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IMPLEMENTATION COMPLETION AND RESULTS REPORT

TF012284

ON A

GRANT

FROM THE  
GLOBAL ENVIRONMENT FACILITY

IN THE AMOUNT OF US\$ 5.18 MILLION

TO THE

Kingdom of Morocco

FOR THE

Integrated Coastal Zone Management Project (P121217)

June 28, 2018

Environment & Natural Resources Global Practice  
Middle East And North Africa Region

## CURRENCY EQUIVALENTS

Exchange Rate Effective: Dec 31, 2017

Currency Unit = Moroccan Dirham

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MAD9.16 = US\$1

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US\$0.11 = MAD1

## FISCAL YEAR

January 1 - December 31

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## ABBREVIATIONS AND ACRONYMS

<b>ADA</b>	Agricultural Development Agency
<b>ANDA</b>	National Agency for the Development of Aquaculture
<b>CD</b>	Country Director
<b>CMU</b>	Country Management Unit
<b>DACEFLCD</b>	Office of the High Commissioner for Water and Forests and the Fight against Desertification
<b>DE</b>	Department of Environment
<b>DFID</b>	Department for International Development
<b>DH</b>	Dirhams
<b>DO</b>	Development Objective
<b>EA</b>	Executing Agency
<b>ESMF</b>	Environmental and Social Management Framework
<b>ESMP</b>	Environmental and Social Management Plan
<b>GDI</b>	Gross Domestic Income
<b>GDP</b>	Gross Domestic Product
<b>GEF</b>	Global Environment Facility
<b>GOM</b>	Government of Morocco
<b>GS</b>	General Secretary
<b>IA</b>	Implementing Agency
<b>ICZM</b>	Integrated Coastal Zone Management
<b>IDRC</b>	International Development Research Centre
<b>IP</b>	Implementation Progress
<b>LDP</b>	Local Development Plan
<b>M&amp;E</b>	Monitoring and Evaluation
<b>MAD</b>	Moroccan Dinar
<b>MED</b>	Mediterranean
<b>MEMWE</b>	Ministry of Energy, Mines, Water, and Environment
<b>METAP</b>	Mediterranean Technical Assistance Programmes
<b>MOF</b>	Ministry of Finance
<b>MS</b>	Moderately Satisfactory
<b>MTR</b>	Mid-Term Review
<b>MU</b>	Moderately Unsatisfactory
<b>NFE</b>	National Fund for the Environment
<b>NGO</b>	Non-Governmental Organization
<b>NSP</b>	National Sanitation Program
<b>PAD</b>	Project Appraisal Document
<b>PDO</b>	Project Development Objective
<b>PMU</b>	Project Management Unit
<b>PNL</b>	National Integrated Coastal Management Plan
<b>RF</b>	Results Framework
<b>S</b>	Satisfactory
<b>SBEI</b>	Site of Biological and Ecological Interest (Site d'Intérêt Biologique et Ecologique)
<b>SMAP</b>	Short and Medium-term Priority Environmental Action Programme

<b>SMART</b>	Specific, Measurable, Achievable, Relevant, and Time-bound
<b>TCC</b>	Technical Coordination Committee
<b>U</b>	Unsatisfactory
<b>UNEP-MAP</b>	United Nations Environment Program – Mediterranean Action Plan
<b>USD</b>	United States Dollars
<b>WB</b>	World Bank

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**DATA SHEET**

**BASIC INFORMATION**

**Product Information**

Project ID	Project Name
P121271	Integrated Coastal Zone Management
Country	Financing Instrument
Morocco	Investment Project Financing
Original EA Category	Revised EA Category
Partial Assessment (B)	Partial Assessment (B)

**Organizations**

Borrower	Implementing Agency
Government of Morocco	Ministry of Environment

**Project Development Objective (PDO)**

Original PDO

The objective of the project is to pilot the application of integrated coastal zone management (ICZM) approach in the project area on the eastern Mediterranean coast of Morocco.

## FINANCING

	Original Amount (US\$)	Revised Amount (US\$)	Actual Disbursed (US\$)
<b>World Bank Financing</b>			
TF-12284	5,180,000	5,180,000	5,121,384
<b>Total</b>	<b>5,180,000</b>	<b>5,180,000</b>	<b>5,121,384</b>
<b>Non-World Bank Financing</b>			
Borrower	20,000,000	20,360,000	20,360,000
<b>Total</b>	<b>20,000,000</b>	<b>20,360,000</b>	<b>20,360,000</b>
<b>Total Project Cost</b>	<b>25,180,000</b>	<b>25,540,000</b>	<b>25,481,384</b>

## KEY DATES

Approval	Effectiveness	MTR Review	Original Closing	Actual Closing
05-Jul-2012	05-Nov-2012	24-Mar-2015	31-Mar-2017	31-Dec-2017

## RESTRUCTURING AND/OR ADDITIONAL FINANCING

Date(s)	Amount Disbursed (US\$M)	Key Revisions
13-Oct-2016	1.58	Change in Results Framework Change in Loan Closing Date(s) Change in Implementation Schedule

## KEY RATINGS

Outcome	Bank Performance	M&E Quality
Moderately Satisfactory	Moderately Satisfactory	Substantial

## RATINGS OF PROJECT PERFORMANCE IN ISRs

No.	Date ISR Archived	DO Rating	IP Rating	Actual Disbursements (US\$M)
01	16-Dec-2012	Satisfactory	Satisfactory	0
02	05-Aug-2013	Satisfactory	Moderately Satisfactory	0



03	04-Jan-2014	Satisfactory	Moderately Satisfactory	.06
04	07-Jul-2014	Satisfactory	Moderately Satisfactory	.20
05	20-Jan-2015	Moderately Unsatisfactory	Moderately Unsatisfactory	.46
06	08-Jul-2015	Unsatisfactory	Unsatisfactory	.63
07	23-Nov-2015	Moderately Unsatisfactory	Moderately Unsatisfactory	.90
08	22-May-2016	Moderately Satisfactory	Moderately Satisfactory	1.20
09	27-Nov-2016	Moderately Satisfactory	Moderately Satisfactory	1.73
10	30-May-2017	Satisfactory	Moderately Satisfactory	2.37
11	27-Dec-2017	Satisfactory	Satisfactory	3.93

## SECTORS AND THEMES

### Sectors

Major Sector/Sector (%)

**Agriculture, Fishing and Forestry 59**

Fisheries 10

Livestock 10

Other Agriculture, Fishing and Forestry 39

**Public Administration 21**

Central Government (Central Agencies) 14

Sub-National Government 7

**Water, Sanitation and Waste Management 20**

Other Water Supply, Sanitation and Waste Management 20

### Themes

Major Theme/ Theme (Level 2)/ Theme (Level 3) (%)

**Human Development and Gender 4**

Gender 4





<b>Urban and Rural Development</b>	<b>2</b>
Rural Development	2
Land Administration and Management	2
<b>Environment and Natural Resource Management</b>	<b>95</b>
Renewable Natural Resources Asset Management	44
Biodiversity	42
Landscape Management	2
Environmental policies and institutions	42
Water Resource Management	9
Water Institutions, Policies and Reform	9

<b>ADM STAFF</b>		
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## I. PROJECT CONTEXT AND DEVELOPMENT OBJECTIVES

### A. CONTEXT AT APPRAISAL

#### Context

1. Morocco's population is largely concentrated along the coast with most major cities located near the Atlantic Ocean and the Mediterranean Sea. Coastal areas are key and vulnerable ecosystems supporting economic sectors such as coastal tourism, fisheries, and associated industries. The importance of the coast to Morocco's economy, and the associated increase in population density and urbanization in the coastal zone, has put pressure on the environment, and the associated impacts have the potential to cause conflicts between users of coastal natural resources in the future.
2. Morocco's coastal resources are being negatively affected by various forms of industrial, domestic, municipal and agricultural pollution and unsustainable practices. They include rapid depletion of water tables with increased salinity, land based source of pollution including industrial effluents, municipal sewage discharge, and solid waste disposal. Consequently, coastal biotopes and marine species, including coral reefs, are rapidly being endangered. Severe coastal erosion, sea level rise, increase in temperature and decreased water availability will significantly affect the attractiveness and viability of these ecosystems especially in the Mediterranean region of Morocco.
3. To protect its coastal assets and to build its resilience to climate change, the Government of Morocco (GOM) has taken several steps to inform effective coastal management, applying an integrated approach, in which all relevant government sectors work together - rather than independently – and in close cooperation with coastal communities and other interested stakeholders. This approach is known as Integrated Coastal Zone Management (ICZM), and has been widely adopted in Morocco for decades.
4. The coastal zone is unique in the diversity of habitats present and their inter-linkages. Managing a single sector like agriculture without consideration of coastal and marine fisheries almost always results in damage to the economic value of the fishery. Managing terrestrial forests in the headwaters of rivers discharging through coastal areas and into the ocean without consideration of the wetlands, marshes, mangrove areas and nearshore aquatic environments often leads to unexpected and detrimental impacts on biodiversity, growth and production in coastal wetlands, reduction in fish biomass, impacts on biodiversity, and so on. The juxtaposition of terrestrial, freshwater, brackish and marine environments in such a small area means that coastal zones are too complex to be managed sector by sector. ICZM requires that all development sectors such as agriculture, fisheries, tourism, forestry, public works, local government, etc. plan and integrate their annual work programs to be complementary and to recognize the very real possibility of “off-site impacts”.
5. Since 1999, a series of coastal initiatives and programs of national significance had been launched, including the Royal Initiative for the Development of the Eastern Region (2003) and the Program of Development of the Nador Lagoon (2008). This had cast the Eastern region as a driver of cross-sectoral development for Morocco. At the time of project preparation, Morocco was in the process of ratifying the Protocol on Integrated Coastal Zone Management in the Mediterranean, the first legally binding instrument of its type in the world, adopted by the conference held in Madrid, Spain on 21 January 2008. Similarly, the ICZM approach was integrated into a bill on Zoning, Protection, Development, and Conservation of Coastal Zones, which was pending before parliament at the time of project preparation.



6. The project built on ongoing multi-partner engagement that was aimed at enhancing the sustainability of the larger Mediterranean ecosystem. The project fit within the larger “Sustainable MED” program sponsored by the Global Environment Facility (GEF) and implemented by the World Bank (GEF Project ID 3977). The Sustainable MED program addressed important transboundary water issues of the Mediterranean Sea, its coast, and the basins draining to the sea, and it provided an opportunity to capitalize on recent developments in the region, which underscored the commitment and political willingness among Mediterranean countries for concerted action in addressing their common challenges.

7. The project was generally aligned with relevant national and sector strategies, and thus represented a real opportunity to apply an integrated approach along the Mediterranean coast of Morocco. The project complemented the GoM’s vision for the period 2012-2016, which focused on rapid and sustainable growth, improved governance, poverty eradication, and improvement of social conditions. The project built on the efforts of national stakeholders and other donors, such as the Short and Medium-term Priority Environmental Action Programme (SMAP III) in which ICZM action plans were developed for project sites in Nador, Driouch, and Berkane provinces, which formed part of this project as well. The ICZM project also complemented ongoing work under the government’s different sectors, including, the national strategies on water, tourism (Plan Azur, Vision 2020), agriculture, fisheries, and the national program on waste water collection and treatment - the National Sanitation Program (NSP).

8. The NSP would provide the main parallel-financing to the project at approval was US\$20 million approved to five specific investment projects in the project area along the eastern Mediterranean coast, and into which the ICZM approach would be piloted.

