World Bank Group. 2015. Nutrition at a Glance: São Tomé and Príncipe.

<sup>&</sup>lt;sup>3</sup> Revisão estratégica "Fome Zero" – Horizonte 2030, Relatorio Final. 2018.

#### C. Components, outcomes and activities

- 21. The three components of COMPRAN remain unchanged:
  - (i) Component 1: Consolidation and development of business relations in value chains. COMPRAN strengthens the economic inclusion of producers in value chains focusing on: (i) developing sustainable business partnerships involving private actors that are financially profitable and mutually beneficial for producers and their economic partners; and (ii) building the capacities of actors involved in value chain promotion or operations.
  - (ii) Component 2: Promotion of well-performing resilient production systems in value chains. COMPRAN supports the development of productive capital by investing in: (i) facilitating sustainable access to inputs, especially quality plant material, and the adoption of environmentally friendly and climate-resilient technologies and good practices, in accordance with IFAD's approach in small island developing states; (ii) improving nutritional status by educating the members of family farms, particularly women; and (iii) putting in place infrastructure to improve productivity, facilitate market access and ensure optimal farm management.
  - (iii) Component 3: Coordination, management and monitoring and evaluation (M&E). This component manages all of the operating arrangements provided for in the project implementation manual. It serves as the project's reference for recording achievements and for analysing performance and impact in line with the project's development objectives as set forth in the country strategy note.

# D. Costs, benefits and financing Project costs

- 22. The original total cost of the project was EUR 19.2 million over a six-year period. Base costs were EUR 18.5 million. Taxes represented 1.2 per cent of total cost, or EUR 0.223 million. The project investment cost and recurring costs were, respectively, EUR 16.7 million, or 91 per cent of base costs, and EUR 1.7 million, or 9 per cent of base costs. Physical and financial contingencies were EUR 0.18 million and EUR 0.6 million.
- 23. The revised cost of the project, which takes into consideration the three additional grants and the additional IFAD financing, is EUR 19.21 million over a six-year period. Base costs are EUR 18.48 million. Taxes represent 1 per cent of total cost, or EUR 0.2 million. The project investment cost and recurring costs are, respectively, EUR 16.74 million, or 91 per cent of base costs, and EUR 1.73 million, or 9 per cent of base costs. Physical and financial contingencies are EUR 0.17 million and EUR 0.55 million.
- 24. Component 2 is partially counted as climate finance. As per the multilateral development banks' methodologies for tracking climate change adaptation and mitigation finance, the revised total amount of IFAD climate finance for this project is estimated as EUR 0.92 million.
- 25. The total amount of additional IFAD climate finance for this additional financing proposal is estimated as EUR 0.444 million.

Table 1
Original and additional financing summary
(Thousands of euros)

|                    | Original<br>financing* | Additional<br>grants | Additional financing | Revision to other contributions | Total  |
|--------------------|------------------------|----------------------|----------------------|---------------------------------|--------|
| IFAD loan          | 970                    | -                    | -                    | =                               | 970    |
| IFAD grant         | 3 880                  | -                    | 4 442                | -                               | 8 322  |
| Other cofinanciers | 8 152                  | -                    | -                    | (105)                           | 8 047  |
| Financing gap      | 5 279                  | =                    | -                    | -                               | -      |
| Beneficiaries      | 534                    | -                    | -                    | (91)                            | 444    |
| Borrower/recipient | 386                    | -                    | -                    | (10)                            | 376    |
| NORAD grant        | -                      | 636                  | -                    | -                               | 636    |
| RPSF grant         | -                      | 422                  | -                    | -                               | 422    |
| Total              | 19 202                 | 1 058                | 4 442                | (206)                           | 19 217 |

<sup>\*</sup> See table 1 in document EB 2020/LOT/P.1/Rev.1 for detailed breakdown.

Table 2 Additional financing: project costs by component (and subcomponent) and financier (Thousands of euros)

|   | Additio<br>DSF gr |     | Total  |  |
|---|-------------------|-----|--------|--|
| Component/subcomponent  | Amount            | %   | Amount |  |
| 1. Consolidation and development of business relations in value chains            |                   |     |        |  |
| 1.1. Economic partnerships and support for income- generating activities          | 864               | 19  | 864    |  |
| 1.2. Capacity-building for actors   | 1 121             | 26  | 1 121  |  |
| 2. Promotion of well-performing resilient production systems in value chains      |                   |     |        |  |
| 2.1. Access to inputs, agricultural advisory services and environmental education | 295               | 7   | 295    |  |
| 2.2. Nutritional education and social inclusion                                   | 424               | 10  | 424    |  |
| 2.3. Infrastructure development   | 174               | 4   | 174    |  |
| 3. Coordination, management and M&E   | 1 564             | 35  | 1 564  |  |
| Total   | 4 442             | 100 | 4 442  |  |

|                             | Additiona<br>grai | Total |        |
|-----------------------------|-------------------|-------|--------|
| Expenditure category        | Amount            | %     | Amount |
| Civil engineering and works | 174               | 4     | 174    |
| 2. Equipment and materials  | 9                 | 0     | 9      |
| 3. Services                 | 2 615             | 57    | 2 615  |
| 4. Support fund             | 655               | 15    | 655    |
| 5. Salaries and benefits    | 918               | 21    | 918    |
| 6. Operating costs          | 71                | 2     | 71     |
| Total                       | 4 442             | 100   | 4 442  |

