

Document: 2019/DOA/3  
Date: 11 December 2019  
Distribution: Public  
Original: English

**E**



Investing in rural people

## Report to the President

### **Proposed additional loan and additional Debt Sustainability Framework grant to the Republic of Guinea-Bissau for the Economic Development Project for the Southern Regions (PADES)**

Project ID: 1100001757

**Note to Executive Board representatives**  
**Approved on Wednesday 25 December 2019**

Focal points:

Technical questions:

**Lisandro Martin**  
Regional Director  
West and Central Africa Division  
Tel.: +39 06 5459 2388  
e-mail: lisandro.martin@ifad.org

**Gianluca Capaldo**  
Country Director  
West and Central Africa Division  
Tel.: + 00221 775293116  
e-mail: g.capaldo@ifad.org

Dispatch of documentation:

**Deirdre Mc Grenra**  
Chief  
Institutional Governance and  
Member Relations  
Tel.: +39 06 5459 2374  
e-mail: gb@ifad.org

## Contents

<b>Financing summary</b>	<b>ii</b>
<b>I. Background and project description</b>	<b>1</b>
A. Background	1
B. Original project description	1
<b>II. Rationale for additional financing</b>	<b>1</b>
A. Rationale	1
B. Description of geographical area and target groups	2
C. Components, outcomes and activities	2
D. Benefits, costs and financing	4
<b>III. Risk management</b>	<b>8</b>
A. Risks and mitigation measures	8
B. Environment and social category	8
C. Climate risk classification	9
<b>IV. Implementation</b>	<b>9</b>
A. Compliance with IFAD policies	9
B. Organizational framework	9
C. Monitoring and evaluation, learning, knowledge management and strategic communication	11
D. Proposed amendments to the financing agreement	11
<b>V. Legal instruments and authority</b>	<b>11</b>
<b>VI. Recommendation</b>	<b>12</b>

## Appendices

- I. Updated logical framework incorporating the additional financing
- II. Updated summary of the economic and financial analysis

---

<b>Regional Director:</b>	<b>Lisandro Martin</b>
<b>Project Delivery Team</b>	
Country Director:	<b>Gianluca Capaldo</b>
Project Technical Lead:	<b>Jean Philippe Audinet</b>
Financial Management Officer:	<b>Damianov Radu</b>
Climate and Environment Specialist:	<b>Pathe Sene Amath</b>
Legal Officer:	<b>Elisabeth Brunat Boulet</b>

---

## Financing summary

<b>Initiating institution:</b>	IFAD
<b>Borrower/Recipient:</b>	Republic of Guinea-Bissau
<b>Executing agency:</b>	Ministry of Agriculture and Rural Development
<b>Original total project cost:</b>	US\$18.99 million
<b>Amount of original IFAD loan</b>	SDR 3.37 million (equivalent to approximately US\$4.7 million)
<b>Amount of original IFAD grant</b>	SDR 3.37 million (equivalent to approximately US\$4.7 million)
<b>Terms of original IFAD financing:</b>	50 per cent Grant and 50 per cent Highly Concessional Loan Highly Concessional Loan terms: 40 years, including a grace period of 10 years, with a service charge of three fourths of 1 per cent (0.75 per cent) per annum
<b>Revised total project cost</b>	US\$22.55 million
<b>Amount of additional DSF Grant:</b>	US\$0.81 million
<b>Amount of additional loan:</b>	US\$2.19 million
<b>Terms of additional IFAD financing:</b>	27 per cent Grant and 73 per cent Highly Concessional Loan. Highly Concessional Loan terms: 40 years, including a grace period of 10 years, with a service charge of 1.45% per annum
<b>Cofinancier(s):</b>	OPEC Fund for International Development (OFID)
<b>Amount of cofinancing:</b>	US\$6 million
<b>Terms of cofinancing:</b>	Maturity of 20 years, including a 5 years grace period; an interest rate of 1.0 per cent per annum and a service charge of 1.0 per cent per annum on amounts withdrawn and outstanding; loan to be administered by IFAD.
<b>Contribution of borrower/recipient:</b>	US\$2.3 million
<b>Amount of additional contribution of borrower/recipient</b>	US\$0.1 million (in-kind contribution)
<b>Contribution of beneficiaries:</b>	US\$1.7 million
<b>Amount of additional contribution of beneficiaries</b>	US\$0.013 million ( <b>in-kind contribution</b> )
<b>Cooperating institution:</b>	IFAD

## **Recommendation for approval**

According to the delegation of authority procedure approved by the Executive Board at its 126<sup>th</sup> session and detailed in document EB 2019/126/R.48/Rev.2, the President is invited to approve the recommendations contained in paragraph 74.

### **I. Background and project description**

#### **A. Background**

1. The Economic Development Project for the Southern Regions (PADES) was approved on 17 April 2015 for a total amount of US\$18.99 million. The financing package approved by the Executive Board (EB) for PADES comprised of: (i) an IFAD loan of US\$4.73 million and a Debt Sustainability Framework (DSF) grant of US\$4.73 million from the PBAS 2013-2015 allocation, (ii) a financing gap of US\$5.5 million, (iii) a government contribution of US\$2.3 million mainly from tax exemption, and (iv) a beneficiary contribution of US\$1.7 million. In 2018, new financing was provided from the OPEC Fund for International Development (OFID) for US\$6.0 million; a loan agreement was signed between the Government of Guinea-Bissau and OFID on 27 August 2018 (OFID Loan 13316P). However, the US\$5.5 million financing gap was only partly covered by the OFID financing - US\$2.5 million - as the latter only financed some of the infrastructure originally planned to be financed by IFAD. The estimated remaining balance as of 1 January 2020 will be US\$3.3 million. The current request is to utilize US\$3.0 million of the 2019-2021 PBAS allocation to fill the financing gap.
2. The completion and closing dates for IFAD financing are 30 September 2021 and 31 March 2022, respectively. The OFID loan was approved on 19 March 2018 and the financing agreement signed on 27 August 2018. The OFID loan completion and closing date is 30 April 2024.

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

3. The general objective of PADES is to contribute to poverty reduction in the rural communities of Tombali, Quinara and Bolama-Bijagos. PADES will help fulfill the rural populations' desire for improved production and better integration in the markets and facilitate the participation of younger adults and women in the processing and marketing of crop and livestock production.
4. The project's development objective is to boost agricultural production in order to guarantee food security and diversify income in the Tombali, Quinara and Bolama-Bijagos regions. The intended outcomes and outputs of the project's activities are: (i) rice production and productivity sustainably increase; (ii) producers improve their income-diversification activities; (iii) rural professional organizations provide their members with useful services; and (iv) people's mobility and the marketing of their farm products are sustainably improved.

### **II. Rationale for additional financing**

#### **A. Rationale**

5. The original total project cost was US\$18.99 million including the US\$5.5 million financing gap. Due to delays in starting up project activities, the IFAD10 PBAS 2016-2018 cycle allocation of US\$5.5 million for Guinea-Bissau was not utilized. However, US\$6.0 million in additional financing was provided by OFID in 2018 for infrastructure associated with the project, with IFAD as the supervising entity. Due to restrictions on the type of activities that can be financed by OFID, only approximately US\$2.5 million was able to cover the US\$5.5 million financing gap, mainly for infrastructure.
6. Project implementation has strongly accelerated since January 2018, moving from a disbursement rate of approximately 25 per cent in January 2018 to a

disbursement rate of approximately 95 per cent in August 2019 with an overall assessment rated as "satisfactory". As the project currently stands, the available IFAD funds of approximately US\$0.7 million will only cover expenditures until the end of 2019 and, if no additional funds are mobilised, the project would need to be closed two years before the original completion date. This would result in important "community grassroots" activities, that are key to ensuring ownership by the communities of the project's investments, not to be carried out. In addition, the OFID loan of US\$6 million would not be implemented because, as per the IFAD/OFID umbrella agreement and per the terms of the OFID loan, the OFID financing does not cover any recurrent costs for the project such as the project coordination, administrative costs, financial management and monitoring activities.

