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Investing in rural people

Republic of Mozambique

Impact evaluation of the Sofala Bank Artisanal Fisheries Project

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Contents

Acknowledgements	ii
Executive summary	iii
Appendix	
Main report – Republic of Mozambique Impact Evaluation of the Sofala Bank Artisanal Fisheries Project	1

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In line with established practice, the draft final report was peer reviewed within IOE. The draft report was also shared with the Government of Mozambique and IFAD Management. All comments received have been duly considered in preparing this final report.

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Executive summary

I. Background

1. As decided by the IFAD Executive Board, the Independent Office of Evaluation of IFAD (IOE) carried out an impact evaluation of the IFAD-supported Sofala Bank Artisanal Fisheries Project (SBAFP) in the Republic of Mozambique in 2015/2016. The overall rationale and terms of reference for this impact evaluation are captured in the approach paper.¹

II. The project

2. The SBAFP was implemented in the Sofala Bank, an area with a large diversity of ecosystems, among which are many sandy beaches and dunes, mangrove forests, bays and widespread wetlands. Because of the large surface area and varying landscapes, six concentration areas were chosen along the coast in which "project activities could be implemented most cost-effectively and achieve the greatest impact" (see EB 2001/73/R.16/Rev.1).
3. The project's development goal, as stated in the President's report, was to: "attain a sustained improvement in the social and economic conditions of artisanal fishing communities in the project area".
4. **Project objectives.** The table below lists the objectives to achieve the above development goal and components at design.

Table

Project objectives and components at design

<i>Objectives</i>	<i>Components</i>
To improve the well-being of fishers by empowering and creating capacity in fishing communities to take increased responsibility for local development initiatives, including implementing social infrastructure and service activities and managing marine resources in a sustainable manner	Community development
To improve access to, and the commercially viable and sustainable use of, Sofala Bank fish resources by artisanal fishers	Fisheries development
To improve economic and physical linkages of artisanal fishing communities to input and output markets on a sustainable basis	Markets
To increase commercial and economic activity in artisanal fisheries subsector	Financial services
To improve the enabling environment for promoting and supporting artisanal fisheries development	Policy, legal and institutional support

Source: SBAFP President's report (2001).

5. **Target group.** The target group consisted of about 500,000 people and encompassed both fishing families and non-fishing families, with the aim of supporting the community as a whole. Within this target group, the primary beneficiaries – an estimated 26,000 fishers and their families – were located in 290 fishing communities in the aforementioned six concentration areas along the coast. The secondary beneficiaries consisted of (i) an estimated 2,300 fish traders, fish processors, boat builders, craft workers, artisans and other economically active groups within the coastal communities; and (ii) families that provide labour along the access roads rehabilitated by the project.
6. **Institutional arrangements.** The official executing agency of the project is the Ministry of Sea, Interior Waters and Fisheries (MSIWF). It comprises four organizations with administrative autonomy, namely: (i) the Small-scale Fisheries Development Institute (IDPPE) – responsible for the organization and management of the project; (ii) the Fisheries Research Institute (IIP); (iii) the National Fisheries Administration (ADNAP) – responsible for fisheries regulations, licensing for

¹ See: www.ifad.org/documents/10180/446ed35b-217e-4067-880f-40aeb3623e6f.

artisanal fisheries and the safety at sea; and (iv) the Small Industry Development Fund (FFPI) – managing formal credit activities.

III. Evaluation objectives, methodology and process

7. **Objectives.** The main objectives of this impact evaluation are to: (i) assess project impact in a quantitative manner, while also paying due attention to qualitative aspects; and (ii) generate findings and recommendations for the design of future operations and implementation of ongoing operations in the country and elsewhere.
8. **Methodology.** The impact evaluation was undertaken in line with the IFAD Evaluation Policy (2011) and the second edition of the IFAD Evaluation Manual (2015). It adopts a set of internationally recognized evaluation criteria (annex I of the main report) and a six-point rating system. This means that while the focus of the evaluation is decisively on the impact criterion, the project performance has also been assessed across all other criteria. This allows the impact evaluation to provide a more strategic and holistic assessment of SBAFP's performance and impact.
9. At the outset of the evaluation, IOE conducted a thorough evaluability assessment of the SBAFP. This allowed for a better understanding of the availability and quality of existing data (e.g. baseline data, and data from the Results and Impact Management System [RIMS]) for the impact evaluation.
10. Based on the outcome of the evaluability assessment, IOE decided to follow a mixed-method approach in this impact evaluation, using quasi-experimental techniques that entailed a combination of quantitative and qualitative analysis. The evaluation made extensive use of both primary and secondary data and information.
11. In the absence of a robust baseline, the quantitative component of the survey employed two strategies: (i) an attempt to reconstruct baseline information through recall methods. This was fundamental because, even though the project had conducted a baseline survey in 2002, it did not identify a comparison group nor did it include considerations for sample size decision, such as key indicators to be estimated, level of significance and power; and (ii) adoption of a quasi-experimental approach using "propensity score matching" as a statistical technique that does not strictly require baseline data. A subset of households with and without project intervention were matched according to a set of characteristics² that are not likely to have been affected by the project.
12. The above approach allowed the evaluation to conduct a "with or without the project" analysis. Also, the recall questions allowed the ex post reconstruction of the baseline for income and therefore a "before and after the project" analysis was conducted for this key indicator.
13. The evaluation designed an impact survey to collect primary quantitative data, which was administered to 1,028 sampled households including beneficiary and non-beneficiary households. The quantitative part of the evaluation was complemented by a set of qualitative tools such as focus group discussions, key informant interviews and site observations, to allow for a more comprehensive understanding of the processes of change induced by the intervention. More information on the data collection methods and the approach used to determine the sample size and sampling strategy may be seen in chapter I of the main report.
14. **Theory of change.** A keystone of the SBAFP evaluation was the ex post reconstruction of the project theory of change (ToC) to describe the impact pathways and construct the evaluation framework including key evaluation questions and impact indicators to be measured. The ToC is described in chapter III

² For the purpose of this evaluation, the following variables have been selected: engagement in agricultural activities; position in the community; age of the household head; marital status; and religion.

of the main report and is illustrated in the chart in annex II. The evaluation framework, which contains the key evaluation questions, impact indicators and tools for data collection is in annex III. The ToC also guided the preparation of the final impact evaluation report as described in the section of this executive summary containing the main evaluation findings (paragraph 19 onwards).

15. **Opportunities and challenges.** This impact evaluation represents an opportunity for IOE to gain deeper experience with mixed evaluation methodologies and sharpen its capabilities in assessing impact through greater reliance on quantitative approaches. IOE's growing experience in conducting impact evaluations also benefits IFAD as a whole, as it contributes to strengthening the internal debate on impact evaluations.
16. Additionally, the impact evaluation of the SBAFP was an opportunity for IOE to collaborate with a public, national institution for the design and conduct of the impact survey for primary data collection. Competencies in evaluation are limited in Mozambique especially among public institutions; therefore this exercise was an occasion to undertake evaluation capacity development activities in the country through "learning by doing".
17. The main challenge in conducting an ex post impact evaluation is related to the establishment of a counterfactual, which, in this case, entailed identification of a comparison group. This exercise was particularly complex in the case of SBAFP given the overlap with operations supported by IFAD and other development actors and the proximity of treatment and comparison areas. Linked to this is the difficulty in attributing impact to a project that closed four years ago.
18. The evaluation tried to overcome, to the extent possible, the aforementioned challenges by (i) including recall questions in the impact survey, as requested by IFAD Management in its comments on the 2015 India impact evaluation; (ii) including tagging questions in the impact survey that helped the identification of SBAFP beneficiaries and reduced the risk of interviewing households that benefitted from other projects or programmes; (iii) mapping potential confounding effects from other interventions by the Government and international organizations inside or outside the project area, as well as unplanned events (e.g. natural disasters) or general change processes that might have interacted with SBAFP; and (iv) triangulating the quantitative data and analysis with qualitative data and available secondary data.

IV. Main evaluation findings

19. The next paragraphs provide an overview of the results and impacts of SBAFP along the causal chain of the key impact pathways depicted by the ToC from bottom to top. Therefore, this section of the executive summary will start by assessing the relevance of project objectives and internal design logic. This assessment is fundamental to capture potential flaws in the design that constrained the project's impact. The achievement of results and outcomes (i.e. project effectiveness) and how these enabled (or constrained) the long-term impact on rural poverty and project sustainability are then described.
20. The above is followed by the assessment of other criteria contributing to rural poverty impact (e.g. environment and natural resources management, gender equality and women's empowerment, innovation and scaling up). Finally, the summary focuses on the findings related to other performance criteria (e.g. efficiency and performance of partners).
21. **Relevance.** The project supported the sustained improvement of the social and economic conditions of the artisanal fishing communities of the Sofala Bank through an integrated approach to the development of the artisanal fisheries subsector. This approach has been relevant in terms of its alignment with national policies, Mozambique country strategic opportunities programmes (COSOPs) and IFAD's strategies. The approach adopted was also particularly relevant to the local

context and the needs of the poor and it has proved to be a milestone contributor to the development of the artisanal fishery subsector in remote rural areas of the country.

22. The project design had, however, some inherent weaknesses. For instance, it had a complex design with five over-ambitious specific objectives and a multiplicity of components covering numerous subsectors. These called for enhanced involvement, cross-institutional coordination and buy-in from different ministries at central and provincial levels. This proved to be demanding for the implementation, monitoring and supervision of activities and the overall achievement of objectives.
23. Moreover, SBAFP could have achieved enhanced results and impact if more attention had been devoted to synergies between the activities and the components, and if each component had had its own targeting strategy. The impact evaluation rates relevance as moderately satisfactory (4).
24. **Effectiveness.** SBAFP is considered by stakeholders and beneficiaries as a milestone in the development of the artisanal fishery subsector due to its integrated livelihood approach, which delivered tangible results beyond fishery development in remote fishing areas. The project reached a slightly greater number of people than originally planned, helped fishery communities organize into groups, promoted a culture of savings and credit, created and rehabilitated markets and rural infrastructures (e.g. roads), and contributed to establishing the basis for the future enhancement of the fishery value chain.
25. SBAFP made a useful contribution to policy formulation and legislation favouring the artisanal fishery subsector and helped strengthen institutions in the subsector. The development of the Plano Estratégico para o Sector da Pesca Artesanal (PESPA) for November 2006 - March 2016 stands out as one of the project's highest achievements.
26. The above outcomes are positive. At the same time, the project did not manage to take the activities to the next level as envisaged in the five objectives, i.e. to promote wider rural transformation through backward and forward linkages to markets, more effective and less detrimental artisanal fishing practices for the sustainable development of the Sofala Bank or greater attention to economic activities that would generate better incomes and livelihoods. It did some groundwork towards the diversification of the economic base of the rural poor through improved post-harvesting activities, but it did not fully achieve this objective. The involvement of the private sector and the development of small and medium-sized fishery enterprises and relevant linkages remained at an embryonic level. These shortcomings may have been the price to be paid for the broad ambitious approach and substantial involvement in the development of social infrastructure rather than a stronger focus on fisheries management from the start of the project. All in all, the evaluation rating for effectiveness is moderately satisfactory (4).
27. **Rural poverty impact.** The evaluation found that the project had a positive impact on the target group. The percentage of households living above the poverty line (US\$1.90/day) is higher in the treatment group than among those in the comparison group. Similarly, the proportional increase in monthly income for the households in the treatment group is 15 per cent, which is slightly higher than the proportional increase of 11 per cent for the households in the comparison group.
28. Based on a standard of living index, which is an aggregated score of 33 household assets and housing characteristics, the evaluation found that ownership of assets at the household level was slightly better in the treatment group. This reflects the fact that the treatment group has better income levels than the non-beneficiary group.
29. The evaluation identified three main drivers of better income and assets in the beneficiary group. First, the project contributed to the expansion of the fishing area

through the formulation and adoption of sectoral policies and the diversification of fishing practices and technologies, which resulted in slightly higher fish production by the beneficiary group. Second, it had a remarkable impact on the access of the artisanal fishery communities to informal microfinance (through accumulating savings and credit associations), which led to increased personal savings and improved investment capacity in the artisanal fishery subsector. Finally, the project's training activities led to improved post-harvesting activities (e.g. salting and drying) and its infrastructure development component created better access to markets, which indirectly contributed to better incomes.

30. The above are remarkable achievements considering the context in which the project was implemented. Yet, the linkages with the formal financial sector and among private-sector actors along the fishery value chain remain weak. This limited wider impact and transformation of the artisanal communities.
31. The evaluation also found limited impact on food security and fishery productivity. The food consumption score (FCS) was used to measure food security.³ FCS captures diet diversity as well as the frequency of consumption of different food types over a reference period. Table 18 in the main report shows a marginally better food security situation in the comparison areas. Moreover, the project did not develop a strategy on food security and nutrition, nor did it collect impact data.
32. In terms of impact on institutions and policies, the project was instrumental in setting in motion an impressive process of institutional change and reform in the subsector that culminated in the adoption of PESPA. The effects of this important institutional change are still visible today and tailored to the decentralized administration of the Government of Mozambique.
33. SBAFP nurtured sound provincial-level approaches and practices, previously not in place, for the co-management of small-scale fisheries and these became enshrined in PESPA. The project played a key role in supporting the decentralization process initiated by the Government by ensuring and consolidating the presence of IDPPE in the three provinces.
34. Yet, there have been shortcomings in the co-management approach and enforcement process of the management measures stemming from PESPA. PESPA recognized the importance of developing linkages to formal microfinance institutions and markets, but it did not promote any conducive policies. This weakness in the regulatory framework is a key determinant of the shortcomings of the project in improving the linkages with the formal financial sector and among private-sector actors along the fishery value chain. The planned renewal of PESPA with the support of the World Bank provides an opportunity to address these issues.
35. Finally, SBAFP strongly contributed to improved human capital in the target areas, mainly through investments in social infrastructure that had a positive impact on access to water, health care and education of poor artisanal fishery communities and in the quality of these services. Moreover, the project is a milestone in terms of actively engaging the artisanal fishery communities in local development processes and promoting their empowerment with respect to local governments.
36. All in all, the project had remarkable impacts in a complex and remote context where – before basic amenities were created by SBAFP – markets and microfinance services were inexistent and the voice and interests of artisanal fishers were neglected. The impact evaluation concludes that the overall rural poverty impact of the SBAFP was satisfactory (5). The full analysis of project impact is provided in section IV of the main report.

³ The FCS is a frequency-weighted diet diversity score calculated using the frequency of consumption of different food groups by a household for a recall period of seven days. The food items are categorized into nine main food groups: cereals; starchy tubers and roots; legumes and nuts; meat, fish, poultry and eggs; vegetables (including green leaves); fruit; oils and fats; milk and dairy products; and sugar or sweets. Based on its FCS, a community can be divided into three categories, namely poor FCS, borderline FCS and adequate FCS.

37. **Sustainability of benefits generated by project impact.** The perception among all heads of key government institutions interviewed by IOE during the field mission (i.e. four years after project completion) is that SBAFP was a milestone in the development of the country's artisanal fishery subsector. The fact that the project was implemented at the provincial and district levels by the IDPPE – an agency of the Government of Mozambique – ensured stability of government support. The plans to renew PESPA will secure the required continuity to sustain the impact of the project's several components.
38. Notwithstanding the above, several factors challenge the long-term sustainability of the project's impacts. First, SBAFP did not develop an exit strategy, which would have helped clarify the roles and responsibilities of different institutions and actors in ensuring that beneficiaries received the necessary inputs and services after completion. Second, inadequate operation and maintenance of the infrastructure developed by the project is a major constraint to sustainability. Finally, grass-roots institutions are weak because by and large they have not been federated into apex organizations. This would have given them more leverage in policy dialogue with government authorities and resource allocation processes.
39. It is important to acknowledge that the project is part of a broader development context and IFAD's country programme framework. In this regard, a scaling-up project (the Artisanal Fisheries Promotion Project [ProPESCA]) is currently addressing some of the above challenges, and this is expected to improve sustainability. All in all, the evaluation concludes that the sustainability of project benefits is moderately satisfactory (4).

Other criteria contributing to rural poverty impact

40. **Environment and natural resources management.** The adoption of PESPA and the co-management approach were key to promoting an enabling environment and set the basis for the sustainable management of the marine resources of the Sofala Bank. However, while establishing an enabling environment is essential, it is not the same as "reducing unsustainable practices that threaten the natural resource base in the project area" as foreseen in the President's report. Despite improvements in fishers' awareness and capacity to fish more sustainably, the adoption of different and more targeted fishing techniques than those used at the start of the project appears to be less widespread than expected given the thrust of the project in this regard.
41. All in all, the impact on natural resources management is limited. However, the role of the project in preparing the ground for the long-term sustainable management of marine resources of the Sofala Bank is noteworthy. Therefore, the evaluation rates environment and natural resources management as moderately satisfactory (4).
42. Achievements towards greater gender equality and women's empowerment have been moderately unsatisfactory (3). Notwithstanding the key role that women play in the fishery value chain, the project design did not include a strategy for gender mainstreaming, although it implemented some activities that benefitted women. This is surprising considering the important role that women play in the artisanal fishery subsector. In this regard, towards the end of the project in 2010 and based on its experience, SBAFP helped the Government of Mozambique develop its first gender strategy in this subsector. Moving forward, this provides an overarching framework for engaging women in different stages of the fisheries value chain.
43. However, women's role in broader economic and social activities remains weak. SBAFP has helped women to organize themselves (e.g. into savings and credit groups) and provided them with capacity-building support in processing and marketing. Yet, the limited financing capacity of accumulating savings and credit associations means that larger loans commensurate with women's entrepreneurial desires and their improved capacity to save and repay are still outside their reach and remain the prerogative of men.

44. Access to health services has improved, but women still have to invest disproportionate effort and time in collecting water – especially given that the majority of water pumps installed under the project are no longer operational. Finally, insufficient attention was devoted to changing relations and interaction between men and women, particularly with respect to promoting greater involvement by women in different stages of the fisheries value chain.
45. **Innovation and scaling up.** SBAFP introduced a number of innovations that were new to the context, such as the development of a co-management approach to fishing resources and the creation of savings and credit associations where financial services were previously absent.
46. In terms of scaling up, the sequence of the three IFAD-supported fishery projects (e.g. NAFFP, SBAFP and ProPESCA) can be considered as successful. Also, the ASCA concept has been successfully scaled up to the national level. The impact evaluation concludes that satisfactory (5) results have been achieved in the promotion of innovation and scaling up.

Other performance criteria

47. Project efficiency is rated as moderately satisfactory (4). The cost per beneficiary is within the range of other similar IFAD fishery development projects. Also the allocation of project management costs is good compared to these other projects. However, the project did not calculate the economic internal rate of return and experienced some difficulties in efficiency such as late provision of funds, rigid contract and procurement norms, insufficient quality of contractors and constructions and infrequency in IFAD's withdrawal applications, which were not well adapted to the complexity of the project.
48. **Partner performance.** IFAD's long-term support to the sustainable and inclusive development of the artisanal fisheries subsector in Mozambique is appreciated by the Government and other partners. The setting up of the IFAD Country Office in Maputo and outpostting of the Country Director, and the shift to direct supervision and implementation support are two important adjustments to IFAD's operating model made during the course of project implementation. Partnerships with the Government of Mozambique, NGOs, and civil society have been good.
49. The partnership with the private sector has not been sufficiently explored. Moreover, IFAD could have done more to capture and address design issues at the beginning of implementation, as this would have ensured more timely implementation and effectiveness. Finally, the plans for a renewal of PESPA offer prospects for collaboration with the World Bank and further scaling-up of SBAFP's successful experiences.
50. The Government provided continuity and good leadership throughout the three IFAD-supported projects in the fisheries subsector, including the SBAFP. Through this continuity, and the adopted bottom-up and integrated approach, IDPPE managed to build up a fisheries co-management model between communities and authorities. However, the evaluation raises concerns regarding the management of fiduciary aspects which will require careful consideration in the future. Both IFAD and government performance as partners is assessed as moderately satisfactory (4).
51. **Monitoring and evaluation.** The project had a generally well-functioning monitoring and evaluation (M&E) system. A baseline survey was undertaken quite early after project effectiveness, additional surveys were conducted during implementation, and an end-line survey was also undertaken at completion. The project's M&E team provided continuity, as they were also part of the Nampula project team, and had good skills and competencies in M&E.
52. Notwithstanding the above, there were several shortcomings, which constrained the use of M&E as a full-fledged monitoring, management and evaluation tool. For instance, the M&E system was not properly linked to the project's logical

framework, which itself had some limitations (including weak articulation of the causal links between the project's components and its objectives and goals). The M&E system collected a wealth of data on inputs and outputs, including in the area of community development, but fell short of reliably assessing outcomes and impacts.

53. With regard to the latter, a baseline study was conducted in 2002, and an end-line study in 2011. Furthermore, two surveys were also conducted as inputs for two of the three tri-term reviews (TTRs). While the availability of such detailed studies is praiseworthy, there are issues with respect to the sample size calculations and data collection (e.g. no gender disaggregation and no comparison groups despite several recommendations to this effect by supervision missions and TTRs).

V. Conclusions

54. SBAFP has been an important milestone in the development of the artisanal fishery subsector. This is attributed to its integrated livelihood approach, which delivered tangible results beyond fishery development in remote and complex fishing areas. Before the project, basic amenities, markets and microfinance services were inexistent in these areas and the voice and interest of the artisanal fishers were neglected.
55. SBAFP had remarkable impacts at the household, institutional and policy levels. This takes into consideration better incomes and assets among beneficiaries, enhanced human and social capital, improved access to social and market infrastructure, as well as better participation in grass-roots institutions. Moreover, the provision of microfinance services supported the creation of a culture of savings and small investments by artisanal fishers.
56. The overall strengthening of IDPPE's capacity and competencies in managing complex, large-scale fisheries development projects and funds, and in collaborating across fisheries and non-fisheries institutions, has been a significant step towards creating the enabling and supportive institutional environment needed for SBAFP to make a difference. It was also fundamental in laying the groundwork for the successful implementation of SBAFP's successor project, ProPESCA.
57. PESPA's 10-year vision for the artisanal fishing subsector emphasized – alongside fishing – social and environmental progress. Looking back at the developments intended for the subsector and achievements at project end, SBAFP was instrumental in providing the targeted assistance needed to step up progress towards artisanal fisheries development.
58. Although progress may have been unevenly achieved across the pillars of the vision, PESPA nonetheless provided the subsector with the coherent framework it needed to guide interventions towards better livelihoods for artisanal fishers. Plans for a renewal of PESPA offer good prospects for addressing the weaknesses of the institutional framework and sustaining impact across the several SBAFP components.
59. Notwithstanding the above, more could have been done to achieve greater impact and ensure realization of the project's full potential and achievement of the envisaged impacts, especially in food security, access to formal microfinance, connectivity to markets and value chains, private-sector engagement and gender mainstreaming. Finally, the weaknesses related to the availability and quality of data impinge on the assessment and attribution of impact to IFAD operations on fishery productivity, food security and nutrition.

VI. Recommendations

60. The impact evaluation makes four specific recommendations for IFAD to consider in the formulation of the forthcoming Mozambique country strategic opportunities programme (COSOP), the implementation of ProPESCA, as well as in the design

and implementation of future operations in the country aimed at artisanal fisheries development.

61. **Recommendation 1: IFAD should work in close partnership with the Government of Mozambique and the World Bank in order to ensure that artisanal fishers' access to markets and finance are duly considered in the revised sectoral policy framework.** IFAD should be involved in the renewal process of PESPA, build on its experience and identify opportunities for further partnership and policy dialogue with the World Bank and the Government of Mozambique. The updated sectoral strategy should generate policies which facilitate artisanal fishers' access to financial institutions (in particular formal financial institutions) and markets.
62. **Recommendation 2: Wider private-sector engagement is needed.** The private sector is playing an increasing role in Mozambique, and its contribution is fundamental for promoting prosperity among artisanal fisheries communities. In particular, IFAD and the Government should ensure that private-sector stakeholders are clearly identified as key partners in fisheries development, both in upstream and downstream activities, ranging from the provision of fishing inputs and financial services, to processing, storage, transportation and value addition of fish produce.
63. **Recommendation 3: Project design should include due attention to gender mainstreaming, and specific activities should be carried out to empower women and ensure that they are prominently involved in productive activities.** This will require attention to building cooperatives or federations of women's savings and credit groups and linking them to formal financial services. Artisanal fisheries projects in Mozambique should include dedicated activities to train women, especially in value addition and marketing for better returns. Specific training sessions should be conducted for fishermen as means of promoting gender equality, to enable them to better recognize the valuable role that women can play in fisheries development. For all this to happen, future project design should clearly include a gender mainstreaming strategy.
64. **Recommendations 4: M&E needs to be enhanced for promoting greater development effectiveness.** This includes ensuring that logical frameworks are constructed in a participatory manner with the main stakeholders and include a theory of change, with simple and clearly measurable indicators and targets. The hypothesis and assumptions for converting inputs to outputs, and outputs to outcomes and impacts should be spelled out. Moreover, logical frameworks should be aligned with project design, as captured in project design documents. Finally, greater attention should be paid to ensuring that M&E systems collect, analyse and report on results beyond the output level, and that their indicators fully reflect the RIMS.

Republic of Mozambique

Sofala Bank Artisanal Fisheries Project (SBAFP)

Impact Evaluation: Main Report

Contents

Abbreviations and acronyms	2
Map of the project area	3
I. Background, evaluation objectives, methodology and process	4
II. The project	9
III. Theory of change (ToC)	13
IV. Main evaluation findings: moving along the theory of change from results, to rural poverty impact and its sustainability	15
V. Other criteria contributing to rural poverty impact	39
VI. Overall project achievement	47
VII. Other performance criteria	48
VIII. Conclusions and recommendations	55

Annexes

I. Definition and rating of the evaluation criteria used by IOE	60
II. The Theory of Change	62
III. Evaluation Framework	63
IV. Main socio-economic indicators for the project area	68
V. Key project dates of the Sofala Bank Artisanal Fisheries Project	69
VI. Project's revised logical framework	70
VII. Differences between the objectives and components at design and at completion of the project	75
VIII. Tables from the effectiveness chapter	77
IX. Tables from the impact chapter	80
X. Tables from the efficiency chapter	84
XI. Rating comparison	85
XII. List of key persons met	86
XIII. Bibliography	92

Abbreviations and acronyms

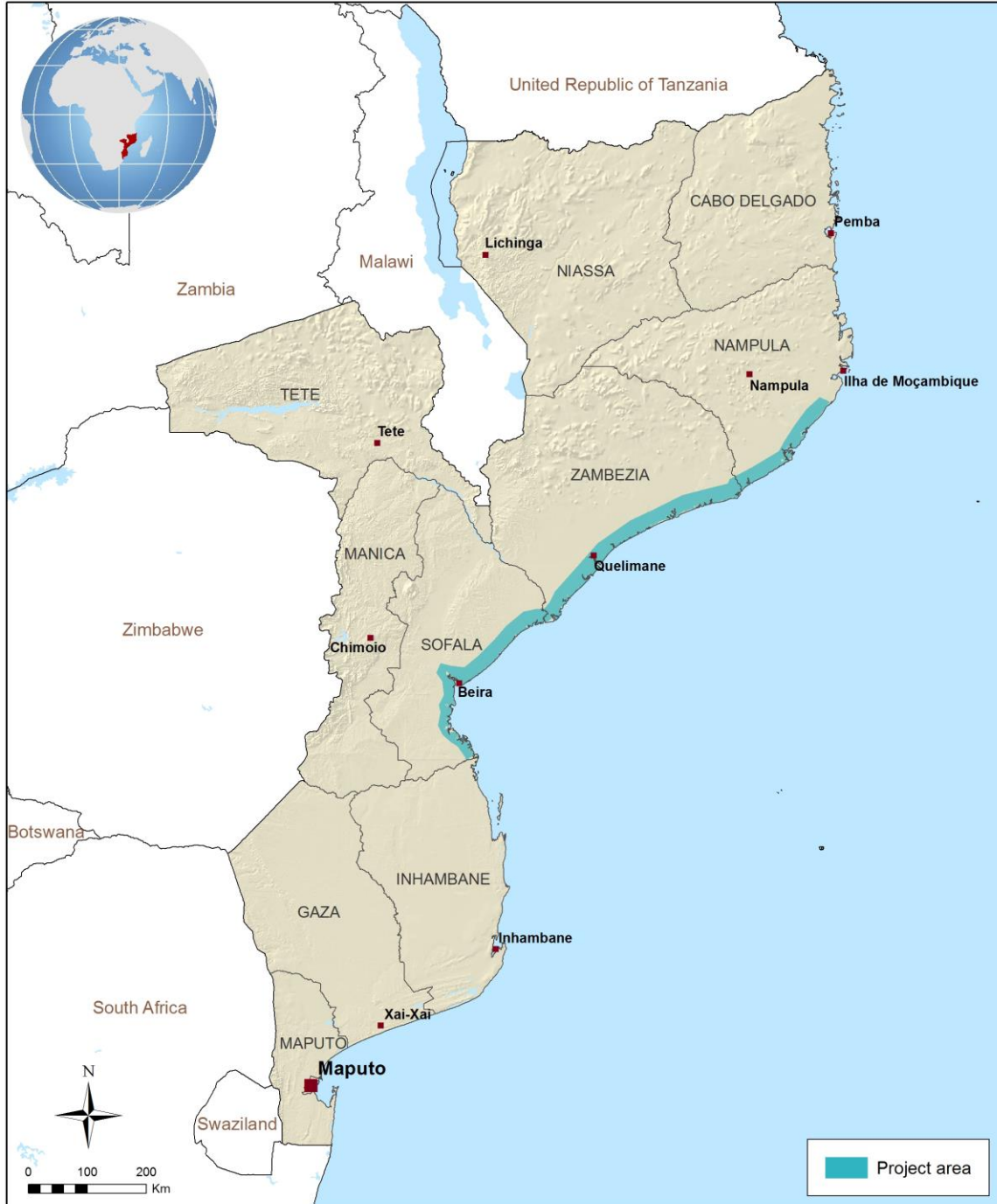
ADNAP	The National Fisheries Administration
AFC	Artisanal Fisheries Communities
AIDS	Acquired immune deficiency syndrome
ANE	The National Administration for Roads
ASCAs	Accumulating Savings and Credit Associations
ATET	Average treatment effect on the treated
BSF	Belgian Survival Fund
CCP	Conselho Comunitário de Pesca
COSOP	Country strategic opportunities programme
EIRR	Economic internal rate of return
FAs	Fishermen associations
FAO	Food and Agricultural Organization of the United Nations
FCS	Food consumption score
FFP	Fisheries Development Fund
FFPI	The Small Industry Development Fund
GDP	Gross Domestic Product
HIV	Human immunodeficiency virus
ICO	IFAD Country Office
IDPPE	The Small-scale Fisheries Development Institute
IFAD	International Fund for Agricultural Development
IGAs	Income-generating activities
IIP	The Fisheries Research Institute
IMF	International Monetary Fund
IOE	Independent Office of Evaluation of IFAD
MDB	Multilateral development bank
MSIWF	Ministry of Sea, Interior Waters and Fisheries
MTR	Mid-term review
MZM	Mozambican meticais
M&E	Monitoring and Evaluation
NAFP	Nampula Artisanal Fisheries Project
NGO	Non-governmental organization
NORAD	Norwegian Agency for International Development
OECD	The Organisation for Economic Co-operation and Development
PARPA	The Action Plan for the Reduction of Absolute Poverty
PCR	Project Completion Report
PCRV	Project Completion Report Validation
PCU	Project coordination unit
PESPA	Plano Estratégico para o Sector da Pesca Artesanal
ProPESCA	Artisanal Fisheries Promotion Project
PSM	Propensity score matching
PSR	Project status report
RFSP	Rural Finance Support Programme
RIMS	IFAD's Results and Impact Management System
SBAFP	Sofala Bank Artisanal Fisheries Project
ToC	Theory of Change
TTR	Tri-term review
UN	United Nations
UNDP	United Nations Development Programme
UNOPS	The United Nations Office for Project Services
USD	United States Dollar
VAT	Value-added tax