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

|   | PY1    |     | PY2    | ?   | PY3    | }   | PY4    |     | PYS    | 5   | PY6    |     | PY7    |     | Total  |
|---|--------|-----|--------|-----|--------|-----|--------|-----|--------|-----|--------|-----|--------|-----|--------|
| Component/subcomponent  | Amount | %   | Amount |
| 1. Consolidation and development of business relations in value chains            |        |     |        |     |        |     |        |     |        |     |        |     |        |     |        |
| 1.1. Economic partnerships and support for income-generating activities           | -      | -   | 732    | 21  | 1 195  | 25  | 1 219  | 26  | 733    | 27  | 293    | 30  | 13     | 3   | 4 186  |
| 1.2. Capacity-building for actors   | 166    | 8   | 685    | 20  | 720    | 15  | 830    | 17  | 474    | 18  | 107    | 11  | 4      | 1   | 2 988  |
| Subtotal  | 166    | 8   | 1 417  | 41  | 1 915  | 41  | 2 049  | 43  | 1 207  | 45  | 400    | 41  | 17     | 5   | 7 175  |
| 2. Promotion of well-performing resilient production systems in value chains      |        |     |        |     |        |     |        |     |        |     |        |     |        |     |        |
| 2.1. Access to inputs, agricultural advisory services and environmental education | -      | -   | 434    | 12  | 829    | 18  | 834    | 18  | 356    | 13  | 127    | 13  | -      | -   | 2 582  |
| 2.2. Nutritional education and social inclusion                                   | 1 048  | 49  | 253    | 7   | 368    | 8   | 274    | 6   | 147    | 6   | 96     | 10  | 37     | 8   | 2 226  |
| 2.3. Infrastructure development   | 495    | 23  | 752    | 22  | 1 115  | 24  | 1 202  | 25  | 611    | 23  | -      | -   | -      | -   | 4 177  |
| Subtotal  | 1 544  | 72  | 1 440  | 41  | 2 313  | 49  | 2 311  | 48  | 1 115  | 42  | 223    | 23  | 37     | 8   | 8 986  |
| 3. Coordination, management and M&E   | 445    | 21  | 619    | 18  | 473    | 10  | 406    | 9   | 348    | 13  | 345    | 36  | 421    | 88  | 3 056  |
| Total   | 2 155  | 100 | 3 476  | 100 | 4 703  | 100 | 4 768  | 100 | 2 670  | 100 | 969    | 100 | 476    | 100 | 19 217 |

#### Financing and cofinancing strategy and plan

- 26. The financing and cofinancing strategy and plan remain unchanged. The project financing plan is as follows: (i) EUR 9.29 million from IFAD, or 48.3 per cent of total project cost; (ii) EUR 3.2 million from the Adaptation Fund, or 16.7 per cent; (iii) EUR 3.8 million from the Global Environment Fund, or 19.6 per cent; (iv) EUR 0.8 million from the International Labour Organization for technical expertise, or 4.3 per cent of total cost; and (v) EUR 0.245 million from the private sector in financing for economic partnership business plans, or 1.3 per cent. The contribution of the Government will be mainly in the form of tax exemptions and contributions in kind, in an amount of EUR 0.37 million, or 2 per cent of total cost. The contribution of beneficiaries (to financing economic partnership business plans, microprojects for income-generating activities or youth microenterprises) is estimated at EUR 0.44 million, or 2.3 per cent of total cost, part of which could be mobilized from financial institutions in the form of credit.
- 27. Expected contributions from the private sector, the Government and the beneficiaries were slightly revised in line with available additional resources.

#### **Disbursement**

28. A designated account will be opened for the IFAD additional financing. Administration, management and disbursement will take place in accordance with the provisions prevailing at IFAD. Upon fulfilment of the disbursement conditions set forth in the financing agreement, IFAD will, at the request of the recipient, transfer the initial deposit determined for the designated account. The amounts of initial advances will be specified in the letter to the recipient.

#### Summary of benefits and economic analysis

- 29. **Financial analysis**. The financial profitability of the activities supported by COMPRAN was evaluated on the basis of financial indicators such as the economic internal rate of return (EIRR), the net present value (NPV) and the profit-cost ratio. The profitability rates for all the activity models are above 20 per cent and the benefit-cost ratios above 1.
- 30. **Economic analysis**. The overall internal rate of return (IRR) of COMPRAN is 10.2 per cent and the NPV of the economic net cash flow generated would be 176.4 million dobras (EUR 6.8 million). Considering the environmental benefits, the IRR is 11 per cent, with an NPV of EUR 8.3 million. This preliminary result is satisfactory, as some benefits have not been considered in the analysis.
- 31. **Sensitivity analysis**. A sensitivity analysis was carried out to test the variation of the EIRR under the assumption of a reduction in benefits (decrease in agricultural yields and prices, increase in input prices, delay in implementation). The results show that the EIRR is sensitive to a decrease in selling prices or yields and an increase in costs, with a 20 per cent drop in revenues leading to an IRR of 7.2 per cent, while a 10 per cent and 20 per cent increase in costs would result in IRRs of around 8.9 per cent and 7.7 per cent, respectively. A one-year delay in the implementation of the project would result in an IRR of 8.5 per cent and a two-year delay, in an IRR of 7 per cent.

#### Exit strategy and sustainability

- 32. COMPRAN assigns priority to ownership by both beneficiaries and the technical entities of the Ministry of Agriculture, Fisheries and Rural Development (MAPDR). The approach adopted is based on capacity-building, skills transfer and steering instruments. The project thus positions itself as a facilitator. Farmers' organizations are placed at the heart of all investments and will be fully involved in the development and management of economic and commercial partnerships.
- 33. Community governance will be established around collective infrastructure, with active involvement of women and youth in management and monitoring bodies. Guidance, advisory assistance and education on environmental and nutritional

issues will facilitate the adoption of good practices. Strengthening of technical functions within MAPDR will prepare the ministry to fully provide effective project management, sector coordination, an enabling policy environment for public and private investment and effective institutional leadership.