7. To avoid this, it is proposed to utilize a portion of the IFAD11 PBAS allocation to fill the remaining financing gap. It is estimated that US\$3.0 million is needed to keep PADES operational until the original completion date of September 2021. This amount is based on (i) an assessment of priority activities to be carried out to maximise the impact, (ii) the OFID intervention financing part of the infrastructure activities originally planned to be financed by IFAD, and (iii) the administrative costs needed until completion. Since PADES will be able to meet and exceed its initial objectives with the OFID financing of 2018 and with this IFAD additional financing of US\$3 million, the new total cost of the project will be US\$22.55 million. The objectives, approach, components and institutional arrangements of the project will remain unchanged.
8. The requested amount will be used to continue funding the planned project activities such as: (i) completing all hydro-agriculture infrastructure rehabilitation work by 2020; (ii) upgrading infrastructure in women's vegetable gardens (solar energy motor pumps, increasing number of wells, etc.) to ensure adequate water availability and reduce the drudgery of watering work for women; (iii) technical support and inputs supply for rice and vegetable production; and (iv) covering the administrative costs of the project. Crosscutting activities will focus on the financial, technical and institutional empowerment of women and community grassroots activities (including creating and consolidating project supported grassroots organizations such as Village Development Committees, water users associations and road maintenance committees). Capitalisation studies and outcome and impact assessments will be conducted in 2020-2021, and other activities necessary to assure an orderly completion.

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

9. The geographical area and targeted population will remain the same. PADES will continue to intervene primarily in the regions of Quinara and Tombali and in the Bolama-Bijagos region, and its interventions will be concentrated in areas with high development potential for rice cultivation and diversification activities such as vegetable production and rearing of small stock.

The project's priority target group consists of: (i) the rice growers and vegetable producers that use the sites to be rehabilitated, as well as the livestock producers that benefit from the complementary activities that promote small-stock production; (ii) micro-entrepreneurs along the targeted commodity chains; (iii) the members of grassroots producers' organizations (GPOs); and (iv) the beneficiaries of the rehabilitated road infrastructure. Thus, PADES will reach approximately 31,277 direct beneficiaries, 40 per cent of whom are women.

## **C. Components, outcomes and activities**

10. **Components, outcomes and activities remain unchanged.** The project will continue to be structured around the original three components: (i) support for rice production and productivity and complementary activities; (ii) support for adding value to production and increasing market access; and (iii) coordination and institutional strengthening.

11. **Component 1: Support for rice production and productivity and complementary activities.** The objective of this component is to promote the three-fold project priority: rice production, vegetable production and small livestock raising.
12. *Subcomponent 1.1: Rehabilitation of hydro-agricultural installations.* Activities to improve rice production will consist of: (i) rehabilitating 1,500 ha of modern mangrove swamps in Quinara; (ii) rehabilitating 6,950 ha of traditional mangrove swamps in Tombali; (iii) rehabilitating 50 ha of lowlands in Quinara; and (iv) developing 422 ha of watersheds. Another 30 ha of lowlands will be rehabilitated for vegetable growing. The main intended outcome is water management, a sine qua non for mangrove-based rice cultivation.
13. *Subcomponent 1.2: Site exploitation and the development of livestock and vegetable production activities.* These activities will allow for: (i) greater availability of quality seeds in sufficient quantities through support for a national agricultural research institute to set up a production and marketing system for certified seed; (ii) the development of mangrove swamps and lowlands by 9,400 rice growers; (iii) the strengthening of users' associations through the creation of area management committees; and (iv) the strengthening of capacity in producer's organizations. Furthermore, complementary activities for vegetable production and small livestock raising will be improved through the provision of: (i) 60 irrigation kits for 6,000 women vegetable farmers; and (ii) 500 livestock breeding stations.
14. This support will create optimal conditions for rice production thanks to water management and the provision of a technology package. Moreover, greater vegetable and livestock production will be obtained through modernization and adoption of good practices, as well as capacity building among women vegetable farmers and livestock producers.
15. **Component 2: Support for adding value to production and increasing market access.** The objective of this component is to add value to the project's priority products and support their transport to local and national markets.
16. *Subcomponent 2.1: Promotion of related trades and value-addition activities.* These activities are designed to promote related trades and post-harvest value-addition activities to facilitate: (i) the improvement of rural entrepreneurship in commodity chains, offering project beneficiaries supply and mechanization services; and (ii) the emergence of operators in post-harvest rice processing and the marketing of surplus yield. These activities will be financed by micro-projects run by 720 entrepreneurs (42.8 per cent of them women).
17. *Subcomponent 2.2: Construction and rehabilitation of rural roads.* In this subcomponent, financing will be provided for the construction and rehabilitation of rural roads to increase mobility and producers' ability to sustainably bring their products to market.

## D. Benefits, costs and financing

### Project costs

18. **Total cost.** The total cost of the project (including taxes and contingencies) for a period of six years (2015 to 2020) at design was approximately US\$18.99 million (FCFA 9.3 billion) including a US\$5.5 million financing gap. As mentioned in Section II.A, an OFID financing of US\$6 million was approved in 2018, of which US\$2.5 million was used to help fill the financing gap. With the US\$3 million additional financing the new total amount of the project will be US\$22.55 million.
19. The US\$3.0 million of additional financing will be mainly allocated to (i) community based social infrastructure activities, and (ii) financial management, knowledge management and monitoring and evaluation (M&E) activities, recurrent costs that cannot be financed by OFID.
20. **Costs per component.** PADES is structured in three components: (i) Component A "Support for rice production and productivity and complementary activities" which includes two sub-components ("Rehabilitation of hydro-agricultural infrastructure" and "Valorisation of production infrastructure and diversification"), (ii) Component B "Value addition and market access " which includes two sub-components ("Promotion of related trades and valorisation activities" and "Construction and rehabilitation of rural roads"), and (iii) Component C "Coordination of the Project" which also includes two sub-components ("Coordination and Monitoring and Evaluation" and "Partnership Management").
21. In terms of costs, Component A has the largest budget allocation, US\$9.9 million. The budget for Component B is estimated at US\$7.6 million. The Component C budget allocation is estimated at US\$5.1 million. The table below summarizes the programme costs, taking into account the whole amount, as per the financing gap filled.

Table 1  
**Original and additional financing summary**  
 (Thousands of United States dollars)

	<i>Original financing</i>	<i>OFID</i>	<i>Total after OFID</i>	<i>IFAD Additional financing</i>	<i>Total after IFAD AF</i>
IFAD DSF grant	4 735		4 735	810	5 545
IFAD loan	4 735		4 735	2 190	6 925
Financing gap	5 536		3 001		
OFID		5 978	5 978		5 978
Beneficiaries	1 691		1 691	14	1 704
Borrower/counterpart	2 297		2 297	102	2 400
<b>Total</b>	<b>18 993</b>	<b>5 978</b>	<b>22 436</b>	<b>3 116</b>	<b>22 551.3</b>

Table 2  
**Additional financing: project costs by component (and subcomponent) and financier**  
 (Thousands of United States dollars)