Map of the project area

Mozambique

Sofala Bank Artisanal Fisheries Project

Impact evaluation



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Republic of Mozambique

Sofala Bank Artisanal Fisheries Project (SBAFP)

Impact Evaluation: Main Report

I. Background, evaluation objectives, methodology and process

1. **Background.** In line with the IFAD Evaluation Policy⁴ and decision of the IFAD Executive Board, the Independent Office of Evaluation of IFAD (IOE) undertook its first impact evaluation in 2013. So far, IOE has completed two impact evaluations, respectively in Sri Lanka (2013) and India (2015)⁵.
2. In 2016, IOE is undertaking its third impact evaluation. The project selected for the third impact evaluation is the IFAD-supported Sofala Bank Artisanal Fisheries Project (SBAFP) in Mozambique.
3. The SBAFP was selected for impact evaluation using a comprehensive selectivity framework agreed with the Board⁶. In particular, the SBAFP was selected, inter-alia, to enhance the evidence base for the Mozambique Country Strategy and Programme Evaluation (CSPE) that IOE planned to conduct in 2016 and the forthcoming evaluation synthesis report on fisheries and aquaculture in 2017.
4. IOE has conducted a number of evaluations in Mozambique in the past which will be used to inform the impact evaluation of the SBAFP, including a country programme evaluation in 2010, the completion evaluation of the Niassa Agricultural Development Project in 2007, and an interim evaluation of the Nampula Artisanal Fisheries Project (NAFP) in 2000.
5. **Evaluation objectives.** The main objectives of this impact evaluation are to: (i) assess impact of the project in a quantitative manner, while also paying due attention to qualitative aspects; and (ii) generate findings and recommendations for the design of future operations and implementation of ongoing operations in the country and elsewhere.
6. **Methodology and process.** The impact evaluation follows the IFAD Evaluation Policy (2011) and the second edition of the IFAD Evaluation Manual (2015)⁷. It adopts a set of internationally recognised evaluation criteria (annex I) and a six-point rating system. This means that while the focus of the evaluation is decisively on the impact criterion, the project performance has also been assessed across all other criteria, thus allowing the impact evaluation to provide a more strategic and holistic assessment of SBAFP's performance and impact.
7. The overall rationale and terms of reference for this impact evaluation are captured in its approach paper.⁸ The latter contains a summary of the design for the impact evaluation including its methodology and key questions, data collection techniques, process, timelines, communication, human resources deployed and other pertinent information.
8. **Technical evaluability assessment.** IOE conducts an *evaluability assessment* at the outset of every impact evaluation. The aim of the assessment is to: (i) generate a comprehensive picture of the availability and quality of data collected and documentation produced throughout the project's life; (ii) evaluate the project's intervention logic with a particular focus on its results framework; and

⁴ <http://www.ifad.org/pub/policy/oe.pdf>.

⁵ The project selected for the impact evaluation in Sri Lanka was the Dry Zone Livelihood Support and Partnership Programme and it was completed in end-2013. The project selected for the impact evaluation in India was the Jharkhand-Chhattisgarh Tribal Development Programme and it was completed in June 2015. The final evaluation reports may be seen at: http://www.ifad.org/evaluation/public_html/eksyst/doc/impact/index.htm.

⁶ The selectivity framework can be seen in annex XIX at: <https://webapps.ifad.org/members/gc/39/docs/GC-39-L-4.pdf>

⁷ <https://www.ifad.org/documents/10180/bfec198c-62fd-46ff-abae-285d0e0709d6>.

⁸ The approach paper may be seen at: <https://www.ifad.org/documents/10180/446ed35b-217e-4067-880f-40aeb3623e6f>.

- (iii) select the most suitable methodological approach for the impact evaluation, in particular in determining the primary data that will need to be collected to ensure a rigorous assessment of results and impact.
9. Usability of available data. Reports and data collected in the field during the SBAFP impact evaluation preparatory mission conducted in October 2015 include:
 - Data from the baseline survey (2002), subsequent impact surveys (2005, 2007 and 2011) and Results and Impact Management System (RIMS);
 - List of districts, administrative posts, localities, villages for each province;
 - Number of direct and indirect beneficiaries in each province;
 - List of associations, co- management committees and savings and credits groups in each province;
 - Mapping of the beneficiaries in each province, with Global Positioning System (GPS) coordinates.
 10. The technical assessment on the usability of baseline data revealed that the 2002 baseline study covered only 373 households, while the sample size of the subsequent surveys is larger. In none of the surveys there is mention of considerations for sample size decision such as key indicators to be estimated, level of significance and power, and none of them identified nor collected data on comparison groups. Therefore, the usability of available data for any statistically robust impact evaluation is considered poor.
 11. Along the same lines, the usability of the data collected on the RIMS indicators is also limited, as the data were not entered in the system regularly and many information are missing (e.g., on third level indicators and on gender disaggregated data). However, the reports from the Institute for the Development of small-scale fisheries (IDPPE) surveys and other impact assessments have been used as and when appropriate given that they contain information on possible causal relations in the project's results chain and lessons.
 12. The evaluability assessment also identified external factors (e.g., interventions from other donors) that may challenge the attribution of impact to SBAFP. These are discussed later on in the description of the sampling strategy and under opportunities and challenges.
 13. **Mix-methods approach: quantitative and qualitative primary data collection.** The evaluation used a mix-method approach applying quantitative and qualitative tools, as displayed in table 1. Given the poor quality of available data, a central component of this impact evaluation was therefore the design of an impact survey to collect primary data, from both the treatment and comparison groups.
 14. Therefore, the evaluation designed an impact survey to collect primary quantitative data, which was administered to 1,028 sampled households including beneficiaries and non-beneficiaries households. The quantitative part of the evaluation was complemented by a set of qualitative tools, which enabled a more comprehensive understanding of the processes of change induced by intervention. Table 1 depicts the type and number of qualitative interviews conducted.

Table 1
Evaluation tools

<i>Quantitative tools</i>	<i>Purpose</i>	<i>N</i>
Structured impact survey	Administered to all the sampled households for the collection of primary quantitative data.	1,028
<i>Qualitative tools</i>	<i>Purpose</i>	<i>N</i>
Focus group discussions (FGDs)	<ul style="list-style-type: none"> • Conducted separately for women and men at the community level to triangulate with quantitative information • Conselho Comunitário de Pesca (CCPs) • Fishermen associations • Accumulating Savings and Credit Associations (ASCAs) • Women associations • Non-governmental organizations (NGOs) • Community leaders • Water, health and school committees • Market associations • Transporter associations 	40
In-depth interviews	<p>Conducted with various stakeholders involved in the project implementation. The target stakeholders included:</p> <ul style="list-style-type: none"> • NGOs • CCPs • Water, health and school committees • National Roads Authority (ANE) • Ministries of health and education • IDPPE, IIP, ADNAP at both central and provincial levels • Ministry of Finance • Central Bank of Mozambique • IFAD country office 	

15. **Building blocks.** The main building blocks of the SBAFP impact evaluation included: (i) the ex-post reconstruction of the theory of change (ToC) to describe the impact pathways and construct the evaluation framework including key evaluation questions and impact indicators to be measured; (ii) the determination of the sample size and sampling strategy for both the treatment and comparison groups for the collection of primary quantitative and qualitative data; and (iii) the selection of the quasi-experimental method for impact analysis and the design of the impact survey.
16. **Theory of change.** The Toc is described in chapter III of the main report. The chart providing a visual illustration of the ToC is contained in annex II.
17. **Use of the ToC.** Further to the reconstruction of the ToC, IOE developed an indicator matrix to describe the effects of the project, along the results chain. The matrix guided the preparation of a detailed evaluation framework containing the key evaluation questions, as well as the quantitative and qualitative research tools for primary data collection. The evaluation framework, which contains the key impact indicators is in annex III.
18. **Sample size and sampling strategy.** The evaluation considered the poverty head count ratio as the indicator for calculating the minimum sample size, which has been computed using the following formula:

$$n = \frac{2[Z_{\alpha/2}\sqrt{2\bar{p}(1-\bar{p})} + Z_{\beta}\sqrt{p_1(1-p_1) + p_2(1-p_2)}]}{(p_1 - p_2)^2}$$

19. In the above formula: (i) P is the value of the poverty head count ratio which was estimated to be 62.3 per cent in the project areas at the beginning of the implementation of SBAFP; (ii) the minimum detectable effect is equal to 10 per cent and the design effect is estimated to be 0.87. This means that the poverty incidence index in the project area is expected to reduce by 10 per cent following the implementation of SBAFP; (iii) the power and level of significance (α) were set to be 80 and 5 per cent, respectively; (iv) p_1 represents the poverty incidence index in the comparison group; (v) p_2 is the poverty incidence index for the treatment group; (vi) $Z_{\alpha/2}$ and Z_{β} are the normal quintiles for $\alpha/2$ and β , respectively; (vii) the maximum error allowed is equal to 3 per cent. Based on the above formula, the representative total sample size is 778 households. However, in order to compensate for non-response, over 30 per cent of the computed sample size was added, thus the final sample size is 1,028 households for both treatment and comparison groups.
20. Sampling strategy. The below paragraphs provide a description of the sampling strategy adopted in determining both the treatment and the comparison groups. At the outset of the process⁹, the evaluation identified potential risks of spill over and contamination effects from other interventions in the project area and spill-over effects from the project into non-project areas. The findings from the analysis revealed that the entire coast of Mozambique benefitted from fishery and coastal management interventions by bilateral and multilateral donors over the past 15 years.
21. In addition, as further detailed in the project key information section of the report, IFAD has been active in the Sofala Bank with NAFP, which is SBAFP's predecessor project, and the Artisanal Fisheries Promotion Project (ProPESCA), which is SBAFP successor project, as well as with the Rural Finance Support Programme (RFSP) which however focused on microfinance. While NAFP was implemented only in Nampula, RFSP was active during the implementation period of the SBAFP. ProPESCA is still on-going in the three provinces covered by SBAFP. In sum, Nampula is the province that benefitted more from external assistance over the past 15 years. In addition, NAFP and SBAFP were implemented in the same areas of the province.
22. Given the above, and following consultations with IDPPE project staff, the treatment and comparison groups were selected from project areas where the risks of contamination from other interventions and spill-over from SBAFP were minimized to the extent possible. SBAFP was implemented in six concentration areas along the shoreline of the three provinces, where the number of fishing centers and fishing families is higher. Therefore, the treatment group has been sampled from selected concentration areas in Sofala and Zambezia.
23. The comparison group was sampled from two districts that were excluded from project implementation at the time of SBAFP design. These districts share similar environmental and socio-economic characteristics with the districts from which the treatment group was sampled. Given the proximity of comparison and project areas, the non-beneficiary households were sampled from fishing communities farther away from the coasts.
24. The sampling of the households within each district in both treatment and comparison groups was done by applying simple random sampling. Table 2 shows the sample size and the main characteristics of treatment and comparison districts.

⁹ IOE met during the preparatory missions to Maputo in October 2015 with other institutions (i.e. African Development Bank, the World Bank, FAO and bilateral agencies) that have been active in the project area during the SBAFP period. This has facilitated the identification of overlaps among development interventions during implementation and will help address the impact attribution issue.

Table 2

Sample size and main characteristics of treatment and comparison districts

	<i>Treatment Districts</i>	<i>Comparison districts</i>	<i>Main economic activities</i>	<i>Ecosystems</i>	<i>Main resources</i>	<i>Main fishing type</i>
	Quelimane Pebane Namacurra Mocubela Beira Buzi	Inhassunge Dondo	Fisheries Agriculture	Pelagic environment; Areas intertidal; Estuary;	Crustaceans; Shellfish; Cephalopods; Pelagic; Demersal soft bottoms; Benthic,	Emhale trailing
Total sample size	600	428				
Overall sample size		1028				

Source: Eduardo Mondlane University and IDPPE.

25. Selection of the most suitable quasi-experimental method. In the absence of a robust baseline, the quantitative component of the survey employed two strategies: (i) an attempt to reconstruct baseline information through recall methods. This was fundamental because, even if the project had conducted a baseline survey in 2002, it did not include a control group and the data it collected was not reliable because there is mention of considerations for sample size decision; and (ii) adoption of a quasi-experimental approach using statistical techniques that do not strictly require baseline data.
26. In particular, with regard to point (ii) above, the evaluation adopted "propensity score matching". A subset of households with and without project intervention were matched according to a set of characteristics¹⁰ that are not likely to have been affected by the project. The test of balancing property of the propensity score was conducted and revealed that the balancing property is satisfied. The standardized bias and t-test of equality of means before and after matching was done to evaluate whether the PSM succeeded in balancing the characteristics between treated and untreated groups. In this regard, the results from the test of equality of means for the matched sample showed that after matching, the differences were no longer statistically significant, suggesting that the matching of the two groups contributed to reduce the bias associated with observable characteristics. Finally, the test to evaluate the common support condition was conducted and the results show no violation of the conditional independent assumption of the PSM.
27. The above allowed the evaluation to conduct a "with or without the project" analysis. Also, the recall questions allowed the ex-post reconstruction of the baseline for income and therefore a "before and after the project" analysis was conducted for this key indicator.
28. **Opportunities and challenges.** This impact evaluation represents an opportunity for IOE to gain deeper experience with mixed evaluation methodologies and sharpen its capabilities in assessing impact through greater reliance on quantitative approaches. IOE's growing experience in conducting impact evaluations will also benefit IFAD as a whole, for example, as it will contribute to strengthening the internal debate on impact evaluations.
29. Also, the impact evaluation of the SBAFP was an opportunity for IOE to collaborate with a public national institution for the design and conduct of the impact survey for primary data collection. Competencies in evaluation are limited in Mozambique especially among public institutions, therefore this exercise was an occasion to

¹⁰ For the purpose of this evaluation the following variables have been selected: engagement in agricultural activities position in the community; age of the household head; marital status; and religion.

conduct some evaluation capacity development activities in the country by “learning through doing”.

30. With regard to the “evaluability” of impact, the review of available documents suggests that in a large number of project sites, project implementation targets were completed by project completion for most of the components and may have contributed to generating impacts in the last four years. Also, it is important to note that IDPPE was able to set up an monitoring and evaluation (M&E) system and team, which has been the same for the NAFP, SBAFP and ProPESCA. Notwithstanding the limitations of the M&E system, this was an advantage for the SBAFP impact evaluation as data and institutional knowledge was still available in the field and provided IOE with the opportunity to better understand the overall approach to the sustainable and inclusive development of the fisheries sector in the country.
31. As mentioned above, the main challenge in conducting any ex-post impact evaluation is related to the identification of a comparison group, which has been particularly complex in the case of the SBAFP given the overlapping of operations from IFAD and other development actors and the proximity of treatment and comparison areas. Linked to this is the difficulty in attributing impact to a project that closed four years ago.
32. The evaluation tried to overcome to the extent possible the aforementioned challenges by (i) including recall questions in the impact survey, as requested by IFAD Management in its comments on the 2015 India-impact evaluation; (ii) including tagging questions in the impact survey that helped the identification of the beneficiaries of the SBAFP and reduced the risk of interviewing households that benefitted from other projects or programmes; (iii) mapping potential confounding effects from other interventions by Government and international organizations inside or outside the project area as well as unplanned events (e.g. natural disasters) or general changes processes, that might have interacted with the SBAFP as described; and (iv) triangulating the quantitative data and analysis with qualitative data and available secondary data.
33. Process. The impact evaluation included a thorough desk review of the available project documentation, a one week preparatory mission to Mozambique to undertake an evaluability assessment of the project and identify a pool of reputed national institutions to support IOE in the design and implementation of the impact survey. The institution selected through a competitive bidding process was the Eduardo Mondlane university, which pulled together a team of experts to cover the diverse thematic areas of the project. A two weeks field mission was led by IOE to pilot the impact survey and interview key stakeholders.
34. The draft impact evaluation was internally peer-reviewed by IOE in July 2016. An learning workshop was held on 14 September 2016 in Maputo to discuss the evaluation’s main findings and recommendations with key stakeholders and IFAD staff. Moreover, the Government of Mozambique and IFAD Management had the opportunity to prepare written comments on both the evaluation design and draft final report. All major comments received were comprehensively considered by IOE and treated in accordance with the provisions of the IFAD Evaluation Policy.

II. The project

Project context¹¹

35. **National socio-economic situation.** Since the end of the two-decade long civil war in 1992, Mozambique was able to implement a market oriented economy, effective economic policies, as well as commitments to alleviate rural poverty, which have contributed to encourage foreign investment, significant donor support

¹¹ Data from INE, the World Bank, IMF, UNDP, FAO, IFAD, OECD and the Ministry of Sea, Interior Waters and Fisheries of Mozambique.

and economic performance. As a result, the country witnessed a sustained economic expansion with the Gross Domestic Product (GDP) growing at an average of seven per cent per year for the last two decades. The largest contributor to the GDP is the services sector (50.2 per cent), followed by the agricultural sector (28.6 per cent), and the industrial mining and energy sectors (21.2 per cent). The fisheries sector contributes with a three per cent.

36. **Overview of the socio-economic situation in the project area.** The Sofala Bank covers the narrow strip from the southern Sofala province, covering the Zambezia province, to halfway up the Nampula province, as well as its fishing waters to a distance of some 20 kilometers from the coast. The three provinces count a population of over 11 million people, out of which two third are concentrated in the coastal areas.
37. The artisanal fishery sector represents a major source of employment, food and income for the rural communities along the Sofala Bank, which has the largest numbers of artisanal fishing communities in Mozambique. In the provinces of Nampula and Zambezia, the population living below the poverty line is close to the national average of 70 per cent, however in Sofala, this percentage increases to between 80-90 per cent. An overview of the main socio-economic indicators for the project area is contained in annex IV.
38. **Fishery sector.** The fisheries sector is one of the main sources of livelihood in Mozambique, which has a 2,700 km coastline on the Indian Ocean with access to a vast fishing area with considerable resources. The Sofala Bank contains the country's richest fishing grounds. In addition, it has two large inland water bodies next to countless small rivers and lakes scattered through the country.
39. The marine fishing sector in Mozambique is characterized by industrial fishery (vessels over 20 meters), semi-industrial fishery (vessels between 10-20 meters) and artisanal fishery (vessels up to 10 meters, of which the majority are canoes). It is estimated that the country's annual marine catch is about 130,000 tones, of which the largest part comes from artisanal fishing (91 per cent) and only seven per cent and two per cent from industrial fishing and semi-industrial fishing respectively. However, in terms of value, the industrial catch represents around 52 per cent, while artisanal catch represents up to 42 per cent and semi-industrial catch the residual six per cent.
40. The industrial fishery is primarily dominated by State joined companies and production is almost entirely focused on crustaceans for the export market. The semi-industrial fishery mostly target national markets and some regional export markets, among which primarily South Africa. Most of the artisanal fishing is for domestic consumption and executed by coastal communities. Artisanal fishing is therefore very important for food security in the coastal districts, but also in the interior regions.
41. Within a population of 24.4 million in 2014, about 334,000 depend directly or indirectly on artisanal fisheries of whom the largest part are artisanal fishermen (about 70 per cent), followed by collectors and divers. This is three times as much as in 2002, when the census estimated 100,000 people directly dependent on artisanal fishing.
42. The artisanal fishing families are considered among the poorest in the country and suffer from great isolation. They are often cut off from the larger economy, lack (social) infrastructure and health facilities. Furthermore, the artisanal fishermen have to compete with the (semi) industrial ones, who have better fishing techniques, equipment and preservation methods as well as a better fleet, financial resources and access to markets. This backlog prevent them from realizing the full value of their produce and from increasing the catch of high-value fish.
43. **Governance.** The Government acknowledged the need to improve the fishery sector and enacted the Fisheries Sector Master Plan in 1996. This plan set out the

Government's policy and strategy for the improvement of the fishery sector and defined the typologies of fisheries (artisanal, semi-industrial and industrial) by species, vessel size, and other specifications related to fisheries. A dedicated Ministry of Fisheries was established in 2000 which emerged out of the Ministry of Agriculture. Various directorates and organizations were set up under this new Ministry, among which a dedicated institute responsible for the promotion of artisanal fisheries¹² and the improvement of livelihoods in fishing communities. During the design of SBAFP, the Ministry was still in the early stages of creating institutional capacities to meet its mandates.

44. **Human development.** Despite the robust economic growth, Mozambique is classified by the World Bank as a low income country, with a per capita gross national income (Atlas method) of US\$620 in 2014. The rapid economic expansion over the past 20 years had only a moderate impact on poverty reduction, and the geographical distribution of poverty remains largely unchanged with most of the poor concentrating in remote rural areas. Along the same lines, the main social indices are on the low side. In fact, Mozambique ranked 180th out of 188 countries in the 2014 Human Development Index and 135th out of 155 for the Gender Inequality Index.¹³
45. The social progress index for access to improved sources of water and sanitation ranks Mozambique 128th and 119th, respectively, out of 135 countries. The average life expectancy at birth is just 50.3 years, HIV prevalence among adults shows a downward trend, stabilizing at a relatively high rate of 11.5 per cent. Life expectancy at birth improved only slightly over the last 15 years from 47 to 50 years. Food insecurity is increasing in the country and malaria remains the most common cause of death, responsible for 35 per cent of child mortality and 29 per cent for the general population. Literacy levels are low and remained practically stalled over time. Nowadays only half of the adults and 60 per cent of the youth are literate. Among women on the other hand, only around 30 per cent is literate. These numbers are even lower among rural and fishery communities.

Project implementation arrangements

46. **IFAD and the artisanal fisheries sector in Mozambique.** As mentioned before, IFAD is addressing the sustainable social and economic development of artisanal fishing communities (AFCs) in Mozambique through three projects since 1993:
- i. the NAFP (1993-2001), which was the first integrated fisheries IFAD-funded project in Mozambique;
 - ii. the SBAFP (2001-2011), which builds on the experience of NAFP; and
 - iii. the ProPESCA, the successor project of the SBAFP, which is currently on-going (2012-2018).
47. **Key project dates.** The SBAFP was initially designed by the Institute for the Development of small-scale fisheries (IDPPE) in 2000, which is an institution under the Ministry of Sea, Interior Waters and Fisheries with administrative autonomy, and responsible for supporting artisanal fisheries and fishing communities. In 2001, the project was appraised by IFAD and thereafter approved by the Executive Board. Annex V summarizes the key project dates of the SBAFP.
48. **Project area.** The project is implemented in the Sofala Bank. This area of around 950 kilometers has a large diversity of ecosystems with, among others, many sandy beaches and dunes, mangrove forests, bays and widespread wetlands. Because of this large surface area and variation in landscape, six concentration areas were chosen along the coast in which "project activities could be implemented most cost-effectively and achieve the greatest impact".

¹² the Small-scale Fisheries Development Institute (IDPPE).

¹³ UNDP 2015 Human Development Report and relevant explanatory note. http://hdr.undp.org/sites/all/themes/hdr_theme/country-notes/MOZ.pdf.

49. **Target group.** At design, the target group consisted of around 500,000 people encompassing both fishing families and non-fishing families, aiming to support the community as a whole. Within this target group, the primary beneficiaries consist of 290 fishing communities in the aforementioned six concentration areas along the coast encompassing 26,000 fishers and their families. The secondary beneficiaries consist of (i) an estimated 2,300 fish traders, fish processors, boat builders, craftsmen, artisans and other economically active groups within the coastal communities; and (ii) families that provide labour along the access roads rehabilitated by the project belong to the secondary beneficiaries.
50. **Project development goal.** The project's development goal as stated in the President's Report was to: "attain a sustained improvement in the social and economic conditions of artisanal fishing communities in the project area".
51. **Objectives and components at design.** Table 3 contains the objectives to achieve the above development goal and components at design.

Table 3

Project objectives and components at design

<i>Objectives</i>	<i>Components</i>
To improve the well-being of fishers by empowering and creating capacity in fishing communities to take increased responsibility for local development initiatives, including implementing social infrastructure and service activities and managing marine resources in a sustainable manner	Community development
To improve access to, and the commercially viable and sustainable use of, Sofala Bank fish resources by artisanal fishers	Fisheries development
To improve economic and physical linkages of artisanal fishing communities to input and output markets on a sustainable basis	Markets
To increase commercial and economic activity in artisanal fisheries sector	Financial services
To improve the enabling environment for promoting and supporting artisanal fisheries development	Policy, legal and institutional support

Source: SBAFP President's Report (2001).

52. **Implementation arrangements.** The official executing agency of the project is the Ministry of Sea, Interior Waters and Fisheries (MSIWF). It comprises four organizations with administrative autonomy, namely:
- (i) the Small-scale Fisheries Development Institute (IDPPE) – focussing mostly on research and technical inputs within small scale fisheries;
 - (ii) the Fisheries Research Institute (IIP) – providing advice to the Ministry on the state of stocks and the exploitation in close cooperation with IDPPE;
 - (iii) the National Fisheries Administration (ADNAP) – providing support to the fisheries sector and is responsible for fisheries regulations, licensing for artisanal fisheries and the safety at sea;
 - (iv) the Fisheries Development Fund (FFP) – managing public sector budgets, financial services to the fisheries sector and receiving all donor/external funding for the Ministry and subsequently transmitting them to the project; and
 - (v) the Small Industry Development Fund (FFPI) – managing formal credit activities.
53. As mentioned above, the MSIWF was overall responsible for the project and the related policy and institutional environment, while the organization and management of the project lay with IDPPE through its headquarters in Maputo, where the project coordination unit (PCU) is located, and three Provincial units. The PCU consists of a project coordinator who reports to the National Director of IDPPE. The central PCU includes: (i) a M&E specialist; (ii) three Provincial financial/contracts officers, (iii) a logistics/administrative officer; (iv) sector specialists; and (v) support staff.

54. Other national authorities involved in project activities are the National Roads Authority (ANE) within the Ministry to Public Works and Housing (MOPH), which is responsible for planning and financing national and regional roads and facilitating rural water activities.
55. **Project costs and financing.** During the design phase, a grant from the Norwegian Agency for International Development (NORAD) was factored in of US\$ 5.82 million and a grant of US\$3.39 million from the Belgian Survival Fund (BSF). During the approval of the project, both grants were still pending. During the course of the project these bilateral grant contributions were confirmed together with further funding from the German Government for an additional component focussing on a HIV/AIDS side-programme and funding from the EU's "Food Facility", meant to co-fund the Government of Mozambique Food Production Action Plan (Pro-PAPA 2009-2011). This initiative was implemented through IFAD projects including SBAFP. The actual project cost and financing at completion can be seen in table 4.

Table 4

Project cost and financing at completion

<i>Project ID</i>	<i>1184</i>
Total Project Cost (USD)	USD 34.31 million
IFAD loan (USD)	USD 20.25 million
Contribution of Borrower	USD 2.77 million
Contribution of beneficiary communities (USD)	USD 101,858.00
Co-financiers	Norwegian Agency for International Development (NORAD): USD 6.4 million; Belgian Survival Fund (BSF): USD 4.7 million
Additional Funding (channeled through IFAD)	German Government: USD 290,585; EU Food Facility: EUR 1,786,410

Source: SBAFP Project Completion Report (2012).