#### III. Risk management

#### A. Risks and mitigation measures

34. An update of the risks identified at design stage and related mitigation measures are detailed in the table below.

Table 5
Risks and mitigation measures

| Risks   | Risk rating | Mitigation measures  |
|---|-------------|--|
| <b>Political/governance</b> : Political instability mainly during election periods.   | High        | Strengthen capacities of key institutions to ensure continuity.  |
| <b>Macroeconomic:</b> Being structurally dependent on imports and foreign capital inflows, the country is highly vulnerable to crises affecting the global economy and logistics chains, such as the COVID-19 pandemic and the war in Ukraine.  | High        | Support domestic production to substitute some food imports; increase high value added agricultural exports and promote technical packages requiring as little imported input as possible (bioproduction, solar energy, gravity irrigation, etc.).   |
| Sector strategy and policy: Because of its limited human resources base and its structural public budget deficit, the country cannot afford a full range of public services, including at the strategy and policy design levels.  | Moderate    | Under the oversight of public authorities, promote and support active coordination within the agricultural sector in implementing innovative and participatory mechanisms that will not create additional public recurrent costs; consolidate the donor rural development group; and facilitate policy dialogue and operational collaborations at the technical level through open and dynamic task-oriented working groups. |
| Institutional capacity: Owing to its small size, its limited human resources base (understaffing and high turnover) and its structural public budget deficit, the capacity of the country's public institutions remains structurally limited.   | High        | Strengthen capacities of producers' organizations, particularly cooperatives. Provide support (technical assistance, training, equipment and operating costs) to strategically selected tasks forces within public institutions, avoiding unessential additional recurrent costs in the public sector.   |
| Portfolio: Weak project management capacity.  | Moderate    | Ensure a stable programme management structure; make available sufficient budget to cover administrative requirements and M&E.   |
|   |             | Partner with sovereign technical entities, farmers and service providers, and conduct periodic progress review meetings between project management units and country teams.  |
| Fiduciary:  |             |  |
| <b>Financial management:</b> Lack of qualified human resources.   | Substantial | Continue to strengthen staff capacities in financial management and establish an internal audit system for projects.   |
| Procurement: Limited procurement expertise.   | Moderate    | Build the capacity of the procurement staff and other public agents involved in the process; operationalize the procurement manual by setting up systems to detect and identify procedural violations.   |
| Environment and climate: Increased risk of violent episodes, such as flash floods, and modification of rainfall patterns, could alter the agroecological vocation of many microzones, mainly through extension of the dry season and more rainfall irregularities. Increased human pressure as a result of population growth. | Moderate    | Build the resilience of existing systems by proposing innovative mitigation and adaptation measures, particularly in irrigation and agroforestry. Continue to support good community preservation practices and public management of natural resources.  |
| Social: With high unemployment and very limited potential for extending cropped areas, agriculture can only create a limited number of additional jobs. Urban   | Moderate    | Redistribute abandoned plots of land to women, young people or persons with disabilities and support them in developing high value added agricultural activities.  |
| population and poverty are increasing as are related risks of social unrest.  |             | Facilitate a "virtuous" transition between generations in the existing agricultural sector.  |
|   |             | Develop the very few hundred hectares still available (mainly through gravity irrigation).   |
| Overall   | Moderate    | Close monitoring and regular support and supervision missions  |

#### B. Environment and social category

35. COMPRAN is classified as a category B operation, as it is not expected to have any substantial adverse environmental or social impact. The irrigated areas will not exceed 100 contiguous hectares and the agricultural tracts to be rehabilitated will not exceed 10 continuous kilometres.

#### C. Climate risk classification

36. COMPRAN is considered to present a moderate climate risk. The project has a strategy that places environmental, social and climate issues at the core of its interventions. It builds in environmental dimensions as a cross-cutting approach in all components, and will finance environmental information, education, communication and monitoring activities.

#### **IV.** Implementation

#### A. Compliance with IFAD policies

37. Activities implemented by COMPRAN are compliant with all relevant IFAD policies, including gender, youth and social inclusion, nutrition, climate change, biodiversity, environment and natural resources management policies, as well as Social, Environmental and Climate Assessment Procedures (SECAP).

#### B. Organizational framework

#### **Management and coordination**

- 38. The project is being implemented under the leadership of MAPDR, which chairs the national steering committee. In Principe, a regional participatory planning committee was set up and is chaired by the secretary of economic affairs for the region.
- 39. **Coordination.** The project organizational chart remains unchanged. The project management unit is located in Sao Tome, with a regional team based in Principe, and performs administrative and accounting, planning and M&E functions, in addition to the required technical functions for the implementation and the management of the additional financing.

#### Financial management, procurement and governance

- 40. **Financial management.** The financial management operational system and team are in place. The financial management of COMPRAN was rated as satisfactory during the last supervision mission. However, the financial management risk was assessed as substantial in January 2022; mitigation measures have been undertaken, including capacity-building of key staff and close regular support and follow-up by IFAD.
- 41. **Procurement**. A procurement officer was recruited and capacity-building for the project team and key agents involved in the procurement process has started. The project procurement risk is assessed as moderate.
- 42. **Governance.** Sao Tome and Principe has made progress on political governance, but challenges remain in terms of security, the rule of law and economic prospects. Transparency International, on its 2021 Corruption Perceptions Index, ranked the country 66<sup>th</sup> out of 180 countries, up from 72<sup>nd</sup> in 2013. The rural sector performance score assigned by IFAD is 3.5.

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

43. **Planning and M&E**. Planning is done annually, following consultation with all implementation partners and based on investment projections agreed during preparation of the annual workplan and budget and submitted to the national steering committee for validation prior to its transmission to IFAD for no objection. The M&E system is in place to keep the project management unit staff and other

- stakeholders informed of the project performance and implementation effectiveness, which will enable them to make decisions on a results basis and to assess and document early project results and impact.
- 44. **Knowledge management and communication.** From project start-up, a knowledge management and communication strategy was developed and implemented to provide a sustainable platform for technical know-how for producers, to enable knowledge to be generated based on the project experience in the various areas concerned and to support policy dialogue and engagement.
- 45. **Innovation and scaling up.** A holistic and inclusive approach has been adopted to improve the incomes and food security of beneficiaries. This approach facilitates emerging local competencies to disseminate resilient techniques and practices, promote farmer field schools, offer support and advisory services and disseminate good practices in nutrition. The COMPRAN project scales up the commercial agriculture approach with improved operating arrangements and will develop South-South and Triangular Cooperation in order to build national capacities.