9. The project area is defined as (i) the coast of Saidia-Ras El Ma, including the Ramsar site of the Moulouya River estuary, (ii) the rural commune of Beni Chiker, including the Cap des Trois Fourches and a part of the Gourougou Mountain, which are both sites of biological and ecological interest (SBEI), (iii) the Nador Lagoon, and (iv) the rural commune of Boudinar (see Annex 6 for a full description of the project area and beneficiaries).

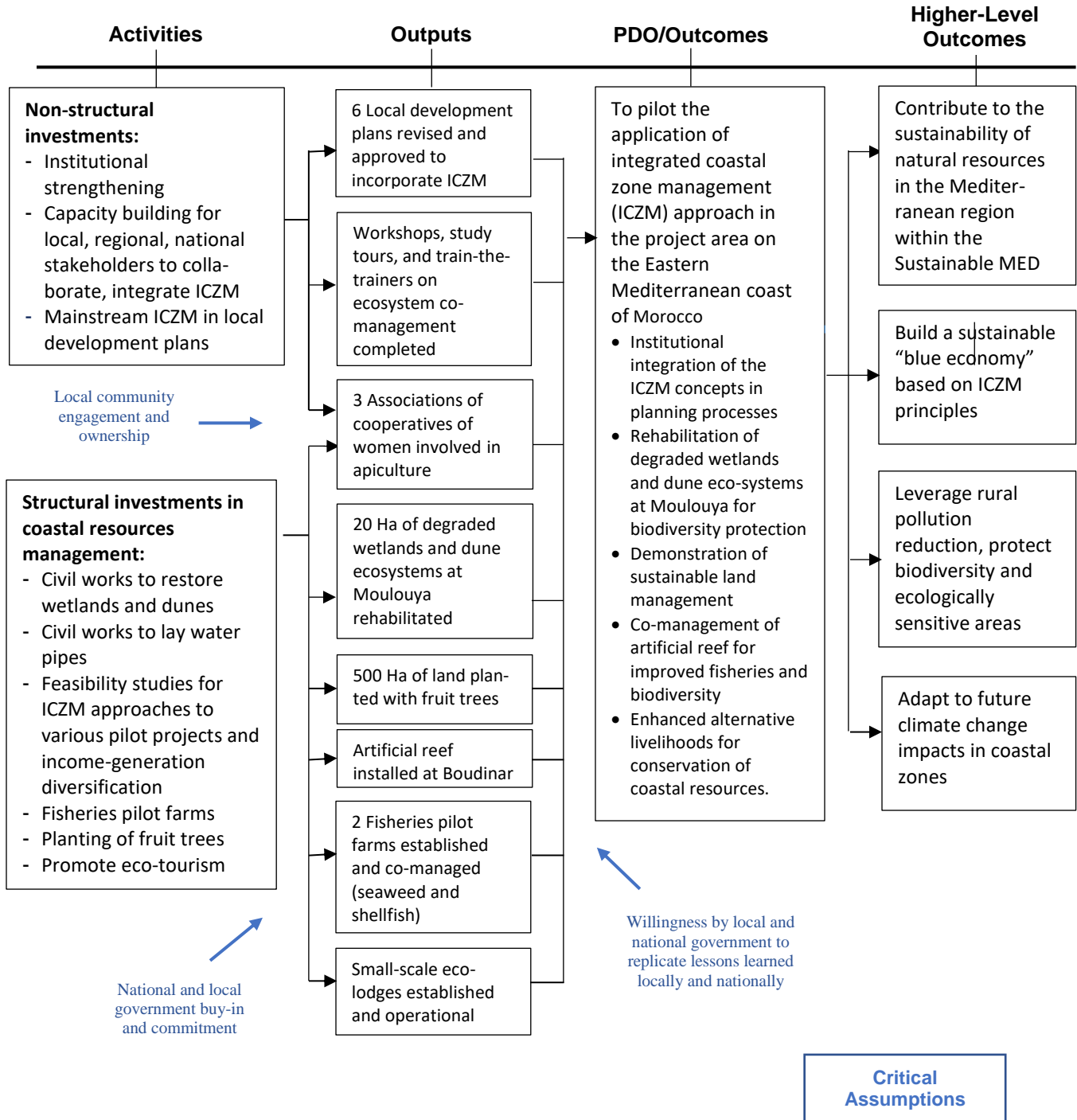
10. Rationale for Bank involvement: The Bank’s blue portfolio has been growing rapidly. The ICZM approach has been successfully applied in similar projects with positive results in several countries, such as, China, Indonesia and Tanzania, affording the Bank an opportunity to build a repository of global knowledge on ICZM (see also Section III.A). Moreover, the project was relevant to on-going Bank activities in Morocco, including: i) Support to small-scale artisanal fishermen cooperatives, and ii) adaptation of the fisheries sector to impacts of climate change.

11. This project contributed to the priorities and objectives outlined in the World Bank Country Partnership Strategy (CPS) with Morocco for the period of 2010-2013, in particular Pillar III on “Sustainable development in a changing climate”. By targeting capacity building for sub-national levels of government and for local associations and cooperatives, the project responded to three long-term development challenges identified in the CPS: (i) achieving higher growth and job creation; (ii) reducing social disparities; and (iii) ensuring sustainability. It also contributed to the cross-cutting beams of governance and territoriality to foster spatially inclusive development, and to increase the role of local government, its performance, accountability, and empowerment. The Bank was thus strategically positioned to assist the GOM in strengthening coastal zone management and in implementing the project successfully.



**Theory of Change (Results Chain)**

**Figure 1: Theory of Change - Illustrated**





12. The Morocco coastal ecosystems on the Mediterranean side faced a number of threats. These included decline of biodiversity, with a number of species considered endangered and under risk, changes in fish species composition in several areas, contraction of seagrass meadows, and degradation of coastal wetlands that are critical for restricting effluent flows into the Mediterranean. High competition for land use with unplanned or ill-planned development on the coastal fringe was forcing critical habitats to decline. Tourism, urban development, agricultural, fisheries and industrial expansion added pressure to vulnerable marine and terrestrial coastal habitats.
13. The project's theory of change is illustrated in Figure 1 above. This project builds on the positive first steps that were taken by the Government, further strengthens the capacity on the ground in the Eastern Mediterranean region, and aims to demonstrate through a series of pilot projects the benefits that can be derived from a more integrated approach. The project activities were designed in a way to directly and indirectly integrate the protection of the environment, the regeneration of biodiversity, and the adaptation to climate change as the foundation for shared and sustainable management of natural resources in the eastern Mediterranean coast of Morocco. Key assumptions for this pilot project included: (a) national and local government buy-in and commitment, (b) local community engagement and ownership, and (c) willingness by local and national government to replicate lessons learned locally and nationally.
14. The project planned to make both non-structural and structural investments. First, project activities aimed to strengthen institutional capacity through investments in capacity building, training and awareness raising, and technical assistance to integrate ICZM approaches into regional and local development plans and to raise local capacity for successful co-management of coastal natural resources. Previously, management was based on individual sectors and there was little coordination. There was also a need for multi-sectoral committees and multi-disciplinary task forces for planning, programming and monitoring ICZM activities. The project aimed to make functional these committees as the mechanism to coordinate the application of ICZM approaches and adaptation to climate change among different sectors. Through integrated water and land management practices, the impact of climate change on coastal zones, biodiversity and wetlands is taken into consideration by local communities, and helps them adapt to these challenges and better manage their natural resources. Second, the project made structural investments in coastal resource infrastructure and in income-generating activities aimed at improving the living conditions of coastal populations through alternative livelihood generation for better fisheries management that will support conservation of natural resources and biodiversity efforts and reduce pressure on sensitive coastal resources. These would include civil works for the protection of the Moulouya estuary and the regeneration of its biodiversity, fruit plantations for sustainable land-based conservation of soil and water, and physical investments targeting aquaculture, apiculture, and eco-tourism.
15. Project outputs were clearly defined and linked to the PDO. Combined, realized outputs would constitute a pilot application of the ICZM approach as it related to i) institutional integration of the ICZM concepts in planning processes, ii) rehabilitation of wetlands and dune eco-systems at Moulouya, iii) an area of demonstrated sustainable land management practices, and iv) local co-management of an artificial reef and of income-generating pilot projects. The challenges in the results chain relate to the lack of proper PDO outcome indicators at project start, which did not fully reflect planned activities and outputs and make the link to project objectives. However, this was mitigated in the October 2016 restructuring (see Section I.B and Annex 1).
16. At a higher-level outcome, the project would help to build a sustainable blue economy for Morocco - especially for the Mediterranean coast, protect biodiversity and ecologically sensitive areas in the coastal zone on the Eastern



Mediterranean, and build Morocco's resilience to the impacts of climate change by raising the adaptive capacity at community, local, and national levels through the integration of ICZM at various levels.

### **Project Development Objectives (PDOs)**

17. As per the Grant Agreement, the project development objective is: "To pilot the application of integrated coastal zone management (ICZM) approach in the project area on the eastern Mediterranean coast of Morocco."

18. The PDO in the Project Appraisal Document (PAD) is worded slightly differently and includes a description of the higher-level objective: "The project development objective is to pilot the application of an integrated coastal zone management (ICZM) approach in the project areas on the eastern Mediterranean coast of Morocco. ICZM implemented at local level by all users of the coastal resources will leverage rural pollution reduction and protection of biodiversity and ecologically sensitive areas."

### **Key Expected Outcomes and Outcome Indicators**

19. From a global environment perspective, the project contributes to the GEF-4 Strategic Priorities of the International Waters Focal Area:

- Restoring and sustaining coastal and marine fish stocks and associated biological diversity; and,
- Reducing nutrient over-enrichment and oxygen depletion from land-based pollution of coastal waters in large marine ecosystems.

20. More specifically, the project had a single development outcome and two associated outcome indicators.

**PDO Outcome (i):** To pilot the application of integrated coastal zone management (ICZM) approach in the project area on the eastern Mediterranean coast of Morocco.

- *PDM outcome indicator #1: Number of approved local development plans that are revised to incorporate the ICZM approach;*
- *PDO outcome indicator #2: Formulation and implementation of a public awareness campaign for the promotion of biodiversity conservation through co-management of the Ramsar wetlands of the Moulouya estuary.*

### **Components**

**Component 1:** Capacity building and institutional strengthening to incorporate the ICZM approach into local development planning. (**Total Planned:** US\$912,000 – **GEF Planned:** US\$677,000 - **GOM Planned:** US\$235,000)

21. The objective of this component is to strengthen the capacity of government institutions and local communities to incorporate the ICZM approach into their local development plans. Investments are to support : (i) promoting awareness of, and building capacity in, the application of the ICZM approach by provincial and local governments and local stakeholders in the project Area; (ii) mainstreaming the ICZM approach in the preparation of the development plan of six selected communes in the Project Area through the provision of technical advisory services; and (iii) piloting spatial development planning method to prepare the communal development plans for one of the six communes. **GEF Actual: US\$677,000, GOM Actual: US\$0.**

**Component 2:** Investments to improve coastal resource management and livelihoods through co-management approach. (**Total Planned:** US\$23.26 M – **GEF Planned:** US\$4.12 M - **GOM Planned:** US\$19.14 M)

22. The objective of this component is to support specific and appropriate investments that demonstrate the application of key tools available for use in an ICZM approach, within the project area. This component is divided into four sub-components, which will: (i) improve conservation and management of sensitive coastal areas; (ii) improve fisheries management; (iii) diversify income-generating activities from agriculture; and (iv) promote the development of ecotourism. **Total Actual: US\$23.84 M - GEF Actual: US\$4.11 M - GOM Actual: US\$19.73 M.**

**Component 3:** Project management and M&E. (Total: US\$1.009 M - GEF: US\$384,000 - GOM: US\$625,000)

23. The objective of this component is to ensure adequate management and coordination of project activities by supporting capacity building within, and activities of, the PMU. This component will finance consultant services, goods, training, non-consultant services and incremental operating cost. **Total Actual: US\$1.01 M - GEF Actual: US\$380,000 – GOM Actual: US\$630,000.**

## B. SIGNIFICANT CHANGES DURING IMPLEMENTATION

### Revised PDOs and Outcome Targets

24. The project development objectives and intended outcomes were not revised.

### Revised PDO Indicators

25. The PDO indicators were revised in a Level II restructuring approved in October 2016. The two original PDO outcome indicators were revised and moved to the intermediate level as they were pitched too low for the PDO level. Four Intermediate outcome indicators relating directly to the PDO were revised for clarity and moved to the PDO level, as they were pitched too high for the intermediate level.