III. Theory of change (ToC)

56. **Rationale for developing the ToC ex-post.** Although the SBAFP was supposed to be implemented following an integrated approach, the log-frame treats the components separately and therefore it does not clearly show their synergies and how they mutually reinforce each other to achieve overall project objectives. Also, it does not describe the intermediate steps and causal linkages guiding the project logic from outputs to purposes. Finally, the assumptions, which identify what is necessary for the causal links to work, are general and mainly linked to the economic context and do not, for example, cover institutional or policy aspects, or other circumstances that need to be in place for progressing from one step to the next.
57. In order to overcome the above limitations, the evaluation reconstructed ex-post the ToC of the project together with concerned stakeholders, which can be seen in annex II.
58. The theory of change illustrates the main steps from activities to impact of the five project components, their linkages and the main causal assumptions and hypothesis. The five project components are coded with different colors in the chart: red for community development and mobilization, purple for policies, blue for fisheries development, orange for financial services, and black for market access.
59. **Impact pathways.** Four impact pathways can be discerned in the ToC for the project to successfully fulfil its development objective:
- improved income and assets for the AFCs, which is the key impact to be achieved by the project and, linked to it, better productivity of the artisanal fisheries sector and better food security and nutrition of AFCs;

- strengthened human and social capital of the poorest AFCs;
 - improved environmental management of the Sofala Bank; and
 - enabling policy and institutional environment.
60. The SBAFP aimed at achieving the sustained improvement in the social and economic conditions of the artisanal fishing communities, by combining an holistic and integrated approach to development with participatory approaches which are key to the sustainable development of the artisanal fishery sector. This involved the setting up of community based organizations and empowering them to take an active role in the community, while providing the much needed viable technological means and resources to increase their access to assets, diversify fishing practices towards higher value produce and reduced risks and vulnerability of the sector.
 61. In order to finance the access of the rural poor to assets, the project sought to link the groups of smallholders to rural finance institutions, which would provide both on-farm and off-farm financial services and in particular financial credit to be invested by fisher communities to improve their productivity, meet the technical standards to market their products and increase incomes.
 62. There is little point in organizing, training and financing smallholder producers to increase and diversify their production if there are no markets where to trade and sell their produce beyond what families need to ensure food security. Therefore, the project also focused on building links between smallholders and markets, and tried to include the artisanal communities in the various steps of the fishery value chain (e.g., production, processing, marketing, consumption). This was meant to be achieved by building/rehabilitating market infrastructures (e.g., roads, first sale markets) and facilities (e.g., freezing facilities along the value chain), improving post-harvest practices, enhancing beneficiaries' knowledge of markets dynamics and inputs/outputs prices, and establishing linkages with private sector operators to create business opportunities.
 63. The above described processes have been accompanied by interventions aimed at improving the living conditions and strengthening the social capital of the AFCs by constructing safe water points, health posts and schools. In particular, the improvement in health conditions and education would in turn further boost human wellbeing and the economic development process.
 64. The creation of an enabling policy and institutional environment cuts across the different components of the sustainable development process of the artisanal fishery sector. In fact, the project is expected to have promoted policy interventions aimed at: (i) supporting market development and financial services (ii) strengthening sectoral institutions at provincial and central levels, (iii) facilitating the adoption of sectoral laws related to fishing limits and exclusive access rights to the AFCs, and (iv) institutionalizing the co-management committees which in turn play a key role in representing the interest of the fishermen and in mitigating the conflicts on marine resources, in liaising with private sector and ensuring the enforcement of laws and the use of more sustainable technologies.
 65. The effective enforcement of the policies combined with the use of sustainable technologies and increased environmental awareness were intended to prevent the overexploitation of natural resources and favour a better environmental management of the Sofala Bank.
 66. The next sections will assess the results and impacts of the project along the causal chain of the key impact pathways depicted by the ToC from bottom to top. Therefore, the evaluation will start by assessing the project relevance in terms of its adherence to national priorities, local context and needs of the artisanal fishery communities. It also assesses the programme's internal design logic, for instance, to ensure the mix of inputs, activities and components were appropriate to achieve its development objectives. This is fundamental to capture potential flaws in the

design that constrained project's impact. The evaluation will then assess the achievement of results and outcomes (i.e., project effectiveness) and how these enabled (or constrained) the long-term impact on rural poverty and its sustainability.

67. The above allows the evaluation to base its finding on the ToC, while at the same time follow the 2015 evaluation manual. In this regard, it is important to note one change which was made to the structure of the report to ensure a better narrative flow and consistency with the theory of change from the analysis of project relevance to project impact and sustainability. That is, project efficiency is treated under "other performance criteria" together with IFAD and Government performance as partners, while sustainability of benefits is discussed after rural poverty impact. However, the ratings of both efficiency and sustainability will inform overall project performance as prescribed by the new evaluation manual.

IV. Main evaluation findings: moving along the Theory of change from results, to rural poverty impact and its sustainability

Relevance

68. **Relevance of objectives.** The project supported the sustained improvement in the social and economic conditions of the artisanal fishing communities of the Sofala Bank through an integrated approach to the development of the artisanal fisheries sector. This approach has been relevant in terms of its alignment with national policies¹⁴, Mozambique country strategic opportunities programmes (COSOPs)¹⁵, and IFAD's strategies.¹⁶
69. Artisanal fishing is important to the livelihoods of artisanal fisher communities of the Sofala Bank, which are among the poorest in Mozambique. Therefore, the integrated approach adopted by the project for the sustainable management of coastal fisheries resources was particularly relevant to the local context and the needs of the poor and it has proven to be a milestone contributor in the development of the artisanal fishery sector in remote rural areas of the country.
70. In particular, investments in social infrastructures, such as primary schools, health posts and water points, were a priority for the communities in the six project concentration areas. In this regard, the evaluation recognises that rural poverty is multifaceted and achieving rural transformation requires interventions in both agricultural and non-agricultural areas.
71. **Relevance of design.** A participatory approach to the design of SBAFP by the implementing agency was adopted, rather than using an externally recruited design team. The project design and rationale were based on the lessons learned from NAFP (1993-2001), which was evaluated by IOE in 2000.
72. The limitations of the log-frame were described in the rationale for developing the ToC ex-post. In addition to those, SBAFP had a complex design, with five over-ambitious specific objectives and over 30 indicators, with no indication of baselines and targets for the indicators. The multiplicity of components covering numerous sub-sectors (e.g., education, health, water, fisheries, markets, microfinance, governance and environmental management) called for enhanced involvement, cross-institutional coordination and buy in from different Ministries at central and provincial levels. This has proven to be demanding for the implementation, monitoring and supervision of activities –especially before 2008, when IFAD was not yet involved in direct supervision.

¹⁴ Action Plan for the Reduction of Absolute Poverty 2000-2004 and 2006-2009 (PARPA I and II); Agricultural Development National Programme for Agricultural Extension.

¹⁵ COSOPs for Mozambique of 2001 and 2004.

¹⁶ 1998-2001 IFAD Strategic Framework.

73. The project's overall complex design and focus in the initial phase of implementation on the construction of infrastructures such as schools, health units and water points, constrained the effectiveness and impact on the fisheries development, market and microfinance components, as will be further analysed later on in the report.
74. The above also raises concerns about the institutional targeting of the project. The evaluation concurs with the choice of IDPPE to oversee the implementation of the project. It however questions why it was also entrusted the responsibility to handle matters such as health, education and public works, that lay outside IDPPE's mandate and capacities. This resulted in a fragile sustainability of the project's community development and mobilisation achievements (see sustainability section).
75. Furthermore, the nature of the fisheries sector in Mozambique, which combines both artisanal and industrial fisheries, the complexity of the decentralised administration and of fisheries management (e.g., including research, management, extension, enforcement, etc.) require that close horizontal and vertical collaboration between fisheries institutions and the several layers of the country's administration be established to facilitate the implementation of the project.
76. This however did not receive adequate attention during the design and implementation phases of the project. It resulted in the bypassing of some levels of administration such as, for example, the Provincial Directions of Fisheries in the overall overseeing of the project implementation. Since IDPPE's provincial branches were reporting back directly to IDPPE in Maputo (PCU), vertical collaboration across the various levels of fisheries administration were prevented and aspects of fisheries management overlooked, such as the enforcement of important laws. The shortcomings in the enforcement process and the limited role of ADNAP in this process will be discussed in more depth in the institutions and policies section of the impact chapter.
77. A number of modifications were made to the project log-frame after the two project tri term reviews (annex VI). To facilitate the understanding of these changes, the differences between the log-frame at design and those at completion, as well as the differences between the objectives at design and completion, are illustrated in annex VII.
78. In particular, the shift of the subcomponents on *Co-management of Fishing Resources* and *Fishing Group Associations* from component A to component B (and herewith the change in objective 1 and 2) was relevant, as they are both fundamental to fisheries development and not to community development. Therefore, the impact evaluation follows the revised objectives, components and log frame. A summary of the number of components, indicators and outputs in the original and revised project logical framework is provided in table 5.

Table 5

Number of components, indicators and outputs in the project logical framework

	<i>At design</i>	<i>Revised version</i>
Components	5	5
Key performance indicators	36	35
Outputs	35	24

Source: SBAFP's original and revised logical framework.

79. Through the ex-post development of the project ToC, the evaluation noted the need for an additional change in the project log-frame. In fact, the promotion of post-harvest activities could have led to greater impact if it had been implemented in conjunction with the market access component under objective 3, instead of under objective 2 (fisheries development component). Handling and processing are more closely associated to market development than fishery development, and

people involved in fishing and marketing are not the same, as further discussed under targeting.

80. Also, given the ambitious integrated project approach, the ToC identified in the availability of in-depth thematic studies and elaboration of appropriate implementation strategies a key pre-assumption to successfully achieving project outcomes, impacts and sustainability. In particular, the development and implementation of strategies for gender mainstreaming, private sector engagement, microfinance, markets and food security based on rigorous studies would have helped in better understanding the opportunities, challenges and synergies across the several project components. This would have also enable a better definition of the scope and institutional and social targeting approach of the project.
81. Good performance on the ground is intrinsically linked to well-defined targeting strategies, and this is why the ToC identified the correct social and institutional targeting as a pre-condition for the successful achievement of project outcomes. While the institutional targeting was treated in previous paragraphs, the social targeting will be described in the next paragraphs.
82. As mentioned in the introduction, the project was implemented in six concentration areas, which consisted of 17 project districts with most villages 3-5 kilometers inland, which were selected based on: (i) accessibility; (ii) the concentration of fish resources; (iii) the number of artisanal fishers and fishing centres; and (iv) level of linkages to markets and commercial activity. Although this approach was relevant to boost the social and economic development of the artisanal fishery communities and maximise impact, there is no firm evidence that the poorest of the poor were proactively targeted.
83. Within the target group, a portion of project activities was directed to the fishing community as a whole, while the rest was directed at fishers' families within these communities. This approach was appropriate given that a large part of the fishing families cannot rely on fishing alone for their livelihood. However, the rural poverty analysis was not carried out at design and different groups (e.g., fishermen, traders, women etc.) have been placed in the same group. The project design did not pay adequate attention to designing activities taking into account the heterogeneities of these different groups and their specific requirements.
84. In this regard, as already highlighted in paragraph 79, the evaluation noted mis-targeting under objective 2, which dealt with the management and exploitation of the Sofala Bank artisanal fisheries. Post-harvest activities, meant to enhance the shelf life and value of the catch, such as training on preservation techniques (e.g. drying, smoking), or making of ice, were not only linked to the wrong component/objective, but also wrongly targeted to fishermen.
85. In fact, fishers' catches, once landed at the beach, are passed on to other agents of the value chain (e.g., traders, sellers and processors) who transport, transform, conserve, process, and sell fish products. A preliminary analysis of fishery value chain would have prevented this by identifying the actors involved at each step of the chain, as well as their roles and relationships and would have sharpened the targeting of project activities in consequence.¹⁷
86. **Rating.** The impact evaluation rates relevance as moderately satisfactory (4). The project was relevant to government policies, IFAD strategies and the needs of the poor, and it kept its relevance through implementation and at completion. However, it had several design deficiencies, which constrained its effectiveness and impact.

¹⁷ A value chain analysis was carried out in 2010 to inform the design of ProPESCA. This was however too late to inform the SBAFP's targeting of beneficiaries.

Key points on relevance

- SBAFP's ambitious integrated livelihoods approach -which focussed on the provision of social and economic benefits to the fishing population- has proven to be a milestone contributor in the development of the artisanal fishery sector in remote rural areas of the country;
- The project's approach was relevant to and aligned with national policies and strategies, as well as relevant to the local context and the needs of the poor;
- The project's design was complex, covering numerous sub-sectors, which has proven to be demanding for implementation and achievement of objectives;
- Some of the social development activities under the project (e.g., health and education) are not areas of core competencies of IFAD. Though important, they added complexity to design, institutional arrangements, implementation and coordination;
- SBAFP could have achieved enhanced results and impact if more attention would have been devoted to synergies between the activities and the components, and if each component would have had its own targeting strategy. Although some adjustments were made at mid-term review (MTR), insufficient attention to targeting and mismatching of activities constrained activities and results under objectives 2 and 3; and
- The project design did not adequately factor in gender equality and women's empowerment.

Effectiveness

87. The findings in this chapter are based on the triangulation of several data and information sources, that go beyond the careful review of project documents, data collected using the indicators in the RIMS and M&E data. These include quantitative and qualitative primary data collected by IOE during this impact evaluation, site visits and inspection of various project activities, and interviews with key informants including Government officials, project beneficiaries, institutions and IFAD's operational staff and others.
88. The second edition of the evaluation manual defines effectiveness as "the extent to which the development intervention's objectives were achieved or are likely to be achieved taking into account their relative importance". Therefore, the assessment of the project effectiveness is structured based on the SBAFP objectives as included in the revised project log-frame. In addition, reference to the theory of change is made as and where appropriate.
89. **Objective 1: To improve the well-being of fishers by empowering fishing communities to take increased responsibility for local development initiatives including implementing social infrastructure and service activities.**
90. **Successful implementation of the project's integrated approach towards improving access to basic social infrastructures and boosting beneficiaries' ownership of project results.** The project adopted an integrated approach to the development of the fisheries sector, which focused on the provision of social and economic benefits to the fishing population that went beyond the development of the fishery sector in terms of production and higher revenues from the sector. The SBAFP aimed at improving the living conditions and strengthening the social capital of the artisanal fishery communities in a broader sense by constructing safe water points, health posts and schools which were highly appreciated by local communities.
91. Despite the difficulties in implementation that led to long construction phases of the various physical infrastructures, as further discussed in the efficiency section of the report, the project managed to achieve or exceed most of the original targets (annex VIII), with the exception of water posts which remained below the target by

30 per cent. The communities were mobilized into school, health and water management councils responsible for the construction activities which increased the participation and responsibility of beneficiaries and fostered a greater sense of ownership of the project development activities. This was one of the key assumption in the ToC towards ensuring the improvement in the access to social infrastructures and their use. However, as further discussed in the sustainability chapter, the success of these councils vary from community to community.

92. SBAFP organized several trainings on health, education and water management which remained below target thus hampering the use and maintenance of the infrastructures and sustainability of the social services created with the support of the project. These constraints to the social development component of the project are also visible in the different surveys carried out by IDPPE, which show modest improvements in the quality of social services at project completion (annex VIII).
93. **Objective 2: Improve the access to, and commercially viable and sustainable utilization of, the Sofala Bank fish and marine resources by artisanal fishers through co-management systems and technical activities.** According to the project log-frame, the achievement of this objective was to be pursued mainly through the (i) promotion of the co-management of fishing resources and the mobilization of fishers in Fishing Group Associations; (ii) demonstrations and trainings; and (iii) research on fishing resources. The ToC shows that the combination of these three activities would have led to a greater diversification of the fishing practices and produce in the medium term (results level) and to an increase in production and productivity in the long-term (outcomes level).
94. **SBAFP supported sound approaches and practices for the co-management of small-scale fisheries¹⁸ which were not in place before the project.** Artisanal communities were mobilized into 65 Community fisheries councils¹⁹ (Conselho Comunitário de Pesca - CCP) and 117 fish group associations (111 per cent of the target).
95. CCPs were at the basis of the co-management approach and provided the much needed tie between the various Fisheries Administrations (i.e. ADNAP, IDPPE and district authorities) and the fishermen. CCPs played an important supporting role in the introduction of new fishing gears and practices, in the control of the use of illegal fishing gear through confiscation and in the mitigation of conflicts between local and in-migrating artisanal fishers, and between artisanal fishers and semi-industrial trawlers²⁰. There was however an imbalance in responsibilities between CCPs and ADNAP regarding enforcement, which will be further discussed in the section of the report on impact on institutions and policies.
96. **The institutionalization of CCPs and the establishment of mechanisms for the functioning of the co-management system did not meet expectations.** Even if the project managed to set up a regulatory framework for their functioning, in fact only 18 CCPs were legalized at completion out of the 65 established by the project.
97. One of the key assumption for the co-management approach to work is the establishment of formal mechanisms to ensure that the artisanal fishery communities are adequately represented. In this regard, the project supported the establishment of a dialogue and conflict resolution platform representing all

¹⁸ The co-management approach to fisheries consists in the division and sharing of responsibilities between the State and potential users in decision-making and joint implementation of measures to optimize the use of fisheries resources and ensure their preservation for the benefit of the current users and future generations.

¹⁹ CCPs are community based organizations elected by locals to represent their constituency as regards fishing and sustainable use of fishery resources. A CCP comprises fishermen, traders and other value chain participants elected by community members. Community leaders and other local players are also invited to join the CCP. The target at design was estimated at 60/70 CCPs.

²⁰ When these conflicts can be solved at community level. Higher level conflicts, for example across provinces, require resorting to the co-management and conflict resolution platform.

fisheries stakeholders²¹ in discussions and decisions regarding fisheries management to ensure that concerns and issues at local level would find their way to higher levels of decision making. However, although established on good principles and still in place, the platform was not effective as further detailed in the sustainability chapter of the report.

98. **Results related to the introduction of viable and sustainable fishing technologies were modest.** The project trained naval carpenters, CCPs members and fishers and conducted demonstrations on improved boat building techniques and use of alternative fishing gears (e.g., hand lines, long lines and gill nets as an alternative to less selective beach seines), with the aim of moving fishers away from the damaging fishing of under-sized shrimp and towards catching under-utilized high value finfish species. It also equipped 13 fishing boats with outboard engines, allowing fishers to go further out to sea and catch higher value species. Table 6 shows that the use of gillnets increased during project implementation. However, this result is modest especially in consideration of the number of people trained by the project in the use of alternative fishing techniques (1,855 according to the RIMS).
99. Field interviews revealed that the aforementioned can be attributed to the limited effectiveness in expanding input/output markets (see objective 3) and the weak extension services offered by the project to promote the adoption of more effective and less detrimental artisanal fishing and handling practices. As further discussed in the section on sustainability, this was due to the difficulties in recruiting skilled extension workers in remote areas and consequent high turn-over.
100. Moreover, the above described results were limited to the output level, as no firm data are available on outcome level indicators such as production and productivity at district level before and after the project.

Table 6
Fishing art

	Total (%)		
	2005	2007	2011
Beach seine	45.6	57.9	45.9
Gillnets	23.2	24.6	35.4
Hand-line	11.4	10.7	6.9

Source: IDPPE impact surveys.

101. **Improved research on fishing resources.** The above efforts in fostering the co-management approach to fisheries and introducing new fishing practices were to be accompanied by a better knowledge of fish stocks. The project was successful in strengthening the capacity of IIP in data collection and analysis (as further discussed under objective 5), and in expanding their research area and statistically cover all three provinces. It is important to acknowledge that, even though the focus remained mainly on collecting catch statistics rather than stock assessments, the quality of the analytical reports collected by the evaluation team during the field mission demonstrates this improvement in capacity.
102. **Objective 3: To improve economic and physical linkages of artisanal fishing communities to input and output markets on a sustainable basis.** The project adopted a holistic approach to improve the access to markets of the artisanal fishers, in particular through construction of physical infrastructures (e.g., roads, points of first sale, storage, ice making machines, etc.), post-harvest

²¹ In particular the organs overseeing fisheries management across all levels of organisation: from CCP at local (municipal) level, confederation of CCPs at district level, CCG (Comité de Co-Gestão) at provincial level (as well as being interprovincial) and CAP (Comissão da Administração Pesqueira) at central level. The full functioning of the platforms and role of each of the organs is detailed in de J. Russo de Sá (2011) A gestão participativa das pescarias. Ministério das Pescas, Administração das Pescas, Maputo. URL: <http://www.adnap.gov.mz/documents/gestao/GESTAO%20PARTICIPATIVA.pdf>

and value addition practices, trading and marketing activities, generation of market knowledge and information and marketing of fish products.

103. **The construction of physical infrastructures was key to improve the access to markets, but ensuring maintenance was challenging.** Isolation is one of the major constraints to poverty reduction in remote rural areas where the project was implemented. IDPPE collaborated with the National Administration for Roads (ANE) to build or rehabilitate feeder roads to improve the connections and reduce transportation costs between remote coastal communities and inland market infrastructures. The design target of 485 km of roads to be rehabilitated by entrepreneurs was surpassed at completion by 167 per cent (annex VIII). Table 7 shows the beneficiaries' perception of improvement in the quality of roads infrastructures after four years from project completion.

Table 7

Improvement in access roads

	<i>Treatment mean</i>	<i>Comparison mean</i>	<i>Difference/ATET</i>	<i>T-stat</i>
	Yes=1; No=0			
Markets	0.776296	0.577415	0.198881	5.99*
Fishing centers	0.734815	0.587427	0.147388	4.4*
First sale markets	0.776296	0.644881	0.131415	4.06*

ATET – Average treatment effect on the treated (for matched data)-Kernel matching.

Note: level of significance *** p<0.01, ** p<0.05, * p<0.1.

Source: IOE impact evaluation survey, 2016.

104. The rehabilitation/maintenance of roads by the community was less successful and outputs only reached about half of the original target. The maintenance activities in general has proven to be problematic, due to: (i) the lack of resources at the provincial road authority; (ii) natural risks like floods and encroachment by grasses; (iii) various challenges in contract management and procurement; and (iv) the lack of good road-making materials. Despite of all these challenges and the absence of data (e.g., increase in traffic, reduction in transport costs etc.), interviews at community level suggested that the road construction activities have been effective in improving access to markets and services.
105. **There have been improvements in post-harvesting and value addition practices, however the use of ice did not spread as envisaged.** To reduce the post-harvest losses and improve the value and commercialisation of fish products, SBAFP promoted the use of good practices in fish conservation and processing. This included techniques ranging from improving the shelf life and value of fish products through drying, smoking or cooking techniques as well as demonstrations on the use of ice that was aimed at improving the commercialization of fresh high value fish. The project also arranged the installation and testing of ice production and cold storage chambers. Final achievements for this sub-component can be seen in annex VIII.
106. The demonstration on the use of ice as an improved fish handling method lagged behind the original target. Data from the IDPPE impact surveys in table 8 shows that at project completion artisanal fishers mainly used drying or salting as a conservation technique or no conservation method at all.
107. The ToC identified two key assumptions for the successful adoption of ice as a new conservation practice: (i) availability of electricity grids; and (ii) willingness of artisanal communities to adopt ice as a new conservation technique. However, none of these two assumptions were sufficiently taken into account. In fact, one of the reasons for the low achievement of ice usage is attributed to the fact that the ice and cold storage facilities for the production of commercial ice depends on public electricity grids, which are slowly being implemented in remote parts of the coasts. Some of these were built by SBAFP to supply the first sale markets, e.g. in Zalala, Zambezia. In addition, interviews with stakeholders during the meeting to

construct the ToC revealed that other two constraining factors were related to the cost and the initial reluctance of the local population, who had not traditionally used ice for conservation purposes and had only small financial capital to be invested.

Table 8
Conservation techniques used by artisanal fishers

	Total (%)		
	2005	2007	2011
None	19.9	23.2	28.5
Ice	9.3	3.4	9.9
Smoked	9.4	13.5	9.6
Dried	29.5	36.0	28.5
Salted	27.6	21.0	20.5
Other	4.4	3.0	2.9

Source: IDPPE impact surveys.

108. Since 2006, the project had been promoting the construction of "points-of-first-sale"²² near the "fishing centres" (i.e. landing sites). Even if the construction target of these points had been exceeded at the end of the project, they have not been used as much as expected by fish traders (only 33 per cent of the expected target). The municipal markets constructed have proven to be more successful, with 119 per cent of the expected traders utilizing these markets and the 103 per cent of the expected target of improved fish sold in these markets. The local availability of fishing inputs, which is a key assumption in the ToC for the successful implementation of the fisheries development and market components, remained however below target. Field interviews revealed that this created discontent among the fishermen about the lack of fishing input supply in the vicinity of smaller fishing centres. Annex VIII, contains the main project targets and outputs for this sub-component of objective 3.
109. All in all, **the construction works and coordination of the activities under this component required time and this delayed and reduced the results and benefits of the whole component to the target group.** In fact, activities related to business counselling services, marketing of fishing products and creation of linkages with the private sector to improve business opportunities remained in infancy.
110. **The improvement in market knowledge and information was limited.** The project set up a market information system, based on market conditions and fish prices, which included notifications using posters or a notice board in fishing communities, to increase the transparency and the negotiating capacity of the fishermen at the landing sites. IDPPE had also established a radio transmission programme on Radio Mozambique to communicate information on fish prices to wide audience. At Praia Nova, Sofala Province, this programme was transmitted in three languages.
111. Even if the information is said to be broadcast beyond the expected target, interviews with project stakeholders revealed that the system has not worked satisfactorily as the prices were not updated on a regular basis. The impact survey conducted by IOE collected data related to information on fish prices. Although it showed that a higher percentage of households receives regular updates on prices in the beneficiary (i.e., the treatment) group, the difference was not statistically significant in relation to the comparison groups, as illustrated below:

²² Multifunctional infrastructures that have a room for fresh fish handling and processing as well as storages for dry fish and insulated boxes, a retail market and some facilities for fresh fish and ice conservation/production depending on the availability of electricity (SBAFP evaluation 2010, page 14).

Table 9
Update on prices

	<i>Treatment mean</i>	<i>Comparison mean</i>	<i>Difference/ATET</i>	<i>T-stat</i>
Matched	0.651852	0.426359	0.225493	6.53
Unmatched	0.651852	0.415954	0.235897	7.25

ATET – Average treatment effect on the treated (for matched data)-Kernel matching.

Note: level of significance *** p<0.01, ** p<0.05, * p<0.1.

Source: IOE impact evaluation survey, 2016.

112. **Objective 4: To increase commercial and economic activity in the artisanal fisheries sector.** The achievement of this objective required an increased presence of formal and informal financial institutions that are accessible to members of the fishing communities.
113. The project facilitated the creation of financial assets through: (i) support to informal credit through the creation of Accumulating Savings and Credit Associations (ASCAs) in the artisanal fishing communities; and (ii) support to formal credit through a US\$1.2 million credit line to FFPI, a publicly owned development fund.
114. **Impressive achievements in linking beneficiaries to informal microfinance institutions. However, the creation of effective links with the formal financial sector is a missed opportunity.** 1,187 ASCAs²³ were created against a target of 600. ASCAs were created through various non-governmental organizations (NGOs)²⁴ and had the objective to target the poorest sections of the community and women. The project managed to reach 20,077 members, of which 46 per cent were women. Taken together, ASCAs were able to collect a total MZM 41 million savings and approved credit of MZM 51.7 million during project implementation. These are remarkable achievements for poor rural families in areas where access to credit was (and it is) difficult, very few banks were present and the demand for financial services was high. However, the evaluation is unable to compare with the situation at design as the target number or value of loans was not set. The project only monitored outputs with limited attention to outcomes and impacts.
115. The formal credit activities were meant to increase commercial and economic activity in the artisanal fisheries sector under the responsibility of FFPI. It has been documented that FFPI's management of the lending processes have been unsatisfactory in Nampula and Zambezia, whereas Sofala has achieved some positive results. The negative performance is mainly due to poor loan repayment rates and unsatisfactory client liaison and portfolio management. Fishers in Mozambique has for decades operated in a system whereby the public sector subsidised fishing inputs and compensated for loss of equipment leading to a culture of government dependency. As such, fishermen simply considered the loans from FFPI to be a grant. This entailed that the off-farm financial services (e.g., financial literacy trainings) supported by the project did not contribute to increase the understanding of financial responsibility and induce a behavioural change in the communities, as envisaged in the ToC. This would have been key to mitigate the risks associated with investments in smallholders' activities and would have helped in attracting private sector investors and banks.
116. FFPI's performance was better in Sofala as it has been the last province in the implementation process and the project was able to learn from previous failures. Also, the Sofala IDPPE delegation proposed the introduction of two innovative financial products that have shown good performance: (i) an investment loan

²³ The ASCAs accumulate savings in weekly or monthly meetings. In each meeting, very short-term loans (normally one month) are issued to members at the interest rate of 10 per cent per month. The savings cycle lasts 9-12 months after which all the capital and the interest earned are distributed to members according to savings balances

²⁴ OPHAVELA in Nampula; ADEM in Sofala; and KULIMA in Zambezia.

whereby the borrower is required to contribute upfront with 30 per cent of the value of the asset while the ownership of the asset remains with FFPI until the loan is fully repaid; and (ii) loans specifically targeted to members graduating from an ACSA group. The former was particularly successful for the leasing of outboard engines for fishermen.