#### D. Proposed amendments to the financing agreement

46. Subject to the approval of this additional financing by the IFAD Executive Board, the financing agreement will be amended accordingly. This financing complements the financing plan initially approved at project design and does not entail any change in the project description, area or target group, nor does it require the creation of any new expense category.

#### V. Legal instruments and authority

- 47. An amendment to the financing agreement between the Democratic Republic of Sao Tome and Principe and IFAD will constitute the legal instrument for extending the proposed financing to the borrower/recipient. The signed financing agreement will be amended following approval of the additional financing.
- 48. The Democratic Republic of Sao Tome and Principe 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 additional financing in terms of the following resolution:

RESOLVED: That the Fund shall provide a grant under the Debt Sustainability Framework to the Democratic Republic of Sao Tome and Principe, in an amount of four million four hundred and forty-one thousand, five hundred euros (EUR 4,441,500) and upon such terms and conditions as shall be substantially in accordance with the terms and conditions presented herein.

Alvaro Lario President

#### Logical framework incorporating the additional financing (unchanged)

| Counth has a /D for the h  | Indicateurs clés  | de vérification | 4&5         |        | М   | oyens de vérification                | on                       | Uymathàgas  |  |
|--|---|-----------------|-------------|--------|---|--------------------------------------|--------------------------|---|--|
| Synthèse/Résultats   | Nom   | Référence       | Mi-parcours | Fin    | Source  | Fréquence                            | Responsabilité           | Hypothèses  |  |
| Objectif général   |   |                 |             |        |   |                                      |                          |   |  |
| Contribuer à la réduction de la  | Nombre de personnes touchées au sein des ménages appuyés *6   | 0               | 16 000      | 38 000 | Enquête de Trimestrielle coordina                   |                                      | Unité de<br>coordination | Contexte sociopolitique   |  |
| pauvreté et à la croissance<br>économique rurale                                     | Taux de réduction du pourcentage de<br>ménages vivant en-dessous du seuil<br>de pauvreté parmi les ménages<br>appuyés                     | 0               | 10%         | 35%    | référence,<br>Evaluation<br>d'impact                | Année 1, 3 et 6                      | Unité de<br>coordination | et conditions favorables à<br>la mise en œuvre du<br>projet.  |  |
| Objectif de développement  |   |                 |             |        |   |                                      |                          |   |  |
|  | Nombre de ménages recevant les services promus par le projet *  | 0               | 4 000       | 8 000  | SSE du projet                                       | Trimestrielle                        | Unité de                 |   |  |
|  | (Dont pourcentage de ménages avec une femme chef de famille)  | 0               | (43%)       | (43%)  | 33L du projet                                       |                                      | coordination             |   |  |
| Améliorer durablement les<br>revenus et la sécurité<br>alimentaire et nutritionnelle | Pourcentage de ménages soutenus<br>déclarant une augmentation de<br>revenus   | 0               | 30%         | 75%    | Enquêtes de<br>référence et<br>enquêtes<br>d'impact | Annuelle à<br>partir de<br>l'année 3 | Unité de<br>coordination | Mobilisation et efficacité<br>des dispositifs d'appui   |  |
| des petits producteurs, en<br>particulier des femmes et des<br>jeunes                | 5. Pourcentage de femmes âgées de 15 à 49 ans qui consomment au moins 5 groupes d'aliments sur 10 <sup>7</sup> par jour (CI.1.2.8. MDD-W) | 0               | 40%         | 80%    | Enquêtes<br>spécifiques                             | Mi-parcours et Unité de coordination |                          |   |  |
|  | 6. Score selon l'indice d'égalité genre et autonomisation des femmes (Pro-WEAI) <sup>8</sup>  | 0               | 40%         | 80%    | Enquêtes Pro-<br>WEAI                               | fin de projet                        | Prestataires             |   |  |
| Effet 1: La valeur ajoutée<br>générée par les filières est<br>augmentée              | 7. Pourcentage d'organisations de producteurs déclarant une augmentation de profit d'au moins 30%* (2.2.2)                                | 0               | 30%         | 75%    | Registres et<br>comptes des<br>coopératives         | Annuelle à<br>partir de<br>l'année 3 | Unité de<br>coordination | Qualité et compétitivité<br>de l'offre des matières<br>premières et/ou<br>transformées dans les<br>filières |  |
| Produit 1.1 : L'accès durable<br>des petits producteurs aux                          | Nombre de partenariats économiques viables  | 0               | 3           | 7      | Enquêtes<br>périodiques                             | Annuelle à<br>partir de<br>l'année 3 | Unité de<br>coordination | Disponibilité de services de facilitation et  |  |

<sup>&</sup>lt;sup>4</sup> Désagrégés par genre et âge (hommes, femmes et jeunes)

<sup>5 \*</sup> Indicateurs de base du Système de mesure des résultats opérationnels (SMRO)

<sup>&</sup>lt;sup>6</sup> Dont bénéficiaires hommes/femmes/jeunes ; bénéficiaires des actions environnementales durables et bénéficiaires des actions sur la nutrition

<sup>&</sup>lt;sup>7</sup> Les 10 aliments concernés sont : (i) grains, racines et tubercules blancs et plantains ; (ii) légumineuses (haricots, pois et lentilles) ; (iii) noix et graines ; (iv) produits laitiers ; (v) viande, volaille et poisson ; (vi) œuf ; (vii) légumes à feuilles vert foncé ; (viii) autres fruits et légumes riches en vitamine A ; (ix) autres légumes ; (x) autres fruits

<sup>&</sup>lt;sup>8</sup> Il s'agit d'utiliser l'Indice d'autonomisation des femmes dans l'agriculture au niveau projet (Pro-WEAI) conçu pour évaluer l'impact des projets de développement agricole avec des indicateurs portants sur la liberté de mouvement et les attitudes à l'égard de violence domestique fondée sur le genre. Pro-WEAI utilise les données d'enquête des adultes auto-identifiés, hommes et femmes, âgés de 18 ans et plus, appartenant au même ménage. Les ménages sont classés comme ayant une parité entre les sexes si la femme est autonomisée (son score d'autonomisation est supérieur ou égal à 80%) ou si son score est supérieur ou égal au score d'autonomisation du décideur de sexe masculin de son ménage.