**Table 1: Original and revised PDO/GEO indicators**

#	Original Indicators	Target	Revised indicators	Target	Comments
PDO 1	Number of approved local development plans that are revised to incorporate the ICZM approach	6			Revised for clarity and moved to intermediate level as the indicator was pitched to low (Restructuring Paper).
PDO 2	Formulation and implementation of a public awareness campaign for the promotion of biodiversity conservation through co-management of the Ramsar wetlands of the Moulouya estuary	1			Revised for clarity and moved to intermediate level as the indicator was pitched to low (Restructuring Paper).
<b>PDO 1</b>			Civil works to restore and rehabilitate degraded wetlands and dune ecosystems at Moulouya completed (#)	2	Original intermediate indicator 2.1 revised for clarity and moved to the PDO level as the indicator relates directly to the PDO. The target is defined as: 1. Works to rehabilitate an area of 20 ha of coastal dunes completed; 2. Water pipes to re-establish the flow of water from Ain Chebbak spring to wetlands located in Douar Cherarbas installed.
<b>PDEO 2</b>			Sites in the project area with artificial reefs under co-management (#)	1	Original intermediate indicator 2.2 (a) revised for clarity and moved to the PDO level as the indicator relates directly to the PDO. The target is defined as a signed reefs co-





					management convention between the Ministry of Fisheries and selected cooperative.
<b>PDOO 3</b>			Seaweed and shellfish farms piloted in project area under co-management (#)	2	Original intermediate indicator 2.2 (d) and (e) revised for clarity and moved to the PDO level as the indicator relates directly to the PDO. The target is defined as one seaweed and one shellfish farm with signed co-management conventions between the National Aquaculture Development Agency and selected cooperatives.
<b>PDO 4</b>			Land area where sustainable land management practices have been adopted as a result of the project (Ha)	500	Indicator did not form part of the original Results Framework, but was tracked at the intermediate level in ISRs since the start of the project. In the restructuring, the indicator was formally adopted at the PDO level as it relates directly to the PDO.

### Revised Components

26. The components were not revised.

### Other Changes

27. A revision of the intermediate indicators formed part of the October 2016 restructuring. A full analysis of these changes is included in Annex 1.

28. The Grant closing date was extended in the October 2016 restructuring from March 31, 2017 to December 31, 2017 to provide enough time to complete the activities. The implementation and disbursement schedules were revised accordingly.

### Rationale for Changes and Their Implication on the Original Theory of Change

29. The changes to the Results Framework were required to refine the PDO/GEO indicators and intermediate indicators in order to better assess the achieved objective to pilot the ICZM approach. The rationale was that both PDO indicators were pitched too low and therefore moved to the intermediate level. In turn, four intermediate indicators were pitched too high for the intermediate level, and moved to the outcome level and revised for clarity.

30. These changes impacted positively on the TOC as the revised outcome indicators strengthened the link between planned outputs and overall objectives and improved the project's ability to track and assess the pilot implementation of ICZM at various levels (see Annex 1 for an overview of original and revised PDO indicators). Importantly, the restructuring did not result in a reduction in the scope or ambition of the project, nor did it introduce new indicators in the RF.

31. The Grant Closing Date was extended in order to complete all activities and achieve the PDO. Due to weather conditions in the summer and the availability of a boat, the installation of artificial reefs could only be undertaken during the winter period. Hence, the installation of the artificial reef activity could only be completed by March 2017.





## II. OUTCOME

### A. RELEVANCE OF PDOs

**Rating: High**

#### **Assessment of Relevance of PDOs and Rating**

32. The project development objectives have remained highly relevant to the strategic priorities outlined within the context of the Country Partnership Strategy (CPS) for Morocco for the period 2014-2017. The CPS is built around three strategic results areas: (i) Promoting competitive and inclusive growth, which the project supports through income-generating activities for women's cooperatives (ii) building a green and resilient future, which the project supports by protecting the natural coastal resources through co-management among different stakeholders, and (iii) strengthening governance and institutions for improved service delivery to all citizens, which the project supports by institutionalizing the ICZM approach in local and communal development planning processes.

33. Specifically, Strategic Outcome 2.1 "Strengthen Management of Soil, Coastal, and Water Resources", which includes the Bank's support to addressing climate change issues, is addressed in project activities relating to rehabilitation of ecosystems, improvements to coastal infrastructure, and signed conventions to co-manage critical natural resources with multiple stakeholder claims. In addition, the project directly contributes to the cross-cutting beams of engagement relating to gender and participation through training, capacity building, and co-management by local and women's cooperatives with governing institutions at multiple levels.

34. The project forms part of the Bank's active and growing 'blue economy' portfolio, which spearheads new business models to support sustainable management and investment in coastal and marine resources around the world. Lessons learned from this ICZM project will directly feed into the WB's continued support for the design and implementation of the ICZM approach to strengthen national/local institutions, government policies, community participation and environmental conservation, adaptation strategies in coastal areas, including protective infrastructure investments, and identification of coastal insurance policies.

35. The PDO also remains highly consistent with global priorities of the current 2014-2018 GEF-6, more particularly the International Waters (IW-3), namely: Enhance multi-state cooperation & catalyze investments to rebuild marine fisheries, restore & protect coastal habitats, reduce pollution of coasts & land management, whose Program 3.2 is about Preventing the Loss and Degradation of Coastal Habitats.

36. Finally, the project is aligned with current GOM development priorities, national strategies, and policies on sustainable development. In particular, there is a high-level focus on the developing the potential of the coastal zones for food production and job creation, which the project supports. Furthermore, the GOM is focused on the vulnerability of coastline and local populations to climate change-related risks, which the project addresses in building climate resilience by raising the adaptive capacity of local livelihoods and communal institutions. See Annex 1 for further analysis.



## B. ACHIEVEMENT OF PDOs (EFFICACY)

**Rating: Substantial**

### Assessment of Achievement of Each Objective/Outcome

37. The project achieved its stated development objective and met outcome targets.<sup>1</sup> The project successfully piloted the application of an integrated coastal zone management approach in the project area on the eastern Mediterranean coast of Morocco by: (i) Integrating ICZM concepts into Local Development Plans in six communes, (ii) Restoring and rehabilitating 20 hectares of degraded wetlands and dune ecosystems at Moulouya and installing water pipes to re-establish the flow of water from the Ain Chebbak spring to wetlands located in douar Cherarbas; (iii) installing artificial reef facilities designed to support coastal fishing activities, preserve biodiversity and marine resources; (iv) establishing 2 seaweed and shellfish farm pilots with signed co-management conventions, and; (v) planting 500 hectares with fruit trees adapted to local climatic conditions under sustainable land management practices. One of the main outcomes is that pilot communes requested regional decision-makers to scale-up activities at the regional level and integrate ICZM in the development of regional action plans, and the current Governor is supportive of this development (see also Annex 1 and 2 for more details).

38. An Impact Evaluation, financed by the project and completed in December 2017, notes that the project has succeeded in nurturing a well-established vertical integration of the ICZM principles between actors and institutions at the national, regional and local levels. This was achieved with considerable capacity building and institutional efforts to integrate the ICZM approach into local development planning through 18 workshops for over 700 participants. See Annex 5 for an English summary of the Impact Evaluation.

39. Achievements of project outcomes are discussed below in the context of the TOC, namely:

- Institutional integration of the ICZM concepts in planning processes
- Rehabilitation of degraded wetlands and dune eco-systems at Moulouya for biodiversity protection
- Demonstration of sustainable land management
- Co-management of artificial reef for improved fisheries and biodiversity
- Enhanced alternative livelihoods for conservation of coastal resources.

### i) Institutional integration of the ICZM concepts in planning processes

- **Intermediate indicator #1.1: Local development plans revised to incorporate the ICZM approach and approved by communal council (6). 100% achieved.**

40. The project succeeded in piloting the integration of ICZM concepts into local development plans in six participating communes. A meeting of restitution and validation of the Local Development Plans (LDPs) took place on March 30, 2017 at the central level in the presence of representatives from the Ministry of the Interior and representatives of the concerned communes.

41. As the foundation for achieving this outcome, the project built the capacity of local community representatives, communal officials, agencies, Non-governmental organizations (NGOs) and businesses through the implementation of 18 workshops and training sessions on several topics including the ICZM approach, integrated water and land management practices, impact of climate change on coastal zones, environmental safeguards, biodiversity and

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<sup>1</sup> See also <http://gizc.environnement.gov.ma> for online project results.



wetlands – benefitting more than 700 people. A website on ICZM was developed, providing all project analytical studies and elaborated guidelines ([gizc.environnement.gov.ma](http://gizc.environnement.gov.ma)). The website includes best practices to provide detailed guidelines for project implementation and replication in other areas.

42. Based on a common understanding of ICZM concepts, it became possible for communal and local stakeholders to work collectively to integrate ICZM into LDPs and – subsequently - to share the responsibility of managing coastal natural resources (see outcomes on co-management below). Within each commune, local municipal authorities integrate a multi-sectoral, coherent vision into their respective local development plans based on meetings, information sharing sessions, and looped feedback mechanisms with concerned stakeholders. Line departments, which used to work in silos, were able to progressively adopt a certain degree of integrated approach to the development of coastal zones. Multi-sectoral committees and multi-disciplinary task forces were set up for planning, programming and monitoring activities.

43. The indicator contributes significantly to the achievement of the PDO by integrating ICZM in institutional mechanisms to manage the coastal zones in a participatory and sustainable manner through consensus building between stakeholders with diverse concerns and interests. Pilot communes have requested their regional decision-makers to scale-up these activities at the regional level and integrate ICZM in the development of regional action plans to foster improved vertical integration of the ICZM approach. This request was positively met by the Governor, who has recently requested to expand the work towards ICZM integration into regional plans.

## ii) Rehabilitation of degraded wetlands and dune eco-systems at Moulouya for biodiversity protection

- ***PDO outcome indicator #1: Civil works to restore and rehabilitate degraded wetlands and dune ecosystems at Moulouya completed (2). 100% achieved.***

44. The targeted civil works to be completed was defined as: i) Civil works to rehabilitate an area of 20 ha of coastal dunes; and ii) installation of water pipes to re-establish the flow of water from the Ain Chebbak spring to wetlands located in douar Cherarbas.