Component/ subcomponent	Additional									
	Additional IFAD loan		Additional IFAD grant		Beneficiaries		Borrower/ counterpart		Total	
	Amount	%	Amount	%	In kind	%	In-kind	%	Amount	%
<b>A. APPUI À LA PRODUCTION ET PRODUCTIVITÉ RIZICOLE ET ACTIVITÉS COMPLÉMENTAIRES</b>										
1. Réhabilitation des ouvrages hydro-agricoles	269	73	99	27					368	12
2. Exploitation des sites et développement des activités d'élevage et de maraichage	484	64	179	24	13	2	84	11	759	24
<b>Subtotal A</b>	<b>753</b>	<b>67</b>	<b>279</b>	<b>25</b>	<b>13</b>	<b>1</b>	<b>84</b>	<b>7</b>	<b>1 128</b>	<b>36</b>
<b>B. APPUI À LA VALORISATION DES PRODUCTIONS ET ACCÈS AU MARCHÉ</b>										
1. Promotion des métiers connexes et des activités de valorisation	8	60	3	22			2	18	13	0.4
2. Construction et réhabilitation de pistes rurales	26	73	10	27					36	1.1
<b>Subtotal B</b>	<b>34</b>	<b>69</b>	<b>13</b>	<b>26</b>			<b>2</b>	<b>5</b>	<b>49</b>	<b>1.6</b>
<b>C. COORDINATION ET RENFORCEMENT INSTITUTIONNEL</b>										
1. Coordination and management	1 297	73	480	27			13	1	1 789	57
2. M&E, knowledge management, communication	107	71	39	26	0.6	0.03	3	2	150	5
<b>Subtotal C</b>	<b>1 404</b>	<b>72</b>	<b>519</b>	<b>27</b>	<b>0.6</b>	<b>0.4</b>	<b>16</b>	<b>1</b>	<b>1 940</b>	<b>62</b>
<b>TOTAL</b>	<b>2 190</b>	<b>70</b>	<b>810</b>	<b>26</b>	<b>13.6</b>	<b>0.4</b>	<b>102</b>	<b>1</b>	<b>3 116</b>	<b>100</b>

Table 3  
**Additional financing: Project costs by expenditure category and financier**  
 (Thousands of United States dollars)

Expenditure category	Additional									
	Additional IFAD loan		Additional IFAD grant		Beneficiaries		Borrower/ counterpart		Total	
	Amount	%	Amount	%	In kind	%	In-kind	%	Amount	%
1. Génie rurale	3	0.02	1	0.01	10.5	3	86	8	100.5	
2. Subventions et dons	277	8.5	103	3.2					380	
3. Véhicules										
4. Equipements et matériels	29	2.0	11	0.7					40	
5. Consultants	708	16	262	6					970	
6. Formation et ateliers	275	14	102	5	3.1	0.8			380.1	
7. Frais de fonctionnement	241	40	89	15			16	4	346	
8. Salaires et indemnités	657	50	243	19					900	
<b>Total</b>	<b>2 190</b>	<b>8.6</b>	<b>810</b>	<b>3.2</b>	<b>13.6</b>	<b>0.1</b>	<b>102</b>	<b>2</b>	<b>3 116.6</b>	



Table 4  
**Project costs by component and project year (PY)**  
 (Thousands of United States dollars)

Component/subcomponent	PY1	PY2	PY3	PY4	PY5	PY6	Total
	Amount	Amount	Amount	Amount	Amount	Amount	Amount
<b>%A. APPUI À LA PRODUCTION ET PRODUCTIVITÉ RIZICOLE ET ACTIVITÉS COMPLÉMENTAIRES</b>							
1. Réhabilitation des ouvrages hydro-agricoles	197.4	570.6	1 356.9	735.1	1 117.6	1 768.6	5 746.1
2. Exploitation des sites et développement des activités d'élevage et de maraichage	542.2	1 244	623.7	1 039.9	198.8	463.8	4 112.4
<b>Subtotal A</b>	<b>739.6</b>	<b>1 814.6</b>	<b>1 980.6</b>	<b>1 775.0</b>	<b>1 316.4</b>	<b>2 232.4</b>	<b>9 858.6</b>
<b>B. APPUI À LA VALORISATION DES PRODUCTIONS ET ACCÈS AU MARCHÉ</b>							
1. Promotion des métiers connexes et des activités de valorisation			335.7	205.3	1 387.4	2 083.8	4 012.3
2. Construction et réhabilitation de pistes rurales	30.1	1 815.9	1 055.5	619.5	10.7	24.9	3 556.5
<b>Subtotal B</b>	<b>30.1</b>	<b>1 815.9</b>	<b>1 391.3</b>	<b>824.8</b>	<b>1 398.1</b>	<b>2 108.7</b>	<b>7 568.8</b>
<b>C. COORDINATION ET RENFORCEMENT INSTITUTIONNEL</b>							
1. Coordination and management	1 022.4	418.5	404.8	496.3	532.8	1 243.3	4 118.1
2. M&E, knowledge management, communication	46.2	256.0	236.0	321.2	43.9	102.5	1 005.8
<b>Subtotal C</b>	<b>1 068.6</b>	<b>674.5</b>	<b>640.7</b>	<b>817.5</b>	<b>576.8</b>	<b>1 345.8</b>	<b>5 123.9</b>
<b>TOTAL</b>	<b>1 838.2</b>	<b>4 305.0</b>	<b>4 012.6</b>	<b>3 417.3</b>	<b>3 291.2</b>	<b>5 686.9</b>	<b>22 551.2</b>

### Financing and cofinancing strategy and plan

22. **Financing plan.** The financing plan is as follows:

IFAD. IFAD will contribute US\$12.47 million to the funding of PADES:

- (a) The first financing (from PBAS allocation 2013-2015) was split 50/50 between a loan and a DSF grant, each of US\$4.7 million (2.3 billion FCFA) and each equivalent to 24.6 per cent of the total project cost.
- (b) A second financing (from PBAS allocation 2019-2021) split 27 per cent DSF Grant for US\$0.81 million and 73 per cent Highly Concessional Loan for US\$2.19 million.

23. Beneficiaries. Beneficiaries will contribute approximately US\$1.7 million (0.8 billion FCFA) to the project financing, equivalent to 7.6 per cent of the total cost. These resources constitute their participation in the cost of rehabilitating the hydro-agricultural infrastructure, maintaining the structures and agricultural production in the mangroves, lowlands, and horticultural gardens rehabilitated by the project, as well as the costs of clearing the sides roads to be rehabilitated and the diversification activities promoted by the project.

24. Government. The Government contribution is estimated at US\$2.3 million (1.1 billion FCFA) equivalent to 10.6 per cent of total cost. This contribution corresponds to the amount of foregone taxes and duties applicable to the goods and services required by the project.

25. The Government will also contribute an additional US\$1.3 million which is equivalent to the foregone revenues from exemption from taxes and custom duties of expenditures associated with goods financed by the OFID Loan.

26. OFID financing is equal to US\$6 million, net of taxes and duties.

**Disbursement**

27. **Disbursement arrangements will remain unchanged as per the original agreement.** The disbursement of IFAD funds will flow through: (i) a designated account opened at a bank acceptable to IFAD, managed by the temporary advance account mechanism; and (ii) an operating account opened centrally. All accounts will be administered by the dual signature principle. The frequency of withdrawal requests will be determined on the basis of the cash flow plan and financial commitments to be honoured by the project. Procedures and thresholds for withdrawals will be set forth in the letter to the borrower and in the project's administrative and financial manual.
28. IFAD made an initial deposit in the designated account sufficient to cover average estimated expenses for six months, based on the Annual Work Plan and Budget.
29. An accounting firm with a regional reputation in the field of project accounting services was recruited to train and assist staff in the correct use of the West African Accounting System (SYSCOA) and the creation of an efficient internal control system.
30. The procurement mechanism is based on current laws, decrees, and legal requirements containing the principles, controls, and regulations governing public procurement and public service concessions. It is also based on *a priori* control of public procurement procedures, which is exercised by the General Directorate for the control of public procurement and financial liabilities, which establishes the thresholds for public procurement, public entities, state enterprises and corporations with majority public ownership, on the one hand, and national or local organizations, on the other.
31. PADES accounts are audited annually by a qualified firm.