| Combbine (Discolar)  | Indicateurs clés  | de vérification | 4&5         |       | Me   | oyens de vérificati                  | on  | Home M. Y  |
|--|---|-----------------|-------------|-------|--|--------------------------------------|---|--|
| Synthèse/Résultats   | Nom   | Référence       | Mi-parcours | Fin   | Source   | Fréquence                            | Responsabilité                            | Hypothèses   |
| opportunités de marché est<br>facilité   | 9. Nombre de plans d'affaires financés*   | 0               | 15          | 35    |  |                                      |   | d'intermédiation pour<br>l'accès au marché   |
|  | 10. Nombre de producteurs affiliés<br>accédant au marché à travers les<br>partenariats* (2.1.4)   | 0               | 3 500       | 6 500 | Coopératives/U nions/Assoc.                    | Trimestrielle                        | Unité de                                  | Bonne coopération Sudsud   |
|  | 11. Nombre de personnes accompagnées dans le lancement d'une AGR* (2.1.2)   | 0               | 700         | 1 500 | SSE du projet                                  |                                      | coordination                              | Disponibilité des services d'appui   |
| Duadwik 1 2 Jan askawa awkawa  | 12. Nombre d'organisations (coopératives)<br>de producteurs professionnalisées*   | 0               | 6           | 10    |  |                                      |   |  |
| Produit 1.2: Les acteurs autour des filières sont renforcés  | 13. Nombre de jeunes formés et insérés dans les microentreprises (2.1.2)*   | 0               | 300         | 700   | Partenaires<br>SSE Projet                      | Trimestrielle                        | Unité de<br>Coordination                  | Dispositifs d'appui<br>disponible  |
| Effet 2 : La productivité et<br>la résilience des systèmes<br>de production dans les<br>filières sont améliorées | 14. Pourcentage de producteurs déclarant<br>l'adoption de techniques, technologies<br>et pratiques résilientes appropriées*<br>(1.2.3)      | 0               | 35%         | 80%   | Enquêtes Effets                                | Annuelle à<br>partir de<br>l'année 2 | Unité de<br>Coordination                  | Conditions climatiques<br>favorables<br>Engagement des services<br>de recherche et<br>vulgarisation<br>Mobilisation de la<br>coopération Sud-sud |
| Produit 2.1: L'accès aux intrants, aux services de   | 15. Nombre de producteurs ayant accès<br>aux facteurs de production et/ou aux<br>paquets technologiques et pratiques<br>résilientes (1.1.3) | 0               | 3 500       | 6 000 | Registres                                      | Annuelle                             | Unité de<br>Coordination                  | Disponibilité des intrants<br>et mobilisation effective<br>des technologies  |
| conseil agricole et à l'éducation<br>environnementale est amélioré   | 16. Nombre de producteurs bénéficiant de services-conseil et d'un encadrement de proximité *  | 0               | 2 500       | 5 000 | coopératives, Assoc, Unions/ Prestataires/ SSE | Semestrielle                         | Unité de<br>Coordination                  | Compétences locales<br>disponibles pour<br>l'encadrement   |
| Produit 2.2: L'alimentation des<br>ménages est améliorée et<br>diversifiée                                       | 17. Nombre de ménages bénéficiant d'un<br>appui ciblé pour améliorer leur<br>nutrition* (C.I. 1.1.8)  | 0               | 150         | 400   |  | Annuelle                             | Unité de<br>Coordination/<br>Prestataires | Expertise en nutrition disponible  |
| Produit 2.3 : Des  | 18. Nombre de kilomètre de pistes<br>agricoles réhabilitées et de tronçons<br>de pistes agricoles améliorées (2.1.5)                        | 0               | 13          | 15    | Rapports                                       |                                      |   |  |
| infrastructures durables<br>améliorent la productivité et  | 19. Nombre d'ha aménagés pour<br>l'irrigation * (1.1.2)   | 0               | 300         | 600   | d'activités des prestataires                   | Semestrielle                         | Unité de<br>Coordination                  | Célérité du système de passation des marchés   |
| l'accès au marché  | 20. Nombre de magasins stockage et<br>d'aires de séchages<br>construits/réhabilités (2.1.6)   | 0               | 11          | 14    | SSE  |                                      |   |  |