45. The target was 100% achieved through: (i) Implementation of a public awareness campaign on co-management of Moulouya SBEI (intermediate indicator #2); (ii) the completion of a hydrological and ecological study of the Moulouya SBEI (intermediate indicator #4) (iii) fixation and restoration of 20 ha of degraded wetland and coastal dune ecosystems at Moulouya; and (iv) the installation of water pipes to re-establish the flow of water from the Ain Chebbak spring to wetlands located in douar Cherarba.

46. The Moulouya estuary is internationally recognized for being of particular significance to biodiversity, and its ecosystem was under particular pressure from economic development and related coastal erosion. The rehabilitation of the Moulouya ecosystem is a demonstration of the successful application of the ICZM approach, involving stakeholders at multiple levels in the process. The civil works carried out towards this objective have made it possible to achieve the outcome of ensuring the transit of floodwaters towards Chrarba Marsh instead of being completely deviated towards the canal and released into the seasonal river, the Moulouya wadi.

47. Several impacts from this work are expected and/or observed. The rehabilitation of the Moulouya SBEI have allowed for better and controlled access of tourists to the coastal area, and is providing better opportunities for local guards, guides, street vendors, and other tourist facilitators to accommodate and service visitors to the area.



According to the Socio-Economic Impact Study prepared at project closing, local incomes are expected to rise between 10 to 25 percent in the short-term. During implementation support missions, local NGOs have confirmed their observations of the return of migratory birds to the site and the improvement of plants density.

### **iii) Demonstration of sustainable land management**

- **PDO outcome indicator #4:** *Land area where sustainable land management practices have been adopted as a result of the project (500 ha). 100% achieved.*

48. Following sustainable land management practices, 500 hectares of lands have been rehabilitated through planting of fruit trees adapted to local climatic conditions, including olive trees and carobs. This was achieved through soil and water conservation measures such as terraced construction and rehabilitation with small physical works to facilitate water infiltration and reduce runoff and erosion. As a result, the area is now less susceptible to erosion due to reduced land degradation, and provides an opportunity for alternative income-generation for local livelihoods. The achievement is a testament to the successfully piloted application of an ICZM approach, which relies on sustainable soil and water management to balance the protection of local biodiversity with community livelihoods dependent on natural coastal resources.

49. *Pilot project on apiculture:* The project provided women's groups with financial support for beekeeping activities and organized dedicated initiatives aimed at building their technical skills. Four women's cooperatives have successfully established apiculture near the land area, as fruit trees provide both nectar and pollen to foraging bees. Over 200 female members of beekeeping associations and cooperatives were equipped with about 1,200 hives and participated in different training sessions. The cooperatives are currently producing and selling honey, and the estimated positive impact on revenue improvement is between 25 and 30 percent (see also section on Poverty Reduction and Shared Prosperity).

50. Because of the demonstrated economic and environmental benefits of planting olive and carob trees through project supported activities, the Provincial Directorate of Agriculture and the province of Driouch are planning to plant an additional 900 ha in 2018 (400 ha for the olive tree and 500 ha for carob trees in the same project sites), and olive grinding units are planned for the province of Boudinar. This indicates that project activities are already being replicated by local and regional agencies.

### **iv) Co-management of artificial reef for improved fisheries and biodiversity**

- **PDO outcome indicator #2:** *Sites in the project area with artificial reefs under co-management (1). 100% achieved.*

51. An artificial reef along a stretch on the Eastern Mediterranean coast has been completed following the manufacturing of reef protection blocks, including tetrapod blocks and small and large production blocks, and their immersion into the sea for the development of marine flora and fauna.

52. Following the completion of technical and economic feasibility studies, the installation of the reef off the coast of Boudinar was launched in October 2016 and completed by the end of July 2017. Reefs co-management conventions have been signed between the commune and the local NGO, which also received several training sessions to ensure they have the appropriate capacity to continue managing this activity.



53. Co-management agreements were signed between the Department of Fisheries and targeted co-operatives. Co-management is a term that describes the government's delegation of a specified set of its responsibilities to manage, including enforcement of regulations limiting use of natural resource, to local stakeholders (i.e. those that commonly "own" and use the resource). The resource is therefore "co-managed" by both the Government and empowered local stakeholders.

54. The artificial reef will allow for more abundant fish stocks in the protected area. It is expected that this will enable artisanal fishermen to improve their livelihoods through increased fisheries production and sale without depleting the natural resource base and local biodiversity. The artificial reef was completed in the summer of 2017. In the first couple of years, local fishermen will only monitor the reef for illegal fishing and ensure the development of marine flora and fauna that can provide a habitat for fish populations. Later, the reef will provide a source of livelihood for local fishermen with the potential of raising incomes 50-100 percent. The outcome was supported by the installation of basic infrastructure at the port site for artisanal fishermen to safely process and store their catch.

#### **v) Enhanced alternative livelihoods for conservation of coastal resources**

- **PDO outcome indicator #3: Seaweed and shellfish farms piloted in project area under co-management (2).**  
**100% achieved.**

55. One pilot seaweed farm and one pilot shellfish farm have been completed and are fully operational. The completion of two feasibility studies confirmed the economic and environment viability of piloting the farms in the project area. The pilots demonstrate the viability of the ICZM co-management approach to support biodiversity and ecosystem conservation while simultaneously undertaking specific and appropriate investments with demonstrated economic value through improved use of local natural resources.

56. *A pilot seaweed farm* – the first in Morocco - has been established and the first seaweed production was carried out. Co-management conventions were signed between the National Aquaculture Development Agency and the selected cooperatives. The pilot phase allowed members of the cooperative to learn about seaweed farming and to make their own judgment on the breeding technique initially recommended by the research department. The farms opted for an alternative technique offering better yields with reduced workload using an innovative cultivation technique with nets suspended from floats. To support this outcome, the project also established seaweed processing and commercialization facilities, and explored and facilitated partnerships between the producing cooperatives and the private sector.

57. *A pilot shellfish farm* on 4.5 hectares has been completed and co-management conventions were signed between the National Aquaculture Development Agency and the selected cooperatives. The pilot focused on the feasibility of mussel and oyster farming. The experimentation of a shellfish barge with hydraulic equipment and a crane system has been an innovative operation in Morocco, which is likely to be adopted by fishing cooperatives in other areas. Processing and commercialization facilities were established in support of the shellfish production, and partnerships between cooperatives and the private sector were explored and facilitated.

58. *Three small-scale tourist eco-lodges* – bed and breakfast style - were rehabilitated based on the results from the feasibility study for the implementation of an integrated approach to ecotourism development in the project area. During the rehabilitation process, particular attention was paid to include adapted equipment for handling solid waste and waste-water for small-scale lodges, in order for them to reduce their footprint and increase biodiversity and environmental sustainability. To support this achievement, tour operators received training in eco-



tourism operation and sustainable tourism activities. The original intermediate target was to rehabilitate 6 eco-lodges, however, the indicator was removed in the October 2016 restructuring even though project activities continued to project closing.

#### **Justification of Overall Efficacy Rating**

59. Overall efficacy is rated Substantial given the achievement of the stated development objective and related outcome targets. As the results indicate, and the Impact Evaluation confirms, the project succeeded in piloting the integration of ICZM concepts into LDPs in six communes, in improving infrastructure for the conservation of biodiversity of coastal natural resources, and in piloting a co-management approach to improving local livelihoods through income-generating and diversifying activities. Together, these outcomes have helped build momentum for growing application of the ICZM approach at local, regional and national levels of government. Results and lessons learned from the project were shared in a national workshop as well as by many technical and financial partners, as the right approach through which all elements of coastal eco-systems can be protected, developed and managed in a sustainable manner.

### **C. EFFICIENCY**

#### **Rating: Modest**

#### **Assessment of Efficiency and Rating**

60. At the time of appraisal, an Incremental Cost Analysis was conducted in lieu of standard economic and financial rates of return. In a qualitative analysis, the costs and benefits of the project activities were separated from a baseline set of activities, which were likely to be carried out independently of the availability of GEF resources, and then compared with an additional set of activities that were contained in the ICZM project. The results showed that without GEF grant support, the priorities identified – and included in the project - by the national and local governments, as well as by local communities might not be implemented until it would be too late to preserve all ecologically and culturally important sites in the coastal zone. From that perspective, the ICZM project was economically justified as the potential benefits to the environment, the ecosystem, and the economy dependent on coastal resources far outweighs the project investment.

61. Table 6 in Annex 4 includes an ex-post analysis of the incremental costs and achievements at the time of project closing. The analysis lists incremental activities by component and relies on qualitative input to assess their achievement side-by-side expected outcomes. Indeed, the benefits of the project go beyond what is captured in quantitative indicators, and as a pilot project one of the benefits accrued includes identifying the systems necessary to capture more robust qualitative data as activities are scaled up. The results show that the project largely delivered the incremental benefits to the global environment and worked as a catalyst to change the baseline scenario.

62. The project impacted positively on job creation and income generation. Nearly 300 jobs were realized in the short term, of which 42 were permanent jobs and 267 were temporary jobs. The impact on job creation is more pronounced over time, where the project has the potential for creating nearly 800 additional jobs, of which 277 may be permanent and 500 temporary jobs. The greatest potential for additional job creation exists in managing the plantation and in beekeeping. The impact of the project on local incomes is unfolding, as monetization of some of the activities will only happen over the coming year. In the short-term, incomes are likely to rise between 5 and 25 percent, while in the medium- to long-term incomes may rise between 20 and 500 percent (see Table 7 in Annex 4).





63. Significant delays characterized the implementation phase with less than 25 percent disbursed less than one year prior to the original closing date. Procurement presented early implementation challenges, which impacted project efficiency. Procedural limitations in designating an authority to approve the spending of project funds held in the National Fund for the Environment caused bottle necks in the procurement process (see Section B(i)). Similarly, a requirement to only allow procurement packages to be processed, rather than individual contracts, ended up delaying works that were independent of other activities. The issues were resolved over time through increased capacity building and a deepened engagement and technical assistance from the Bank's side.

64. It is important to note that the pilot project contributed to shaping the broader World Bank dialogue with GoM especially when it came to the conceptualization and implementation of the Inclusive Green Growth Development Policy Loan (see paragraph 122).

65. Inefficiencies at the central level, which led to the introduction of a new PMU team in May 2015, was mitigated by the efficient collaboration between the six participating communes, who enjoyed good coordination between the different agencies at the local level. Indeed, there was very robust and continuous local community engagement in all project activities and this was key to mitigating any inefficiencies at the national level. To date the project still enjoys very strong local support among all the participating communities.

66. The project closing date was extended for less than a year (nine months), an indication of reasonable efficiency, and resulted in net efficiency gains as the project was able to meet all targets and successfully demonstrate the viability of the ICZM approach. There were no cost overruns. In addition, it is important to note that the project leveraged US \$20.36 million in parallel government funding which is a significant amount for a modest pilot activity.

#### **D. JUSTIFICATION OF OVERALL OUTCOME RATING**

##### **Rating: Moderately Satisfactory**

67. An overall outcome rating of Moderately Satisfactory is justified by the (i) continued high relevance of the development objectives, (ii) the substantial achievement of intended project outcomes and targets, and (iii) the modestly efficient allocation of resources in achieving those outcomes.