117. All in all, the effectiveness of this component shows mixed results. Even if the project succeeded in mobilizing ASCAs at community level, it did not succeed in realizing their full social and economic potential by linking these savings groups with formal financial institutions and commercial banks for productive credit and other forms of financial services for livelihood enhancement. It did not put enough emphasis on value-addition, promotion of market linkages as well as creation of micro-enterprises. Discussions at provincial and village levels suggest that this was due to the lack of a clear strategy on rural enterprise development, which constrained overall outcomes.
118. **Objective 5: To improve the enabling policy environment for promoting and supporting artisanal fisheries development.**
119. **The project significantly strengthened the presence and capacities of the institutions responsible for managing artisanal fisheries.** At provincial level, the project facilitated the establishment of IDPPE delegations and provided training to staff and extensionists, which allowed IDPPE to better fulfil its role of overseeing the development of the artisanal fisheries sector. IDPPE's Delegations were equipped with much needed facilities such as computers, motorbikes and cars. IIP was equipped with laboratories and sampling equipment and vehicles to reach landing sites and communities to directly work with and assist fishermen and staff was trained on data handling and statistics.
120. As discussed in previous paragraphs, good progress was also registered with empowering fishing communities. For example, SBAFP strongly contributed to enhancing the capacities of CCPs on important issues such as safety at sea, fishers' census, licenses collection and conflict resolution. However, as further discussed in the sustainability chapter, many groups remained fragile.
121. **The development of the Plano Estratégico para o Sector da Pesca Artesanal (PESPA, 2006- March 2016) stands out as one of the highest achievement of the project.** The project contributed to the establishment of a normative framework of policy and legislation in favour of artisanal fishing, and the adoption of a corresponding strategy (PESPA) in November 2006²⁵. With the adoption of PESPA, three important fisheries management measures to the benefit of the artisanal sector were promoted: (i) three-mile exclusion zone, within which only small-scale fishers may fish; (ii) differentiated closed fishing seasons between the artisanal and industrial sector, dates and duration of the closed season are determined by IIP on the basis of their catch data collection and analyses and recommended to ADNAP for implementation; and (iii) minimal mesh sizes. Overall, the specific attention given to small-scale fisheries is noteworthy.
122. **Effectiveness in outreach.** Overall, the project calculated to have reached 87,600 direct beneficiaries (12 per cent below target) and 438,000 indirect beneficiaries (almost 10 per cent above target), of which overall, 51 per cent were women²⁶ even though the project did not have gender disaggregated targets, nor gender disaggregated outputs for all activities.

²⁵ PESPA and includes the following key elements: (i) the extension of the artisanal fishing zone from one (instigated under the NAFFP) to three miles; (ii) the adoption and enforcement of the electronic satellite-based Vessel Monitoring System (VMS) which enables the identification of industrial and semi-industrial fishing boats that encroach the exclusive artisanal fishing zone; (iii) the formalisation of the principles and practice of co-management by the Government and fishing communities for the proper utilization and conservation of the fishing resources and fishing equipment; (iv) introduction of a differentiated closed season management regime for artisanal and industrial fishing.

²⁶ Project Completion Report, page 6 + page 12.

Table 10
Target population

	<i>Total</i>	<i>Direct</i>	<i>Indirect</i>	<i>Women</i>	<i>Men</i>
Target number of beneficiaries	500,000	100,000	400,000	n/p	n/p
Actual number of beneficiaries	525,600	87,600	438,000	n/p	n/p
%	105.1%	87.6%	109.5%	51%	49%

Source: SBAFP's Project Completion Report (2012).

123. Even though the project managed to exceed the number of indirect beneficiaries, better identification of each stakeholder's role could have improved the effectiveness of outreach and targeting to direct beneficiaries. In fact, in addition to what has already been highlighted under relevance, fish traders and processors (which can often be the same people) should have been recognized as important direct beneficiaries instead of secondary beneficiaries²⁷ and targeted under the market component to increase effectiveness.
124. **Rating.** The SBAFP is considered by stakeholders and beneficiaries as a milestone in the development of the artisanal fishery sub-sector due to its integrated livelihood approach, which delivered tangible results beyond fishery development in remote fishing areas. The project reached a slightly greater number of people than originally planned, helped fishery communities to get organized in groups, promoted a culture of savings and credit, created rural infrastructure, and contributed to establish the basis for the future enhancement of the fishery value chain. These are positive achievements.
125. At the same time, however, the project did not manage to take the activities promoted to the next level as envisaged in the five specific objectives, to promote wider rural transformation through backward and forward linkages to markets, more effective and less detrimental artisanal fishing practices for the sustainable development of the Sofala Bank or greater attention to economic activities that would generate better incomes and livelihoods. It did some ground work towards the diversification of the economic base of the rural poor through improved post-harvesting activities, but it did not fully achieve this objective. The involvement of the private sector and the development of fisheries small and medium enterprises and relevant linkages remained at an embryonic level. These shortcomings may have been a price to be paid for the broad ambitious approach and substantial involvement in the development of social infrastructure rather than a stronger focus on fisheries management from the start of the project. All in all, the evaluation rating for effectiveness is moderately satisfactory (4).

²⁷ Within this target group, the primary beneficiaries consist of 290 fishing communities in the above described project area along the coast encompassing 26,000 fishers and their families. The secondary beneficiaries consist of (i) an estimated 2,300 **fish traders, fish processors**, boat builders, craftsmen, artisans and other economically active groups within the coastal communities; and (iii) families that provide labour along the access roads rehabilitated by the project belong to the secondary beneficiaries.

Key points on effectiveness

- The project made a useful contribution to policy formulation and legislation favouring the artisanal fisheries sector, which is indeed an important achievement. It also positively helped strengthening of institutions in the sector;
- It reached more beneficiaries (direct and indirect) as compared to design targets, and man to women ratio of beneficiaries is extremely high (51 per cent women as compared to 49 per cent men beneficiaries);
- Effectiveness was promoted by the rehabilitation of rural roads, even though their maintenance remains a challenge;
- By introducing improved technology, the project aimed to improve fish production and productivity. However, no firm data are available on outcome level indicators at district level before and after the project. Moreover, field interviews confirmed that the extension services to promote the adoption of more effective and less detrimental artisanal fishing and handling practices were inadequate;
- The project promoted several techniques to improve fish conservation and processing. However, the use of ice for storage and conservation lagged behind; and
- The number of savings and credit associations created have exceeded design targets, making financial services available in rural areas. However, repayment rates have been low, partly because portfolio management and client relations by FPPI has not been satisfactory.

Rural poverty impact

126. As outlined in the methodology section, the evaluation used a mix-method approach applying quantitative quasi-experimental²⁸ and qualitative participatory methods. In the absence of a robust baseline, the evaluation used propensity score matching (PSM) to control for bias, and matched treatment and comparison groups with high comparability.
127. Hence, if there is a positive difference in impact between treatment and comparison groups, and if this difference is found to be statistically significant, it can be attributed to the project's intervention, keeping in mind the methodological limitations highlighted in paragraph 31-32.

Income and assets

128. **Findings from the impact survey.** Table 11 shows that the percentage of households living above the poverty line is higher in the treatment group in relation to those in the comparison area. The evaluation also found a significantly higher household monthly income for the treatment group, in relation to those in the comparison group. It is important to note that the data have been collected at household level and not at individual level. Therefore, an income of US\$102 a month - which corresponds to US\$3.90 a day - means that the household as a whole is above the poverty line of US\$1.90 a day. However, if the same amount is shared among an average number of 5 members per family, the single member of the family is below the poverty line.
129. Bearing in mind the limitations of analysing the impact on income levels before and after the project through recall questions, the evaluation made an attempt to reconstruct the baseline for the average monthly income by including recall questions in the survey. The proportional increase in monthly income for the households in the treatment group is 15 per cent, which is slightly higher than the proportional increase for the households in the comparison group which is 11 per cent.

²⁸ In absence of random assignment of treatment, comparison groups with similar characteristics are selected.

Table 11
Households above the poverty line and monthly income

	<i>Treatment mean</i>	<i>Comparison mean</i>	<i>Difference/ATET</i>	<i>T-stat</i>
Households above the poverty line of USD 1.90 /day				
matched	0.8846	0.7656	0.119	7.531***
Households monthly income in 2015 (USD)				
Matched	102.4034	88.5974	13.806	2.545**
Households monthly income 10 years ago (USD)				
Matched	88.9008	79.3818	9.519	1.922

ATET – Average treatment effect on the treated (for matched data)-Kernel matching.

Note: level of significance *** p<0.01, ** p<0.05, * p<0.1.

Source: IOE impact evaluation survey, 2016.

130. The evaluation measured the impact on assets through the standard of living index, which is an aggregated score of 33 household assets and housing characteristics. Based on the index, the household population has been divided into five equal groups of 20 per cent each (quintiles), where 1 is very low (poorest) and 5 is very high (wealthiest). Table 12 shows that the standard of living index at household level is better in the treatment group and this is consistent with the fact that the treatment group has better income levels in relation to the comparison group.

Table 12
Standard of living index

	<i>Treatment mean</i>	<i>Comparison mean</i>	<i>Difference/ATET</i>	<i>T-stat</i>
Matched	0.1839	-0.3441	0.528	11.182***
Unmatched	0.1839	-0.3532	0.5371	10.284***

ATET – Average treatment effect on the treated (for matched data)-Kernel matching.

Note: level of significance *** p<0.01, ** p<0.05, * p<0.1.

Source: IOE impact evaluation survey, 2016.

131. **Explaining the drivers and inhibiting factors of project impact on income and assets.** The ToC identifies three main mutually reinforcing conditions for the achievement of improved incomes and assets for the AFCs: (i) the expansion of the fishing area through the promotion of new sectoral laws (pursued under objective 5) and the diversification of fishing practices and gears (pursued under objective 2) leads to increased production and productivity of the artisanal sector; (ii) the access to input and output markets (pursued objective 3) improves the quality and value of the produce through better post-harvesting activities, expands the linkages with the private sector and creates better business opportunities for the commercialization of the artisanal produce; (iii) the access to formal and informal microfinance institutions (pursued objective 4) leads to increased personal savings and improved investment capacity in the artisanal fishery sector.
132. **The contribution of the project to the expansion of the fishing area through the formulation and adoption of sectoral policies and the diversification of fishing practices and technologies resulted in a slightly higher fish production of the beneficiary group.** Table 13 shows that the treatment group saw a greater increase in the quantity of catch (production) in the last 10 years in relation to the comparison group.

Table 13
Increase in the quantity of catch in the last 10 years

	<i>Treatment mean</i>	<i>Comparison mean</i>	<i>Difference/ATET</i>	<i>T-stat</i>
	Yes=1, No=0			
Matched	0.499241	0.375686	0.123555	3.55*

ATET – Average treatment effect on the treated (for matched data)-Kernel matching.

Note: level of significance *** p<0.01, ** p<0.05, * p<0.1.

Source: IOE impact evaluation survey, 2016.

133. As discussed under effectiveness, the project facilitated the introduction of key laws such as the 3 miles exclusion zone and the closed season, which, as also confirmed by the interviews held at community level and key informants from the associations and government, protected the areas of artisanal fishing and contributed to improve artisanal fishers' access to marine resources.
134. Moreover, the impact survey found a positive and significant correlation between participation in the project and the access and uptake of innovative fishing gears, such as boats and gillnets, which both had a positive impact on the production in the treatment group (table 14). Yet, interviews with local communities confirmed that fishing inputs are still mainly available only in larger urban centres.

Table 14
Access and uptake of innovative fishing gears

	<i>Treatment mean</i>	<i>Comparison mean</i>	<i>Difference/ATET</i>	<i>T-stat</i>
	Yes=1, No=0			
Do you use the same fishing material as 10 years ago?				
Matched	0.45827	0.555479	-0.09721	-2.76*
Households that own a boat				
	Yes=1, No=0			
Matched	0.7367	0.5217	0.2150	7.9520***
<u>With engine</u>	0.09763	0.0383	0.058	4.440**
<u>Without engine</u>	0.3210	0.211	0.110	7.691***

ATET – Average treatment effect on the treated (for matched data)-Kernel matching.

Note: level of significance *** p<0.01, ** p<0.05, * p<0.1.

Source: IOE impact evaluation survey, 2016.

135. The impact survey found that the above is accompanied by a **remarkable impact in the access to informal microfinance (through ASCAs) which led to increased personal savings and improved investment capacity in the artisanal fishery sector**. The impact survey found that the access to savings and credit and the level of productive investments, are significantly higher in the treatment area (annex IX). This reflects the project's efforts in promoting microfinance, though at an informal level. The focus group discussions also confirmed that the creation of the ASCAs by the project contributed to increasing the availability of savings facilities and small loans to artisanal fishers in the project area in the past 10 years. Along the same lines, the impact survey revealed that households benefitting from better access to micro-finance have often invested funds in procuring improved fishing gears, such as gillnets (table 15).

Table 15
proportion of households by type of investment

Type of investment		Treatment mean	Comparison mean	Difference/ ATET	T-stat
Boats	Matched	0.0740	0.0480	0.0260	1.7020*
Canoe	Matched	0.1361	0.1051	0.0310	1.367*
Gillnets	Matched	0.3610	0.1830	0.1780	4.980***
Fishing net	Matched	0.1923	0.1207	0.1083	3.6381***
Hooks	Matched	0.1799	0.1379	0.0420	0.5480
Fish processing	Matched	0.0799	0.0279	0.0520	4.0810**
Ice-machine	Matched	0.0110	0.0000	0.0110	2.2720**
Bicycle/motorcycle	Matched	0.0814	0.0514	0.0300	2.0540**

ATET – Average treatment effect on the treated (for matched data)-Kernel matching.

Note: level of significance *** p<0.01, ** p<0.05, * p<0.1.

Source: IOE impact evaluation survey, 2016.

136. **Better physical access to markets through infrastructure development by the project and improvements in post-harvesting activities resulting from the training activities are still visible today and laid the basis for the development of the sub-sector.** As discussed in the effectiveness chapter under objective 3, investments in roads have given remote fishing areas access to markets and services. The construction/rehabilitation of markets and first point sale has improved the quality and handling of the overall merchandise sold, reducing spoilage and risks of potential infections from lack of hygiene. In a context where infrastructures were missing before the project, these achievements are remarkable and indirectly contributed to better incomes.
137. Table 15 above shows that project investments in fish processing and conservation assets, aimed at reducing post-harvesting losses and better diversification and improvements in the quality and value of fish production, are also significantly higher in the treatment group. This is further supported by the finding that a slightly higher percentage of fishers in the treatment group has experienced a reduction in the loss of catch in the last 10 years in relation to fishers in the comparison group (table 16).

Table 16
Reduction in the loss in the quantity of catch in the last 10 years

	Treatment mean	Comparison mean	Difference/ ATET	T-stat
Matched	0.760243	0.607545	0.152698	4.57*

ATET – Average treatment effect on the treated (for matched data)-Kernel matching.

Note: level of significance *** p<0.01, ** p<0.05, * p<0.1.

Source: IOE impact evaluation survey, 2016.

138. Interactions the evaluation team had with market associations revealed that first sale markets, and the ice-making machines and conservation facilities (cold chambers) they host and which were provided by the project, constituted an important improvement in the organisation of the first stages of the fish value chain. The flexibility they give in conserving high value fish for sale at a later date or sale further afield is a considerable improvement from the past situation.
139. By and large the acquired knowledge and skills from fish handling trainings and post value-addition techniques are still visible today. The project also helped diversification and fabrication of fish by-products (e.g. scales and skins) into non-food, fashion items including purses, rings and earrings. This was possible thanks to the training imparted under the project to CCP and women's groups'.
140. **However, the linkages with the formal financial sector and private sector actors along the fishery value chain remain weak and constrain impact on**

productivity and on the income base of artisanal communities. The evidence suggests that ASCAs are still mainly used by individuals for savings. The evaluation did not find much evidence that these groups have been federated into viable institutions with greater voice and capability to link to formal and/or commercial financial institutions. Both the quantitative and qualitative analysis found that the amounts invested in productive activities, which could have been financed by taking credit from ASCAs, are very small, and the difference between treatment and comparison groups is not statistically significant (annex IX).

141. The above indicates that by and large ASCAs remained weakly linked to fisheries activities and did not manage to promote higher investments in fisheries technological innovations, which require the availability of bigger amounts of financial capital for acquisition and maintenance over the years. For example, as shown in table 14, only 9.7 per cent of the households in the treatment group owns a boat with engine. Higher investments in boats with advance technologies would have contributed to further expand the produce and increase productivity by fishing in open sea and reduce effort and time spent in the sea, enabling fishers to diversify their income base with alternative economic activities. Both the quantitative and qualitative analysis confirm that the main income generating activity is still fishing and, by and large, the portfolio remains mainly composed by on-farm small scale activities (annex IX).
142. Along the same lines, notwithstanding the improvements discussed before and the better situation of the treatment group, investments in ice machines and the use of ice remain low in the project area due to the cost of the ice and the cost related to the use cold chambers²⁹. Interviews with local associations revealed that traders and processors are aware of the importance of using ice for increasing the value of the catch by commercializing a fresh product, yet only 10 per cent of the treatment group use ice in order to conserve the catch (table 17) as it requires the availability of larger amounts of financial capital which are still limited in the project areas.

Table 17

Proportion of households that use ice as a conservation technique

	<i>Treatment mean</i>	<i>Comparison mean</i>	<i>Difference/ATET</i>	<i>T-stat</i>
Matched	0.1050	0.036	0.069	3.796**

ATET – Average treatment effect on the treated (for matched data)-Kernel matching.

Note: level of significance *** p<0.01, ** p<0.05, * p<0.1.

Source: IOE impact evaluation survey, 2016.

143. The above weaknesses can be attributed to the fact that the public financial facilities targeted by the project to provide loans (e.g., FFPI) were not properly structured and licensed to play a lasting role in retail finance. While private institutions that can potentially play that role were not sufficiently involved and keep showing little interest in investing in the artisanal fisheries sector, due to its persistent high risks and vulnerability.
144. As a consequence, the evaluation did not find much evidence of increased business opportunities for small-scale fishers which were supposed to be created by linking private sector operators along the various stages of the fishery value chain. To provide an example, and as mentioned in previous paragraphs, local demand of fishing inputs is not yet matched by an adequate local supply that would reduce travel and additional expenses by artisanal fishers.
145. Moreover, better linkages with the private sector could have been fostered by the increased knowledge and dissemination of fishing gears and fish prices which could have improved the productivity and bargaining power of artisanal fishers, a key assumption in the ToC. The dissemination of prices initiated by the project ended at

²⁹ 100 MZN per day for every 20 kilo of fish stored, as compared to 10 MZN per 50 kilogram-bag of dry fish stored at the market.

project completion, compromising sustainability of benefits, as will be further discussed in the chapter on sustainability.

146. In sum, the private sector has been one of the most prominent missing links in the artisanal fisheries value chain, leaving individual fishers themselves to take up entrepreneurial initiatives, for which they are not yet adequately equipped.

Key points on income and assets

- The percentage of households living above the poverty line is higher in the treatment group in relation to those in the comparison area. The evaluation also found a significantly higher household monthly income for the treatment group in relation to those in the comparison group. Ownership of assets is better in beneficiaries households;
- The project contribution to the expansion of the fishing area through the formulation and adoption of sectoral policies and the diversification of fishing practices and technologies resulted in a slightly higher fish production of the beneficiary group;
- SBAFP had a positive impact in the access to informal microfinance (through ASCAs) which led to increased personal savings and improved investment capacity in the artisanal fishery sector. Also, better physical access to markets through infrastructure development by the project and improvements in post-harvesting activities resulting from trainings activities are still visible today and laid the basis for the development of the sub-sector. These are remarkable achievements considering the context in which the project was implemented; and
- Yet, the linkages with the formal financial sector and among private sector actors along the fishery value chain remain weak. This limited wider impact and transformation of the artisanal communities.

Fishery productivity and food security

147. **Fishery productivity and food security remain an area of challenge.** There are no secondary data available on productivity at district or provincial levels. However, the impact survey contained some questions from which the evaluation could assume that the impact on productivity was marginal. First, as shown in table 14, the majority of boats are without engine, which, as mentioned earlier, would have allowed fishermen to diversify their produce by fishing in open sea. Second, there have been some improvements in the price of fishing inputs in the last 10 years in the treatment area as compared to the comparison group. However, the difference is not statistically significant, and in fact, the vast majority of the households interviewed do not consider the prices to have improved much (annex IX).
148. With regard to food security, the evaluation used the food consumption score (FCS)³⁰ as a key indicator to measure food security. FCS captures diet diversity as well as frequency of consuming different food types over a reference period. Table 18 shows a marginally better food security situation in the comparison areas.

Table 18

Food consumption score

	<i>Treatment mean</i>	<i>Comparison mean</i>	<i>Difference/ATET</i>	<i>T-stat</i>
Poor=1, Bordeline and Acceptable=0				
Matched	0.032593	0.041332	-0.00874	-0.66

ATET – Average treatment effect on the treated (for matched data)-Kernel matching.

Note: level of significance *** p<0.01, ** p<0.05, * p<0.1.

Source: IOE impact evaluation survey, 2016.

³⁰ The FCS is a frequency-weighted diet diversity score calculated using the frequency of consumption of different food groups consumed by a household for a recall period of seven days. The food items are categorized into nine main food groups: cereals; starchy tubers and roots; legumes and nuts; meat, fish, poultry and eggs; vegetables (including green leaves); fruit; oils and fats; milk and dairy products; and sugar or sweets. Based on FCS, community are divided into three categories namely poor FCS, borderline FCS and adequate FCS.

149. The above finding is substantiated by the analysis on food availability at household level. Nearly 50 per cent of the beneficiaries households affirmed an improvement in the availability of food. This is higher than those in the comparison group. The majority, in time of crises, however reduces the number of meals per day. Finally, most of the households in the treatment group use less than 10 per cent of fish they catch for their own consumption (annex IX). These findings are not surprising, considering that the project did not develop a strategy on food security and nutrition, nor collected impact data.

Key points on fishery productivity and food security

- The project did not have a strategy on food security and nutrition nor collected impact data. The evaluation did not find evidence of improvement in food security and fishery productivity.

Institutions and policies³¹

150. **The project was instrumental in setting into motion an impressive process of institutional change and reform in the sector which culminated in the adoption of PESPA.** The effects of this important institutional change are still visible today and tailored to the decentralized administration of the Government of Mozambique. As anticipated by the findings at results level (i.e., under effectiveness) and in the previous section on incomes and assets, there is no question about its conduciveness to the sustainable development of artisanal fisheries and better environmental management of the Sofala Bank³².
151. SBAFP nurtured sound provincial level approaches and practices for the co-management of small-scale fisheries which were not in place before the project and became enshrined in PESPA. The project played a key role in supporting the decentralization process initiated by the Government by ensuring and consolidating the presence of IDPPE in the three provinces. IDPPE provincial offices are still there and in good conditions although the one in Zambezia would require some renovation work and further investments in equipment. IDPPE presence at provincial level was key to promoting the participation of the poor in local planning.
152. The established CCPs, are considered key contributors to the improved governance of the fisheries sector at community level and keep playing an important supporting role. These organizations continue to support the implementation of artisanal fisheries management measures by conveying messages about the importance of sustainable fishing practices and the conservation of fisheries resources through the use of alternative fishing gear. By doing so, CCPs continue to promote the responsibility of fishers in the management of marine resources and facilitate information flows between fishing communities and fisheries authorities.
153. **However, there have been shortcomings in the co-management approach and enforcement process of the management measures stemming from PESPA,** which have constrained a further increase in production and the overall improvement of the management of the fisheries of the Sofala Bank. One of the key assumption in the ToC is related to the existence of mechanisms to ensure the representation of the artisanal communities at the highest level and mitigate conflicts. As discussed in the effectiveness chapter, the dialogue and conflict resolution platform is not delivering the expected benefits to the artisanal communities for several reasons.
154. First, meetings occur in Maputo and this limits the participation of artisanal fishermen due to logistical and financial issues. Second, the number of seats available in the platform for artisanal fishermen is low as compared to those reserved for the (semi) industrial sector. Third, the variety in needs and issues

³¹ "Institutions" refer to government institutions, not private or civil society institutions of beneficiaries.

³² When directly related to the institutions and policies component of the project. The impact – Natural Resources/Environment section. deals with it in relation to the fisheries development of the project.

among artisanal fishermen coming from different areas along the coast is underestimated and limits the capacity of the few representatives from the artisanal sector to provide a united voice to influence decision making at the policy level. This challenges the sustainability of the platform as well as its impact on fisheries management.

155. With regard to the enforcement process, ADNAP's efforts in the enforcement of fisheries management measures are more focused on the shrimp fishing industry (e.g. monitoring of the trespassing of the 3-mile limit by trawlers, total allowable catches), and less so on small-scale fisheries management, such as the use of the illegal nets, due to the limited role that it was given in the project.
156. Instead, this task tends to be fulfilled by CCPs, who have thus taken up a de-facto, informal, enforcement role limited to the confiscation of illegal nets (e.g. small mesh size, xicocotas). However, the legal status of CCPs does not confer them any power to fine fishermen for infringing fishing restrictions. Despite improvements in the overall awareness of the fragility of the marine and coastal environments, infringing is still prevalent and CCPs' actions in controlling the fishing pressure is limited to catching lawbreakers and confiscating their nets on the spot.
157. **PESPA recognizes the importance of developing linkages to formal micro-finance institutions and markets, but it did not promote any relevant conducive policies.** As highlighted by the theory of change, an enabling and conducive policy environment is key to an efficient financial and market system. In this regard, the need to establish a linkage with the formal financial sector and markets is well-acknowledged in PESPA. However, the document is rather concise as regards the ways and means to establish a bank and market linkage model. This weakness in the regulatory framework is a key determinant of the shortcomings of the project in improving the linkages with the formal financial sector and among private sector actors along the fishery value chain which were analysed in the income and assets pathway.
158. The planned renewal of PESPA with the support of the World Bank provides an opportunity to address the above issues related to the enforcement process and access to formal microfinance and input/output markets.

Key points on institutions and policies

- The project was instrumental in setting into motion an impressive process of institutional change and policy reform in the sector, which is still in place and tailored to the decentralized administration of the Government of Mozambique;
- However, there have been shortcomings in the co-management approach and enforcement process of the management measures stemming from PESPA, which have constrained a further increase in the artisanal fisheries production and the overall improvement of the management of the fisheries of the Sofala Bank; and
- These shortcomings also concern the ways and means to establish a bank and market linkage model which are not adequately explored in PESPA.

Human and social capital empowerment

159. This impact pathway concerns SBAFP impact on: (i) human capital, in terms of improved access to basic infrastructures, better capacities acquired through trainings and higher level of awareness; and (ii) social capital, in terms of promoting participatory and co-management approaches and strengthening community-based associations.
160. **The SBAFP strongly contributed to improved human capital in project areas,** mainly through investments into social infrastructure that had a positive impact in the access to water, health, and education of poor artisanal fishery communities and in the quality of these services.

161. The investment of the project in water facilities resulted in a higher percentage of beneficiary households (i.e., the treatment group) that have access to better infrastructures, and in particular to wells/boreholes with hand pump, as compared to the comparison group (table 19).

Table 19

Main source of water

	<i>Treatment (%)</i>	<i>Comparison (%)</i>
Piped water in the house	1.7	0.3
Piped water outside the house	11.0	1.4
Water from the fountain	13.3	0.6
Water from the well/borehole with hand pump	27.8	6.6
Water from the well without hand pump	41.0	84.0
Water from the river/ lake/pool	.8	0.3
Other	4.5	6.9
Total number of respondents	663	349

Source: IOE impact evaluation survey, 2016.

162. The percentage of households that perceived an improvement in the main source of drinking water and in its quality in the last 10 years is higher in the treatment area than the comparison area (complete set of data in annex IX). Moreover, the treatment group has the largest share of respondents (35.6 per cent) that perceived a reduction in distance to the source of water in the last 10 years in relation to the comparison group (11.4 per cent).
163. Along the same lines, a higher percentage of households in the treatment group in relation to the comparison group reported an improvement in the access to and physical conditions of the health facilities due to the rehabilitation work from the project (annex IX).
164. Although most of the above differences between the treatment and comparison groups are not statistically significant, field interactions with households in the treatment group suggest that beneficiaries in fishing communities attribute their overall good health status to the increased availability of drinking water combined with the improved access to health infrastructures rehabilitated by the project. In particular, women groups mentioned the provision of antenatal and postnatal care (including HIV testing) as one key driver of better health. This achievement triggered greater confidence in the provision of health care and today women of the communities that benefitted from the project recommend to other women to visit the health centers.
165. Yet, direct field observations and interviews confirmed that most of the water points constructed by the project are not functioning due to design faults (e.g., wells/boreholes not deep enough to cope with variations in water table levels in dry seasons) or to lack of maintenance. Community members seemed very critical in this regard, and in particular women as the lack of water is causing them increased hardship and the lack of latrines is seen as a potential threat to safety.
166. Moreover several health units are still without maternity care and poorly equipped, or without trained staff. Another important point raised during the focus group discussion concerns the fact that by and large public transport, that would further facilitates the access to these infrastructures, does not exist.
167. With regard to access to education, the project rehabilitated several existing schools in the treatment area and this was acknowledged during the focus group discussions, which revealed that before the project many children were forced to study at the open air or under a tree. The percentage of school attendance is high

in both groups for both girls and boys and this can be attributed to the fact that in Mozambique the primary school is mandatory by law.

168. At the same time, the drop-out rate of girls in higher grades continues to be significant. The interviews at community level revealed that this is linked with the lower position of women in rural society where the tradition of early marriage (and consequent early pregnancies) prevails, and the general low priority given to girls' education within the households. In this regard, the presence of a gender strategy at design would have helped in addressing these issues and raising awareness at households level on the need for a more balanced relationship between men and women, and the transformational role women (and especially educated women) can play in broader social and economic development activities.
169. Finally, the project organized various types of trainings to build the capacities of the artisanal fishery communities. Nevertheless, the effectiveness of these trainings remained below target. This is confirmed by the results of impact survey, which suggest that only 5.6 per cent of the surveyed households had members that received any training. The qualitative data reveals that the trainings were mostly limited to association members, particularly impacting on the CCP members and women as further described in the gender chapter.
170. **With regard to social capital and empowerment, the project is a milestone in terms of actively engaging the artisanal fishery communities in local development processes and their empowerment towards local governments.** Some communities visited during the field mission still have fully functioning and active health and education councils overseeing the functioning and, to a limited extent, the maintenance of the facilities under their care. In instances where the health and school councils were not active, there were intentions to revive them.
171. **Yet, the participation in associations is low in the project area after four years from completion** and that the difference with the comparison group is not significant (table 20). One of the key reasons for the low coverage, which emerged from the focus group discussions, is linked to the fact that the project is no longer providing support or capacity building trainings. The lack of compensation and opportunity to acquire skills pushes them to leave the groups. Moreover, interviews with members of fishermen associations and ASCAs highlighted that the associations established with the support of the project lacked an appropriate long-term vision and linkages with banks, markets and mainstream institutions as further detailed in the sustainability chapter.