### Updated summary of the economic and financial analysis

Table A. Financial cash flow models

| A)               |      |                         | MODELES | DE PRODUC       | TION AGRICO | DLE                 | MODEL         | MICROEN             | MODELES DE<br>MICROENTREPRISES<br>JEUNES |                      | MODELES DE PARTENARIATS<br>COMMERCIAUX            |          |           |             |
|------------------|------|-------------------------|---------|-----------------|-------------|---------------------|---------------|---------------------|--|----------------------|---|----------|-----------|-------------|
|                  |      | Cacao,<br>bariane, taro | Paire   | Manico-<br>mais | Maniec      | Maraichage<br>miste | Paisson séché | Farine de<br>manioc | Elevage<br>Porc                          | Elevage de<br>poviet | Commerciali<br>sation de<br>produits<br>agricoles | PCS-Miel | 49-Ananas | 4P-Polyra   |
|                  | ANI  | -33 452                 | -8 796  | -7 138          | 8 604       | -24 930             | -13 359       | -30 954             | -71 050                                  | -25 037              | -6 463  | -150 785 | -867 087  | -10 386 491 |
|                  | AN2  | -3 236                  | -8 100  | 1381            | 690         | 4.337               | 1586          | 16 045              | 20.559                                   | 9 222                | 5 875   | 25 211   | 30 067    | 769 276     |
|                  | ANS  | 3 444                   | -2 977  | 1983            | 3 108       | 12 564              | 12 102        | 14 045              | 19 809                                   | 8 472                | 5 297   | 38 532   | 72 910    | 1 400 232   |
|                  | ANA  | 7.194                   | -1284   | 4 283           | 4 400       | 14 144              | 14 452        | 16 045              | 20 559                                   | 9 222                | 5 920   | 38 532   | 207 964   | 2 735 099   |
|                  | AN5  | 6.624                   | 5.638   | 2.963           | 3 105       | 12 554              | 12 102        | 14 045              | 15 809                                   | 6.672                | 5 320   | 38 533   | 154 900   | 3 106 222   |
|                  | ANE. | 10 175                  | 6 096   | 4 283           | 4 405       | 14144               | 14 452        | 16 045              | 9 359                                    | 3 801                | 5 370   | . 552    | 167 938   | -941 468    |
|                  | AN7  | 9 698                   | 5 471   | 2 983           | 3 105       | 12 964              | 12 102        | 14 045              | 19 809                                   | 8 472                | 5 320   | 38 532   | 98 740    | 2 793 312   |
|                  | ANE  | 10 998                  | 6 921   | 4283            | 4 405       | 14 144              | 14 452        | 16 045              | 20 559                                   | 9 222                | 5 920   | 58 532   | 212 824   | 3 352 312   |
|                  | AN9  | 9.698                   | 6.471   | 2 983           | 3 105       | 12.564              | 12 102        | 14 045              | 15 809                                   | 6 672                | 5 320   | 38 532   | 92 569    | 3 136 312   |
|                  | AN10 | 10 998                  | 5 921   | 4 285           | 4 403       | 14 144              | 14 452        | 16 045              | 20 559                                   | 9 222                | 5 920   | 38 582   | 217 824   | 5 212       |
|                  | AN11 | 8 873                   | 5 646   |                 | 10.000      |                     |               |                     |  |                      |   | 532      | 165 520   | 381 532     |
|                  | AN12 | 10 998                  | 6.921   |                 |             |                     |               |                     |  |                      |   | 38 532   | 212 824   | 2 891 312   |
|                  | AN13 | 9 698                   | 6 471   |                 |             |                     |               |                     |  |                      |   | 38 532   | 147.740   | 2 597 312   |
|                  | AN14 | 10 998                  | 5 921   |                 |             |                     |               |                     |  |                      |   | 38 532   | 212 824   | 3 332 312   |
|                  | AN15 | 9 608                   | 6 471   |                 |             |                     |               |                     |  |                      |   | 38 582   | 210 954   | 3 332 312   |
|                  | AN16 | 10 173                  | 6 496   |                 |             |                     |               |                     |  |                      |   | 111      |           | 1000        |
|                  | AN17 | 9 698                   | 6 271   |                 |             |                     |               |                     |  |                      |   |          |           |             |
|                  | AN18 | 10 998                  | 7 121   |                 |             |                     |               |                     | 1  |                      |   |          |           |             |
|                  | AN19 | 9.688                   | 6 671   |                 |             |                     |               |                     |  |                      |   |          |           |             |
|                  | AN20 | 29 131                  | 7 121   |                 |             |                     |               |                     |  |                      |   |          |           |             |
| TRI (financier)  |      | 18,7%                   | 19,1%   | 38,4%           | 30,7%       | 40,3%               | 63,1%         | 47,8%               | 21,4%                                    | 29,3%                | 87,3%   | 19,1%    | 13,2%     | 15,3%       |
| VAN (@9%, Dobra) |      | 35 477                  | 19 888  | 11 409          | 10 038      | 42 832              | 50 692        | 54 996              | 34 957                                   | 20.700               | 24 790  | 88 311   | 237 119   | 4 176 602   |
| VAN (@9%, Euro)  |      | 1448                    | 612     | 466             | 410         | 1748                | 2 069         | 2.245               | 1427                                     | 845                  | 1012  | 3 605    | 9 678     | 170 474     |
| Ratio B/C        |      | 2,31                    | 1,20    | 1,85            | 1,95        | 2,73                | 1,34          | 1,56                | 1,02                                     | 1,07                 | 1,11  | 1,61     | 1,03      | 1,07        |

Table B. Programme/project costs and logframe targets

| en millions d'Euros  | 19,04        | Coût de base<br>(millions d'Euros )                         | 18,32  |  |  |  |  |
|--|--------------|---|--|--|--|--|--|
| Bénéficiaires (personnes)  | 34 800       |   |  |  |  |  |  |
| Coût par bénéficiaire  | 547 Euro po  | ar personne   |  |  |  |  |  |
| Componsantes   | Coût total   | Effets et Indicates   | Effets et Indicateurs  |  |  |  |  |
| 20   |              |   | % d'organisations de   |  |  |  |  |
| Consolidation et développement des relations d'affaires<br>dans les filières | 7,18         | La valeur ajoutée générée par les filières est<br>augmentée | producteurs déclarant une<br>augmentation de profit d'au<br>moins 30%° |  |  |  |  |
| 500000000000000000000000000000000000000                                      | 7,18<br>8,99 |   | augmentation de profit d'a   |  |  |  |  |