**Summary of benefits and economic analysis**

32. Expected benefits are expected to remain the same, considering the approaching completion date, for efficiency reasons an economic and financial analysis (EFA) will be carried out towards the completion date in order to have realistic data. As per the original EFA A total of 9,400 farmers using the developed sites will benefit from the project's activities. PADES will lead to the creation of some 3,200 jobs, with the following breakdown: 1,700 jobs for farm labourers, 765 jobs for younger adults in the highly labour-intensive work of road building, and 720 jobs in the processing of agricultural products. Furthermore, the ferry and the various kinds of service infrastructure will make it possible to reach 10 per cent of the population in the five sectors, or 16,700 beneficiaries, principally younger adults and women.
33. Furthermore, it is expected that by the end of the project 90,000 head of livestock will have been produced in six years at 500 breeding stations for short-cycle species and that vegetable production will have increased, improving family nutrition.
34. The project's internal rate of return (IRR) is 18 per cent. The sensitivity analysis conducted reveals that with a 40 per cent reduction in yield (2.2 t/ha to 3 t/ha).
35. Instead of the 100 per cent envisaged (1.6 t/ha to 3.3 t/ha), the IRR remains stable at 14.21 per cent. Moreover, the IRR is more sensitive to a 50 per cent drop in gross margins than to a 50 per cent increase in costs or a two-year delay in the realization of the project's benefits. This provides us assurance on the economic solidity and financial viability of the investments.

### **Exit strategy and sustainability**

36. The project seeks to ensure the sustainability of PADES activities by the following elements: (i) the strategy of concentrating on the improvement of hydro-agricultural sites in the Tombali and Quinara regions; (ii) the strengthening of capacities in producers' organizations and users' associations through area management committees and CDITs; (iii) the rehabilitation of hydro-agricultural installations and the introduction of new farming practices in mangrove swamps and lowland areas; (iv) partnership with and strengthening of capacities in NGOs, the local private sector and state services.

## **III. Risk management**

### **A. Risks and mitigation measures**

37. The main risks identified at design and their proposed mitigation measures have not changed.
38. **Risks related to country instability and institutional weakness.** The project strategy is grounded in strengthening the capacities of the decentralized technical services, local organized economic actors and local communities to guarantee the sustainability and continuity of the investments. The project will secure appropriate technical assistance and IFAD will strengthen its partnership with international institutions and donors to support the government. IFAD mobilized a US\$500,000 grant from Sweden to accelerate certain PADES activities, notably those related to lifting the conditions for the first disbursement.
39. **Unfavourable climate change.** PADES will address climate issues across all its activities (awareness-raising and training of actors as part of the advisory assistance and the technology package, etc.). The MAF (Ministère de l'Agriculture et Forêts) is expected to mobilize funding from the Global Environmental Fund (GEF) to ensure a more sustainable response to the climate issue.
40. **Risks related to the quality of service providers.** The US\$500,000 grant will make it possible to proceed to institutional and organizational diagnoses of the main actors (technical service providers, NGOs). These studies will lead to plans for improving project implementation, for which the project will secure appropriate technical assistance. The Project Coordination Unit (PCU) established a planning process, and a regional M&E mechanism involving all project stakeholders.
41. **Fiduciary risks.** The US\$500,000 grant made possible to distribute the project manuals prior to project launch. In addition, IFAD will: (a) negotiate the evaluation and rehiring of the PRRDC team with the MAF, and the creation of new posts to be filled on a competitive basis; and (b) provide sustained implementation support to the PCU, especially during the first 18 months. The absence of banks in Buba, headquarters of the PRRDC project and future headquarters of PADES has been identified as a risk. Advances should therefore be capped at FCFA 2,000,000 (US\$4,000), and most payments should be made by check or bank transfer to the account opened in Bissau. Furthermore, to prevent any risk, the project will open an operating account in Buba as soon as one or more banks acceptable to IFAD establish a branch in that city. As recommended the project engaged the services of a reputable project accounting firm to train and support project staff in the proper use of SYSCOA and the creation of an efficient internal control system.

### **B. Environment and social category**

42. PADES has been classified as a **category B project**. Potential negative impacts are site-specific, are not irreversible and can be easily corrected by appropriate mitigation measures.
43. No SECAP assessment was provided for the original project in 2014-2015.

### C. Climate risk classification

44. The project did not receive any climate risk classification at the time the project was originally designed in 2014-2015 however after assessment has now been classified as moderate given that the project contributes to strengthening resilience through specific interventions that allow better water management, improved production and sustainable natural resource management hence proposing solutions and mitigation measures to climate variations.

## IV. Implementation

### A. Compliance with IFAD policies

45. The following changes were made to the original Project Design Report (PDR) during the mid-term review conducted from 08 to 29 October 2018:
46. **Budget reallocation.** A reallocation was proposed for the balance of US\$1.3 million (i.e. SDR 949,945) of IFAD funds estimated to be available on 31 December 2018. The assumption was that this balance could be used to finance the needs of the 2019 AWPB from IFAD funds as well as the expenditures for the first three months of 2020, i.e. until end-March 2020.
47. **Logframe and M&E Indicators.**
- (a) Targets: Increased targets to be achieved in terms of direct beneficiaries (40,000 instead of 31,277) due to the financing obtained from OFID and IFAD additional financing to amplify the impact of PADES impacts;
  - (b) Rice production: Re-evaluation of reference yields in relation to the project formulation.
  - (c) Small livestock: option of poultry farming and beekeeping in place of breeding of short cycle species (goats and pigs)
  - (d) Tracks: Targets are revised upward to reflect OFID funding and this additional financing (see Updated Logical Framework)

### B. Organizational framework

#### Project management and coordination

48. **Lead agency.** The Lead Agency is the Ministry of Agriculture and Forests .
49. **Project coordination.** The project is coordinated by a PCU based in Buba, in the Quinara region. The PCU is led by a National Coordinator, and includes: (i) an Administrative and Financial Unit comprised of an Administrative and Financial Officer (RAF), a procurement specialist, an accountant, a secretary of management, four drivers and support staff (one guardian, and one cleaning agent); (ii) one M&E team (Expert and Assistant); (iii) a technical team comprised of: (a) a Rural Engineering Engineer Expert (IGR), (b) one agronomist; (b) one Zootechnician (c) one Socio-Economist/Agroeconomist specialized in organizational and community development; and (d) one Gender and targeting expert

#### Key implementation partners

50. National Agricultural Research Institute (INPA/MARD) - in charge of seed production and the establishment of a certified seed production and sales system.
51. Directorate General of Engineering and Rural Development (DGIDR/MARD) - in charge of planning, conducting studies and monitoring the execution of works related to the rehabilitation of hydro-agricultural infrastructure.
52. Directorate General of Agriculture (DGA) and the Directorate General of Livestock (DGEL) of MARD and their regional representative in the implementation area (Regional Delegations of Agriculture and Rural Development DRADR of Tombali, Quinara and Bolama) play an important role in providing guidance and technical

oversight of rice development and vegetable production and small livestock production.

53. Directorate of Roads and Bridges (DRP) of the Ministry of Public Works (MT) - in charge of technical oversight of road works.

54. CAIA (Ambiental Ambiental Impact Cell) - in charge of Environmental Impact Assessments. CAIA is the government agency responsible for the implementation of the Environmental Assessment Policy in Guinea-Bissau.

#### **Financial management, procurement and governance**

55. **Project Administrative and Financial Unit.** The Project Administrative and Financial Unit includes an Administrative and Financial Officer (RAF), an Accountant and a Procurement Officer. In terms of financial and accounting management, the administrative and financial unit will be responsible for: (i) setting up an accounting and financial management system; (ii) the preparation of expenditure forecasts within the framework of annual work plans and budgets (AWPBs) and procurement plans (PPMs); (iii) account management (designated account, counterpart account, and operational account); (iv) the accounting record of financial transactions, as well as the preparation of annual financial statements, and the maintenance of all financial and accounting management documentation; (v) the scheduling of annual audits and the implementation of related recommendations; and (vi) the establishment of an effective internal control system and management procedures that ensure a fiduciary framework for the project in accordance with the standards set and the financing agreement.