#### **E. OTHER OUTCOMES AND IMPACTS**

##### **Gender**

68. The project had a very strong and positive impact on women's economic empowerment in the local context. By supporting women-managed activities, the project was and remains highly consistent with the current national and global development priorities, which specifically target women in closing gender gaps in the target areas. The geographic area covered by the project is characterized by very conservative social values and the actual economic role of women in agricultural and fishing activities is limited. For the same reason, it is commendable that the project was able to successfully support women's participation in apiculture. The various activities that targeted women and were led and implemented by women have enabled a very strong dynamic in the communities whereby women are now able to organize and manage their affairs through their formally registered groups/associations. This has led to strengthened capacity for the women to engage in local development activities that generate critical household income. In addition, some of the women representatives were able to be facilitated to participate in critical local, national, and international fora (including a side event at the UNFCCC COP 22 in Marrakech) and



showcase and articulate their activities. This has substantially increased their visibility and potential for additional support from government and other partners to scale up their activities.

69. Overall, women made up 28 percent of a total of 8300 beneficiaries. Most notably, women were involved in beekeeping and apiculture, in which 219 of 251 beekeepers were women (87%) (see also Annex 5 for an Executive Summary of the post-project Socio-Economic Impact Study). Also see the project website for additional details: <http://gizc.environnement.gov.ma>

### **Institutional Strengthening**

70. The project stressed the importance of capacity building initiatives, and linked them to the preparation of local development plans, the outcomes of public awareness campaigns, and the findings of studies and assessments. A number of general mechanisms were aimed at strengthening synergy and collaboration between ministries and also between different ministerial departments, an element which will be crucial for future operations. But it is especially at the local level that the project had a significant impact on institutional strengthening, as outlined in the Efficacy section. For example, line departments, which used to work in silos, were able to progressively adopt a certain degree of integrated approach to the development of coastal zones.

### **Mobilizing Private Sector Financing**

71. N/A.

### **Poverty Reduction and Shared Prosperity**

72. The Socio-Economic Impact Study shows that beneficiary households directly benefitted from different activities and were adequately sensitized about the challenges of an integrated approach to the development of coastal zones. Overall, 42 new permanent jobs and 267 temporary jobs were created.

73. Initial data from the Socio-Economic Impact Study indicate that the average annual income of households participating in project activities vary greatly from one pilot project to another (see Annex 5 for an Executive Summary in English). Overall, incomes are expected to increase 5 to 25 percent in the short-term with the potential for income growth of 20 to 500 percent in the medium- to long-term in the following areas:

- *Rehabilitation and restoration of degraded wet ecosystems and coastal dunes at the mouth of the Moulouya:* it is expected that through the development of seaside tourism, the arrangements made will allow for better access for visitors, in particular, in the case of car parks and controlled access. Guards, caretakers, and street traders will improve their average income by 10-25 percent during the first year, or more in the medium and long term.
- *Artificial reef off Boudinar:* No impact on job creation in the short term, but in the medium and long term the site has the potential to be used for scuba diving which could create jobs. The artisanal fishery in the Boudinar area has about 60 boats and an overall number of about 280 fishermen. In the short-term, the fishermen simply monitor the reef to prevent illegal fishing, thus no positive impact on their income. In the medium- to long-term, fishermen estimate that their income could improve from 50-100% to reach at least 3000 DH per month.
- *Seaweed farm at the Nador lagoon:* In 2017, the first seaweed production realized a harvest of 13 tons, which were sold by the cooperative at market prices, generating substantial additional income. The production cycle for algae is only 45 days. The harvest is estimated at 500 kg net the first year with a





potential of 20,000 kg in the medium- to long-term. This improvement is estimated to raise incomes by 10 percent in the short term, and by 20 to 25 percent in the medium and long term.

- *Shellfish farm off the coast of Nador*: No impact has been observed on local incomes yet, but the site has the potential to create 9 permanent jobs and 2 temporary jobs.
- *Olive and carob tree plantation*: The farmers benefiting from the olive and carob tree planting work previously grew cereal crops, which were vulnerable to climate hazards and generated a fairly low and irregular income per farmer at around 2,100 dirhams per year per hectare. Value-added of olive oil production and cultivation of carob trees holds the potential to raise the income per farmer per year per hectare 5-fold. The tree planting itself provided temporary employment and income to local agricultural workers, who might be considered as indirect beneficiaries of the Project
- *Apiculture*: Considering the production, the average income of beekeepers remains limited (between 1,000 and 3,000 dirhams per year). Increasing the production and the value-added of various apiculture products, holds the potential to positively impact the revenue stream by between 25 and 30 percent in the medium to long term.
- *Small-scale eco-lodges*: Rehabilitation of 3 traditional houses as tourist cottages were intended to encourage young entrepreneurs to invest in ecotourism. Those investments could potentially provide a return on investment of between 20 to 50 percent in the medium to long term. There are no short-term impacts on income.

#### **Other Unintended Outcomes and Impacts**

74. While not a direct outcome of the project, it is worth noting the momentum that the ICZM project has helped to build. Three years after the start of the ICZM project, Law 81-12 on the coastline was promulgated, which lays down the fundamental principles of integrated coastal management as a transversal management process involving the simultaneous consideration of different interests in the coast, including in particular the systematic consideration of the environment for all decisions affecting this fragile territory.

75. Specifically, the law aims to: i) Preserve the coast's biological and ecological balance, natural and cultural heritage, while combatting coastal erosion; ii) prevent and reduce pollution and the coast's degradation, while rehabilitating polluted and damaged areas; iii) improve planning, by means of a national plan for the coast and compatible regional spatial planning documents (the National Integrated Coastal Management Plan places the integration of the coastal protection dimension into sectoral policies, particularly the fields of industry, tourism, housing and infrastructure works); iv) guaranty free and unpaid access to the seashore; v) enable the involvement of organizations, the private sector, and affected local and regional authorities in decisions pertaining to coastal zone management; and vi) advance research and innovation promoting the coast and its resources.

76. Importantly, Law 81-12 establishes a national commission and various regional commissions for coastal management, bringing together and mobilizing stakeholders, and provides a legal definition of the coastal zone, incorporating marine and land components. The coastal zone includes a 100-meter wide strip free of construction, and a two-kilometer wide zone free of transportation infrastructure. The law establishes that scientific data be the basis for the integrated management of the coastal environment, taking the impact of climate change on the coastal zone into consideration. All solid wastes that contribute to the pollution of the seashore are forbidden by the law,



and liquid wastes will be subject to permits within explicit limits and the payment of fines in case the limits are exceeded.

### III. KEY FACTORS THAT AFFECTED IMPLEMENTATION AND OUTCOME

#### A. KEY FACTORS DURING PREPARATION

77. Drawing on the Bank's global experience in ICZM, the project design was based on a pilot approach with a strong demonstration effect, solid alignment with country development priorities and strategies, well-structured components, and sound mechanisms in place for building local ownership from early consultation with local stakeholders, through to the design of outcomes linked to signed co-management conventions. By focusing project implementation at the commune level, the design leveraged existing institutions and expanded upon them by incorporating ICZM principles.

78. Activities chosen to be implemented were selected from existing Coastal Management Action Plans funded by other donors and took into account the impacts of climate change. Participatory consultative meetings, sector-based interviews, visits to proposed project locations, and discussions with beneficiaries were undertaken throughout the identification stage. Project design and implementation arrangements were informed by on-going World Bank projects on ICZM, such as the Indonesia Coral Reef Management Program (COREMAP) beginning in 1998, the China Sustainable Coastal Resource Development Project (P003539), and the Tanzania Marine and Coastal Management Project (P082492).

79. Because of the multi-sectoral aspect of the ICZM approach, the design correctly emphasized the importance of an efficient collaboration between different departments and agencies, both at central and regional levels. Overall implementation risk was rated moderate. However, a capacity assessment carried out in June 2010 during project preparation showed that the Department of Environment (DE), who would be responsible for project procurement, was inexperienced in the implementation of World Bank projects and had inadequate capacity and availability of trained staff to carry out procurement in accordance with Bank standards. Hence, IA/EA capacity risk was rated Substantial, as was procurement risk.

80. Chief among the mitigation measures planned to build the capacity of the EA were (i) organization of training workshop for the EA and staff from all other entities involved in the project implementation before project effectiveness, and (ii) preparation of standard bidding documents for National Competitive Bidding acceptable to the Bank. In hindsight, however, it is noticeable that the project did not develop a specific financial management manual, only simple guidelines were provided in the general Operational Manual. Nor did the plans for staffing the PMU include a procurement specialist, which should have been a condition for effectiveness. Given the low capacity and the intended reliance on existing organizational structures, it would have been advisable to strengthen implementation arrangements with firmer and clearer protocols and requirements that went beyond basic workshop training, preparation of standard bidding documents, and no-objection procedures.

81. At the time of appraisal, the project was in an advanced stage of preparation, meeting all regional criteria for project readiness. The results framework was adequate in tracking progress towards project outcomes, even if some of the indicators were not placed at the appropriate level. Arrangements for monitoring and evaluation were planned within the Project Management Unit (PMU) and were adequate at the preparation stage.



## **B. KEY FACTORS DURING IMPLEMENTATION**

### **(i) Factors subject to government and/or implementing entities control**

82. The keys to the substantial achievement of the PDO are threefold. First, the efficient collaboration between participating communes with good coordination between the different agencies at the local level. Second, the GOM's strong political commitment to the ICZM approach. Third, the high level of commitment and ownership to the project at the community level. These are the factors that helped ensure the achievement of the development objectives.

83. However, during the first two years of implementation, several institutional and administrative factors slowed down project activities and caused significant implementation and disbursement delays. By January 2014, more than one year after project effectiveness, levels of commitments, payments and disbursements were limited (22.7%, 12.4% and 9.1% respectively).

84. This was partly due to the EA's general inexperience with implementing World Bank projects and the limited knowledge of World Bank's procurement procedures at the PMU level within the Department of Environment (DE) as this was the first WB project for the DE. The Bank team worked closely with the PMU to complete the first request for withdrawal of project funds 11 months after effectiveness was declared.

85. Another factor related to institutional challenges at the national level. Following a government reshuffle in October 2013, the absence of transfer of the signing authority from the General Secretary to the then recently appointed Minister Delegate to the Minister of Energy, Mines, Water and the Environment (MEMWE), who was in charge of the Department of Environment and for the National Fund for Environment (NFE) where project funds were held, caused a 12 months delay in implementation. The issue was resolved following high-level pressure from Bank management and a series of personal meetings between the World Bank Country Director (CD) and relevant Ministers.

86. Third, the delayed validation of the modified program for the NFE for 2014 for several months affected (i) payment of project staff, a number of whom resigned as a consequence; (ii) important delays in payment of several bills, which was partly circumvented by the use of direct payment; and (iii) the inaccessibility to financial resources to carry out the planned activities. Again, the issue was resolved following the engaged support of the senior Bank Management, when the CD met personally with various Ministers to devise a concerted solution.

87. Fourth, the members of the PMU had up until the mid-term review (MTR) other responsibilities within their respective departments. With the appointment of the new team in May 2015 under a new Project Director, the PMU from then on had a dedicated Project Manager, an administrative and financial expert, and a technical expert.

88. In summary, there was a lack of adequate coordination and engagement at the level of governmental institutions in the early phases of the project, including lack of clarity about roles and responsibilities of different stakeholders. This reduced synergies between multiple ministries, and presented an obstacle to getting the multiple implementation and coordination mechanisms to work as intended. Eventually, the collaboration was strengthened between the different ministerial departments of the MEMWE and a more concrete partnership was established between this ministry and the departments of other ministries.

89. Meanwhile, a highly dedicated regional PMU and especially local communities and stakeholders intensely committed to the ICZM approach made the difference on the ground, which led to a successful outcome with less than a year's extension of the project closing date.