Table 20

Member of the household who belong to any association

	<i>Treatment mean</i>	<i>Comparison mean</i>	<i>Difference/ ATET</i>	<i>T-stat</i>
Matched	0.0390	0.029	0.010	0.772

ATET – Average treatment effect on the treated (for matched data)-Kernel matching.

Note: level of significance *** p<0.01, ** p<0.05, * p<0.1.

Source: IOE impact evaluation survey, 2016.

172. **The project contributed to raise awareness and knowledge about key policies introduced by PESPA (e.g., mesh size, boundary, closed fishing season etc.) in the treatment group.** This is important as the level of awareness of local communities of key government policies determines their capacity to access entitlements as well as to contribute to the sustainable management of the Sofala Bank fish resources. In this regard, the impact evaluation assessed that the treatment households have a better knowledge of government policies as compared to non-beneficiaries households (annex IX).

Key points on human and social capital empowerment

- The SBAFP strongly contributed to improved human capital in project areas, mainly through investments into social infrastructure that had a positive impact in the access to water, health, and education of poor artisanal fishery communities and in the quality of these services;
- With regard to social capital and empowerment, the project is a milestone in terms of actively engaging the artisanal fishery communities in local development processes and their empowerment towards local governments;
- Yet, the participation in associations is low in the project area after five years from completion the project is no longer providing support or capacity building trainings. the associations established with the support of the project lacked an appropriate long-term vision and linkages with banks, markets and mainstream institutions.

Overall assessment of rural poverty impact

173. The impact evaluation assess the overall rural poverty impact of the SBAFP as satisfactory (5). The project had remarkable impacts in a complex and remote context where before the SBAFP basic amenities, markets and microfinance services were inexistent and the voice and interest of the artisanal fishermen were neglected.
174. This takes into consideration better incomes and assets among beneficiaries, improved access to social and market infrastructures, as well as better participation in grass-roots institutions. The provision of microfinance services supported the creation of a culture of savings and small investments by artisanal fishermen.
175. The overall strengthening of IDPPE's capacity and competencies in managing complex, large-scale fisheries development projects and funds, and in collaborating across fisheries and non-fisheries institutions, has been a significant step towards the creation of the enabling and supportive institutional environment that integrated projects such as SBAFP require to make a difference. It was also fundamental for laying the grounds required for the successful implementation of the SBAFP successor project, ProPESCA.
176. PESPA's 10-year vision for the artisanal fishing sub-sector emphasized, alongside fishing, social and environmental progress. Looking back at the developments intended for the sub-sector and achievements at project end, SBAFP was instrumental in providing the targeted assistance needed to step up progress towards the development vision for artisanal fisheries. Although some progress may have been unevenly achieved across the pillars of the vision, PESPA nonetheless provided the sub-sector with the coherent framework it needed to guide interventions towards better livelihoods of artisanal fishers.
177. However, more could have been done to achieve greater impact and ensure that the project could realize its full potential and achieve the envisaged impacts, especially in food security, nutrition, access to formal micro-finance and connectivity to markets and value chains, private-sector engagement and gender mainstreaming. Finally, the weaknesses related to the availability and quality of data impinge on the assessment and attribution of impact to IFAD operations on fishery productivity, food security and nutrition.

Sustainability of benefits generated by project impacts

178. This section of the report assesses the overall sustainability of the project benefits towards the sustained improvement in the social and economic conditions of the artisanal fishing communities. The analysis focuses on the highest level of the ToC. The key assumption is related to the elaboration and implementation of a sound exit strategy to ensure: (i) continued and sustained support from the Government

- to IDPPE and other line ministries after project completion, and (ii) institutional and technical sustainability of the benefits generated by the project.
179. The project exit strategy mainly consisted of ensuring the sustainability of those interventions that will be discontinued under ProPESCA, and on creating the right conditions for a smooth transition into the new project. A comprehensive and viable exit strategy to transparently define the respective roles and responsibilities of the government, IFAD, community-based organizations and other concerned players in post-project activities, was not elaborated. This, together with the lack of financial support to key activities after project completion, hampered the sustainability of benefits generated by the project as described in the following paragraphs.
 180. **Continued government support.** At the time of the country visit, the perception among all interviewed heads of key government institutions was that the project was a milestone in the development of the country's artisanal fishery subsector. One of the most tangible and wide reaching sustained benefits of the SBAFP is the support and empowerment of provincial delegations and the improvement of operational capacity of the government institutions of the fishery sector which are still visible today.
 181. The fact that the project has been executed at the provincial and district levels by IDPPE, which is a Government of Mozambique's agency, ensured continuity in government support. In fact the resources made available by the central government to IDPPE increased in the last five years. The plans to renew PESPA with the support of the WB secure the required continuity to sustain project impacts across the several SBAFP components.
 182. However, government's resources are not being sufficiently allocated to IDPPE's extension system to enable it to keep fulfilling its functions. IDPPE's fisheries extensionists were not provided with housing, an essential incentive for their retention and facilitation of their work in remote project areas. As a result the turnover of staff was high and in general it was (and it is) difficult to find people willing to work in remote areas³³.
 183. IIP is facing similar constraints in terms of availability of resources and had to scale down its data collection. This is jeopardising the continuity of IIPs work as well as capacity to produce accurate stock assessment analysis and recommendations for management. The reduction in funding since the end of the project had also a negative effect on the upgrading of IIP staff's technical skills and knowledge.
 184. In addition to the above, the current restructuring of the Ministry of Fisheries which is merging of IDPPE and INAQUA, the latter so far separately mandated for the development of aquaculture in the country, to form a single agency (Instituto do Desenvolvimento da Pesca e Aquacultura) which will fall under the authority of Provincial Fisheries Directions at provincial levels. The merging could raise issues with regards to budget allocations and dilute the capacities built within IDPPE during the project and essential for the continuation of its work in fishing communities.
 185. **Government support to other line ministries.** The sustainability of benefits deriving from infrastructure improvements, such as health posts, schools, roads and markets depends heavily on the extent to which governments and communities assume ownership and responsibility for ongoing maintenance and operations. In this sense, the assumption in the SBAFP theory of change for which the project should have complemented (and not substituted) the work of line ministries to ensure social long-lasting benefits beyond the project life, did not hold true. In fact, the recurrent costs for the schools and the health posts created by the project are not included in the annual plans and budgets of relevant provincial

³³ House building for fisheries extensionists has however been included in ProPESCA and was seen as ongoing in some communities visited by the Evaluation team.

authorities, which are not willing to cover these costs without additional funding from the Government.

186. The above not only dampens the positive impact of the cross-ministerial collaborations that were fostered by SBAFP, but also raises concerns regarding the long-term sustainability of the infrastructures created by the project. In fact, the various village organisations that are still functioning cannot cover alone the resource requirements for equipment maintenance and replacement. With particular regard to roads built by the project, many of them are in bad state and damaged by frequent natural hazards that the ANE is struggling to keep up with. ProPESCA is making an effort to significantly rehabilitate the roads, yet interviews with relevant stakeholders revealed that insufficient resources have been allocated for maintenance purposes.
187. **Continued engagement of beneficiaries and ownership of project results.** The evaluation found that the majority of the CCPs have become legalised since the end of the project. The legalisation process was described as relatively easy, especially with support from IDPPE. Legalised CCPs collect fishing licences from fishers (whether these are CCP members or not) for the local district authorities (SDAEs). In exchange for this service, CCPs receive 20 per cent of the fees collected back, which is used to finance their running costs. However, the return of these funds from district authorities is often delayed and far from a smooth process. As already mentioned under human and social capital empowerment, this lack of compensation threatens the sustainability of CCPs' activities.
188. In addition, the project did not devote enough attention to facilitate the transition of CCPs and fishermen associations into structured associations with a long term strategy in order to strengthen the presence and voice of artisanal fisheries communities, their bargaining opportunities and market access.
189. The sustainability of village institutions promoted by the project, such as schools, water and health councils, appears mixed. Some of them visited by the evaluation team are weak with modest prospects of continuity, while others have committed members that are still very active in the management of the infrastructure itself and its use under their care (e.g. health centre and school of *Danga, Busi, Sofala*; health centre of *Muceliua, Zambezia*). In instances where the health council was no longer active, there were intentions to revive it. In particular female members of community health councils are still active in the management and use of the facilities, gained confidence in the provision of care, and tend to recommend it to others, including to women in communities further afield which do not have such facilities.
190. **Technical sustainability.** Fishers and fishing communities remain vulnerable to the vagaries of fish stocks and to the stringent nature of some management measures, such as season closures, because they do not have sufficient alternative means, including income-generating activities, to cope with these. As a consequence, the continued collaboration and cooperation of fishers in the longer-term management of the artisanal fisheries will be challenging, in particular if management measures become even stricter to protect stocks.
191. The long-term use of alternative fishing gear by fishers remains an issue due to the lack of incentives and weak confiscation of illegal measures. For example, *xicocotas* are cheap and widely available and their use has become an ingrained practice that will be difficult to change. The same applies to *kinias* used by women. In addition, accessing alternative fishing equipment, which remains available for sale only in large urban centres (Beira, Quelimane), incurs additional costs to fishers. Similarly, fixing engines when they break down is an issue because spare parts are not easily accessible. In Zalala (Zambezia Province), out of the 40 engines available in 2015, only 16 worked. All these factors are likely to hamper the lasting impact of the project's diversification efforts on fishing practices and fisheries resources.

192. With regard to the sustainability of microfinance services, informal institutions, such as the ASCAs, have good prospects of sustainability. However, as detailed in the impact chapter, the project did not sufficiently enhance the linkages with service providers and markets to enable the saving and credit groups to reach higher scale and realize their full economic and social potential. This would have required a certain level of formalisation and registration which is not in place yet.
193. With regard to markets, the physical market infrastructures visited by the team are in good shape. However, also in this case maintenance is an issue. The information system that IDPPE had set up to collect and disseminate fish prices is no longer operational for reasons ranging from disappearance of notice boards to lack of regular updating of the information. Nowadays prices are determined freely upon negotiation between fishers and traders, and vary according to the supply and demand of fish. Fishers usually have a preferred trader, with whom they communicate directly. In the absence of the radio programme, the spread of mobile phones and opportunity for facilitated communications between stakeholders they offered is likely to have been an important contributor in the demise of the paper notification system of IDPPE.
194. **Rating.** It is important to acknowledge that the project is part of a broader development context and IFAD country programme framework. In this regard, the presence of a scaling-up project (PROPESCA) that is currently addressing some of the above challenges is expected to contribute to better sustainability. All in all, the evaluation concludes that the sustainability of project's benefits is moderately satisfactory (4).

Key points on sustainability of benefits generated by project impacts

- The perception among all heads of key government institutions interviewed by IOE during the field mission was that the SBAFP was a milestone in the development of the country's artisanal fishery subsector;
- The fact that the project has been executed at the provincial and district levels by IDPPE, which is a Government of Mozambique's agency, ensured stability in government support. The plans to renew PESPA secure the required continuity to sustain project impacts across the several SBAFP components;
- Several factors challenge the long-term sustainability of project's impacts. First and foremost, the SBAFP did not develop an exit strategy. Second, operation and maintenance of the infrastructures developed by the project is a major constraint to sustainability. Finally, grassroots institutions are weak; and
- It is important to acknowledge that the project is part of a broader development context and IFAD country programme framework. In this regard, the presence of a scaling-up project (PROPESCA) that is currently addressing some of the above challenges is expected to contribute to better sustainability.

V. Other criteria contributing to rural poverty impact

Environment and natural resources management

195. Despite the shortcomings discussed in the institutions and policy impact domain, **the adoption of PESPA and the co-management approach are key to promoting an enabling environment and set the basis for the sustainable management of the marine resources of the Sofala Bank.** The project developed a functioning and effective co-management system. Hence a framework and forum for discussing and resolving resource management issues (in particular fishing resources depletion close to the coast) has been put in place. Through these structures SBAFP has empowered local groups to recognize environmental risks, enabling them to defend their interests and develop their own activities. At the community and district level, co-management is seen as the start of a long-term, bottom-up process for the preservation of fisher population's livelihood. The project's bottom-up approach, combined with enabling interventions at policy and

regulatory level, has facilitated and enabled these essential processes of sustainable artisanal fisheries development to be started in the project area.

196. **While establishing an enabling environment is essential, it is not the same as “reducing unsustainable practices that threaten the natural resource base in the project area” as foreseen in the President’s report.** Despite improvements in the awareness and capacity of fishermen to fish more sustainably, the adoption of different and more targeted fishing techniques from those they were using at the start of the project, does not appear to be as widespread as expected given the thrust of the project in this regard.
197. The three-mile fishing exclusion zone has reduced the number of semi-industrial and industrial vessels in this area and indirectly have led to a decrease in pressure on the shrimp stocks. Yet, shrimp stocks have been on the decline in absolute terms over the last 10 years (decline in catch per unit effort). This was repeatedly reported by fishers and staff in the various fisheries authorities (IIP, ADNAP, IDPPE) and it is confirmed by the analysis of IIP’s annual reports.
198. This continuous decline is attributed by fishers and scientists alike to environmental factors (e.g. variations in temperatures and precipitations), as well as to the very damaging effect of the illegal usage of xicocotas and kinia. The enforcement of the use of nets with minimal mesh sizes is problematic and remains ad-hoc through confiscation only, as explained in the institutions and policies section. Despite being illegal, xicocota and kinia use is rife, resulting in the catch of large numbers of juveniles, with the consequence of interrupting the life cycle of many species and renewal of stocks, including shrimp.
199. It is worth noting that in relative terms, shrimp catches from artisanal fishers have steadily increased, to the point that they now constitute 40 per cent of all shrimp catches and have partially offset the reduced shrimp catches from the industrial and semi-industrial fleets³⁴. According to IIP’s assessment, this high level of targeted inshore shrimp catches by artisanal fishers is “having a significant impact on the stock and biomass available to the fishery as a whole”.
200. **Rating.** The impact on natural resources management is limited. However, the role of the project in preparing the ground for the long-term sustainable management of marine resources of the Sofala Bank is remarkable. Therefore, the evaluation rates natural resources and environmental management as moderately satisfactory (4).

Key points on environment and natural resources management

- The adoption of PESPA and co-management approach are key to promoting an enabling environment and set the basis for the sustainable management of the marine resources of the Sofala Bank;
- The project promoted awareness building in the use of more suitable fishing gear to ensure sustainable fisheries management. However, the evidence collected by the evaluation reveals that better and more appropriate technology is not sufficiently wide-spread across fishing communities;
- The policy to prevent industrial and semi-industrial trawlers to fish within three miles of the coast has been favourable in reducing pressure on shrimp stocks;
- In general, however, shrimp stocks have been declining the past decade, inter-alia, due to climate change and use of inappropriate mesh size of fishing nets; and
- The impact evaluation concludes that there is increasing pressure on marine resources in general, and measures introduced by the project have not had the desired impact of ensuring sustainable management of fish stock. However, the role of the project in preparing the ground for the long-term sustainable management of marine resources of the Sofala Bank is remarkable.

³⁴ DE SOUSA. L.P., ABDULA. S., DE SOUSA. B. P. & PENN. J.W. (2015) O camarão do Banco de Sofala. Relatório Interno de Investigação Pesqueira n° 33. IIP, Maputo.

Adaptation to climate change

201. IFAD adopted its corporate strategy on climate change in 2010, just one year before the project was closed. Hence, corporate guidance on climate change was not available at the time of the project's design nor during the majority of the implementation period.
202. Notwithstanding the aforementioned, it is noted that improving the management of the fisheries is an integral part of the process of adaptation to climate change. Moreover, it is a mechanism through which the resilience of coastal fishing communities to the effects of climate change can be increased.
203. Climate change adaptation was however not an explicit component of the project. Inferences between diversification of fishing activities as part of improved fisheries management promoted by the project and improved means to cope with, and adapt to, climate-induced variations in fish stocks, remain therefore speculative. In addition, climate change does not get a mention in PESPA.
204. Taking the above into account and in line with the provisions of the second edition of the Evaluation Manual, this impact evaluation does not provide a rating to the evaluation criteria of "adaptation to climate change".

Key points on the adaptation to climate change

- Corporate guidance on climate change was not available during the project life cycle; and
- Even if the improvement of fisheries management is an integral part of the process of adaptation to climate change, it was not an explicit component of the project. Therefore the results and impacts remain speculative.

Gender equality and women's empowerment

205. Gender equality and women's empowerment is normally treated under "other performance criteria". However, the theme of gender equality and women's empowerment cuts across all of project components and through all levels of the TOC. Therefore, the impact evaluation treats the impact on gender equality and women's empowerment within rural poverty impact. Notwithstanding the important role of women in the artisanal sector, the project in a whole was not sufficiently designed with a gender perspective.
206. Given that the project was approved in 2001, the reference document for the assessment of the gender equality and women's empowerment impact domain is the 2003 Gender Plan of Action³⁵, which articulates IFAD's main operational objectives for promoting and mainstreaming the gender dimension across IFAD operations. The three overarching objectives envisioned in the Plan of Action, are summarized in Box 1.

Box 1

IFAD's gender equality and women's empowerment objectives, 2003

- Expand women's access to and control over fundamental assets;
- Strengthen women's agencies – their decision-making role in community affairs and representation in local institutions; and
- Improve women's well-being and ease their workloads by facilitating access to basic rural services and infrastructures.

207. The impact survey comprised a specific section dedicated to women's awareness, status and participation and was administered to at least one female member of each surveyed household. In addition, it was administered to a sub-sample of female-headed households (53 in the treatment and 42 in the comparison groups).

³⁵ <https://www.ifad.org/documents/10180/25a9d840-98d5-4127-a6e0-8018c43cd453>.

208. Since the sub-sample is small as compared to the overall number of households surveyed, the findings provide only an indication of impact. Moreover, the evaluation triangulated the information and findings with qualitative tools, such as focus group discussions and visits to project sites and women's households.

Women's access to and control over fundamental assets

209. Capital. The quantitative impact survey found that currently most women do not have their own income. The majority of women (equal to 31.3 per cent) earned on average less than 1000 meticaís during the last 10 years. However, a positive trend can be observed when looking at the income during the last 5 years – where the percentage of women earning less than a 1000 MT is reduced to 22.7 per cent (annex IX).
210. The above improvement is attributed by women associations interviewed to the successful awareness raising among female ASCAs members not only about the benefits of savings, but also about the emancipation they could gain from their increased capacity to save. In this respect, the focus group discussions suggested that, in most cases, the creation of ASCAs triggered the transformative change required to progress towards greater women's agencies. The impact survey revealed that the percentage of women who are part of these associations is higher in the treatment group and the difference with the comparison group is statically significant (table 21). However, the surveyed women in the treatment area continue to spend most of their income on basic necessities like food and clothes (annex IX).

Table 21

Women participating in saving and credit groups

<i>Sample</i>	<i>Treatment</i>	<i>Comparison</i>	<i>Difference</i>	<i>T-stat</i>
Matched	0.128888889	0.050439	0.07845	4.14*
Unmatched	0.128888889	0.059829	0.06906	3.44*

ATET – Average treatment effect on the treated (for matched data)-Kernel matching.

Note: level of significance *** p<0.01, ** p<0.05, * p<0.1.

Source: IOE impact evaluation survey, 2016.

211. Knowledge and technologies. The fisheries development component of the project has remained relatively weak in its integration of gender concerns. This is due to the fact that fishing is a traditionally male-dominated activity and women's role is typically limited to post-harvest activities – despite the fact that some women do operate boats as "*donas de barco*"³⁶ and use shore nets to catch fish.
212. Women did recognize having benefited from the training directly targeted at them, such as training on savings, post-harvest fish handling and preservation methods and the diversification of value-added skills (e.g. usage of fish to make cookies; and fish by-products for fashion items, etc.). Such skills are likely to have been particularly beneficial for women who were both CCP and ASCAs members.
213. With respect to the awareness raising on environmental matters and the promotion of sustainable fishing, practices have not been matched by a significant change among women. Many of them still largely depend on harmful fishing practices like "*kinias*" (small sized shrimp fishing nets) for generating the daily supplementary income they need to support their livelihoods (in complement to their farming activities), even though they know these nets are illegal.

Strengthen women's agencies – their decision-making role in community affairs and representation in local institutions

214. Results achieved under this objective are mainly linked to women participation in ASCAs which, as mentioned above, triggered greater women's agencies. Local decision-making forums, have opened up to participatory decision-making and to

³⁶ Women boat-owners not going at sea themselves but commissioning crews for fishing.

listening to the opinions of women, in particular when developments and decisions concern the needs of households (e.g. well, school, health centre construction). Their decision-making role and representation in CCP is however low.

215. Despite the key role of female traders and processors in fish value chains (post-harvest), there has not been an appropriate mechanism to organise them and promote their specific interests as has been done with CCPs and fishers. Neither ASCAs, nor current market councils were able to fulfil this role. Whilst some women met by the evaluation team are members of the market councils and responsible for the collection of market fees from traders using the market infrastructure, market commissions tend to be dominated by men. Market facilities are being primarily used by male traders, while 70 per cent of women continue to sell fish out to traders on the beach, as illustrated in annex IX).
216. The above suggests that the project did not sufficiently recognize the role of women (nor effectively targeted them) in the development of post-harvest activities, and as a consequence, this led to sub-optimal impact.
217. Representation in national institutions and policies. In the policy sphere, the project supported the elaboration of a Gender Strategy for the Artisanal Fisheries Sub-sector,³⁷ covering the period 2009-2013. Until then, gender aspects had been neglected in the Government of Mozambique's fisheries policies, including in PESPA and in the collection of data (non-disaggregated) of projects like SBAFP. By supporting its development, the project enabled to fill a gap within the entire Ministry of Fisheries, which had overlooked gender aspects in its work, despite the importance of women's contribution to the sector.
218. The strategy is comprehensive. Its objectives are relevant to the mainstreaming of gender and to progressing women's position in, and benefits from, fisheries at multiple levels: in the sector itself as well as in the country's fisheries administration, and it includes a list of progress indicators. Although the Gender Strategy is in itself a significant output of the project and an important step towards increasing awareness of authorities and the sensitivity of all fisheries-related developments to gender issues, it is until now unclear to what extent it has been implemented.
219. The evaluation team was however able to retrieve the current ratio of men/women employed as IDPPE staff in Maputo headquarters as well as in the Nampula, Zambezia and Sofala provinces. While the headquarters is to be complemented for having an almost equal male/female staff ratio, the provinces are still lagging behind. However, the IDPPE Delegation of Zambezia Province reported having had a woman dedicated to gender in its offices.

Table 22

Male/female ratio in IDPPE

<i>Location</i>	<i>Total</i>	<i>Men</i>	<i>Women</i>
Headquarters in Maputo	78	48	30
Nampula	61	50	11
Zambezia	59	48	11
Sofala	57	45	12
TOTAL	255	191	64

Source: IDPPE Maputo.

220. Awareness of gender issues was very low among IDPPE and other agencies' staff prior to the project, and was recognised by IDPPE staff as an important lesson from the project.

³⁷ IDPPE (2009) Estrategia de Genero para o Sub-Sector da Pesca Artesanal. IDPPE, Ministério das Pescas, Governo de Moçambique.

Improvement of women's well-being and eased workloads by facilitating access to basic rural services and infrastructures.

221. This section comprises an assessment of different aspects of women's well-being, including the extent to which the project contributed to easing their workloads by constructing local water pumps, promoting access to health centres, and by building first sale markets.
222. As mentioned in the human and social capital empowerment chapter, most of the water pumps built under the project are no longer functioning due to design faults or lack of maintenance. As emphasized in the same chapter, the interviewed women were very critical of the derelict water points, and in particular of the lack of water which is causing them increased hardship and a potential threat to their safety.
223. In fact, the impact survey confirms that the majority of the women (62.9 per cent) did not see a reduction in the distance to the source of water to drink in the last 10 years, neither did the majority of women (52.6) see changes with respect to access of water. This is a heavy constraint on women's time and effort, and as such, not a contribution to their wellbeing. The results are however better than for the control group, where the percentages are 89.1 and 83.6 per cent respectively.
224. Although adequate maintenance of the health centres built under the project is an issue, the facilities created represent a major improvement in the quality of life of women. They have offered a focal point for communities' health and in particular women's health, thanks to the presence of qualified staff able to attend emergencies around the clock and offering maternal care to female patients and their babies (including HIV testing). Moreover, as already highlighted in the human and social capital empowerment chapter, women have gained confidence in the provision of care and tend to recommend it to others, including to women in communities further afield which do not have such facilities.

Gender equality

225. This section comprises an assessment of women increasing their autonomy and authority in decision-making, and enhancing their freedom to raise voice against intra-households and social issues.
226. The quantitative impact survey used financial decision making power as indicator for measuring autonomy and authority in decision-making and herewith gender equality. The results revealed that that the access to income is better in the treatment group (table 23).

Table 23
Access to income

	<i>Treatment(%)</i>	<i>Comparison (%)</i>	<i>Total</i>
Yes	86.6	72.6	538
No	13.4	27.4	121
Total	425	234	659

Source: IOE impact evaluation survey, 2016.

227. Notwithstanding the above, the impact survey reveals that women are not free in using money without asking their husband, as shown in table 24:

Table 24
Freedom in using the money without asking the husband

	<i>Treatment (%)</i>	<i>Comparison (%)</i>	<i>Total</i>
Yes	23.3	17.3	172
No	76.7	82.7	646
Total	506	312	818

Source: IOE impact evaluation survey, 2016

228. Moreover, as mentioned earlier, the limited financing capacity of ASCAs means that women's access to larger loans commensurate with their entrepreneurial desires and that improved capacity to save and repay, are still outside their reach and the prerogative of men.
229. Nevertheless, female members of ASCAs groups reported that they had become "more valued" and were "getting respect in the household". They can also rely on the group in case of hardship or emergency, giving them an additional means to progress towards greater emancipation.
230. Finally, gender equality cannot be adequately addressed without considering the relationships between women and men and men's perceptions of women's empowerment. The views of men and women about women's empowerment were analysed through both the focus group discussions and the impact survey.
231. Overall, the participation of women in ASCAs improved the recognition of their role and rights and contributed to greater equality. This is an essential step in addressing the challenge of existing gender relations for greater gender equality. This change has also started to resonate in wider community spheres: women's participation and dynamic roles (mainly in savings groups and business management) is increasingly recognized by various actors, both male and female.
232. In the impact survey results, the majority of the women claim that the main impediment for women's empowerment is lack of education with 71.3 per cent in the treatment area and 67.2 in the control area. According to 16.6 and 19 per cent of the responses in the treatment and control area respectively, the second highest constrain that precludes women to empower themselves is lack of security.
233. When asked if women could play an important role in fishing activity, the majority of men in both the treatment and control areas denied this fact. This illustrates that the project did not sufficiently raised awareness on gender equality in the fishery sector (table 25).

Table 25

Percentage of men that think women can play an important role in fishing activity.

	<i>Treatment (%)</i>	<i>Comparison (%)</i>	<i>Total</i>
Yes	24.0	23.3	237
No	76.0	76.7	761
Total	651	347	998

Source: IOE impact evaluation survey, 2016

234. **Rating.** All in all, the impact evaluation assesses gender equality and women's empowerment as moderately unsatisfactory (3). The project design did not have a specific gender strategy. In spite of that, it has helped better organise women (e.g., in savings and credit groups) and provided them capacity building in processing and marketing. However, more generally their role in broader economic and social activities remains weak. Moreover, a large number of indicators covered by the impact evaluation for this criteria do not show better results in the treatment group in relation to the comparison group.

Key points on gender equality and women's empowerment

- The project design did not include a strategy for mainstreaming gender. This is rather unfortunate, given IFAD's broader track record and comparative advantage in promoting gender equality and women's empowerment;
- Notwithstanding the above, the project did contribute to developing the first gender strategy in the artisanal fisheries sector, even though the ratio of men to women in some of the country's main fisheries institutions remains poor;
- During implementation, the project made efforts to involve women in key activities, in particular by organising them in savings and credit groups, and also providing them with basic training in processing, storage, and marketing of fisheries;
- Lack of education is a major impediment for the further advancement of rural women in Mozambique. Access to health services have improved, but women still have to spend disproportionate effort and time in collecting water – especially given that majority of water pumps installed under the project are no longer operational; and
- Insufficient attention was devoted to changing relations and interactions between men and women, in particular with the aim of promoting greater women's involvement in different stages of the fisheries value chain.

Innovation and Scaling up

235. Under this criterion, the evaluation assesses the extent to which the project (i) has introduced innovative approaches to rural poverty reduction; and (ii) have been (or are likely to be) scaled up by government authorities, donor organizations, the private sector or other agencies.

Innovation

236. The assessment of innovation is based on the IFAD Innovation Strategy (2007) which states that "(...) the most important innovations are those that change the way smallholders and other rural poor people invest, produce and market their products; manage their assets; get organized, communicate and interact with their partners; and influence policies and institutions."³⁸
237. The SBAFP entailed a number of innovations that were new to the context of application. First, the participatory appraisal methodology introduced by the project enabled IDPPE delegations to develop skills in participatory strategies and bottom-up approaches to planning and implementation that were new to these institutions. The recognition that fishers and vulnerable groups are able to express their needs and should be equal partners in development processes constitutes a significant shift in the work ethics and paradigm of IDPPE and the entire MSIWF, and would have been unlikely without the impulse of the project.
238. The bottom-up and integrated approach adopted by the project called for closer collaboration among IDPPE Provincial delegations and the Provincial Directions for Education, Health and Public Works. This type of cross-sectoral collaboration had not occurred before and denotes a noteworthy broadening of the sectoral approaches typically adopted in development.
239. The principles of bottom-up participation are now routinely incorporated in the planning and implementation of IDPPE's work. This extends to knowledge gained on how to involve women in development activities, although more progress remains to be done on this front, as discussed in the gender section of the report.
240. Second, the development of a co-management approach to fishing resources with the establishment of CCPs, as well as other organised grassroots institutions like ACSAs were crucial innovations. Third, the development of organised community-level forms of savings and credit associations has been a further important innovation in a context where financial services were previously absent. The leasing of outboard motors by FFPI is an innovation in terms of financial products.