56. **Budgeting.** PADES is implemented on the basis of AWPBs duly approved by the Project Steering Committee and by IFAD. Each AWPB includes a procurement plan for the year as well as potential contracts for the following year.

57. Monitoring of the AWPB is done on a monthly basis according to three levels of assessment of the financial information: (i) according to the disbursements; (ii) according to the achievements received and invoiced; and (iii) according to the legal commitments (remaining contracts signed but not yet executed which are recorded at the level of the market monitoring module).

58. **Flow of funds and disbursement arrangements.** The administrative and financial management procedures are detailed in the Letter to the Borrower and in the Administrative, Financial and Accounting Management Procedures Manual.

59. **Initial deposit.** An initial deposit of 750 million FCFA was made by IFAD to the designated account at project start-up to cover the estimated average expenditure authorized for funding for a period of approximately six (6) months.

60. **Accounting systems, principles and procedures.** The PADES accounting abides by the following guidelines and procedures: (i) general accounting according to SYSCOA accounting law (accrual accounting); and (ii) analytical and budgetary accounting organized and parameterized along the following lines: (a) by source of financing; (b) by category of expenditure according to the budget of the financing agreement, (c) by component, subcomponent and activity, and (d) by geographical code.

61. **Financial reporting.** The PCU uses a four-pillar financial monitoring system: (a) the bank monitoring of the designated account and the operations account, in order to visualize the regulations made and the Withdrawal Applications (Was); (b) budget tracking, by source of funding, by category of expenditure and by activity, sub-component and component, (c) accounting follow-up, with verification of the regularity of expenses and imputations and the analysis of accounts; and (d) technical and financial monitoring, in relation with the heads of operational components, focused on the correlation between the procurement plan, the level of

physical achievements, financial commitments, disbursements and the cash flow plan.

62. **External audit.** The project is subject to an annual audit of financial statements as required by IFAD guidelines. This audit is conducted in accordance with international auditing standards and follows IFAD's audit guidelines. The external auditors are recruited by the PCU based on Terms of References (ToRs) approved by IFAD. They are recruited in accordance with international tender procedures and the selection method was based on quality and cost.
63. **Procurement.** The PCU Administrative and Financial Unit includes a procurement specialist to ensure compliance with all procurement guidelines and procedures and to ensure the quality of all contract files prepared at all levels of project implementation. Particular attention is paid to the application of the Public Procurement Code and IFAD Guidelines in the event of contradictory provisions.

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

64. **Monitoring and Evaluation.** The PADES results-based Monitoring and Evaluation (M&E) System is aligned with the Government of Guinea-Bissau and IFAD requirements. The M&E is built around the programme's Logical Framework (LogFrame), which is informed annually and updated whenever necessary. Indicators are disaggregated by gender.
65. The monitoring and evaluation system is structured around three functions, each using specific sources of data, information and tools, and contributing specifically to the achievement of the objectives of the system: monitoring implementation of AWPBs, monitoring of results and measurement of impact.
66. The primary data comes from the grassroots actors via the implementation partners, Rural Professional Organisations and stakeholders institutions at the grassroots level.
67. Data and information collected at the grassroots level was supplemented by thematic and outcome surveys that will be carried out before completion.
68. The head of the M&E team led the preparation of the following documents: (i) AWPBs; (ii) the semi-annual and annual activity reports of the project; and (iii) supervision report documents. In addition, he supervised the specific surveys and thematic studies and impact assessment studies.
69. **Knowledge management and communication.** The M&E system is complemented by a sound knowledge management (KM) system that allows for better informed decision-making. The KM system capitalizes on best practices in the field and shares key information in various formats based on the different target audiences (internal and external end-users).

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

70. Subject to the approval of the additional financing by the President delegated by the Executive Board, the PADES financing agreement will be amended to take into account the additional IFAD funds and the new financing terms. No new expenditure category will be created. This financing completes the financing plan initially approved during programme design and will not involve changes to the programme, objectives, target area or target group. Schedule 1 will be updated to reflect the additional financing.

### **V. Legal instruments and authority**

71. An amendment to the current financing agreement between The Republic of Guinea-Bissau and IFAD will constitute the legal instrument for extending the proposed financing to the borrower.

72. The Republic of Guinea-Bissau is empowered under its laws to receive financing from IFAD.
73. 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**

74. According to the delegation of authority procedure approved by the Executive Board at its 126<sup>th</sup> session and detailed in document EB 2019/126/R.48/Rev.2, the President is invited to approve the proposed financing in terms of the following resolution:

RESOLVED: that the Fund shall provide a loan under highly concessional terms in an amount of two million and one hundred ninety thousand dollars (US\$2,190,000) to the Republic of Guinea-Bissau and upon such terms and conditions as shall be substantially in accordance with the terms and conditions presented herein.

FURTHER RESOLVED: that the Fund shall provide a Debt Sustainability Framework grant in an amount of eight hundred and ten thousand dollars (US\$810,000) to the Republic of Guinea-Bissau and upon such terms and conditions as shall be substantially in accordance with the terms and conditions presented herein.

Donal Brown  
Associate Vice-President, Programme Management Department

## Updated logical framework incorporating the additional financing

Results Hierarchy	Indicators				Project Yr 4 (2018)			Project Yr 5 (2019)			Project Yr 6 (2020)			Project Yr 7 (2021)		
	Name	Baseline	Mid-Term	Original End Target	Year Targets	Year Results	Cumulative	Year Targets	Year Results	Cumulative	Year Targets	Year Results	Cumulative	Year Targets	Year Results	End target
Outreach	<b>1.b Estimated corresponding total number of households' members</b>															
	Household members - Number of people			288 000	21 096	21 200	25 784	37 912	9 416	35 200			38600			46200
	<b>1.a Corresponding number of households reached</b>															
	Households - Number			40000	9618	1795	3323	4739	1177	4500			4825			5775
	<b>1 Persons receiving services promoted or supported by the project</b>									-						
	Males - Number			24000	5670	1185	2506	2 749	683	3189	228		3378	665		4043
	Females - Number			16000	3948	610	817	1 990	494	1311	98		1448	285		1733
	Young - Number			16800	4084	426	892	1 896	471	1363	98		1448	285		1733
	Not Young - Number			23200	5535	1369	2 431	2 843	706	3137	228		3378	665		4043
Total number of persons receiving services - Number of people			40000	9618	1795	3323	4 739	1 177	4500	325		4825	950		5775	
Project Goal Contribute to the reduction of poverty in the rural communities of Tombali, Quinara and Bolama	<b>% beneficiaries having improved their asset accumulation index</b>															
	beneficiaries - Percentage (%)			30									-			-
	<b>% children under five suffering of malnutrition</b>															
	children - Percentage (%)			23												-
<b>% beneficiaries who report an improvement in their food security</b>																