**(ii) Factors subject to World Bank control**

90. Bi-annual implementation support missions provided the PMU with support from the Bank’s side.<sup>2</sup> In response to the institutional and procurement challenges facing the PMU and the project, the Bank took several measures to address the issues: i) utilization of direct payments in the absence of a signing authority; ii) meeting with Procurement and FM specialists and providing additional training; iii) intensive communication with the PMU and Ministry of Finance from both Washington DC and Rabat; and iv) high-level intervention from the CD.

91. At the time of the MTR in March 2015, the project had disbursed less than US\$0.5 million - or 9% of total funds - with a disbursement lag of 80% and the Bank was considering suspending the project. The development objective and implementation progress were both rated Unsatisfactory. A background report, prepared in advance of the MTR, underscored the need to provide capacity building and technical assistance as part of an overall vision with accompanying actions, rather than on the basis of specific issues in the form of fragmented training activities.

92. Several actions were taken to turn things around: i) The MTR offered a set of recommendations with a time bound action plan to bring the project back on track; ii) a new project team was introduced under the leadership of a different Project Director (see Section B(i)); and iii) frequent technical missions held since the MTR and monthly meetings with the project team were instrumental in reaching a new momentum in project implementation. Finally, the project was restructured in October 2016 with 34% disbursed, and extended for nine months. Consequently, the project team was able to complete almost all planned project activities in the remaining 14 months with a final disbursement rate of 89 percent at project closing (see Section II.B (v) on rehabilitation of eco-lodges.)

93. The Bank team restructured the results framework (RF) to better capture the demonstrated outcome of piloting an ICZM approach in the project area, while the scope of the project remained unchanged.

**(iii) Factors outside the control of government and or implementing entities**

94. No major factors outside the control of government and implementing entities impacted the project significantly.

**IV. BANK PERFORMANCE, COMPLIANCE ISSUES, AND RISK TO DEVELOPMENT OUTCOME**

**A. QUALITY OF MONITORING AND EVALUATION (M&E)**

**Rating: Substantial**

**M&E Design**

95. The theory of change of piloting the application of ICZM approach through strengthened institutional capacity to integrate ICZM approaches into local development plans, and undertaking investments in coastal natural resources management through a series of pilot projects was clear and realistic. Overall, the results framework was adequate in tracking project progress towards achievement of the PDO and intermediate outputs with most of the indicators defined as specific, measurable, achievable, relevant, and time-bound (SMART) – except for a few intermediate indicators linked to Component 3 on project management. Monitoring and evaluation was intended

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<sup>2</sup> Supervision missions were held on: 31 July 2015; 21-22 September 2015; 10 November 2015; 31 March 2016; 24 May 2016; 11 September 2016; 31 December 2016; and 30 May 2017. The last supervision mission was held the week before the ICR mission in October-November 2017.



to be an integral part of the project, as evidenced by the inclusion of original intermediate indicator #3.3 on M&E and the detailed attention paid to M&E arrangements at the time of project preparation.

96. One short-coming in the M&E design relate to the inclusion of indicators at the inappropriate level. For example, original PDO indicator #2 “formulation and implementation of a public awareness campaign [...]” was in fact an intermediate output towards the objective of rehabilitating the degraded wetlands and dune ecosystems at Moulouya. Meanwhile, original intermediate indicator 2.1 “Rehabilitation of degraded wetlands and dune ecosystems at Moulouya” indeed demonstrated a successful pilot phase and was directly linked to achieving the PDO.

97. To correct these issues, the RF was re-organized and clarified in the October 2016 restructuring. Both PDO indicators were moved to the intermediate level, though it would have been advisable to keep PDO indicator 1 at the outcome level and revise the indicator wording to make it more outcome oriented as it pertains to the integration of ICZM principles into local development plans used by the participating communes - a strong statement on the demonstrated effect that the pilot had. Four intermediate indicators were moved to the outcome level, as they also offered evidence on a successful pilot phase. No new indicators were introduced, and the scope and level of ambitiousness of the project remained the same.

98. Intermediate indicators were also revised, making the RF overall more streamlined. Intermediate indicator 2.4 Small-scale eco-lodges establish/rehabilitated and operational was dropped, however implementation of planned activities under sub-component 2.4 continued to project closing.

#### **M&E Implementation**

99. M&E was executed at two levels, centrally by the PMU in the DE, and by the regional PMU. The M&E Handbook outlined a comprehensive system to collect and analyze data on project progress, which was put in place by the PMUs, and who shared regular progress reports. There was significant delay in finalizing the M&E Handbook, which was only revised and completed following the MTR. However, given the significant implementation delay due to institutional and procurement factors, this may not have been much of an issue.

100. At the central level, the PMU monitored project activities, including the collection and analysis of data and the finalization of M&E reports showing progress on every single project activity and for each indicator included in the RF. The PMU organized regular coordination meetings with project partners to present and discuss M&E findings.

101. At the regional level, monitoring committees were set up for each of the activities launched at the regional level, and the regional PMU monitored the implementation of those activities through the organization of regular meetings with local stakeholders. When needed, the PMU liaised with local authorities and providers of technical assistance to find relevant solutions in consultation with the central PMU to move implementation progress along.

102. Progress reports were regularly transmitted to the World Bank, in particular prior to the various consultations and/or implementation support missions.

#### **M&E Utilization**

103. M&E data was used to track project implementation and performance. Regional PMU staff shared semester reports with local cooperatives engaged in co-management with the government with the purpose to inform local decision-making in a transparent manner, and to seek their feedback on the monitoring and evaluation of the



project as it pertained to their activities. The M&E tool was also utilized to track delivery of outputs by contractors and consultants recruited under the project.

104. M&E was rated Unsatisfactory around the time of the MTR and until the October 2016 restructuring in part due to the overall slow implementation progress (see Section B.I) and in part due to the need to revise the RF. Following the restructuring, project implementation picked-up and the revised RF offered a better perspective on project achievements. M&E was again rated Satisfactory in late 2016.

#### **Justification of Overall Rating of Quality of M&E**

105. The overall quality of the M&E system is rated Substantial. The justification is that the results framework was adequate in tracking progress towards the development objectives and that M&E was executed in a timely manner by a dedicated PMU. As confirmed in the Borrower's Impact Evaluation (see Annex 5), the recommendations issued by the mid-term evaluation were largely adopted and were sufficient to assess the successful achievement of the objectives. Even though adopted late in the implementation process, substantial improvements were observed in the revised results framework following the October 2016 restructuring, in which indicators were reordered at their appropriate level.

## **B. ENVIRONMENTAL, SOCIAL, AND FIDUCIARY COMPLIANCE**

106. For environmental and social safeguards purposes, the project was rated "category B" (partial assessment) with expected significant positive environmental and social impacts. The project triggered two safeguards policies: OP/BP 4.01 with a partial Environmental and Social Impact Assessment, and OP/BP 4.04 on Natural Habitats, due to the work planned to enhance biodiversity protection and co-management regimes that included at least one Ramsar wetland site.

107. An environmental and social management framework (ESMF) was prepared, and throughout implementation of the project, a total of 11 environmental and social management plans (ESMPs) were prepared (between 2014 and 2017). Potential negative environmental impacts were related to civil works and were expected to be minor, temporary and site-specific in nature. Feasibility studies were conducted for the eventual establishment of one artificial reef, one seaweed farming facility, one aquaculture (shell fish farming) facility, and the establishment of eco-tourism facilities. Throughout the implementation of the project, feasibility studies were carried out to assess the potential risks associated with the implementation of project activities and to provide for specific mitigation measures for all negative social impacts. The project complied with all triggered safeguards policies.

108. In the same spirit as the ICZM approach itself, continuous consultation and engagement with the public through NGOs that were represented in the monitoring committees set up for each activity, allowed the public to stay informed and to participate in the project's decision-making process. This enabled the PMU to consider, in real time, the concerns of affected and interested persons. In the same vein, the project utilized local grievance redress mechanisms to address concerns. Each participating commune has a Citizen's Office, which can be freely accessed by anyone residing in that commune. No complaints were filed at the Citizen's Office concerning the project, and the project team attests that to an efficient PMU, which interacted in a transparent and inclusive manner with all those benefitting from and affected by the project.

109. There were significant procurement delays, which was caused in part by an inexperienced PMU and in part by the lack of clear delineation over the authority to sign for the funds in the National Fund for Environment (NFE). The PMU relied on existing and cumbersome procurement procedures within the DE, which had no prior experience with implementation of a World Bank project. Initial procurement delay was caused by the PMU's delay in





submitting the first request for withdrawal of funds, which took 11 months to complete. The issue was resolved following several meetings between the PMU and WB project teams and between the Country Director and the Secretary General of the Government.

110. Following the government reshuffle in October 2013, the absence of transfer of signing authority for the NFE from the Secretary General of the Government to the then newly appointed Minister Delegate to the Ministry of Energy, Mines, Water, and Environment delayed project implementation with over one year. The CD was actively engaged in trying to resolve the issue, but it would take over 12 months to fully resolve the issue. Following that, validation of the modified NFE work program further delayed implementation with a few months.

111. In addition, the procedures of the NFE were laborious and time-consuming, because the Fund was only able to approve funds for projects submitted as a package, not for single projects. This caused delay in the release of funds, in the disbursement schedule, and the implementation schedule.

112. Fiduciary compliance was satisfactory with financial reports (FRs) consistently submitted on time, in compliance with World Bank procedures. Annual audits were duly conducted, according to international standards.

## **C. BANK PERFORMANCE**

### **Rating: Moderately Satisfactory**

#### **Quality at Entry**

113. The Bank team employed due diligence in basing the project on a solid diagnostic foundation of Morocco's development priorities, which remained highly relevant throughout the project period. The project team drew on the Bank's global experience by taking into account the lessons learned from other ICZM projects. Close consultations with the GOM and other key stakeholders helped set-up the institutional arrangements, upon which project outcomes ultimately rested. The results framework was mostly characterized by SMART indicators and was adequate in tracking progress towards the PDO. Even though the indicators were not initially placed at the appropriate level, it is telling that no new indicators were introduced in the revision of the RF, only a reorganization of existing ones. Provisions for safeguards were adequate at the design stage, whereas provisions for procurement could have been strengthened given the low capacity in the EA/PMU.

114. One aspect that could have been strengthened during preparation is ensuring quality of procurement procedures. Knowing that the PMU was inexperienced in implementing World Bank projects, the Bank team could have prepared more detailed procurement guidelines as part of the Operations Manual (see also Lessons Learned).

#### **Quality of Supervision**

115. The Bank provided timely and adequate guidance to the Project. Implementation of project activities was supported by bi-annual supervision missions and benefitted from the close proximity of the TTL based in a regional World Bank office (Tunisia). Task Team Leadership changed once during the six years of implementation. Bank supervision addressed fiduciary aspects, environmental challenges, and encouraged a proactive identification of opportunities and resolution of implementation issues; proposing appropriate restructuring of outcome and intermediate indicators to realign the results framework; and providing guidance on M&E, and ensuring appropriate transition arrangements.



116. The Bank team maintained candor in reporting on project progress, at one point rating the project U and questioning its viability. World Bank management showed continued support and applied high-level pressure when it was most needed to move implementation along.

117. The project has ensured an adequate foundation for activities to continue operation following project closure. This is in part because the project promoted local ownership of the project at the communal and institutional level, relied on local institutions to support implementation, and supported self-sustaining pilot projects with signed co-management agreements, and some of which have demonstrated their economic viability.