Table C. Main assumptions and shadow prices

|            |                               |  | PRINCIPAL  | ES HYPOTHESI | TYPOTHESES & PRIX DE REFERENCE    |       |             |  |  |  |  |
|------------|-------------------------------|--|------------|--------------|-----------------------------------|-------|-------------|--|--|--|--|
|            | Produits a/                   | Unité                                  | rendements | Prix (Dobra) | Intrants                          | Unité | Prix (Dobra |  |  |  |  |
|            | Cacao                         | Kg                                     | 74%        | 53           | Plants de cacao                   | Unité | 15          |  |  |  |  |
|            | Poivre                        | Kg                                     | 131%       | 196          | Plants de poivre                  | Unité | 15          |  |  |  |  |
|            | Manioc                        | Kg                                     | 41%        | 10           | Bouture améliorée de manioc       | Unité | 2,5         |  |  |  |  |
|            | Mais                          | Kg                                     | 185%       | 15           | Semence améliorée de mais         | Unité | 20          |  |  |  |  |
| FINANCIERE | Tomate                        | Kg                                     | 25%        | 15           | Compost                           | Kg    | 0,8         |  |  |  |  |
| FINA       | Poivron                       | Kg                                     | 20%        | 50           | Sulfate de cabro                  | Kg    | 80          |  |  |  |  |
| 10.00      | Oignan                        | Kg                                     | 22%        | 30           | CAL                               | Kg    | 20          |  |  |  |  |
|            | Poulet                        | Unité                                  | N/A        | 130          | Poussin                           | Unité | 20          |  |  |  |  |
|            | Porc                          | Unité                                  | N/A        | 6 500        | Main d'œuvre                      | Jour  | 100         |  |  |  |  |
|            | Miel brute                    | Kg                                     | 50%        | 160          | Aliments betail                   | Kg    | 10          |  |  |  |  |
|            | Ananas                        | Kg                                     | N/A        | 30           |                                   |       |             |  |  |  |  |
|            | Taux de chan                  | ge Official (                          | DER) 24,   | 5            | Cout d'opportunité du capital (fi | 9,0%  |             |  |  |  |  |
| ECONOMIQUE | Taux de chan                  | Taux de change de référence (SER) 25,7 |            |              | Cout d'opportunité du capital so  | cial  | 6,0%        |  |  |  |  |
| NOMICE     | Facteur de co                 | nversion 5ta                           | andard I,  | L.           | Facteur de conversion Output lo   | cal   | 1,00        |  |  |  |  |
| BCOIL      | Labour Conversion factor 0,86 |  |            | 5            | Facteur de conversion Intrants    | 0,99  |             |  |  |  |  |

Table D. Beneficiary adoption rates and phasing

|   |                                      |     | 2020 | 2021 | 2022 | 2023  | 2024  | 2025 | 2026 | Total |
|---|--------------------------------------|-----|------|------|------|-------|-------|------|------|-------|
|   | Cacao- Poivre                        |     |      |      |      |       |       |      |      |       |
|   | Bénéf. Totaux                        |     | -    | -    | 139  | 180   | -     | -    |      | 319   |
| Modèles de  | Bénéf. Adoptant                      | 80% | -    | -    | 111  | 144   | -     | -    |      | 255   |
| production agricoles  | Culture vivrière                     |     |      |      |      |       |       |      |      |       |
|   | Bénéf. Totaux                        |     | -    | -    | 270  | 1 471 | 1 473 |      |      | 3 214 |
|   | Bénéf. Adoptant                      | 80% | -    | -    | 216  | 1 177 | 1 178 | -    |      | 2 571 |
|   | Microprojets                         |     |      |      |      |       |       |      |      |       |
|   | Bénéf. Totaux                        |     | -    | -    | 50   | 400   | 550   | 500  |      | 1 500 |
|   | Bénéf. Adoptant                      | 85% | -    | -    | 43   | 340   | 468   | 425  |      | 1 275 |
| Modèles   | Microentreprises jeunes-Insertion    |     |      |      |      |       |       |      |      |       |
| microprojets et   | Bénéf. Totaux                        |     | -    | -    | -    | 440   | 160   | -    |      | 600   |
| microentreprises<br>jeunes  | Bénéf. Adoptant                      | 70% | -    | -    | -    | 308   | 112   | -    |      | 420   |
|   | Microentreprises jeunes-Renforcement |     |      |      |      |       |       |      |      |       |
|   | Bénéf. Totaux                        |     | _    | _    | -    | -     | 13    | -    |      | 13    |
|   | Bénéf. Adoptant                      | 80% | -    | -    | -    | -     | 10    | -    |      | 10    |
|   | Partenariat standard simple          |     |      |      |      |       |       |      |      |       |
| Modèles<br>d'amélioration de la<br>valeur ajoutée<br>(partenariats) | Bénéf. Totaux                        |     | -    | -    | -    | 18    | 7     | -    |      | 25    |
|   | Bénéf. Adoptant                      | 90% | -    |      | -    | 16    | 6     | -    | -    | 23    |
|   | 4P                                   |     |      |      |      |       |       |      |      |       |
|   | Bénéf. Totaux                        |     | _    |      | _    | 5     | 2     | -    |      | 7     |
|   | Bénéf. Adoptant                      | 90% |      | -    | -    | 4     | 2     | -    |      | 6     |