	Lowlands rice fields - Surface (ha)		95	50	72	95					0			0	95
	Vegetable gardens – Surface (ha)		30	30	23	23				7		30			30
	<b>1.1.4 Persons trained in production practices and/or technologies</b>														
	Men trained in crop - Number		4 640					191							
	Women trained in crop - Number		3 360					139							
	<b>Nb ha mangroves banks and watersheds protected</b>														
	Banks and watershed – Surface (ha)		927												
<b>Outcome 2</b> Producers adopt income diversification activities	<b>Nb de tons of additional vegetables and horticultural products</b>														
	tons – Number		1 770												
	<b>% organization of rural producers declaring an increase in their sales</b>														
	RPO - Percentage (%)		80												
<b>Output</b> Agricultural producers are supported in the implementation of microprojects for breeding and valorization of agricultural production.	<b>1.1.4 Persons trained in production practices and/or technologies</b>														
	Women trained in crop - Number		4640	12	6	6	760	951	957	1230				2280	4467
	Young people trained in crop - Number		3360	13	4	4	417	496	500	820				1520	2840
	Men trained in livestock - Number		350												-
	Women trained in		150												-

	livestock - Number																	
	<b>Nb of beneficiaries of microprojects for poultry production and honey production</b>																	
	Males - Number		350							-								-
	Females - Number		150							-								-
	Nbre poultry produced									-								-
	Poultry - Number		25300							-								-
<b>Outcome 3</b>	<b>% members of RPO satisfied with quality of services</b>																	
Rural professional organizations provide services to their members	Members des OP - Number		80				30			-	20				30			<b>80</b>
	<b>% of OP utilizing adequate management tools s</b>																	
	OP - Percentage (%)		80				30			-	20				30			<b>80</b>
<b>Output 5</b>	<b>Nb RPO structured and strengthened</b>																	
Rural professional organizations are structured and strengthened	OPB – Number		40	12	24	24	3	7	31	6					4			<b>41</b>
	<b>Number unions structured and strengthened</b>																	
	Union – Number		6						0	5					2			<b>7</b>
<b>Output 6</b>	<b>% of RPO making collective purchases and sales of products</b>																	
Rural professional organizations provide socio-economic services for their members	RPO - Percentage (%)		50							-	25				25			<b>50</b>
	<b>ANAPA - GB is operational</b>																	
	ANAPA-GB – Number		1				1			-								<b>1</b>



## Updated summary of the economic and financial analysis

### I. Résumé

1. La présente annexe présente l'analyse économique et financière (AEF) du Projet d'appui au développement économique des régions du sud (PADES). L'approche méthodologique de l'AEF suit les principes directives de Gittinger (1982)<sup>1</sup> et Belli et al (2001)<sup>2</sup>. Elle est conforme aux récentes lignes directives publiées par le FIDA<sup>3</sup> et la Banque mondiale sur les analyses économiques et financières. L'objectif est d'identifier, de calculer et de comparer les coûts et les avantages/revenus du projet afin d'apprécier sa viabilité d'une part du point de vue des agents économiques (analyse financière) et d'autre part du point de vue de l'économie nationale dans son ensemble (analyse économique).
2. La méthodologie utilisée est une analyse coûts-bénéfices qui repose sur l'estimation en termes monétaires des coûts et des avantages du projet. La présente analyse est basée sur des données et les informations ont été fournies par l'équipe nationale PADES.
3. L'analyse financière du PADES montre que les activités ciblées sont saines. L'analyse économique montre également que le projet est économiquement viable. Compte tenu des hypothèses actuelles, le taux de rentabilité économique (TRIE) pour l'ensemble du projet est de 17,35 % et la valeur actualisée nette (VAN) est de 8,84 millions de dollars américains (\$US).
4. L'analyse a été axée sur les impacts découlant des activités principales de gestion durable des ressources naturelles et de l'agriculture sur les mangroves et de la gestion durable des bas-fonds. Six modèles financiers ont été développés, dont cinq pour les activités agricoles (composante une) et un pour la composante deux.
5. Cinq modèles financiers de production ont été préparés, notamment : deux modelés pour la production de riz de mangrove (traditionnel et moderne), un modèle de riziculture de bas-fond (riz pluvial), un modèle pour le maraîchage mixte (oignon, tomate et piment) et le dernier modelé de multiplicateurs de semences du riz aux mangroves.
6. De plus, l'analyse économique a également modélisé l'impact que les infrastructures de marchés auront sur la production additionnelle et les prix, ainsi que l'impact environnemental des interventions. Ces impacts s'avèrent positifs.

### II. Analyse financière

7. L'analyse financière du PADES est basée sur la comparaison des flux financiers nets (produits – charges) obtenus dans la situation « avec projet » à ceux qui seraient obtenus dans la situation « sans projet ». Elle vise à évaluer l'impact des investissements en infrastructures (aménagements de mangroves et bas-fonds, et pistes rurales) et de l'adoption des nouvelles pratiques proposées par le projet sur la situation financière des parties prenantes. Un taux d'actualisation de 10% est utilisé, ce qui reflète le coût d'opportunité du capital, sur la base de l'expérience d'autres projets et des discussions avec les institutions de microfinance en Guinée Bissau.
8. En fonction de l'objectif, du cadre de résultats et de la structure des composantes, on s'attend à ce que le projet génère des avantages de natures différentes. De tels avantages comprennent : (i) un appui à la production et productivité rizicole et activités complémentaires ; (ii) un appui à la valorisation des productions et accès au marché ; (iii) coordination et renforcement institutionnel.

<sup>1</sup> Gittinger, P. 1982. *Economic Analysis of Agricultural Projects*.

<sup>2</sup> Belli, P., J.R. Anderson, H.N. Barnum, J.A. Dixon, and J-P. Tan. 2001. *Economic Analysis of Investment Operations: Analytical Tools and Practical Applications*. WBI Development Studies. World Bank Institute. Washington, DC: World Bank.

<sup>3</sup> IFAD. 2015. *Economic and Financial Analysis of Rural Investment Projects, Basic Concepts and Rationale*.

## A. Méthodologie et hypothèses

9. **Prix financiers.** L'information sur les prix (intrants, prix du marché, prix au producteur, etc.) a été obtenue au cours d'entretiens avec les producteurs et les commerçants durant la mission en septembre 2019. Tous les modèles sont exprimés en prix constants 2019. L'analyse s'appuie sur les données primaires recueillies par la mission, par le gouvernement de Guinée Bissau et par le projet PADES même. Des hypothèses et des paramètres modérés ont été appliqués afin d'éviter une surestimation des prestations et de fournir des résultats réalistes.
10. **Budgets de cultures.** Pour apprécier la viabilité financière des cultures susmentionnées, il a été élaboré des budgets de cultures sur une superficie théorique d'un hectare pour les autres activités de production.
11. Dans la situation sans projet, les budgets de cultures ont été élaborés pour une année, il est tenu compte du fait que les rendements et les charges d'exploitation resteront à leurs niveaux actuels sans l'intervention du projet. Dans la situation avec projet, les budgets de cultures ont été élaborés sur 10 ans, de façon à faire ressortir l'évolution graduelle des rendements après l'adoption des nouvelles technologies par les producteurs. Pour éviter une surestimation des bénéfices du projet, les pertes post récolte ont été prises en compte. Pour la situation sans projet, les taux des pertes utilisés sont de 25% pour toutes les cultures à exception de la production du riz de bas-fonds avec 20%. Pour la situation avec projet, les taux des pertes diminuent de 15% pour toutes les cultures à l'exception du maraîchage où le taux diminue de 20% et 18,75% pour mangrove traditionnel. La situation avec projet et sans projet se basent sur 75% de main-d'œuvre familiale et 25% de main-d'œuvre salariée.
12. **Rendements.** Le projet encouragera l'utilisation des bio pesticides pour améliorer la fertilité des sols et réduire l'utilisation de produits chimiques sur les mangroves. Les rendements moyens sont de l'ordre de 1,5 t/ha pour le riz. Avec les améliorations proposées par le projet, notamment des variétés de semences améliorées et la construction de digues, et de diguettes et une meilleure utilisation des intrants, les rendements moyens seraient de l'ordre de 2,1 t/ha pour le riz pluvial. La production de riz de mangrove, les rendements moyens augmenteront à 2,6 t/ha pour le moderne et 2,2 t/ha pour le traditionnel. Pour les multiplicateurs de semences, les rendements de riz pluvial augmenteront à 2,4 t/ha. Pour la situation sans projet, la production de maraichage mixte est de l'ordre de 5,0 t/ha pour l'oignon, 2,5 t/ha pour la tomate, 1,5 t/ha pour le piment. Avec le projet, les rendements augmenteront de 25%. Toutes ces estimations sont basées sur les discussions avec l'équipe technique agronomique de la mission et l'expérience actuelle du même projet.