³⁸ <http://www.ifad.org/gbdocs/eb/91/e/EB-2007-91-R-3-Rev-1.pdf>.

241. Finally, PESPA is considered a new approach towards "promoting the development of artisanal fishing through integrated projects, which, alongside technological actions in the spheres of fishing and fish produce, also aim to improve social conditions, infrastructures and the sustainability of fishery resources". The importance of this innovative plan to Mozambique's artisanal fishery sector is highlighted throughout the report.

Scaling up

242. Scaling up results is an overarching priority that directly supports the achievement of IFAD's mandate³⁹. The definition of scaling up adopted in IFAD's operational framework for scaling up results (2015) is "expanding, adapting and supporting successful policies, programmes and knowledge so that they can leverage resources and partners to deliver larger results for a greater number of rural poor in a sustainable way".
243. As previously mentioned in the report, SBAFP is part of a succession of three projects: NAFP, SBAFP and now ProPESCA. Table 26 shows that in ProPESCA the contribution from the government and other partners covers the largest share of the total funding in replicating IFAD development interventions.

Table 26

Overview of contributions (IFAD and Government)

Project	IFAD contribution (millions)	Government contribution (millions)	Cofinancier contribution (millions)	Total project cost (millions)
NAFP	USD 6.0	USD 3.2	USD 1.9	USD 11.2
SBAFP	USD 20.3	USD 2.77	USD 13.2	USD 34.3
ProPESCA*	USD 21.1	USD 4.4	USD 30.9	USD 43.5

Source: IFAD loans and grants administration.

244. Moreover, a good example of scaling-up deriving from SBAFP is related to the ASCA concept which was scaled up to the national level where it is implemented across Mozambique or adopted in the national regulatory framework.
245. **Rating.** All in all, however, the evaluation rates innovation and scaling up as satisfactory (5).

Key points on innovation and scaling up

- SBAFP included some interesting innovations that were new to the context of application; and
- Using IFAD's own definition, the sequence of the three IFAD-supported fishery projects can be considered as successful scaling up. Also, the ASCA concept has been successfully scaled up to the national level.

VI. Overall Project Achievement

246. The evaluation finds that the project contributed to a process of change and improvement in remote rural areas amongst impoverished fisher folk. This was done by a combination of policy and institutional reforms, strengthening in social organisation and community development, provision of improved fishing technology, and some progress in promoting access to markets and financial services.
247. At the same time, the project could have achieved even greater results. But results were constrained due to a number of factors, inter-alia, including project design that did not include a gender strategy, insufficient attention to engaging more

³⁹ <https://webapps.ifad.org/members/repl/10/3/docs/IFAD10-3-R-2.pdf>

prominently the private sector at different stages of the fisheries value chain, limited efforts to federate community organisations into apex structures, weak linkages between savings and credit groups to formal financial institutions, and lack of proper attention in ensuring the sustainability of benefits.

248. **Rating.** All in all, the impact assesses the project's overall achievement to be moderately satisfactory (4).

VII. Other performance criteria

Efficiency

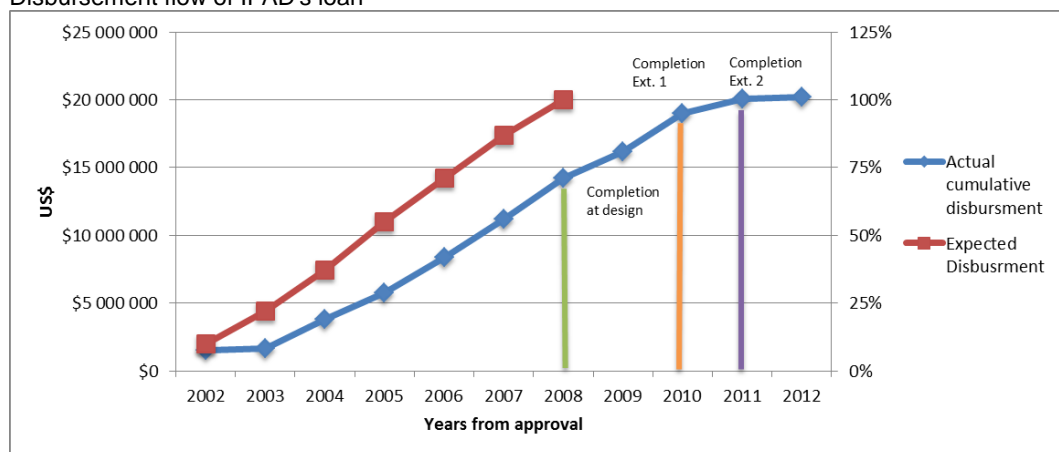
249. **Approval to effectiveness.** The loan was approved by IFAD's executive Board on 12 September 2001 and became effective on 2 September 2002. Even though the one year time-lapse is in line with IFAD's global average of 12.4 months and the regional average of 11.6 months⁴⁰, delayed loan effectiveness delayed the benefits intended by the project to the rural poor and also implied IFAD had to invest costs in ensuring timely effectiveness. It also implies that the time taken from loan approval to the first disbursement was rather long.
250. **Financial delivery.** In the initial years of implementation, the project faced some challenges with the financial management system applied by SBAFP. Some examples of these setbacks were the late provision of funds, rigid contract and procurement norms, non-compliance with loan covenants and IFAD withdrawal applications' frequency; which was not well adapted to the complexity of the project. Furthermore, the project was initially lacking appropriate trained staff at provincial and district level to manage larger financial volume. However, this was later improved by IDPPE. Together with the hindrance of remoteness, this caused implementation to take off slowly. Compliance with loan covenants and procurement norms will be further discussed under fiduciary responsibilities in the section on Government performance as a partner.
251. **Disbursement analysis.** In chart 1 an analysis of the total IFAD disbursement is provided. In the first year of implementation, the project disbursed 7 per cent of the funds. However, given the reasons explained in the financial delivery section, the project disbursed only 1 per cent of the funds during the second year of implementation, which reached 8 per cent as cumulative disbursement. According to IFAD's project disbursement profile by project type⁴¹, the disbursement of a project is expected to be at 22 per cent by the second year. In fact, the chart illustrates that disbursement performance at appraisal was overestimated when compared to the actual performance.
252. The first tri-term review (2006) states that the slow flow of funds was mostly due to the lack of accountability from implementing agencies; which delayed the preparation of statements of expenditure (SOEs) and their supporting documentation required to replenish the special accounts. Despite the recommendations included in the second tri-term report (2008) and subsequent supervision missions, disbursement issues persisted till the end of the project.
253. The slow flow of funds from IFAD is said to have been affected by IFAD's minimum threshold of US\$300,000⁴² for the submission of withdrawal applications (WAs), which caused funds being locked up in WAs pending for payment and special accounts having unsatisfactory low level of balances. In addition to this, IFAD funds were being utilized to pay for VAT in the absence of sufficient counterpart funds from the Government. This created serious liquidity constraints, problems in the flow of funds and implementation delays, and the need for loan amendments and project extensions.

⁴⁰ Based on figures from 2011 (PCR/V).

⁴¹ Project Review Guideline 2014.

⁴² 20 per cent of the special account for the IFAD loan.

Chart 1
Disbursement flow of IFAD's loan



Source: IFAD loans and grants administration.

254. **Loan Amendments and project Extensions.** As highlighted in table 27, SBAFP was extended twice during its project life. The first time in 2007 for a total of 18 months to compensate for the implementation delays during the first years and to give enough time to improve and consolidate project results. The delays faced were mostly related to the speed of construction which has been slow and the quality not always sufficient (e.g. water wells). The quality of the contractors was not always at the required levels of compliance and institutional cooperation arrangements and (procurement) procedures to place construction orders were also reported to be lengthy.
255. In 2010, the project was extended a second time for a total of 12 months. This extension was due to the supplementary EU funding and the exchange rate gained in relation to the USD devaluation, which increased the USD amount of the IFAD loan as well as the amounts of NORAD and BSF. The extension was also necessary to recoup the disbursement rate, as according to the 2009 project status report (PSR), there was more than US\$10 million left to be spent, which was an important challenge as little implementation time was left. Yet, with the second extension, IFAD managed to reach a final disbursement rate of almost 99 per cent⁴³.
256. The extensions provided an opportunity for the project to catch up on the components that were lagging behind and guarantee a smooth transition from the SBAFP activities to the succeeding ProPESCA activities. At the same time, an extension of nearly three years from the original closing date has detrimental effects on project efficiency. For instance, IFAD had to invest greater administrative resources (e.g., for supervision and implementation support activities and corresponding follow-up) in pursuing project effectiveness, as compared to what was anticipated at design.

Table 27

Overview of SBAFP's loan amendments and project extensions

Status	Extension period	Completion Date	Percentage disbursed at Completion date	Explanation
At design	-	2008	70%	-
Extension 1	+18 months	2010	80%	Due to implementation delays during the first year
Extension 2	+12 months	2011	99%	Due to exchange rate gains as a result of the USD devaluation

Source: SBAFP's Project Completion Report (2012) and various Loan Amendments.

⁴³ NORAD disbursed 81 per cent, BSF 97 per cent, Germany 91 per cent, the EU Food Facility 97 per cent of the envisaged co-financing, all via IFAD. The project beneficiaries are said to have contributed about 36 per cent of what was envisaged at design. Yet it has been acknowledged in the PCR that this contribution has been incompletely registered.

257. **Economic and financial analysis.** The project completion report (PCR) did not include an economic analysis conducted at the time of project closure with respect to the economic internal rate of return (EIRR). It did also not include a benefit-cost ratio analysis as "the boundaries between direct and indirect (economic) benefits are hard to define".⁴⁴ Therefore, the evaluation cannot comment on the cost-benefit of SBAFP.
258. **Cost per beneficiary.** This proxy indicator assesses the total project costs in relation to the number of direct beneficiaries reached. The impact evaluation calculated US\$391,61 per direct beneficiary. A comparison of the cost per beneficiary of SBAFP with other IFAD-supported fishery projects⁴⁵ the cost per beneficiary is within the range observed in other, similar projects (Annex X).
259. **Cost of Project Management.** Even though there is not an official standard, an allocation of between 10-15 per cent to project management is considered acceptable. At design, the project allocated 13 per cent to project management. However, according to the PCR, the project invested 8 per cent of the total funds to project management. The decrease on project management cost represented an opportunity for the project to channel these extra funds to other areas that required support such as the institutional support to IDPPE. A comparison with other similar fisheries development projects is contained in annex X and it shows that SBAFP allocation of project management costs is good.
260. **Rating.** The impact evaluation assesses the project efficiency as moderately satisfactory (4).

Key points on efficiency

- The IFAD loan had a one year time lapse from loan approval to effectiveness and first disbursement;
- The project experienced some difficulties in efficiency matters like the late provision of funds, rigid contract and procurement norms, insufficient quality of contractors and constructions, non-compliance with some loan covenants as well as IFAD's withdrawal application's frequency – which was not well adapted to the complexity of the project;
- Design and loan amendments as well as two project extensions are the reason many project targets were reached at completion and the initially slow disbursement rate has been recouped; and
- The cost per beneficiary is within the range of other similar IFAD fishery development projects. Also the allocation of project management costs is good compared to these other projects. However, the project did not include a EIRR.

Performance of partners

IFAD

261. **Involvement in the project design and implementation.** Both project documentation and interviews held with various partners and implementing institutions in Mozambique confirm that IFAD's long-term support to the sustainable and inclusive development of the artisanal fisheries sector for the last 20 years is highly appreciated, especially for its alignment to national development strategies and policies, strong emphasis on capacity building and participatory approach.
262. Although project design was informed by the preceding project and relevant to the context, it has proven to be demanding in terms of implementation. The risks that were included in the appraisal report highlighted challenges for the cooperation requirements between the many partners as well as the timely availability of resources. Although IFAD was not responsible for project supervision until 2008, it

⁴⁴ PCR, page 20.

⁴⁵ Similar projects in which fisheries were the focal component.

could have done more to capture and address these issues in the beginning of the project rather than only towards the end of the project.

263. **IFAD country office (ICO).** IFAD has a field presence in Maputo since 2003 as part of the corporate field presence pilot programme. At the outset, IFAD recruited a national country programme officer, who has positively over the years contributed to the establishment of relations and the strengthening of IFAD's role in the country. An ICO in Maputo was approved by IFAD's Executive Board in 2008 and established in 2011. Moreover, IFAD has recently strengthened its office by out-posting, for the first time, a senior and experienced Country Director to Maputo. This positive development is likely to further enhance the quality of the country programme more generally.
264. **Partnerships.** IFAD has developed strong partnerships with a range of institutions in the Government, and is well known for its support and commitment for more than 15 years to the artisanal fishers sector. It has also developed good cooperation with NGOs in the context of the SBAFP, who provided training and capacity building to rural communities.
265. However, IFAD could have sought opportunities for a broader engagement of the private sector, in particular to strengthened linkages to banks and markets, which are two weak aspects of the project. Similarly, IFAD could have more proactively sought partnerships with FAO, which has rather well developed technical capacities and skills in fisheries, as well as with other multilateral development banks (MDBs) especially to explore opportunities for scaling up, for example in the context of the renewal of PESPA which is planned with the support of the WB.

Quality of IFAD's self-evaluation system

266. Project supervision. Ten supervision missions were conducted during project implementation, of which six were supervision missions, three were tri-term reviews, and one was a follow up mission. Supervision was carried out by The United Nations Office for Project Services (UNOPS) till 2008, and following the adoption of IFAD's direct supervision and implementation support policy, the Fund itself carried out supervision and implementation support of the project after 2008.
267. The change from UNOPS to IFAD's direct supervision and implementation support was indeed positive. It resulted in an intensification in the follow-up actions taken by IFAD in addressing implementation difficulties. This led, amongst others, to some improvement in administrative and fiduciary issues. Most of the supervision missions mounted by IFAD were undertaken together with Government, BSF and NORAD representatives. Even if the expertise and the number of mission members were not consistent from one mission to another, they always comprised a fisheries specialist and a Finance specialist, and almost always a community development specialist.
268. Documentation and data. Apart from supervision missions, the project's self-evaluation system embraces a range of instruments to monitor and evaluate the performance of the project, including the preparation of annual PSRs, mid-term reviews, a project completion report and the collection of data following indicators contained in IFAD's RIMS.
269. For SBAFP, there is a total of three tri-terms review reports, and the project completion report prepared by IDPPE. These reports are detailed and well-structured, reviewing the design and achievements, identifying constraints to implementation as well as recommendations for improving development effectiveness. The quality of the PCR will be further discussed in the dedicated chapter later in the report.
270. The IFAD RIMS indicators however have not been adopted in the detailed progress reports produced by IDPPE. Moreover, the few data available are at outputs level within limited attention to outcomes and impacts. Gender disaggregated data are

available only in few instances, making it difficult to understand the involvement of and impact on women.

271. **Rating.** All in all, the performance of IFAD as a partner is moderately satisfactory (4). Though the setting up and strengthening of the IFAD country office in Maputo and the move to direct supervision and implementation support are positive, the project suffered from design weaknesses that IFAD could have proactively addressed earlier during implementation. Moreover, partnerships with other development organisations and the private sector have not been sufficiently pursued by the project.

Key points on IFAD's performance as a partner

- IFAD's long-term support to sustainable and inclusive development of the artisanal fisheries sector in Mozambique is appreciated by the Government and other partners;
- The setting up of the IFAD country office in Maputo, including the out-posting of the Country Director, and shift to direct supervision and implementation support are two important adjustments to IFAD's operating model made during the course of project implementation;
- Partnerships with the Government of Mozambique, NGOs, and civil society has been good. But, partnership with the private sector has not been sufficiently explored; and
- IFAD could have done more to capture and address design issues at the beginning of implementation, as this would have ensure more timely implementation and effectiveness.

Government

272. The government of Mozambique is to be complimented for providing continuity in commitment and leadership throughout the three IFAD-supported projects in the fisheries sector. Through this continuity, and the adopted bottom-up and integrated approach, IDPPE managed to build up a fisheries co-management model between communities and authorities.
273. IDPPE's project management has been excellent in terms of commitment to development objective, proactiveness in searching solutions to implementation constraints and institution building. Furthermore, IDPPE has been successful in lobbying for the interests of the artisanal fishery sector.
274. **M&E system.** The core IDPPE project team has largely remained unchanged for the NAFFP, SBAFFP and ProPESCA. This has ensured continuity and the opportunity to leverage on the experience and knowledge from previous fisheries projects.
275. Although earlier supervision missions found the M&E system to be complex, over-time, the project staff streamlined the system. At the time of evaluation, the M&E system is well structured and data well stored. Moreover, all project activities underwent an annual planning process and the IDPPE annual progress reports provide a wealth of information on the physical progress, progress on financial aspects and procurement as well as the performance of the implementation agencies and strategy. This is remarkable given the complexity of the project and context in which it was implemented.
276. Notwithstanding the above, there were several shortcoming, which constrained the use of M&E as a full-fledged monitoring, management and evaluation tool. For instance, the M&E system was not properly linked to the project's logical framework, which in itself also had some limitations including weak articulation of the causal links between the project's components and its objectives and goals. The M&E system collected a wealth of data on inputs and outputs, including in the area of community development, but fell short of reliably assessing outcomes and impacts.

277. With regard to the latter, a baseline study was conducted in 2002, and an end-line study in 2011. Furthermore, two surveys were also conducted as inputs towards two of the three tri-term reviews (TTRs). While the availability of such detailed studies is worth complimenting, there are issues with respect to the sample sizes, data collection (e.g. no gender disaggregation and no comparison groups despite several recommendations to this effect by supervision missions and TTRs) as well as estimation and significance testing in the reporting of findings as already highlighted in the methodology section.
278. **Fiduciary aspects.** The project's financial management has showed some weaknesses mainly due to a very complex flow of funds arrangements with several different accounting units and the limited availability of counterpart funds. The various fiduciary aspects have been further assessed below.
279. Audits. The project has a track record of unqualified audits until financial closure. The internal audits were conducted by the Ministry of Finance and the Ministry of Sea, Interior Waters and Fisheries. It was however noticed that these checks were not performed on a regular basis and –according to the second tri-term review– did not entail pre-payment checks. Internal auditing at the PCUs in the provinces seemed almost non-existing and was left to the external auditors. External audits were however not done on a regular basis. Up to the 2008, only two annual audits had been conducted. Near to completion, the audits were reported to have improved to some extent, even though delays in submission and lack of appropriate evidence on the opening balances persisted.
280. Counterpart funds. The PSRs and second tri-term review report some issues with the counterpart funds from 2008-2010. The Government of Mozambique has not fully met its counterpart fund obligations, not because of inability or bad will, but rather due to annual ministerial budgeting, which has failed to foresee and include the allocation of funds required to pay value added tax and duties on imported IFAD-funded equipment and materials. This limited availability of Government counterpart funds for taxes resulted in the use of IFAD loan from a special account to pay for taxes against loan agreement causing delays in implementation and outstanding debts at project completion.
281. Procurement. The PSRs reveal that the project had a limited mastery of procurement processes (especially for services) and limited use of effective procurement and contract management tools (procurement plan, contract register and contract management form). Interviews with various line ministries revealed that procurement was often executed according to local procurement rules, due to language issues.
282. **Rating.** All in all, the impact evaluation has assessed the government performance as a partner as moderately satisfactory (4).

Key points

- The Government provided continuity and good leadership throughout the three IFAD-supported projects in the fisheries sector, including the SBADP. Through this continuity, and the adopted bottom-up and integrated approach, IDPPE managed to build up a fisheries co-management model between communities and authorities;
- In the end, IDPPE set up a relatively good M&E system, with a team that has the required skills and competencies;
- However, the M&E system could have been better aligned with the project's logical framework and the RIMS indicators were not fully reported on;
- Though baseline, mid-term and endline surveys were undertaken, their quality and reliability was inadequate; and
- The project's financial management showed some weaknesses mainly due to a very complex flow of funds arrangements with several different accounting units, the limited availability of counterpart funds and a track record of unqualified and infrequent audits.

Assessment of the PCR quality

283. **Scope.** The PCR produced by the Government is broadly aligned to IFAD's PCR guidelines. The PCR follows the proposed structure and the content is also informative and well-structured according to the evaluation criteria. Moreover, issues like targeting and the relevance of the objectives and the project's fit within and contribution to national poverty reduction strategies are not covered.
284. Secondly, as already highlighted in the efficiency section of this report, the PCR did not include an economic analysis conducted at the time of project closure with respect to the economic internal rate of return, neither did it include a benefit-cost ratio analysis as "the boundaries between direct and indirect (economic) benefits are hard to define".⁴⁶ To this end, the evaluation is not able to conduct a proper cost-benefit analysis for SBAFP and had to look for proxy indicators.
285. Thirdly, the section on IFAD performance as a partner is more focussed on the strategic division of responsibilities with the government, rather than on the support provided by IFAD to project implementation, including interventions with non-project staff authorities. The section on Government performance as a partner is more thorough, even though more reasons for the under-achievement on fulfilling the counterpart obligations as well as the fiduciary aspects would have been desirable. Finally, and also previously mentioned in the report, there is little attention to gender.
286. The sections on project outputs and effectiveness are comprehensive and well prepared. It includes a review of project outputs against targets for each component, qualitative information and a clear and detailed assessment of the quality of the outputs and project approach. On the other hand, project effectiveness is assessed per component and not against the project's objectives.
287. The sections on rural poverty impact, sustainability and scaling up are also informative, even though the section on rural poverty impact could have been expanded, as explained in the next section on "quality".
288. **Quality.** The project team conducted qualitative interviews and used extensive monitoring data from four surveys: the baseline survey from 2002, two surveys for the first two tri-term reviews from 2005 and 2007 and the endline survey from 2011. In the PCR good attempts have been made to include information about impact where feasible, yet certain impact domains lack in narrative underpinning (e.g. human assets and financial assets) or explanation on attribution and contribution, despite of the wealth of data at disposal. A detailed table illustrating most of the outcomes of the impact surveys is included in the report.

⁴⁶ PCR, page 20.

289. The PCR was prepared following a participatory process. The report is informed by two stakeholder workshops which discussed the strengths, weaknesses and suggestions for the future for all the different project components in 2009 and 2011. A summary of the findings is annexed to the PCR.
290. **Lessons.** The PCR presents a dedicated section containing useful lessons on design and implementation activities. However, it falls short of innovation/scaling-up and also gender. Even though some of the lessons remain somewhat at the surface, the report highlights many areas /results which did or did not work well throughout the report. Some reference is made to the follow-up project ProPESCA, yet this could have been enhanced given the strong link between the projects.
291. **Candour.** The candour of the PCR is good. The PCR clearly states limits in data and provides a candid assessment of both positive and less positive aspects of the project design and implementation.
292. **Rating.** Based on the above analysis, the impact evaluation rates PCR scope as moderately satisfactory (4), and quality, lessons and candour as satisfactory (5).

VIII. Conclusions and recommendations

Conclusions

293. **The project has been an important milestone in the development of the artisanal fishery sector due to its integrated livelihood approach, which delivered tangible results beyond fishery development in remote fishing areas** (paragraphs 68, 90, 173). Building on the experience of the IFAD-funded Nampula Artisanal Fisheries Development Project, the project consolidated some of the previous achievements, while making further inroads in promoting sustainable and inclusive rural transformation - including by paying attention to promoting an enabling fisheries policy and institutional environment.
294. **The project was instrumental in setting into motion an impressive process of institutional and policy change in the artisanal fishery sector which culminated in the adoption of PESPA (November 2006-March 2016)** (paragraphs 119-121, 150-151). This is the highest development impact of the project which laid solid foundations for the sustainable management of marine resources as well as provided greater opportunities for artisanal fisheries development.
295. PESPA's 10-year vision for the artisanal fishery sub-sector emphasized, alongside fisheries, social and environmental progress. Looking back at the developments intended for the sub-sector and achievements at project end, SBAFP was key to providing the assistance needed to step up progress towards the development vision for artisanal fisheries. Although some progress may have been unevenly achieved across the pillars of the vision, for example the enforcement process and absence of policies on microfinance and markets, PESPA nonetheless provided the sub-sector with the coherent framework it needed to guide interventions towards better livelihoods of artisanal fishers. Plans for the renewal of PESPA with the support of the WB will hopefully address these weaknesses.
296. **The institutional reform was accompanied by the development of a co-management system which triggered important social changes and empowered artisanal communities** (paragraphs 94-95, 152). Co-management is seen as the start of a long- term, bottom-up process for the preservation of fisher population's livelihood. This involved the successful setting up of community based organizations and their empowerment in taking an active role in the community development processes and management of marine resources.
297. **The sectoral laws enacted by PESPA and the introduction of better technologies contributed to enhanced production and increased income and assets of the beneficiaries** (paragraphs 121, 132-134). The SBAFP further pursued policy reforms such as by enacting a three mile no trawler zone and the

closed fishing season, which had the twin objective of ensuring sustainable management of marine resources as well as providing greater opportunities for artisanal fishermen in terms of access to these resources. To complement its policy work, the project introduced innovative and improved fishing technologies such as better boats, engines, and fishing gear with specific mesh sizes.

298. **Strong linkages with informal microfinance institutions (ASCAs) and better physical access to markets are also key determinants of improved income and assets** (paragraphs 102-108, 112-114, 135-139). The participation in ASCAs led to increased personal savings and improved investment capacity in the artisanal fishery sector, while investments in roads have given remote fishing areas access to markets and services.
299. The construction/rehabilitation of markets and first point sale has improved the quality and handling of the overall merchandise sold, reducing spoilage and risks of potential infections from lack of hygiene. In a context where market infrastructures were missing before the project, these achievements are remarkable and indirectly contributed to better incomes.
300. However, more could have been done to achieve greater impact and ensure that the project could realize its full potential towards the sustained economic and social development of the artisanal fishery communities.
301. **The linkages with the formal financial sector and among private sector actors along the fishery value chain remain weak** (paragraphs 114-117, 125, 140-146). This limited wider impact and transformation of the artisanal communities. ASCAs are still mainly used by individuals for savings and there is not much evidence that these groups have been linked to formal and/or commercial financial institutions, thus constraining the further expansion and uptake of alternative technologies which require larger financial capital for acquisition and maintenance over the years.
302. The support to market access remained confined mainly to infrastructure development and improvement of post-harvesting practices. Very little has been achieved in terms of activities related to business counselling services, marketing of fishing products and creation of linkages with the private sector to improve business opportunities and bargaining power of artisanal fishermen.
303. **Limited impact on fishery productivity and diversification of the artisanal fishers income base** (paragraphs 141, 147). The lack of higher investments in technological innovations (e.g., boats with engines) limited a further expansion of the produce and increase in productivity by fishing in open sea. This would have also reduced effort and time spent in the sea, enabling fishers to diversify their income base with alternative economic activities. The limited evidence of improved productivity is also partly due to unavailability of reliable data to conduct rigorous assessments, for instance, of labour productivity in the artisanal fishers sector and/or by assessing environmental and stock fluctuations.
304. The aforementioned shortcomings can be linked back to project design flaws: **SBAFP lacked a strategic approach at design in recognising the important role that the private sector plays in the sustainable development process of the artisanal fishery sector** (paragraphs 80, 146). The private sector offers potentially a great opportunity to the development of the artisanal fisheries sector in Mozambique, but their involvement in the project has been rather limited. On the positive side, the project did establish some linkages with private providers of inputs such as fishing gear and ice, but their role in purchase of produce, processing, storage, transportation, and marketing has been rather sporadic.
305. The evaluation therefore concludes that the private sector has been one of the most prominent missing links in the artisanal fisheries value chain, leaving individual fishers themselves to take up entrepreneurial initiatives, for which they are not yet adequately equipped.

306. **Along the same lines, gender mainstreaming was not secured by an adequate implementation strategy** (paragraphs 80, 205-233). As it was conceived, the project design did not include a strategy for gender mainstreaming, but it implemented some activities that benefitted women. This is surprising considering the important role that women play in the artisanal fisheries sector. In this regard, towards the end of the project in 2010 and based on its experience, the project helped the Government of Mozambique develop its first gender strategy in the artisanal fisheries sector. Moving forward, this provides an overarching framework for engaging women in different stages of the fisheries value chain.
307. With the help of NGOs, the project paid attention to social mobilisation by forming savings and credit groups for women and imparted training in financial management and fisheries processing and markets. The community development activities, such as water management and health services including market infrastructure development, aimed also at improving the well-being of women.
308. The impact evaluation however concludes that – in spite of the above – gender equality was not adequately addressed under the project, and remains an area where further benefits can be achieved. This is partly attributable to the relatively low levels of education among women, but also because the project did not undertake specific activities that could have contributed to changes in mind-sets, especially among men, to ensure women’s greater involvement in decision-making, managing income and productive and economic activities.
309. Finally, the data collected and analysis of the evaluation found that **the project did not have major impacts on food security in the treatment group, especially in relation to the comparison group** (paragraphs 80, 147-148). Though there were some improvements, around 20 per cent of beneficiaries noted that the situation of food availability in the household had worsened at the time of evaluation as compared to the past. Also in this case the main constraining factor concerns the lack of a strategy for promoting food security and enhancing nutrition.
310. **The prospects for the sustainability of benefits generated by SBAFP impacts are modest** (paragraphs 178-194). The perception among all heads of key government institutions interviewed by IOE during the field mission (e.g., four years after project completion) was that the SBAFP was a milestone in the development of the country’s artisanal fishery subsector. The fact that the project has been executed at the provincial and district levels by IDPPE, which is a Government of Mozambique’s agency, ensured stability in government support. The plans to renew PESPA secure the required continuity to sustain project impacts across the several SBAFP components.
311. Notwithstanding the above, several factors challenge the long-term sustainability of project’s impacts. First and foremost, the SBAFP did not develop an exit strategy, which would have helped clarify the roles and responsibilities of different institutions and actors in ensuring beneficiaries received the necessary inputs and services after programme completion. Second, operation and maintenance of the infrastructures developed by the project is a major constraint to sustainability. Finally, grassroots institutions are weak as by and large they have not been federated into apex organisations which would have given them more leverage in policy dialogue with government authorities and resource allocation processes.
312. It is important to acknowledge that the project is part of a broader development context and IFAD country programme framework. In this regard, the presence of a scaling-up project (PROPESCA) that is currently addressing some of the above challenges is expected to contribute to better sustainability.
313. **The evolution in IFAD’s operating model has been good, but design complexities have constrained results. Government has shown a high degree of commitment, but the evaluation raises concerns with fiduciary aspects** (paragraphs 261-273, 278-281). The setting up and strengthening of the ICO in Maputo, including through the recent out-posting of the Country Director for

the first time, are positive evolutions in the Fund's operating model that should lead to better development effectiveness in the future.