#### **Justification of Overall Rating of Bank Performance**

118. Overall Bank performance is rated Moderately Satisfactory. This is justified by the responsibility that the Bank bears in the significant implementation delays affecting the project in the first few years of operation. Better quality at entry could have anticipated and mitigated some of the problems arising soon after effectiveness, such as institutional grid-lock and stalling procurement processes. Overall, the Bank team showed timely and dedicated attention, supported by a committed Bank management team and high-level engagement on the part of the CD to put the project back on track. These are the key factors from the Bank's side in ensuring outcomes, despite the minor shortcomings that have been outlined.

#### **D. RISK TO DEVELOPMENT OUTCOME**

119. Risks to development outcomes are **modest** and related to political commitment, local ownership, scaling-up, and economic sustainability.

120. **Political commitment to the ICZM approach is gaining momentum, both at local and national levels.** For decades now, Morocco has engaged in the promotion of coastal sustainability through the continued integration of coastal zone management of natural resources. As a result of this project, local governors of the participating communes are requesting the integration of ICZM into the regional level development plans as a way to continue to vertically build the institutional commitment to ICZM at local, regional, and national levels. Even so, there is always a risk that waning political support or conflicting interests reduces the institutional commitment over time and potentially threatens the achievements of the project. Though, in the short to medium term, this risk is considered low.

121. **There appears to be substantial potential in sustaining, replicating and scaling-up local ownership of the ICZM approach in Morocco and other neighboring countries.** Significant local ownership has been built through comprehensive training, capacity building, and public awareness raising. However, to sustain and further develop the initiatives funded by the project requires on-going support to widen the circle of ICZM stakeholders, advocates, and participants. The financial risk to sustaining and scaling-up the ICZM approach is considered substantial, but is mitigated by the current political momentum (see point above) and growing interest from other communes to replicate the experiences of the project and piloting the ICZM approach. A national workshop was organized on December 19th, 2017 to present and discuss the main lessons learned and outcomes to a larger audience. Representatives from communes of the 9 coastal regions participated and received guidance for the adoption of the ICZM approach. In addition, Tunisia has recently approached the World Bank for support on blue economy activities based on the ICZM approach.

122. **Between 2013 and 2016, the GOM with support from the World Bank implemented a programmatic Inclusive Green Growth Development Policy Loan that was rated satisfactory.** One of the Program Development





Objectives (PDOs) of the programmatic DPL series 1 and 2 was “Improving the management of natural capital” with critical indicators including (a) number of regional coastal zone management plans (*Schémas Régionaux d’Aménagement du Littoral*) approved; and (b) number of regional maritime fisheries control and enforcement plans approved. This successful DPL has broadened the space for ICZM nationally and thus substantially reduced any risks to development outcome. In addition, the upcoming World Bank Country Partnership Framework for Morocco will have a specific green growth pillar that includes key aspects of the blue economy.

123. **The continued maintenance of realized infrastructure improvements and operation of pilot projects depend on the strength of the co-management conventions**, which must take into account the diverse interests and concerns of multiple stakeholders. While the conventions have been designed to handle this diversity, there is the risk of a struggle for power among the stakeholders that could eventually leave some of the stakeholders out of the process, which would jeopardize the local application of the ICZM approach. This risk is considered substantial, but with continued institutional commitment and support the risk is effectively mitigated.

## V. LESSONS LEARNED

124. **Public consultation and community engagement are essential to building trust and ownership and to sustaining an ICZM approach on the ground.** More than a project development objective, ICZM is a process, which must be cultivated and sustained from local consultation, participation and engagement to succeed. This process builds trust and ownership among stakeholders, which are essential elements for co-management to form and deepen. The project enjoyed excellent support from institutional partners and a high level of commitment and ownership to the project at the community level. In fact, getting the stakeholders involved when designing the project was a big part of the project's success and the on-going consultations with project stakeholders throughout the implementation phase made it possible to reach the project development objectives despite significant challenges.

125. **Robust and iterative fiduciary assessments of project implementation agencies can help anticipate and mitigate implementation challenges by identifying gaps** and better targeting of training and technical assistance for effective project execution.

126. **Better targeting of capacity building needs at the start of the project can help to devise a comprehensive and coherent training plan that can prevent early implementation delay.** For a better targeting of reinforcement actions and technical assistance required, it would have been advisable to better evaluate the needs at the start of the project. During appraisal, provisions should clearly define roles and responsibilities, including funds flow and procurement procedures, of key participating agencies. The resulting capacity building plan for PIU staff should begin before project effectiveness and stretch over several years in the form of timed, sequential actions, which complement each other, and not in the form of individual ad hoc training activities. This is particularly true in a



multi-agency project with institutions unfamiliar with Bank procurement processes, where training and repeater training in procurement and other aspects of project management for all implementing agencies is needed.

127. **An actively engaged and supportive Country Management Unit (CMU) is critical for pilot projects that have inherent implementation risks.** This project would not have been successfully executed were it not for the proactive follow-up by the CMU and especially the high-level engagement by the Country Director.

128. **Introducing new approaches such as ICZM can benefit greatly from piloting and learning by doing followed by replication and scaling up.** In situations where countries are grappling with scarce resources, a pilot approach enhances the chances of effective allocation of limited financial and human resources to natural resource management measures and activities that have been proven to work at various scales.



ANNEX 1. RESULTS FRAMEWORK AND KEY OUTPUTS

A. RESULTS INDICATORS

A.1 PDO Indicators

Objective/Outcome: To pilot the application of integrated coastal zone management (ICZM) approach in the project area on the eastern Mediterranean coast of Morocco

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Civil works to restore and rehabilitate degraded wetlands and dune ecosystems at Moulouya completed	Number	0.00 31-Jan-2012	2.00 31-Mar-2017	2.00 31-Dec-2017	2.00 31-Dec-2017

**Comments (achievements against targets):** The target was 100% achieved through: (i) Implementation of a public awareness campaign on co-management of Moulouya SBEI (intermediate indicator #2); (ii) Restoration of 20 ha of degraded wetland and coastal dune ecosystems at Moulouya; (iii) the completion of a hydrological and ecological study of the Moulouya SBEI (intermediate indicator #4); and (iv) the installation of water pipes to re-establish the flow of water from the Ain Chebbak spring to wetlands located in douar Cherarba. During supervision missions, local NGOs confirmed the return of migratory birds to the site and the improvement of plants density.

The Moulouya estuary is internationally recognized for being of particular significance to biodiversity, and its ecosystem was under particular pressure from economic development and related coastal erosion. The rehabilitation of the Moulouya ecosystem is a demonstration of the successful application of the ICZM approach, involving stakeholders at multiple levels in the process.



Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Sites in the project area with artificial reefs under co-management	Number	0.00 31-Jan-2012	1.00 31-Mar-2017	1.00 31-Dec-2017	1.00 31-Dec-2017

**Comments (achievements against targets):** Target 100% achieved. The indicator was moved to the PDO level from the intermediate level in the October 2016 restructuring. The indicator tracks the installation of an artificial reefs, which benefit the development of marine flora and fauna and can boost the fisheries sector. At the end of the project, one artificial reef was installed off the coast at Boudinar by immersing into the sea a total of 2,197 concrete blocks (200 Kg protection block, 2 T tetra pods, 200 Kg production block, 3 T cubic block). The reef will allow for more abundant fish stocks in the protected areas, and it is expected that this will enable artisanal fishermen to improve their livelihoods. The artificial reef was completed in the summer of 2017 with the first fish production expected in the summer of 2018. The outcome was supported by the installation of basic infrastructure at the port site for artisanal fishermen to safely process and store their catch. Co-management agreements were signed between the Department of Fisheries and targeted co-operatives.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Seaweed and shellfish farms piloted in project area under co-management	Number	0.00 31-Jan-2012	2.00 31-Mar-2017	2.00 31-Dec-2017	2.00 31-Dec-2017

**Comments (achievements against targets):** Target 100% achieved. The indicator was moved to the PDO level from the intermediate level in the October 2016 restructuring. One pilot seaweed farm and one pilot shellfish farm have been completed and are operational. This is the first seaweed farming project in Morocco, which has adopted an innovative cultivating technique using nets suspended by floats. Co-management agreements were signed between the Department of Fisheries and target co-operatives.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
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Land area where sustainable land management practices have been adopted as a result of the project	Hectare(Ha)	0.00 31-Jan-2012	500.00 31-Mar-2017	500.00 31-Dec-2017	500.00 31-Dec-2017
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**Comments (achievements against targets):** Target 100% achieved. The indicator did not form part of the original Results Framework, but was tracked at the intermediate level in the ISRs since the start of the project. The indicator was formally introduced at the PDO level in the October 2016 restructuring. At the end of the project, 500 hectares of lands have been rehabilitated through planting of fruit trees adapted to local climatic conditions, including olive trees and carobs. The successful achievement of the indicator is a testament to the successfully piloted application of an ICZM approach, which relies on sustainable land and water management to balance the protection of local biodiversity with community livelihoods dependent on natural coastal resources. This has benefitted 224 farmers organized in cooperatives. Three women’s cooperatives have successfully established apiculture near the land area, as fruit trees provide both nectar and pollen to foraging bees. Building on the momentum that the ICZM project has helped spur, the regional Department of Agriculture is planning to plant another 900 trees in 2018.

## A.2 Intermediate Results Indicators

**Component:** Incorporating ICZM and climate change adaptation in provincial and local development planning

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Local development plans revised to incorporate the ICZM approach and approved by communal council	Number	0.00 21-Sep-2016	6.00 31-Mar-2017	6.00 31-Dec-2017	6.00 31-Dec-2017

**Comments (achievements against targets):** Original target 100% achieved. Indicator was moved to the Intermediate level from the PDO level in the October 2016 restructuring. The project achieved the target objective of integrating ICZM principles into the action plans of six communes (Local Development Plans), which were validated by communal councils and are currently under implementation. As the foundation for achieving this outcome, the project sought to build the capacity of local community representatives, communal officials, and agencies, NGOs and businesses through the



implementation of 18 workshops and training sessions on several topics including the ICZM approach, integrated water and land management practices, impact of climate change on coastal zones, environmental safeguards, biodiversity and wetlands – benefitting more than 700 people. A website on ICZM was developed, providing all project analytical studies and elaborated guidelines ([gizc.environnement.gov.ma](http://gizc.environnement.gov.ma)). The website includes best practices to provide detailed guidelines for project implementation and replication in other areas. The indicator contributes significantly to the achievement of the PDO by integrating ICZM in institutional mechanisms to manage the coastal zones in a participatory and sustainable manner through consensus building between stakeholders with diverse concerns and interests. One of the main outcomes is that pilot communes requested their regional decision-makers to scale-up these activities at the regional level and integrate ICZM in the development of regional action plans.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Public awareness campaign on co-management of Moulouya estuary completed	Number	0.00	1.00	1.00	1.00
		21-Sep-2016	31-Mar-2017	31-Dec-2017	31-Dec-2017

**Comments (achievements against targets):** Target 100% achieved. Indicator was moved from the PDO level to the intermediate level in the October 2016 restructuring. The target was defined as the elaboration and implementation of an awareness campaign, communication strategy and action plan implemented through the organization of 3 local workshops with the participation of 138 stakeholders representing different state and non-state institutions. At the end of the project, the project had implemented 18 workshops benefitting more than 700 people (see also intermediate indicator 1.1). The intermediate target was an important milestone for the achievement of PDO outcome indicator #1 Civil works to restore and rehabilitate degraded wetlands and dune ecosystems at Moulouya completed.