**Tableau 1 : Résumé des modèles financiers**

Rendements (Kg/ha)	Sans Projet	Avec Projet	Accroissement
<b>Production de riz de bas-fonds</b>			
riz pluvial	1,500	2,100	140%
<b>Production de riz de mangrove (moderne)</b>			
riz	1,500	2,625	175%
<b>Production de riz de mangrove (traditionnel)</b>			
riz	1,500	2,250	150%
<b>Multiplicateur de semences (riz)</b>			
Semences certifiées riz	1,500	2,475	165%
<b>Production maraîchage</b>			
oignon	5,000	7,250	145%
tomate	2,500	3,625	145%
piment (chilli)	1,500	2,175	145%

## B. Résultats financiers

13. Les indicateurs de rentabilité témoignent de la viabilité des modèles financiers, avec des marges additionnelles et des retours sur investissement importants. Tous les modèles ont des valeurs nettes actuelles (VAN) positives et des ratios bénéfices-coûts supérieurs à un. Pour le modèle de production de riz avec un système traditionnel de mangrove, le revenu additionnel obtenu une fois que les rendements et autres bénéfices sont réalisés se situe à 90 344 FCFA/ha/an. Pour la production de riz avec un système moderne, ce revenu additionnel est de 0,21 million FCFA/ha/an. Pour le modèle de riz de bas-fonds, le revenu additionnel est de 83 750 FCFA/ha/an. Pour le modèle de maraîchage, il est de 2,8 millions FCFA/ha/an. Pour le modèle de semences, il est de 0,35 million FCFA/ha/an.

**Tableau 2 : Résumé des modèles financiers**

		Production de riz de mangrove (traditionnel)	Production de riz de mangrove (moderne)	Production de riz de bas-fonds	Multiplicateur de semences (riz)	Production maraîchage
<b>ANALYSE FINANCIERE</b>	<b>AN1</b>	(92,872)	(399,000)	(136,950)	(409,875)	(3,192,410)
	<b>AN2</b>	43,469	85,750	45,400	63,750	2,501,390
	<b>AN3</b>	76,750	165,250	78,550	204,375	2,675,190
	<b>AN4</b>	90,344	210,688	92,750	349,250	2,868,990
	<b>AN5</b>	120,344	240,688	133,750	390,250	2,858,990
	<b>AN6</b>	130,344	250,688	133,750	240,250	2,868,990
	<b>AN7</b>	80,344	200,688	83,750	350,250	2,858,990
	<b>AN8</b>	130,344	250,688	133,750	390,250	2,868,990
	<b>AN9</b>	120,344	240,688	133,750	390,250	2,858,990
	<b>AN10</b>	90,344	210,688	83,750	350,250	2,868,990
	<b>TRI (financier)</b>	<b>76%</b>	<b>41%</b>	<b>57%</b>	<b>51%</b>	<b>83%</b>
<b>VAN (@10%, '000 FCFA)</b>	<b>407</b>	<b>782</b>	<b>445</b>	<b>1,284</b>	<b>13,152</b>	
<b>B/C</b>	<b>1.32</b>	<b>1.36</b>	<b>1.27</b>	<b>1.46</b>	<b>1.50</b>	

## III. Analyse économique

14. L'analyse économique vise à évaluer la viabilité du projet du point de vue de l'économie nationale. Compte tenu de sa complexité, le PADES a aussi d'autres avantages économiques qui sont difficiles à quantifier. Cependant, cette analyse comprend les principaux avantages attendus du projet, résultants des appuis aux filières rizicoles et maraîchage, ainsi que l'impact des infrastructures sur la production additionnelle.

## A. Méthodologie et hypothèses

15. L'analyse économique ainsi que l'analyse financière reposent sur la comparaison entre la situation avec projet et la situation sans projet, le résultat imputable au projet étant le bénéfice net additionnel. Pour l'analyse économique, la méthodologie utilisée évalue les coûts et les bénéfices en se basant sur les prix financiers et, ensuite, réévalue ces prix en termes économiques pour refléter les coûts d'opportunité pour la société (prix économiques). L'analyse économique a été conduite sur une période de 20 ans, correspondant à la durée de vie estimée des avantages générés par le projet.
16. **Taux d'actualisation social.** Conformément à la Note technique de la Banque mondiale sur l'actualisation des coûts et avantages dans l'analyse économique, un taux d'actualisation de 8 % a été utilisé pour refléter le coût d'opportunité social du capital en Guinée Bissau. Ce taux d'actualisation a été appliqué pour calculer la VAN économique et les avantages différentiels nets futurs.
17. **Prix économiques.** Conformément aux estimations de l'Economist Intelligence Unit (EIU), le taux de change officiel a été fixé à 1,00 \$US pour 580,4 CFA franc (FCFA), soit le taux en vigueur en septembre 2019. Les prix financiers ont été convertis en prix économiques en appliquant des facteurs de conversion (FC). Pour les biens non échangeables, on a utilisé un FC égal à un, car ils sont généralement achetés au niveau local, sans distorsions fiscales significatives. Pour la main-d'œuvre, le facteur de conversion du coût d'opportunité est de 0,94. Pour les autres biens et équipements échangeables, un facteur de conversion de 0,85 a été retenu en considérant que les prix financiers comportent au moins la TVA dont le taux est actuellement de 18%. Des prix de parité à l'importation ont été calculés pour les principaux produits agricoles et intrants (riz et urée), qui sont commercialisés au niveau international. La CF est de 0,71 pour le riz et de 0,71 pour l'urée et les intrants importés. Finalement, un facteur de conversion de 1,00 a été utilisé pour d'autres intrants locaux non soumis à la TVA.

**Tableau 3 : Résumé des facteurs de conversion**

Facteurs de Conversion	Facteur de conversion
Riz	0.71
Anacardier, maraichage, etc.	1.00
Imported inputs	0.71
Domestic tradeable inputs	0.85
Domestic non-tradeable inputs	1.00
Labour *	0.94

18. L'analyse a également estimé le taux de change de référence (SER) de 580,4 FCFA pour 1 US\$ et un facteur de conversion standard de 1.06, sur la base des données de la Banque mondiale (WDI) concernant les importations et exportations et les droits et taxes sur les importations et les exportations, en appliquant la formule suivante :

$$SER = OER \cdot \frac{[(M + Tm) + (X - Tx)]}{(M + X)}$$

Où SER représente le taux de change de référence,

OER le taux de change officiel,

M le volume des importations,

Tm le taux des droits de douane sur les importations,

X le volume des exportations,

Tx le taux des taxes sur les exportations.



## IV. Analyse économique des infrastructures d'accès aux marchés

19. Au-delà de l'appui à la production agricole, le projet va aussi investir dans des infrastructures – 133 km de pistes rurales.
20. Ces investissements entraînent des effets positifs directs et indirects sur les populations et les économies locales, au-delà du cadre des filières appuyées par le projet. Les bénéfices quantifiés et pris en compte comprennent : (i) l'augmentation des superficies cultivées et des rendements grâce aux routes permettant un meilleur accès au marché; (ii) la diminution des pertes grâce à l'amélioration des conditions de transport, et (iii) l'accroissement des prix au producteur en raison du meilleur accès aux marchés. Les bénéfices additionnels non-comptabilisés comprennent : i) l'amélioration de l'accès aux centres de santé et d'éducation, qui a un impact positif sur le développement du capital humain, ii) la diminution du coût d'exploitation des véhicules (entretien, réparation, consommation de carburant), iii) le développement plus général du commerce, grâce à une réduction du coût et du temps de transport.
21. Plus spécifiquement, dans le cadre de la présente analyse, le modèle a pris en compte les bénéfices suivants : i) une augmentation des superficies cultivées de 2% ; ii) une augmentation des rendements agricoles/productions vendus de 5% ; iii) une réduction du taux des pertes de 25% à 15% pour le riz de mangrove moderne, riz de bas-fonds et multiplicateurs de semences de riz, de 25% à 18,75% pour le riz de mangrove traditionnel et de 25% à 20% pour les cultures maraichères ; et iv) une augmentation du prix payé aux producteurs de 5%. Le modèle économique est basé sur l'hypothèse d'un rayon d'influence de 5 km de part et d'autre d'un tronçon de piste de 10 km. La zone d'influence est exploitée principalement pour la production de riz et des cultures maraichères. Par ailleurs, le modèle économique est basé sur l'hypothèse d'un taux de mise en culture de 10% de la superficie de la zone d'influence. Le coût total pour la réhabilitation ou construction des pistes rurales.
22. L'analyse économique sur la base de ces hypothèses aboutit à un taux de rentabilité économique de 43% et une VAN de 12,201 milliards FCFA.