314. Government institutions dealing with the fisheries sector generally have good skills and knowledge in designing and implementing interventions in the artisanal fisheries sector. The main point raised by the evaluation is the management of fiduciary aspects, in particular auditing, which will require careful consideration in the future.
315. **The Government devoted good attention to monitoring and evaluation, but this was not sufficiently leveraged for better assessment and reporting on results** (paragraphs 9-11, 56, 100, 104, 274-277). The project is commended for having developed a generally well-functioning M&E system for complex project. A baseline survey was undertaken quite early after project effectiveness, additional surveys were done during implementation, and an end-line survey was also done at completion. The M&E team of the project provided continuity, as they were also part of the project team of the Nampula project, and had good skills and competencies in M&E.
316. Notwithstanding the above, there were several shortcoming, which constrained the use of M&E as a full-fledged monitoring, management and evaluation tool. For instance, the M&E system was not properly linked to the project's logical framework, which in itself also had some limitations including weak articulation of the causal links between the project's components and its objectives and goals. The M&E system collected a wealth of data on inputs and outputs, including in the area of community development, but fell short of reliably assessing outcomes and impacts. With regard to the latter, while the project is commended for undertaking a large number of surveys throughout project life cycle and for its commitment to ensuring continuous collection of data, their underpinning methodology and quality of data collected and corresponding analysis was found to have various limitations.

Recommendations

317. Based on its conclusions, the impact evaluation makes four specific recommendations for IFAD to consider in the formulation of the forthcoming Mozambique COSOP, the implementation of ProPESCA, as well as in the design and implementation of future operations in the country aimed at artisanal fisheries development.
318. **Recommendation 1: IFAD should work in close partnership with the Government of Mozambique and the World Bank in order to ensure that artisanal fishers' access to markets and finance are duly considered in the revised sectoral policy framework.** IFAD should be involved in the renewal process of PESPA, build on its experience and identify opportunities for further partnership and policy dialogue with the World Bank and the Government of Mozambique. The updated sectoral strategy should generate policies which facilitate artisanal fishers' access to formal financial institutions (in particular formal financial institutions) and markets.
319. **Recommendation 2: There is need for wider private sector engagement** (paragraphs 301, 304). The private sector has an increasing role in general in Mozambique, and their contribution is fundamental for promoting prosperity among artisanal fisheries communities. In particular, IFAD and the Government should ensure that the role of the private sector is clearly articulated as key partners in fisheries development, both in upstream and downstream activities, ranging from the provision of fishing inputs and financial services, to processing, storage, transportation and value addition of fish produce.
320. **Recommendation 3: Project design should include due attention to gender mainstreaming, and specific activities should be carried out to empower women and ensure they can be more prominently involved in productive activities** (paragraphs 306-308). This will require attention to building

cooperatives or federation of women's savings and credit groups and linking them to formal financial services. Artisanal fisheries projects in Mozambique should include dedicated activities to train women, especially in value addition and marketing for better returns. Specific training sessions should be conducted for fishermen, as a means for promoting gender equality, so they can better recognise the valuable role women can play in fisheries development. For all this to happen, future project design should clearly include a gender mainstreaming strategy.

321. **Recommendations 4: M&E needs to be better leveraged for promoting greater development effectiveness** (paragraphs 315-316). This includes ensuring that logical frameworks are constructed in a participatory manner with the main stakeholders and include a theory of change, with simple and clearly measurable indicators and targets. The hypothesis and assumptions for converting inputs to outputs, and outputs to outcomes and impacts should be spelt out. Moreover, the logical frameworks should be aligned with project design, as captured in project design documents. Finally, greater attention is needed to ensuring M&E systems collect, analyse and report on results beyond the output level, and indicators in the system should also ensure the RIMS are embedded therein.

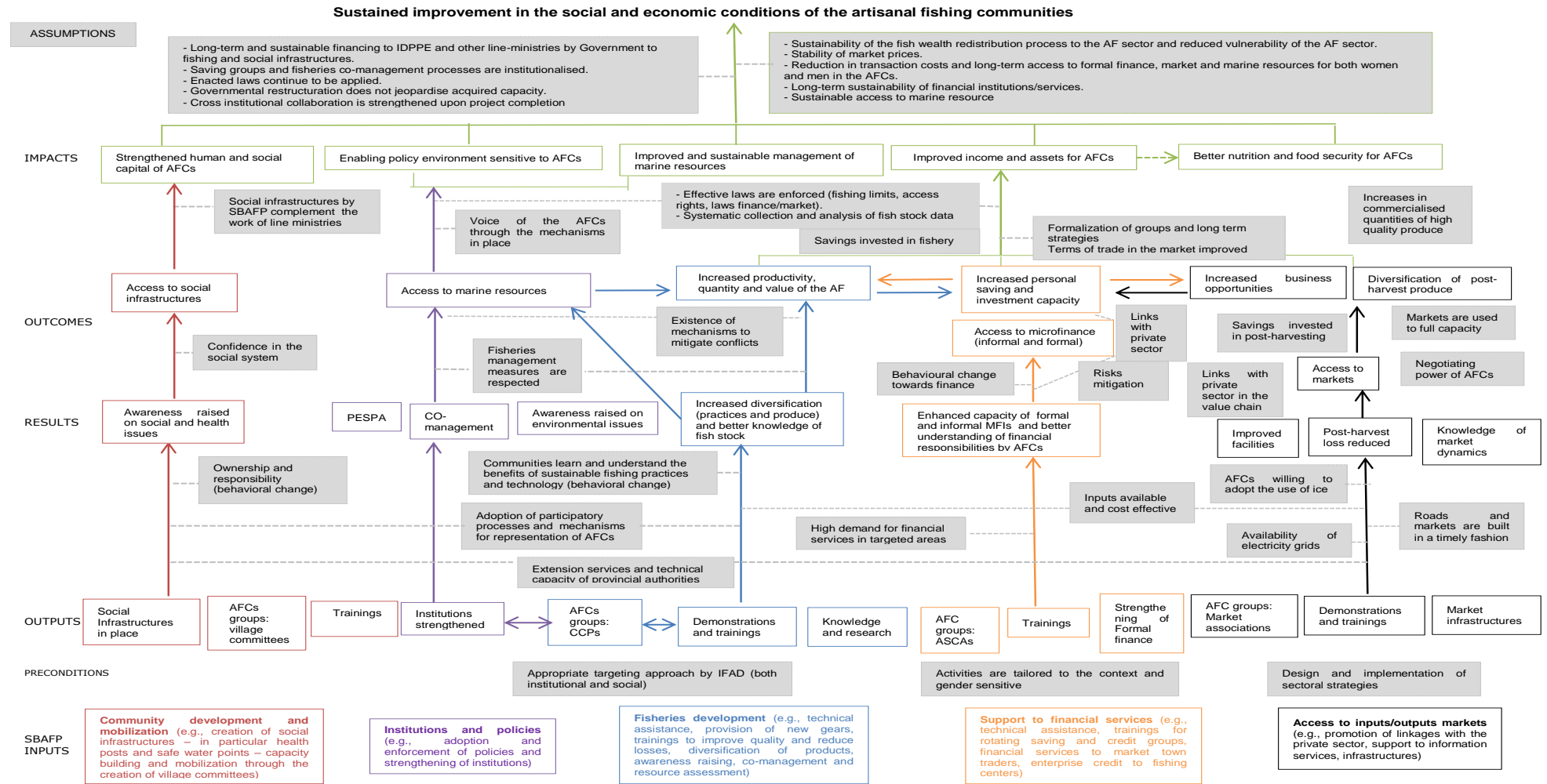
Definition and rating of the evaluation criteria used by IOE

Criteria	Definition *	Mandatory	To be rated
Rural poverty impact	Impact is defined as the changes that have occurred or are expected to occur in the lives of the rural poor (whether positive or negative, direct or indirect, intended or unintended) as a result of development interventions.	X	Yes
	<i>Four impact domains</i>		
	<ul style="list-style-type: none"> Household income and net assets: Household income provides a means of assessing the flow of economic benefits accruing to an individual or group, whereas assets relate to a stock of accumulated items of economic value. The analysis must include an assessment of trends in equality over time. 		No
	<ul style="list-style-type: none"> Human and social capital and empowerment: Human and social capital and empowerment include an assessment of the changes that have occurred in the empowerment of individuals, the quality of grass-roots organizations and institutions, the poor's individual and collective capacity, and in particular, the extent to which specific groups such as youth are included or excluded from the development process. 		No
	<ul style="list-style-type: none"> Food security and agricultural productivity: Changes in food security relate to availability, stability, affordability and access to food and stability of access, whereas changes in agricultural productivity are measured in terms of yields; nutrition relates to the nutritional value of food and child malnutrition. 		No
	<ul style="list-style-type: none"> Institutions and policies: The criterion relating to institutions and policies is designed to assess changes in the quality and performance of institutions, policies and the regulatory framework that influence the lives of the poor. 		No
Project performance	Project performance is an average of the ratings for relevance, effectiveness, efficiency and sustainability of benefits.	X	Yes
Relevance	The extent to which the objectives of a development intervention are consistent with beneficiaries' requirements, country needs, institutional priorities and partner and donor policies. It also entails an assessment of project design and coherence in achieving its objectives. An assessment should also be made of whether objectives and design address inequality, for example, by assessing the relevance of targeting strategies adopted.	X	Yes
Effectiveness	The extent to which the development intervention's objectives were achieved, or are expected to be achieved, taking into account their relative importance.	X	Yes
Efficiency	A measure of how economically resources/inputs (funds, expertise, time, etc.) are converted into results.	X	Yes
Sustainability of benefits	The likely continuation of net benefits from a development intervention beyond the phase of external funding support. It also includes an assessment of the likelihood that actual and anticipated results will be resilient to risks beyond the project's life.	X	Yes
Other performance criteria			
Gender equality and women's empowerment	The extent to which IFAD interventions have contributed to better gender equality and women's empowerment, for example, in terms of women's access to and ownership of assets, resources and services; participation in decision making; work load balance and impact on women's incomes, nutrition and livelihoods.	X	Yes
Innovation and scaling up	The extent to which IFAD development interventions: <ul style="list-style-type: none"> (i) have introduced innovative approaches to rural poverty reduction; and (ii) have been (or are likely to be) scaled up by government authorities, donor organizations, the private sector and others agencies. 	X	Yes
Environment and natural resources management	The extent to which IFAD development interventions contribute to resilient livelihoods and ecosystems. The focus is on the use and management of the natural environment, including natural resources defined as raw materials used for socio-economic and cultural purposes, and ecosystems and biodiversity - with the goods and services they provide.	X	Yes
Adaptation to climate change	The contribution of the project to reducing the negative impacts of climate change through dedicated adaptation or risk reduction measures	X	Yes

<i>Criteria</i>	<i>Definition</i> *	<i>Mandatory</i>	<i>To be rated</i>
Overall project achievement	This provides an overarching assessment of the intervention, drawing upon the analysis and ratings for rural poverty impact, relevance, effectiveness, efficiency, sustainability of benefits, gender equality and women's empowerment, innovation and scaling up, as well as environment and natural resources management, and adaptation to climate change.	X	Yes
Performance of partners			
• IFAD	This criterion assesses the contribution of partners to project design, execution, monitoring and reporting, supervision and implementation support, and evaluation. The performance of each partner will be assessed on an individual basis with a view to the partner's expected role and responsibility in the project life cycle.	X	Yes
• Government		X	Yes

* These definitions build on the Organisation for Economic Co-operation and Development/Development Assistance Committee (OECD/DAC) Glossary of Key Terms in Evaluation and Results-Based Management; the Methodological Framework for Project Evaluation agreed with the Evaluation Committee in September 2003; the first edition of the Evaluation Manual discussed with the Evaluation Committee in December 2008; and further discussions with the Evaluation Committee in November 2010 on IOE's evaluation criteria and key questions

The Theory of Change



62

Source: IOE.

Evaluation framework

<i>Evaluation criteria</i>	<i>Key evaluation questions</i>	<i>Impact indicators</i>	<i>Data Sources</i>
I.RURAL POVERTY IMPACT			
<i>a) Household income and assets</i>	a.1 What have been the changes on incomes and assets in the beneficiary group as compared to the non-beneficiary? <u>In particular:</u>	Standard of Living Index Income	Desk review <u>Qualitative:</u> Interviews
	a.2 What is the mean current annual income and what was 10 years ago?	% of households reporting increase in number of sources of income	Focus group discussions
	a.3 What is the relative wealth of the household based on the household characteristics and assets?	% of households reporting engagement in alternative income generating activities	<u>Quantitative:</u> impact survey by IOE and secondary data
	a.4 Has SBAFP increased fishermen's income-generating capacity in targeted areas with respect to non-targeted areas? What is the contribution of the diversified fishery production to improved incomes? How did it change over time?	Total savings and credits Participation in ASCAs and related saving and credit activities	
	a.5 Did the saving capacity of AFCs improve as compared to 10 years ago? how are those savings utilized? Are the productive investments increasing in project areas?	% of productive credit and trend over time	
	a.6 Has the project increased women's income-generating capacity in targeted areas with respect to non-targeted areas?	% of households reporting savings and credit (in ASCAs and other sources)	
	a.7 Were the AFCs able to access informal and formal financial markets more easily?		
<i>b) Human and social capital and empowerment</i>	a.6 What factors caused the above changes?		
	b.1 What changes have occurred in the empowerment of AFC and the quality of community-based organizations? What factors caused the changes? <u>In particular:</u>	% of respondents reporting participation in village and co-management committees, groups and associations in the last one year	
	b.2 To what extent did the project contribute to strengthening the role of community based organizations, inter alia, in planning and executing development activities?	% of women of reporting participation in village and co-management committees, groups and associations in last one year	
<i>c) Food security and fish productivity</i>	b.3 To what extent did the behaviour of the communities change towards the adoption of sustainable fishing practices? Towards the use of micro finance services?	% of respondents that received trainings from the project % of households with access to education and health facilities % of households with access to safe source of drinking water	
	c.1 What have been the changes in the food security of targeted communities and productivity of the fisheries sector? What were the factors triggering the changes? <u>In particular:</u>	% of households reporting year round availability of food + other indicators on household food self-sufficiency	
	c.2 Did the improvement in incomes lead to better food security?	Tot Indicators relevant to the productivity of the fishery sector (e.g. catch, tools etc.)	
	c.3 What have been the changes in the average productivity of the fisheries sector in the project's area with respect to comparison areas?	Indicators on access to natural resources	
	c.4 Has the SBAFP increased on average the percentage of commercialized production of the beneficiaries with respect to non-beneficiaries?	Indicators on access to markets	

<i>Evaluation criteria</i>	<i>Key evaluation questions</i>	<i>Impact indicators</i>	<i>Data Sources</i>
	<p>c.5 What have been the changes in nutrition and health conditions?</p> <p>c.6 Did the AFC have better access to input and output markets?</p> <p><u>In particular:</u></p> <p>c.7 For whom has market access been achieved and what has been the nature of smallholder market interaction?</p> <p>c.8 Did the project conduct a value chain analysis?</p> <p>c.9 Has sufficient action been taken on marketing activities?</p> <p>c.10 How did the different types of infrastructure development impact access to markets?</p> <p>c.11 How have partnership strategies between fishers, traders and interested private sector/public sector enterprises, capacity-building of institutions and the target group, and development of policies affected access to markets?</p> <p>c.11 How has the financial sector (formal and informal) responded to meet the financial demands and needs of the target group for production and market access? And to what extent was the private sector involved?</p>		
<i>d) Institutions and policies</i>	<p>d.1 What are the changes in the quality and performance of institutions, policies and the regulatory framework that influence the lives of the poor?</p> <p>d.2 What has been the project's contribution to the behavioural changes in local authorities and grass roots organizations? What were the underlying causes for the change induced?</p>		
<i>e) Environment and natural resources</i>	<p>e.1 What has been the impact on natural resources and environment?</p> <p><u>In particular:</u></p> <p>e.2 To what extent and how did the project contribute to the sustainable use of marine resources?</p> <p>e.3 To what extent and how did the project contribute to improve the resilience of AFCs to environmental shocks?</p>		
<i>f) Adaptation to climate change</i>	<p>f.1 To what extent did the project contribute to improve the resilience of small sale fishers?</p> <p>f.2 To what extent did the project include specific activities related to climate change adaptation?</p>		<p>Desk review</p> <p><u>Quantitative:</u></p> <p>Secondary data</p> <p><u>Qualitative:</u></p> <p>Interviews</p>
II. PROJECT PERFORMANCE			
<i>a) Relevance</i>	<p>a.1 Were the <u>objectives</u> of the SBAFP relevant?</p> <p>a.2 Were they relevant to: country strategies and policies?</p> <p>a.3 the needs of the poor? IFAD's priorities, strategies and COSOPs?</p> <p>a.4 Was the project <u>design</u> appropriate?</p> <p>a.5 In particular, was it based on a thorough socio-economic analysis of the sector which would allow an in-depth understanding of the complex dynamics characterizing the AFCs, including gender related aspects?</p> <p>a.6 Did it target the poorest artisanal fishing communities, including women?</p> <p>a.7 Was it based on development approaches tailored to the context (A5)?</p>		<p>Desk review</p> <p><u>Qualitative:</u></p> <p>interviews</p>

<i>Evaluation criteria</i>	<i>Key evaluation questions</i>	<i>Impact indicators</i>	<i>Data Sources</i>
	a.8 Did the project have an exit strategy at design?		
b) Effectiveness	<p>b.1 Was the project <u>targeting</u> approach effective?</p> <p>b.2 What was the project <u>outreach</u> at completion?</p> <p>b.3 Did the project meet its <u>objectives</u>?</p> <p><u>In particular:</u></p> <p>b.4 Did the project succeed in mobilizing AFCs? How many associations were institutionally recognized at project completion?</p> <p>b.5 Did the project support the local authorities in the improvement/creation of social infrastructure?</p> <p>b.6 Did the project support the creation and adoption of sectoral policies? Are these policies known at community level?</p> <p>b.7 Did the AFCs adopt the fishing practices introduced and disseminated by the project?</p> <p>b.8 Did the AFCs production improve at project completion as compared to project design? What about the production of high value fish?</p> <p>b.9 To what extent did the capacity of MFIs improve?</p> <p>b.10 To what extent did the AFCs access to financial services and input/output markets improve?</p> <p>b.11 Did the AFCs productive investments increase at project completion as compared to project design?</p> <p>b.12 To what extent did the project contribute to set-up a functioning market information system?</p> <p>b.13 To what extent did the project contribute to improve the economic linkages between the AFCs and the private sector? What has been the change in inputs/outputs prices?</p> <p>b.14 Was the technical capacity of IDPPE adequate to support the implementation of the project?</p>	RIMS	<p>Desk review</p> <p><u>Qualitative:</u> Interviews</p> <p>Focus group discussions</p> <p><u>Quantitative:</u> Probit analysis</p> <p>Selected recall questions in the impact survey</p>
c) Efficiency	<p>c.1 How economically resources and inputs were converted into results?</p> <p><u>In particular:</u></p> <p>c.2 How cost-effective were the development approaches adopted by the project?</p> <p>c.3 What was the cost of the project as compared to fisheries project supported by other donors in the country?</p> <p>c.4 What was the time lag between approval and loan effectiveness?</p> <p>c.5 What was the budget utilization at completion?</p> <p>c.6 Were the funds from IFAD and other partners made available in a timely manner?</p> <p>c.7 What are the project management costs at completion? And as compared to other similar projects?</p>	Proxy indicators of efficiency	<p>Desk review</p> <p><u>Qualitative:</u> Interviews</p>
d) Sustainability of benefits	<p>d.1 To what extent the net benefits deriving from the project are continuing?</p> <p>d.2 To what extent did the project contribute to trigger a process of wealth redistribution towards the AF sector?</p> <p>d.3 To what extent did the project contribute to reduce the vulnerability of the sector? What is the sustainability of the project from a technical, institutional and social perspective?</p>		<p>Desk review</p> <p><u>Qualitative:</u> Interviews</p> <p>Focus group discussions</p>

<i>Evaluation criteria</i>	<i>Key evaluation questions</i>	<i>Impact indicators</i>	<i>Data Sources</i>
III. OTHER CRITERIA			
a) Gender equality and women empowerment	<p>a.1 What has been the impact on gender equality and women's empowerment? Did the project expand women's access to and control over fundamental assets?</p> <p>a.2 Did the project strengthen women's agencies – their decision-making role in community affairs and representation in local institutions?</p> <p>a.3 Did the project improve women's well-being and ease their workloads by facilitating access to basic rural services and infrastructures?</p>	Women empowerment index	<p>Desk review</p> <p><u>Qualitative:</u> Interviews</p> <p>Focus group discussions</p> <p><u>Quantitative:</u> impact survey</p>
b) Innovation and scaling up	<p>b.1 To what extent did the project introduce innovative approaches that have been scaled-up by the Government of Mozambique and others?</p> <p>b.2 To what extent did the project learn from past experience and inform the design of new projects?</p>		<p>Desk review</p> <p><u>Qualitative:</u> Interviews</p>
IV. PERFORMANCE OF PARTNERS			
a) Performance of IFAD as a partner	<p>a.1 Has IFAD exercised its developmental, project management, and fiduciary responsibilities?</p> <p>a.2 Did IFAD mobilize adequate resources (funding, time, technical expertise)?</p> <p>a.3 Was the design process participatory (with national and local agencies, grass-roots organizations) and did it promote ownership by the borrower?</p> <p>a.4 Did IFAD undertake the necessary follow-up to resolve any implementation bottlenecks?</p> <p>a.5 Was prompt action taken to ensure the timely implementation of recommendations stemming from the supervision and implementation support missions, including the tri-term reports?</p> <p>a.6 Did IFAD (and the Government) take the initiative to suitably modify project design (if required) during implementation in response to any major changes in the context, especially during the mid-term review?</p> <p>a.7 Has IFAD been active in creating an effective partnership and maintaining coordination among key partners?</p> <p>a.8 Has IFAD made proactive efforts to be engaged in policy dialogue activities at different levels in order to ensure, inter alia, the scaling up of pro-poor innovations?</p> <p>a.9 Has IFAD, together with the Government, contributed to planning an exit strategy?</p>		<p>Desk review</p> <p><u>Qualitative:</u> Interviews</p>
b) Performance of Government as a partner	<p>b.1 Has the Government assumed ownership and responsibility for the project? Judging by its actions and policies, has the Government been fully supportive of project goals.</p> <p>b.2 Has adequate staffing and project management been assured?</p> <p>b.3 Has project management discharged its functions adequately, and has the Government provided policy guidance to project management staff when required?</p> <p>b.4 Have loan covenants and the spirit of the loan agreement been observed? Have appropriate levels of counterpart funding been provided on time? Have the flow of funds and procurement procedures been suitable for ensuring timely implementation? Has auditing been undertaken in a timely manner and have reports been submitted as required?</p>		<p>Desk review</p> <p><u>Qualitative:</u> Interviews</p> <p>Focus group discussions</p>

<i>Evaluation criteria</i>	<i>Key evaluation questions</i>	<i>Impact indicators</i>	<i>Data Sources</i>
	<p>b.5 Was prompt action taken to ensure the timely implementation of recommendations from supervision and implementation support missions, including the tri-term reports?</p> <p>b.6 Did the Government (and IFAD) take the initiative to suitably modify the project design (if required) during implementation in response to any major changes in the context?</p> <p>b.7 Did the Government ensure suitable coordination of the various departments involved in execution?</p> <p>b.8 Has the Government facilitated the participation of NGOs and civil society where appropriate?</p> <p>b.9 Has an effective M&E system been put in place and does it generate information on performance and impact which is useful for project managers when they are called upon to take critical decisions? And is the generated information useful for (impact) evaluations?</p>		

Source: IOE.

Main socio-economic indicators for the project area

	<i>Sofala</i>	<i>Zambezia</i>	<i>Nampula</i>	<i>Mozambique</i>
Contribution to national GDP by province (2008)	11%	12%	14%	-
Total population million	1.95	4.6	4.8	24.4
Total number of men million	947 863	2 203 257	2 353 417	11.8
Total number of women	1 003 148	2 359 761	2 414 025	12.6
Approx. % people below 1.25 USD per day	80-90	70	70	70
Number of hospital and health centers/posts	156	227	210	1,448
Road network (kilometers)	2 342	4 541	4 116	30 554
Registered unemployment	7 600	3 857	3 052	28 759
% illiterates (15 years and older)	43.4%	62.5%	62.3%	50.4%
Of which men	23.0%	43.5%	46.5%	65.5%
Of which women	61.9%	79.0%	77.4%	35.9%

Source: various reports INE

Key project dates of the Sofala Bank Artisanal Fisheries Project

<i>Year</i>	<i>Month</i>	<i>Day</i>	<i>Occurrence</i>
2001	September	12	Approval of IFAD loan of SDR 14 million ¹ by the Executive Board
2002	February	20	Loan signature
2002	September	02	Project becomes effective
2003	August		Supervision mission (UNOPS)
2004	September - October	20-1	Supervision mission (UNOPS)
2005	October-November		First Tri-term review
2006	November-December		Supervision mission (UNOPS)
2007	July		Supervision mission (IFAD/UNOPS)
2008	March-April		Second tri-term review
2008	September	19	First loan amendment
2008	September	30	Original completion date
2009	September-October		Country Programme Evaluation (IOE)
2009	March	31	Original loan closing date
2009	April-May		Supervision mission (IFAD)
2009	July	16	Second loan amendment
2010	May-June		Supervision mission (IFAD)
2011	January	14	Third loan amendment
2011	March	31	Actual completion of the project
2011	September	30	Actual loan closing
2012	May		Third tri-term review (Project Completion Report)
2012	November		Project Completion Report Validation (IOE)

Source: Various SBAFP project reports.

¹ In the loan agreement the IFAD funding is specified in SDR. 14 million SDR is equivalent to approximately 18 million USD.

Project's revised logical framework

Description	Key Performance Indicators a/	Means of Verification	Assumptions
<p>Development Goal: To achieve a sustained improvement in economic and social conditions of artisanal fishing communities in the Project area</p>	<ul style="list-style-type: none"> • Household incomes increased during the Project period. • No and proportion of households in Project communities with improved access to social services, sanitation facilities and clean drinking water. • No and proportion of households realising improved health and nutrition status, especially of children. 	<ul style="list-style-type: none"> • National household income and poverty studies. • Final evaluation surveys compared to Baseline Survey data. • Use of Health Information System and ad hoc case studies. 	<ul style="list-style-type: none"> • Effective mitigation of natural disasters. • Continued Government support for transfer of resource rights from industrial and semi-industrial to artisanal fisheries. • Economic growth and consumer purchasing power maintained.
Component A: Community Development			
<p>Purpose: To improve the well-being of fishers by empowering fishing communities to take increase responsibility for local development initiatives including implementing social infrastructure and service activities.</p>	<ul style="list-style-type: none"> • No of community committees, associations formed and active. • No of community infrastructure and other community projects planned, constructed and maintained. • No of community health workers trained and given incentives. • No of health care schemes operating in Project villages. 	<ul style="list-style-type: none"> • Baseline and follow-up survey data. • Quarterly progress reports from extensionists, IDPPE/IIP mobile teams and local implementing agencies, identifying impact. • Community project progress and completion reports. • Quarterly and annual PPABAS reports and project completion report. 	<ul style="list-style-type: none"> • Collaboration of Provincial Departments of Health, Education and Public Works is maintained and enhanced. • Local government budget for staff and operation of facilities/services assured. • Communities are willing to provide the contribution required to construct the infrastructure facilities.
<p>Expected Key Outputs:</p> <ul style="list-style-type: none"> • Appropriate community committees and associations set up, members trained, and supported to operate in a sustainable manner to represent peoples interests. • Democratically selected social infrastructure projects, facilities and services planned and established with proper operating, financing and maintenance arrangements. • Community-based, primary health care service provision significantly upgraded/ensured with involvement of TBAs/CHWs – and onward referral facilitated for serious medical cases. • Educational facilities provided or improved where necessary; and adequate, ongoing provision made for adult/functional literacy training. 			