Table E. Economic cash flow

| E)     |                                     |  |                            |  |   |                          |                                     |                                   |                                      |
|--------|-------------------------------------|--|----------------------------|--|---|--------------------------|-------------------------------------|-----------------------------------|--------------------------------------|
|        |                                     | BENEFICES NETS ADDITIONNELS (BNA) ECONOMIQUES EN MILLIONS DOBRAS |                            |  |   |                          |                                     |                                   |                                      |
|        |                                     | Modèles de<br>production<br>agricole                             | Modèles de<br>Microprojets | Modèles<br>micro-<br>entreprises<br>jeunes | Modèles de<br>partenariats<br>commerciaux | Pistes rurales           | TOTAL BNA<br>(Dobra)                | COUTS ECO.<br>NETS ADD<br>(Dobra) | AVANTAG. ECO.<br>NETS ADD<br>(Dobra) |
| A      | AN1                                 | 0  | 0                          | 0  | 0   | -1 342 110               | -1 342 110                          | 53 832 176                        | -55 174 286                          |
| N      | AN2                                 | 0  | 0                          | 0  | 0   | -12 974 465              | -12 974 465                         | 90 179 223                        | -103 153 688                         |
| A<br>L | AN3                                 | -5 586 876   | -1 489 545                 | 0  | 0   | -5 199 605               | -12 276 026                         | 125 333 474                       | -137 609 500                         |
| Y      | AN4                                 | -29 701 695  | -7 264 336                 | -7 812 198                                 | -2 308 816                                | 23 297 063               | -23 789 982                         | 130 857 848                       | -154 647 830                         |
| s      | AN4                                 | -29 /01 695  | -7 264 336                 | -/ 812 198                                 | -2 308 816                                | 25 297 065               | -23 /89 982                         | 150 657 646                       | -154 647 850                         |
| E      | AN5                                 | -18 531 101  | -3 219 634                 | 4 478 244                                  | -473 571                                  | 36 749 077               | 19 003 016                          | 75 320 283                        | -56 317 267                          |
|        | AN6                                 | 18 934 290   | 973 351                    | 9 501 728                                  | 805 107                                   | 39 601 704               | 69 816 179                          | 27 060 653                        | 42 755 526                           |
| E      |                                     |  |                            |  |   |                          |                                     |                                   |                                      |
| С      | AN7                                 | 29 123 870   | 17 533 404                 | 9 676 055                                  | 889 029                                   | 39 601 704               | 96 824 062                          | 13 943 658                        | 82 880 403                           |
| 0      |                                     |  |                            |  |   |                          |                                     |                                   |                                      |
| N      | AN8                                 | 29 846 496   | 16 425 538                 | 8 979 788                                  | 889 029                                   | 39 601 704               | 95 742 555                          | 10 330 546                        | 85 412 008                           |
| 0      |                                     |  |                            |  |   |                          |                                     |                                   |                                      |
| M      | AN9                                 | 30 370 765<br>30 459 119   | 16 440 802                 | 7 871 528<br>8 924 544                     | 307 190<br>662 758                        | 39 601 704<br>39 601 704 | 94 591 990<br>95 855 142            | 10 330 546                        | 84 261 444<br>85 524 596             |
| Q      | AN10<br>AN11                        | 30 459 119   | 16 207 017<br>17 533 404   | 9 676 293                                  | 889 029                                   | 39 601 704               | 95 855 142<br>98 183 480            | 10 330 546<br>10 330 546          | 85 524 596<br>87 852 934             |
| U      | AN11                                | 30 459 119   | 16 605 496                 | 8 979 788                                  | 889 029                                   | 39 601 704               | 96 535 135                          | 10 330 546                        | 86 204 589                           |
| E      | AN13                                | 30 661 742   | 17 400 556                 | 9 485 749                                  | 889 029                                   | 39 601 704               | 98 038 780                          | 10 330 546                        | 87 708 234                           |
| _      | AN14                                | 32 046 832   | 17 321 069                 | 9 320 834                                  | 307 190                                   | 39 601 704               | 98 597 630                          | 10 330 546                        | 88 267 083                           |
|        | AN15                                | 32 182 065   | 17 963 776                 | 9 254 975                                  | 662 758                                   | 39 601 704               | 99 665 279                          | 10 330 546                        | 89 334 732                           |
|        | AN16                                | 32 159 116   | 17 963 776                 | 9 254 975                                  | 889 029                                   | 39 601 704               | 99 868 601                          | 10 330 546                        | 89 538 054                           |
|        | AN17                                | 32 182 065   | 17 963 776                 | 9 254 975                                  | 889 029                                   | 39 601 704               | 99 891 549                          | 10 330 546                        | 89 561 003                           |
|        | AN18                                | 32 075 130   | 17 963 776                 | 9 254 975                                  | 889 029                                   | 39 601 704               | 99 784 614                          | 10 330 546                        | 89 454 068                           |
|        | AN19                                | 32 079 307   | 17 963 776                 | 9 254 975                                  | 889 029                                   | 39 601 704               | 99 788 792                          | 10 330 546                        | 89 458 245                           |
|        | AN20                                | 32 155 033   | 17 963 776                 | 9 254 975                                  | 889 029                                   | 39 601 704               | 99 864 518                          | 10 330 546                        | 89 533 971                           |
|        | Sans bénéfices environnementaux     |  |                            |  |   |                          | Avec bénéfices environnementaux     |                                   |                                      |
|        | <u>VAN@ 6 % (Dobra)</u> 176 392 885 |  |                            |  |   |                          | <u>VAN@ 6 % (Dobra)</u> 215 674 180 |                                   |                                      |
|        | VAN@ 6 % (Euro) 6 856 41            |  |                            |  |   |                          | VAN@ 6 % (Euro) 8 383 280           |                                   |                                      |
|        | TRIE 10,2%                          |  |                            |  |   |                          | TRIE                                |                                   | 11,0%                                |

Table F. **Sensitivity analysis** 

| ANALYSE DE SENSIBILITE      |                   |  |       |                          |  |  |  |
|-----------------------------|-------------------|--|-------|--------------------------|--|--|--|
|                             | Δ%                | Lien avec la matrice des risques   | TRIE  | VAN<br>("million "Euros) |  |  |  |
| Scénario de base            |                   |  | 10,2% | 6,9                      |  |  |  |
| Coût du Projet              | 10%               | Hausses du prix des intrants, des  | 8,9%  | 5,0                      |  |  |  |
| Coût du Projet              | 20%               | equipements et materiels de  | 7,7%  | 3,1                      |  |  |  |
| Coût du Projet              | 30%               | production/transformationn du coût de l'energie  | 6,6%  | 1,2                      |  |  |  |
| Bénéfices                   | -10%              | Facteurs affectant les prix de   | 8,7%  | 4,3                      |  |  |  |
| Bénéfices                   | -20%              | vente des produits, la baisse du   | 7,2%  | 1,7                      |  |  |  |
| Bénéfices                   | 30%               | taux d'adoption et des rendements  | 4,1%  | 2,7                      |  |  |  |
| Bénéfices retardés d'1 an   |                   | Combinaison des risques liés à la  | 8,5%  | 4,3                      |  |  |  |
| Bénéfices retardés de 2 ans |                   | mobilisation du groupe cible ,<br>volonté politique favorable au                             | 7,0%  | 1,8                      |  |  |  |
| Bénéfices                   | retardés de 3 ans | renforcement des fonctions<br>techniques régaliennes et la<br>capacité d'exécution du projet | 5,7%  | 0,5                      |  |  |  |