**Tableau 4. Bilan économique des infrastructures d'accès aux marchés**

Taille moyenne du tronçon de piste (Km)	10,0
Linéaire total (Km)	133
Bénéfice additionnel par Km/an (millions de FCFA)	26
TRI économique pour les 630 Km (20 ans)	43%
VAN économique pour les 133 Km (20 ans; @ 8%; millions de FCFA)	12,201

## V. Coûts et bénéfices économiques

23. Les trois composantes du projet ont été prises en compte dans le calcul du coût économique du projet. Dans tous les cas, pour les années 7 à 20, un coût récurrent a été estimé à 10 % du coût total du projet pour prendre en compte le coût prévu pour le secteur public en vue de poursuivre l'appui technique. Les coûts économiques du projet ont été calculés en déduisant 18%, qui déduit des imprévus financiers, les taxes et les provisions pour hausse de prix puis applique le taux de change de référence pour la conversion en monnaie locale de la partie du coût du projet en devises.
24. Sur la base de la méthodologie et des hypothèses exposées ci-dessus, les cash-flow des modèles financiers élaborés pour les différentes activités ont été transformés en valeurs économiques, ce qui a permis d'obtenir des bénéfices nets

additionnels en prix économiques. Afin de prendre en compte la possibilité que, pour diverses raisons, il puisse y avoir des incidents ou des difficultés dans le développement des activités et tenir compte d'hypothèses prudentes, un taux d'adoption de 80 % a été appliqué.

## VI. Résultats économiques et analyse de sensibilité

25. La période d'analyse est de 20 ans pour tenir compte du phasage des interventions proposées. Les avantages économiques des modèles d'exploitation agricole ont été regroupés à l'aide des avantages nets différentiels moyens et des bénéficiaires pour chaque activité agricole dans le cadre des interventions du projet et en supposant des taux d'adoption extraits de l'exercice de calcul des coûts. Les prestations sont introduites progressivement pour tous les types d'interventions.
26. Les coûts économiques associés à l'amélioration de la productivité agricole, de l'agrobusiness et des pistes rurales ont été estimés à 33 millions de \$US. Les coûts économiques ont ensuite été déduits du flux global des avantages économiques pour obtenir le flux net des avantages supplémentaires du projet. L'analyse économique montre des résultats satisfaisants, avec une valeur actuelle nette qui s'élève à 8,842 millions de \$US au coût d'opportunité du capital de 8%, et un taux de rentabilité interne économique (TRIE) du Projet qui s'établit à 17,35%.

**Tableau 5. Résumé des analyses d'économique**

Millions de FCFA		Production de riz de mangrove (traditionnel)	Production de riz de mangrove (moderne)	Production de riz de bas-fonds	Multiplicator de sementes (riz)	Production maraichage	TOTAL BNA Pistes et infrastructures économiques	Adoption rate	Coûts eco projet	Bénéfices nets additionnels
		Millions de FCFA								
	<b>AN1</b>	-	0	-	-	-	-	80%	-	-
	<b>AN2</b>	-	0	3	-	-	775	80%	-	(778)
	<b>AN3</b>	237	675	8	-	82	281	80%	129	(1,212)
	<b>AN4</b>	14	40	4	6	48	258	80%	3,169	(3,434)
	<b>AN5</b>	29	173	7	6	26	8	80%	2,346	(2,494)
	<b>AN6</b>	213	430	9	2	70	476	80%	558	497
	<b>AN7</b>	637	556	11	5	71	1,821	80%	930	1,913
	<b>AN8</b>	799	625	10	7	72	1,821	80%	930	2,101
	<b>AN9</b>	799	586	8	5	72	1,821	80%	930	2,067
	<b>AN10</b>	932	645	11	5	72	1,821	80%	930	2,223
	<b>AN11</b>	863	604	10	7	72	1,821	80%	930	2,135
	<b>AN12</b>	819	607	7	7	72	1,821	80%	930	2,100
	<b>AN13</b>	852	589	7	7	72	1,821	80%	930	2,112
	<b>AN14</b>	769	566	7	6	72	1,821	80%	930	2,028
	<b>AN15</b>	722	566	7	6	72	1,821	80%	930	1,989
	<b>AN16</b>	722	566	7	6	72	1,821	80%	930	1,990
	<b>AN17</b>	722	566	7	6	79	1,821	80%	930	1,995
	<b>AN18</b>	722	566	7	6	79	1,821	80%	930	1,995
	<b>AN19</b>	722	566	7	6	81	1,821	80%	930	1,997
	<b>AN20</b>	722	566	7	6	81	1,821	80%	930	1,997
VAN@ 8% (millions de FCFA)				<b>5,132</b>						
VAN@ 8% (US\$)				<b>8,842,045</b>						
EIRR				<b>17.35%</b>						

27. Ce résultat est plutôt satisfaisant. Les bénéfices, qui ne sont pas reflétés dans le TRIE, comprennent notamment les bénéfices liés à l'amélioration des conditions de vie et de la sécurité alimentaire et nutritionnelle grâce à l'accroissement des revenus et des disponibilités alimentaires, les conséquences de l'amélioration des circuits de commercialisation, les impacts des compétences transmises via les formations sur d'autres types d'activités économiques exercées par les bénéficiaires et des effets multiplicateurs sur les acteurs des secteurs en amont (fournisseurs d'intrants, équipements, services) et en aval (transformateurs, commerçants) des filières, dont les femmes et les jeunes.
28. Les résultats ont été soumis à un test de variation des avantages et des coûts et à divers retards dans la réalisation des avantages. Un retard de trois ans dans la génération de prestations ou une baisse de 30 % par rapport au scénario de base réduirait le TRIE à 8,95 % et 9,98 % respectivement, ce qui est nettement supérieur au taux d'actualisation. Tous les scénarios montrent des résultats

robustes dans tous les scénarios hypothétiques, le taux de rentabilité économique reste supérieur au coût d'opportunité du capital.

**Tableau 6. Résumé des analyses de sensibilité**

Scénarios	TRIE	VAN (8%, million FCFA)	VAN (8%, US\$)
cas de base	17.35%	5,132	8,842,045
coûts +10%	15.50%	4,211	7,254,685
coûts +20%	13.74%	3,289	5,667,325
coûts +30%	12.05%	2,368	4,079,965
revenues +10%	19.13%	6,566	11,313,610
revenues +20%	20.69%	8,001	13,785,174
revenues +30%	22.07%	9,435	16,256,738
revenues -10%	15.30%	3,697	6,370,481
revenues -20%	12.89%	2,263	3,898,916
revenues -30%	9.98%	828	1,427,352
revenus retardés d'un an	14.14%	3,488	6,009,389
revenus retardés de 2 ans	11.38%	1,966	3,386,560
revenus retardés de 3 ans	8.95%	556	958,584