Component B: Fisheries Development			
Description	Key Performance Indicators	Means of Verification	Assumptions
<p>Purpose: To improve access to – and, commercially viable and sustainable utilisation of – the Sofala Bank fish and marine resources by artisanal fishers through co-management systems and technical initiatives.</p>	<ul style="list-style-type: none"> • No of CCPs operative and effective in: <ul style="list-style-type: none"> ○ eradication of illegal gear use; ○ conversion from beach seines in congested areas; ○ reduction in 3 mile zone encroachment; ○ resolution of immigrant/rights conflicts; and ○ receipt of share of fishing licence revenues. • Numbers of trials/demonstrations by extensionists and mobile teams. • No of A-B Fisher Associations operative and effective in providing services to members on an economically viable basis. • No and/or proportion of total effort in use of new fishing gear (gillnets, trammel nets and longlines) and better traditional processing – and hence improved quality, volume and value of cured fish. • Increase in net returns to fishers per unit of effort. • No of fishing workers becoming owners of gear and boats. 	<ul style="list-style-type: none"> • Records of Vessel Monitoring System and CCP reports. • Records of Fisher Associations and extension agents supporting them. • Surveys in fishing communities of adoption, impact and benefits of new gear and practices including supply of ice, market acceptance of products, prices and incomes. • Quarterly progress reports from extensionists and IDPPE/IIP mobile teams on success of marketing higher value fish and impact on fisher incomes; and effectiveness of co-management activities. • IIP reports on state of fish resources. • Quarterly and annual PPABAS reports and project completion report. 	<ul style="list-style-type: none"> • Adequate purchasing power by low-income fish consumers. • Demand for higher value fresh fish products will continue to increase. • Prices of main fish products on the domestic market stable, or increasing. • Artisanal fishing communities respond to improved legal environment. • IIP sustains fish catch and effort monitoring programme.
<p>Expected Key Outputs:</p> <ul style="list-style-type: none"> • Community Fishery Councils, fishers associations set up, trained, and supported to operate in a sustainable and increasingly commercialised manner. • Further demonstration of the practicability and acceptability of diversified, open sea fishing technologies and methods. • Backing-up – by local by-laws, political will and effective enforcement – of the favourable legislation and regulation that has now been enacted. • Extension of better regulation and fish conservation by: local licensing and fishing effort control in congested zones. • Continued and extended uptake of improved traditional fish processing methods and marketing practices. • Time series data on fishing effort, fish catch and fish stock enabling better informed fishery management decisions. 			

Component C: Market Support and Roads			
Description	Key Performance Indicators	Means of Verification	Assumptions
<p>Purpose: To improve economic and physical linkages of artisanal fishing communities to input and output markets on a sustainable basis.</p>	<ul style="list-style-type: none"> • Uptake in commercial use of ice/cold boxes for fresh fish. • Rates of change in volume and value marketed of: first quality, high value fresh fish; lower-value fresh, frozen or processed fish; and traditional products. • No of fish landing centres and fish market facility improvements, completed. • No by category of product of fish buyers/traders and joint marketing enterprises. • No of prawn processing and fresh fish handling plants dealing with artisanal fishers. • Number of suppliers and volume of sales of quality fishing inputs at competitive prices. • Project road maintenance arrangements. • Km of access roads constructed, rehabilitated and maintained. • Km of Project roads regularly maintained to proper standard. 	<ul style="list-style-type: none"> • Annual survey of traders involved in supplying inputs to and marketing fish from artisanal fishers, constraints experienced and opportunities. • Survey of fish marketed to assess the response of consumers to better quality cured fish and to increased supplies of fresh and frozen fish. • Quarterly and annual PPABAS reports and project completion report. • Quarterly reports submitted by DEPs in each of the three Provinces. • Bid/tender documents and contracts. • Reports submitted by a joint Project and DEP team on the quality of maintenance carried out on Project roads. 	<ul style="list-style-type: none"> • Demand for higher quality fresh and frozen fish is sufficient to test viability of adoption of use of ice and associated cold handling. • Prawn processing plants are interested in purchasing shrimp and fish from artisanal fishers. • Electricity network continues to expand • Resources made available for continued maintenance of Project roads • DEPs select qualified and experienced contractors to rehabilitate and maintain Project roads.
<p>Expected Key Outputs:</p> <ul style="list-style-type: none"> • Value chain study elaborating on the feasibility of ice supply and fresh fish marketing in conjunction with private sector/fishers association partners. • Continued, refined and expanded availability of information on product prices and demand/supply conditions for major fish markets. • Further fisher, fisher association and private sector trader linkages facilitated, promoted, supported and operational. • Jointly-financed, improved facilities for landing/handling in fishing centres, point-of-first-sale, wholesale and retail markets – planned, constructed and in operation. • Roads maintenance agreements reached with Provincial/District authorities result in allocation of adequate budget to road maintenance. • Project roads re-surveyed and necessary remedial investments and repairs undertaken. 			

Component D: Financial Services			
Description	Key Performance Indicators	Means of Verification	Assumptions
<p>Purpose: To increase commercial and economic activity in artisanal fisheries sector.</p>	<ul style="list-style-type: none"> No of fishing and fishing related enterprise loans made by FFPI. Proportion of overdue principal and interest payments recovered by FFPI. FFPI systems, records, procedures and loan management capabilities upgraded to commercial standards. No of rotational savings and credit groups, and numbers of members, supported by Project. No savings and credit groups linked to the formal microfinance sector and number of members graduating to formal credit. Results of new pilot credit programmes undertaken by GAPI in each province. 	<ul style="list-style-type: none"> FFPI and PPABAS Provincial Delegation records and reports. Quarterly progress reports from extensionists and mobile teams on savings and credit schemes and enterprise credit. Quarterly and annual PPABAS reports and project completion report. Reports from GAPI on results of new pilot credit programmes. 	<ul style="list-style-type: none"> FFPI aggressively pursues wilful loan defaulters and recovers arrears. Agreement can be reached on continued PPABAS/FFPI collaboration. Basic stability of the financial sector is maintained to support activities of financial institutions.
<p>Expected Key Outputs:</p> <ul style="list-style-type: none"> Continued expansion in the number of savings and credit groups and graduation of some groups and group members to the formal microfinance sector. Conclusion of amended agreement between IDPPE, FFP and FFPI to recover defaulting loans, and recovery of at least two thirds of the overdue amount. Consolidation, further expansion and intensive promotion and advisory support of income-generating activities by Project and NGO implementing agencies Expanded opportunities for small/medium business development linked to fishing, fish trading and marketing, related support services. 			

Component E: Institutional Support			
Description	Key Performance Indicators	Means of Verification	Assumptions
<p>Purpose: To improve the enabling environment for promoting and supporting artisanal fisheries development</p>	<ul style="list-style-type: none"> • Permanent, exclusive artisanal fisheries zone, VMS and co-management system, all now in new laws, effectively enforced. • Cost effective, coherent structure and function for IDPPE and MDP at Province level implemented. • IDPPE continuing to act as advocate/catalyst to Government on artisanal fisheries policy. • Terms of trade improved for artisanal fisheries. • Project community development and infrastructure advisory/supervision cadre at Province level strengthened. • Operation of special accounts streamlined to allow for more timely release of funds. • Project M&E system operating in participatory mode. 	<ul style="list-style-type: none"> • Records of MoP Vessel Monitoring System and CCP reports. • Minutes of the PPABAS oversight committees: MoP and IDPPE Consultative Committees and Provincial Steering Committees. • Quarterly progress reports from extensionists and mobile teams noted above. • Quarterly and annual PPABAS reports and project completion report. • Special account and project account statements. 	<ul style="list-style-type: none"> • Government continues to allocate resources to the expansion of institutional capacity by IDPPE and MDP to oversee fisheries development. • Full Project Management and Technical Assistance team maintained until 2009. • Implementing agencies will improve their accountability to allow for more frequent replenishment of special accounts.
<p>Expected Key Outputs:</p> <ul style="list-style-type: none"> • PESPA and gender and HIV/AIDS policies and procedures put into effect. • Project M&E system and procedures further refined and operating satisfactorily and in a participatory manner. • Institutional support and strengthening activities, including those for community organisations, NGOs and local government agencies, continued and intensified • Project/IDPPE advocacy and catalytic role for fisheries policy, legislative and institutional development continued and entrenched within MDP 			

a/ All indicators to be gender disaggregated

Source: SBAFP Project Completion Report (2012).

Differences between the objectives and components at design and at completion of the project

	<i>At design</i>	<i>At completion</i>
	Objective 1: To improve the well-being of fishers by empowering and creating capacity in fishing communities to take increased responsibility for local development initiatives, including implementing social infrastructure and service activities and managing marine resources in a sustainable manner	Objective 1: to improve the well-being of fishers by empowering fishing communities to take increased responsibility for local development initiatives including implementing social infrastructure and service activities
Components	Sub-components at design	Sub-components at completion
A) Community development	Co-management	Community Mobilization and social infrastructure
	Community development	Community Health Care services
	Community health care	
	Objective 2: To improve access to, and the commercially viable and sustainable use of, Sofala Bank fish resources by artisanal fishers	Objective 2: Improve the access to, and commercially viable and sustainable utilization of, the Sofala Bank fish and marine resources by artisanal fishers through co-management systems and technical activities
Components	Sub-components at design	Sub-components at completion
B) Fisheries development	Resource assessment and Management (sustainable use of resources*)	Co-Management of Fishing Resources (CCPs) and Fishing Group Associations
	Promotion of diversified fish production	Management of Fishing Resources
	Post-harvest utilization	Promotion of diversified fish production
		Processing, Conservation and Losses Post Capture
	Objective 3: To improve economic and physical linkages of artisanal fishing communities to input and output markets on a sustainable basis	Objective 3: Same
Components	Sub-components at design	Sub-components at completion
C) Market support and access	Support to input and output marketing	Trading and Markets
	Market access road development	Roads Rehabilitation and maintenance
	Objective 4: To increase commercial and economic activity in artisanal fisheries sector	Objective 4: Same
Components	Sub-components at design	Sub-components at completion
D) Financial services	Support to savings and credit groups	Savings and credit groups
	Financial services to market town traders	
	Enterprise credit to fishing centres	Formal credit
	Support to financial services policies in the fisheries sector	

<i>At design</i>		<i>At completion</i>
Objective 5: To improve the enabling environment for promoting and supporting artisanal fisheries development		Objective 5: Same
Components	Sub-components at design	Sub-components at completion
E) Policy, legislative and institutional support	Policy and legislative support	Support to legislative initiatives
	Institutional Strengthening (to IDPPE*)	Institutional support
	Project management	Project Management
F) Workplace HIV/AIDS Programme		

Source: SBAFP Loan agreement 2002 / *President's report 2001 / Tri-term reports 2006, 2008, 2011

Tables from effectiveness chapter

- **Objective 1**

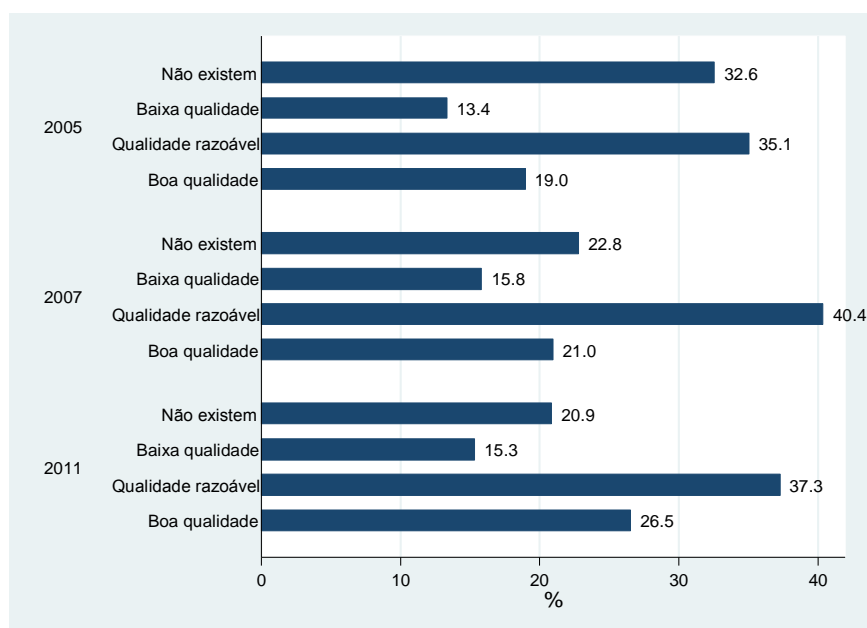
Main project targets and outputs (RIMS)

	<i>At design</i>	<i>At completion</i>	<i>Achieved percentage</i>
<u>Community Mobilization and social infrastructure</u>			
Schools constructed	25	23	92%
School committees formed	24	29	121%
Literacy trainees trained	830	722	87%
<u>Community Health Care services</u>			
Health units constructed	18	18	100%
Health committees formed	18	22	122%
Health committees members trained	270	298	110%
Health staff trained	713	312	44%
Birth attendants trained	585	352	60%
Mothers trained	274	226	82%
Children immunized	520,000	1,200,000	231%
Community water points constructed	57	17	30%
Water points constructed by entrepreneurs	296	301	102%
Water points working	353	303	86%
Water committees formed	353	301	85%
Number of people benefitting of water points	176,500	481,500	273%

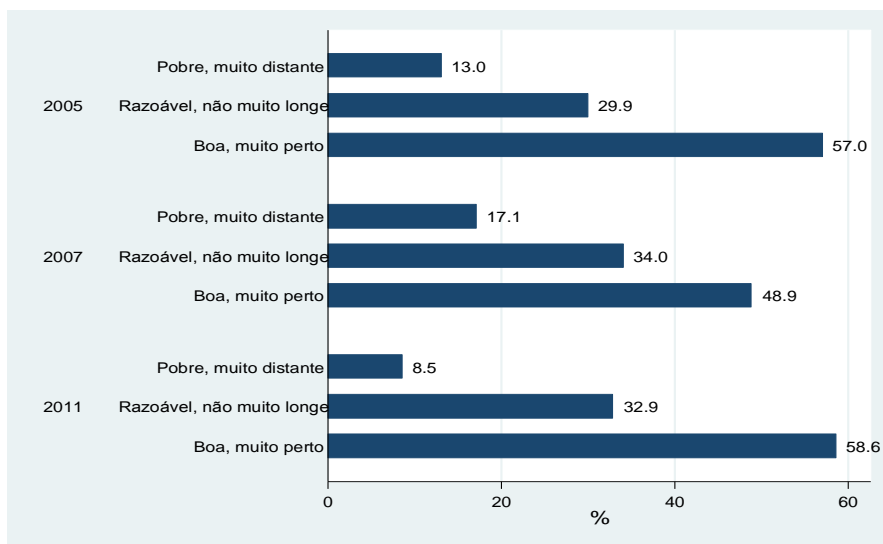
Source: SBAFP Project Completion Report (2012).

IDPPE surveys on objective 1

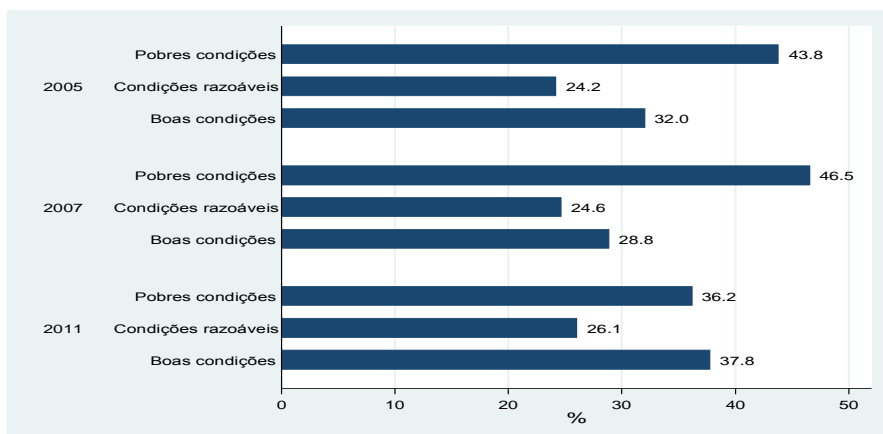
Opinion on the quality of health services (%)



- **Objective 1 (continued)**

Opinion on the quality of schools (%)


Source: IDPPE.

Opinion on the quality of water (%)


Source: IDPPE.

- **Objective 2**

Main project targets and outputs relevant to roads (RIMS)

	<i>At design</i>	<i>At completion</i>	<i>Achieved percentage</i>
Roads rehabilitated by entrepreneurs (km)	485	809	167%
Roads maintained by entrepreneurs	419	264	63%
Roads rehabilitated/maintained through community participation	155	80	52%

Source: SBAFP Project Completion Report (2012).

- **Objective 2 (continued)**

Main project targets and outputs relevant to processing, conservation and losses post capture (RIMS)

	<i>At design</i>	<i>At completion</i>	<i>Achieved percentage</i>
Demonstration of improved techniques and devices for traditional processing (participants)	3,600	3,815	106%
Processors using improved techniques	1,800	3,245	180%
Demonstration on use of ice (participants)	3,600	2,082	58%
Improved ice boxes introduced	120	210	175%
Improved fish sold in municipal markets (tons)	405	418	103%

Source: SBAFP Project Completion Report (2012).

- **Objective 3**

Main project targets and outputs (RIMS)

	<i>At design</i>	<i>At completion</i>	<i>Achieved percentage</i>
<u>Market support and access</u>			
Management committees of community markets established	3	14	467%
Points of first sale built	3	10	333%
Number of traders using the points of first sale	180	60	33%
Municipal markets constructed	3	4	133%
Number of traders using municipal markets	180	215	119%
Ice making machines established	3	12	400%
Local availability of fishing gears	17	12	71%
Information on markets broadcast by radio (number of formal shops)	624	720	115%

Source: SBAFP Project Completion Report (2012).

Tables from the impact chapter

Income and assets

Access to financial Services

	<i>Treatment mean</i>	<i>Comparison mean</i>	<i>Diference/ ATET</i>	<i>T-stat</i>
Credit				
Matched	0.01923	0	0.01923	3.8390**
Unmatched	0.01923	0	0.01923	3.6380**
Savings				
Matched	0.1110	0.0470	0.0640	4.6180**
Unmatched	0.1110	0.0540	0.0570	3.3361**

ATET – Average treatment effect on the treated (for matched data)-Kernel matching.

Note: level of significance *** p<0.01, ** p<0.05, * p<0.1.

Source: IOE impact evaluation survey, 2016.

Proportion of households with productive investment in 2015

	<i>Treatment mean</i>	<i>Comparison mean</i>	<i>Difference/ ATET</i>	<i>T-stat</i>
Matched	0.4789	0.3069	0.1720	5.4590**
Unmatched	0.4789	0.2841	0.1948	6.1503**

ATET – Average treatment effect on the treated (for matched data)-Kernel matching.

Note: level of significance *** p<0.01, ** p<0.05, * p<0.1.

Source: IOE impact evaluation survey, 2016.

Proportion of households that consider the price of fishing material to have improved in the last 10 years

	<i>Treatment mean</i>	<i>Comparison mean</i>	<i>Difference/ ATET</i>	<i>T-stat</i>
Matched	0.291351	0.250392	0.040959	1.31
Unmatched	0.291351	0.251462	0.039889	1.34

ATET – Average treatment effect on the treated (for matched data)-Kernel matching.

Note: level of significance *** p<0.01, ** p<0.05, * p<0.1.

Source: IOE impact evaluation survey, 2016.

Value of productive investments (2015)

	<i>Treatment mean</i>	<i>Comparison mean</i>	<i>Difference/ ATET</i>	<i>T-stat</i>
Matched	7699.2	6382.9	1316.26	0.6540

ATET – Average treatment effect on the treated (for matched data)-Kernel matching.

Note: level of significance *** p<0.01, ** p<0.05, * p<0.1.

Source: IOE impact evaluation survey, 2016.

Income and assets (continued)

Uptake of new income-generating activities (IGAs)

	<i>Primary income generating activities</i>	<i>Secondary income generating activities</i>	<i>Third income generating activities</i>	<i>New income generating activities</i>
Agriculture	2.7%	50.2%	18.7%	15.4%
Livestock	1.1%	2.8%	29.2%	9.9%
Fishing	93.3%	3.9%	2.7%	3.3%
Fish trade	1.1%	30.3%	18.2%	9.9%
Trade fishing inputs	0.1%	0.1%	1.9%	6.6%
Services	0.3%	0%	0.0%	1.1%
Fish processing	0%	0.3%	1.0%	1.1%

Source: IOE impact evaluation survey, 2016.

Food availability in the house

	<i>Treatment (%)</i>	<i>Comparison (%)</i>	<i>Total</i>
Worsen	20.8	17.7	172
Improved	48.9	43.7	410
Nothing changed	30.3	38.6	288
Total	577	293	870

Dealing with shocks in months of starvation

<i>Sales of goods to buy food</i>	.8	.3	6
Use savings to buy food	8.6	2.4	62
Sale animals	6.4	14.3	88
emigrate temporarily	.5	.6	5
Reduce number of meals	22.7	21.4	215
Get food from the work	11.1	14.0	117
Make use of the forest resources	.8	2.4	13
Resorts to hunger food	1.6	3.3	21
Mutual help	3.5	4.5	37
Resorts to cheaper food	21.1	17.6	192
Others	22.9	19.3	209
Total	629	336	965

Source: IOE impact evaluation survey, 2016.

Human and social capital empowerment

Opinion on water

	<i>Treatment (%)</i>	<i>Comparison (%)</i>
Households that perceived an improvement in the main source of drinking water in the last 10 years	42	9.9
Satisfaction on the quality of drinking water	25.6	6.4
Perception on a reduction in distance to the source of water in the last 10 years	35.6	11.4

Source: IOE impact evaluation survey, 2016.

Opinion on the access and physical conditions of the health facilities

	<i>Treatment mean</i>	<i>Comparison mean</i>	<i>Difference/ ATET</i>	<i>T-stat</i>
Access	0.636666667	0.497575	0.139092	3.91*
physical conditions	0.763333333	0.643072	0.120262	3.59*

Source: IOE impact evaluation survey, 2016.

Knowledge about:

	<i>Treatment (%)</i>	<i>Comparison (%)</i>
Regime of fishing closed period		
Yes	57.5	43.1
No	42.5	56.9
Fishing boundary zone		
Yes	68.7	49.6
No	31.3	50.4
Fishing licence		
Yes	85.0	65.0
No	15.0	35.0
Minimum fish size		
yes	60.2	47.1
No	39.8	52.9
Allowed catch		
Yes	27.0	25.1
No	73.0	74.9

Source: IOE impact evaluation survey, 2016.

Gender equality and women's empowerment

Percentage of women with their own income

	<i>Treatment (%)</i>	<i>Comparison (%)</i>	<i>Total</i>
Yes	38.0	35.7	336
No	62.0	64.3	568

Source: IOE impact evaluation survey, 2016.

Gender equality and women's empowerment (continued)

Women income in the last 5 years

<i>Income</i>	<i>Treatment (%)</i>	<i>Comparison (%)</i>	<i>Total</i>
Less than 1000 MTC	22.7	34.5	128
1000 - 1500 MTC	21.1	21.1	100
1500 - 2500 MTC	8.6	14.0	50
2500 - 3000 MTC	21.1	17.0	93
3000 - 3500 MTC	10.2	5.3	40
3500 - 5000 MTC	10.2	4.7	39
5000 - 10000 MTC	4.3	2.9	18
More than 10000 MTC	2.0	0.6	7
Total	304	171	475

Source: IOE impact evaluation survey, 2016.

Expenses with income

	<i>Treatment (%)</i>	<i>Comparison (%)</i>	<i>Total</i>
Food	71.9	52.4	328
Medicine	41.7	31.1	192
Furniture	20.2	12.7	88
Clothes	68.2	44.8	301
Saving	7.9	9.0	43
Others	26.8	51.4	190
Total	302	212	514

Source: IOE impact evaluation survey, 2016.

Place where catch is sold

	<i>Comparison (%)</i>	<i>Treatment (%)</i>
To trader on the beach	72.2	69.2
Municipality market	21.2	18.6
To small fishing centers	26.6	21.4
In the first market	23.6	31.4
To private company	.9	1.6
In the street	2.4	1.6
From house to house	3.3	5.7
In then restaurants/hotels	.6	1.0
In the urban centers	6.9	8.8

Source: IOE impact evaluation survey, 2016.

Tables from the efficiency chapter

Cost per direct beneficiary per project

Country	Project	Project cost (USD)	Number of direct beneficiaries	Cost per direct beneficiary (USD)
Mozambique	Nampula Artisanal Fisheries Project 334	11,245,500	12,539 (indirect not mentioned)	896.84
Mozambique	Sofala Bank Fisheries 1184	34,305,015	87,600 (indirect: 438,000)	391.61
Mozambique	ProPESCA 1517	43,540,408	40,000 (indirect not mentioned)	1088.51*
Bangladesh	Aquaculture Development 1074	23,769,000	49,144 (indirect: 4,020)	483.67
Angola	Northern Fishing project 1023	9,300,000	20,000 (indirect not mentioned)	465.00
Benin	PADPPA 1211	2,343,904	21,600 (indirect not mentioned)	108.51

*Project still on-going.

Project management cost per project

Country	Project	Project cost (USD)	Project management cost (USD)	Percentage
Mozambique	Sofala Bank Artisanal Fisheries Project - 1184	30,580,000 (design)	4,020,000 (design)	13.1% (design)
		34,305,015 (actual)	2,852,900 (actual)	8.3% (actual)
Mozambique	Nampula Artisanal Fisheries Project - 334	11,245,100 (design)	785,700 (design)	7.0% (design)
		11,245,500 (actual)	870,000 (actual)	7.7% (actual)
Mozambique	Artisanal Fisheries Promotion Project - 1517	43,540,408*	8,592,487*	19.7%*
Bangladesh	Aquaculture Development Project - 1074	23,768,900 (design)	1,519,100 (design)	6.4% (design)
		23,769,000 (actual)	1,806,000 (actual)	7.6% (actual)
Angola	Northern Fishing Project - 1023	9,267,600 (design)	2,329,900 (design)	25.2% (design)
		9,267,608 (actual)	2,639,356 (actual)	28.5% (actual)
Benin	Participatory Artisanal Fisheries Development Support Programme - 1211	25,994,700 (design)	2,867,500 (design)	11.0% (design)
		23,439,040 (actual)	3,027,800 (actual)	12.9% (actual)

* Project is still on-going – figures are from August 2016.

Rating comparison^a

<i>Criteria</i>	<i>IFAD-PMD rating</i>	<i>Evaluation rating</i>	<i>Rating disconnect</i>
Rural Poverty Impact	5	5	0
Project performance			
Relevance	6	4	-2
Effectiveness	5	4	-1
Efficiency	5	4	-1
Sustainability of benefits	4	4	0
Project performance^b	5	4	-1
Other performance criteria			
Gender equality and women's empowerment	5	3	-2
Innovation and scaling up	5	5	0
Environment and natural resources management	4	4	0
Adaptation to climate change	n.r	n.a	n.a
Overall project achievement^c	5	4	-1
Performance of partners^d			
IFAD	6	4	-2
Government	5	4	-1
Average net disconnect			-0.9

^a Rating scale: 1 = highly unsatisfactory; 2 = unsatisfactory; 3 = moderately unsatisfactory; 4 = moderately satisfactory; 5 = satisfactory; 6 = highly satisfactory.

^b Arithmetic average of ratings for relevance, effectiveness, efficiency and sustainability of benefits.

^c This is not an average of ratings of individual evaluation criteria but an overarching assessment of the project, drawing upon the rating for relevance, effectiveness, efficiency, rural poverty impact, sustainability, innovation and scaling up, and gender.

^d The rating for partners' performance is not a component of the overall project achievement rating.

Ratings of the project completion report document

<i>Ratings of the PCR document quality</i>	<i>PMD ratings</i>	<i>Evaluation ratings</i>	<i>Disconnect</i>
Scope	5	4	-1
Quality	6	5	-1
Lessons	6	5	-1
Candour	6	5	-1

List of key persons met*

Ministry of Economy and Finance

Ms Ester José Dos Santos
Deputy National Director of Treasury

Ms Fátima Gimo
Superior Technician of International Relations Diplomacy - External Dep. Analyst
IFAD Focal Point

Mr Narciso Manhenje
M&E Specialist and IFAD Focal Point

Ministry of Sea, Interior Waters and Fisheries

Departamento de economia, política e infra-estrutura

Mr Rafael Boavida
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Departamento de economia, política e infra-estrutura

Ms Isabel
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Departamento de economia, política e infra-estrutura

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Mr Tomé Nhamadinha Capece
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Direcção Provincial de Pesca Beira (Sofala)

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Embassy of Belgium – Belgium Fund for Food Security (BFFS)

Mr Antoon Delie
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African Development Bank

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Researcher, dpt. of Statistics

Ms Maria Cecilia Pedro
Consultant – Social Sciences

UNDP

Mr Matthias Z. Naab
Country Director

FAO

Mr Castro P. Camarada
Country Representative

Ms Luisa Patrocinio
Programme Officer

IFAD

Mr Robson Mutandi
Country Director

Mr Custodio Mucavele
Country Officer

Ms Ana Zandamela
Country Assistant

Community Councils, Committees and Associations

President of the CCP and 2 Fiscal (supervisors) de CCP
Conselho Comunitários de Pesca (CCP) de Praia Nova (Sofala)

President of the CCP and 8 members (fishermen)
Conselho Comunitários de Pesca (CCP) de Busi (Sofala)

President of the CCP and 6 members (fishermen and community members)
Conselho Comunitários de Pesca (CCP) de Madingo (Zambezia)

President of the CCP and 12 members (fishermen)
Conselho Comunitários de Pesca (CCP) de Zalala (Zambezia)

President
Market Management Committee of the Praia Nova Municipal Market (Sofala)

President and 10 members
Comissão do Mercado / First sale market – Chiconjo (Sofala)

President and 10 fish traders
Comissão do Mercado / First sale market – Zalala (Zambezia)

Focus group discussion with fishermen association in Isturil Village (Sofala)

President and 15 female members
Poupança e Crédito Rotativo (PCR) – Danga (Sofala)

President and 10 female members
Poupança e Crédito Rotativo (PCR) – Zalala (Zambezia)

President and 10 female members
Poupança e Crédito Rotativo (PCR) – Macuse (Zambezia)

President and 5 members
Conselho de Escola – Danga (Sofala)

Pedagogy officer
Conselho de Escola – Tatte (Zambezia)

President and 5 members
Conselho de Saude – Danga (Sofala)

President and 10 members (clinic staff and members of community)
Conselho de Saude – Muceliua (Zambezia)

Director
KRUSTAMAZ (fishing company – industrial sector) Quelimane (Zambezia)

***This list does not provide an exhaustive account of all the stakeholders and beneficiaries interviewed throughout the evolution process.**

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