**Component:** Improving coastal resource conservation and local livelihoods through co-management

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Feasibility studies of establishing seaweed and shellfish farms and pilots	Number	0.00	2.00	2.00	2.00
		31-Jan-2012	31-Mar-2017	31-Dec-2017	31-Dec-2017



**Comments (achievements against targets):** Target 100% achieved. Two feasibility studies were carried out by ANDA and seaweed and shellfish pilot farms are operational. The positive feasibility studies allowed the pilot projects to advance under the project, directly supporting PDO outcome indicator #3 Seaweed and shellfish farms piloted in project area under co-management.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Hydrological and ecological studies of the Moulouya completed	Number	0.00	2.00	2.00	2.00
		21-Sep-2016	31-Mar-2017	31-Dec-2017	31-Dec-2017

**Comments (achievements against targets):** Target 100% achieved. Hydrological and ecological studies of the Moulouya SBEI – with associated maps and monitoring system – have been completed. The hydrological and ecological studies of the Moulouya confirmed the possibility to rehabilitate the Moulouya estuary, and directly supported the achievement of PDO outcome indicator #1.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Associations of cooperatives of women involved in apiculture	Number	0.00	3.00	4.00	4.00
		31-Jan-2012	31-Mar-2017	31-Dec-2017	31-Dec-2017

**Comments (achievements against targets):** Original and revised target 100% achieved. The target was four cooperatives – whose members count over 200 women – who were provided with 1200 bee hives and appropriate training. The first honey crop has already been produced and sold. These income generating activities contributed to the PDO by reducing pressure on coastal resources by providing alternative livelihoods to community members who depended on these coastal resources.



B. KEY OUTPUTS BY COMPONENT

To pilot the application of integrated coastal zone management (ICZM) approach in the project area on the eastern Mediterranean coast of Morocco	
Outcome Indicators	<p>1. Civil works to restore and rehabilitate degraded wetlands and dune ecosystems at Moulouya completed (Number). Baseline: 0; Target: 2; Actual: 2 <i>Works to rehabilitate an area of 20 ha of coastal dunes completed. Installation of water pipes.</i></p> <p>2. Sites in the project area with artificial reefs under co-management (Number). Baseline 0; Target:1; Actual: 1 <i>Reefs co-management conventions signed between Ministry of Fisheries, and selected cooperative.</i></p> <p>3. Seaweed and shellfish farms piloted in project area under co-management (Number). Baseline 0; Target: 2; Actual: 2; <i>Seaweed and shellfish farms established (benefitting 25 fishermen). Co-management conventions signed between the National Aquaculture Development Agency and the selected cooperatives.</i></p> <p>4. Land area where sustainable land management practices have been adopted as a result of the project (Hectare). Baseline 0; Target: 500; Actual: 500; <i>Plantation of 500 ha - fruit trees (olive and carob trees)- for 224 farmers organized in cooperatives.</i></p>
Intermediate Results Indicators	<p>1.1 Local development plans revised to incorporate the ICZM approach and approved by communal council: Baseline 0; Target 6; Actual: 6. <i>6 LDPs have been updated, with the integration of the ICZM-supported approach and of elements of the CCNEDD law, by taking into account new planning requirements.</i></p> <p>1.2 Public awareness campaign on co-management of Moulouya estuary completed (Number, Custom):</p>





	<p>Baseline 0; Target :1; Actual: 1. <i>Awareness campaign implemented through the organization of local workshops, with the participation of 138 stakeholders representing different state and non-state institutions.</i></p> <p>2.1 Feasibility studies of establishing seaweed and shellfish farms and pilots: Baseline 0; Target: 2; Actual: 2. <i>Two feasibility studies were carried out by ANDA.</i></p> <p>2.2 Hydrological and ecological studies of the Moulouya completed: Baseline 0; Target: 6; Actual: 6. <i>Hydrological and ecological studies of the Moulouya SBEI – with associated maps and Monitoring system – have been completed and validated by an ad hoc committee.</i></p> <p>2.3 Associations of cooperatives of women involved in apiculture: Baseline 0; Target 4; Actual: 4. <i>Four cooperatives – whose members are predominantly women – were provided with 1200 hives (and appropriate training.</i></p>															
<p>Key Outputs by Component (linked to the achievement of the Objective/Outcome 1)</p>	<p><b>1. Incorporating ICZM and climate change adaptation in provincial and local development planning</b></p> <ul style="list-style-type: none"> <li>- 6 local development plans have incorporated ICZM principles <ul style="list-style-type: none"> <li>▪ A meeting of restitution and validation of the LDPs took place on March 30, 2017 at the central level in the presence of representatives from the Ministry of the Interior and representatives of the concerned communes.</li> </ul> </li> <li>- Public awareness campaign on co-management of Moulouya estuary completed</li> <li>- Organization of 18 workshops and training sessions for 707 participants on a variety of topics</li> </ul> <table border="1" data-bbox="688 1230 1839 1401"> <thead> <tr> <th>Thematic Focus</th> <th># of Workshops</th> <th># of Participants</th> </tr> </thead> <tbody> <tr> <td><b>The ICZM approach</b></td> <td>5</td> <td>205</td> </tr> <tr> <td><b>Integrated Water Resources Management</b></td> <td>3</td> <td>120</td> </tr> <tr> <td><b>Coastal Environment and Climate Change</b></td> <td>3</td> <td>130</td> </tr> <tr> <td><b>Training of trainers on ICZM</b></td> <td>3</td> <td>72</td> </tr> </tbody> </table>	Thematic Focus	# of Workshops	# of Participants	<b>The ICZM approach</b>	5	205	<b>Integrated Water Resources Management</b>	3	120	<b>Coastal Environment and Climate Change</b>	3	130	<b>Training of trainers on ICZM</b>	3	72
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<b>Training of trainers on ICZM</b>	3	72														



<b>Environmental and social safeguards</b>	<b>1</b>	<b>30</b>
<b>Biodiversity and Wetlands</b>	<b>3</b>	<b>150</b>
<b>Total</b>	<b>18</b>	<b>707</b>

- Completion of a Web site ([www.gizc.environnement.gov.ma](http://www.gizc.environnement.gov.ma))
- Organization of four communication events:
  - A regional communication event;
  - An information workshop for the benefit of the press;
  - Side Event as part of the UNFCCC COP22 in Marrakech to showcase the ICZM project and share results and lessons;
  - National workshop at the central level to communicate project progress, share results and raise awareness about ICZM formed part of the closing workshop with project stakeholders organized during the month of December 2017.
- Exposition on the coastline and the biological sites of Moulouya
- Study related to the integration of the ICZM approach
- Organization of a study tour to Belize to learn and share experiences on ICZM

**2. Improving coastal resource conservation and local livelihoods through co-management**

- 2 feasibility studies of establishing seaweed and shellfish farms and pilots using integrated approaches to natural resources management
- 6 hydrological and ecological studies of the Moulouya completed
- 4 associations of cooperatives of women involved in apiculture
- Ecologic and socio-economic study of Moulouya and related works
- Training of staff of the Fishing Department on scientific and technical monitoring, setting up artificial reefs and supervising cooperatives
- Creation of artificial reefs (Boudinar)
- Creation of a seaweed and shellfish farms
- Acquisition of hives and beekeeping equipment for cooperative
- Water and soil conservation works
- Fruit tree planting
- Acquisition of 3 agricultural tractors and 6 tanks for associations benefiting from planting works



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|--|--|
|  | <ul style="list-style-type: none"><li>- Acquisition of 4 cars for beekeeping cooperatives.</li><li>- Organization of meetings, tours with tourist promoters for the promotion of ecotourism in the project area</li><li>- Beaconsing of a shellfish farm of 4.5 ha.</li><li>- Creation of a shellfish barge with hydraulic equipment</li><li>- Feasibility study for the implementation of an integrated approach to ecotourism development.</li></ul> |
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**C. RESULTS FRAMEWORK**

**Table 2: PDO Indicators - Original and revised**

#	Original Indicators	Target	Revised indicators	Target	Comments
PDO 1	Number of approved local development plans that are revised to incorporate the ICZM approach	Number of ICZM-friendly local plans created: 6			Revised for clarity and moved to intermediate level as the indicator was pitched too low for the PDO level (Restructuring Paper).
PDO 2	Formulation and implementation of a public awareness campaign for the promotion of biodiversity conservation through co-management of the Ramsar wetlands of the Moulouya estuary	Number of public awareness campaigns promoting conservation of Ramsar wetlands: 1			Revised for clarity and moved to intermediate level as the indicator was pitched too low for the PDO level (Restructuring Paper).
<b>PDO 1</b>			Civil works to restore and rehabilitate degraded wetlands and dune ecosystems at Moulouya completed (Number)	2	Original intermediate indicator 2.1 revised for clarity and moved to the PDO level as the indicator relates directly to the PDO. The target is defined as: 1. Works to rehabilitate an area of 20 ha of coastal dunes completed; 2. Water pipes to re-establish the flow of water from Ain Chebbak spring to wetlands located in douar Cherarbas installed.
<b>PDO 2</b>			Sites in the project area with artificial reefs under co-management (Number)	1	Original intermediate indicator 2.2 (a) revised for clarity and moved to the PDO level as the indicator relates directly to the PDO. The target is defined as a signed reefs co-management convention between the Ministry of Fisheries and selected cooperative.
<b>PDO 3</b>			Seaweed and shellfish farms piloted	2	Original intermediate indicator 2.2 (d) and (e)



			in project area under co-management (Number)		revised for clarity and moved to the GEO level as the indicator relates directly to the PDO. The target is defined as one seaweed and one shellfish farm with signed co-management conventions between the National Aquaculture Development Agency and selected cooperatives.
<b>PDO 4</b>			Land area where sustainable land management practices have been adopted as a result of the project (Ha)	500	The indicator did not form part of the original Results Framework, but has been tracked at the intermediate level in the ISRs since the start of the project. In the restructuring, the indicator was formally adopted at the GEO level as it relates directly to the PDO.



**Table 3: Intermediate indicators - original and revised**

Original Indicators Project Appraisal Document June 11, 2012	Target value	Revised Indicators Restructuring October 3, 2016	Target value	Comments
<b>Component 1</b>				
1. (a) Government officials and members of local communities involved in development planning receive training and regular refreshers in ICZM and co-management	Number of training workshops delivered: 48			Dropped. The indicator was focused on an activity (training) and not the outcomes of that activity, for instance behavior change related to management.
1. (b) Specific permanent Coastal Commissions at the provincial level hold regular meetings and discharge their mandate	Number of meetings of Coastal Commissions: 27			Dropped. The indicator was focused on an activity (meeting) and not the outcomes of that activity, for instance integration in coastal zone management.
1. (c) Training of trainers in ICZM principles	Number of educators trained: 90			Dropped. The indicator was focused on an activity (training) and not the outcomes of that activity, for instance behavior change related to management.
1. (d) Number of approved local development plans that are revised to incorporate the ICZM approach	Number of ICZM-friendly local plans created: 6	1.1 Local development plans revised to incorporate the ICZM approach and approved by communal council	6	Originally, this indicator was included at both the PDO and intermediate level. In the restructuring, the indicator was revised for clarity and continued / moved from the PDO level to the intermediate level. The PAD notes that success will be measured by inclusion of key ICZM concepts in revised plans. The revised indicator includes "approved by communal council."
		1.2: Public awareness campaign on co-management of Moulouya estuary completed	1	Original PDO level indicator 2 revised and moved to the intermediate level.
<b>Component 2</b>				
2.1. Rehabilitation of degraded	Number of hectares			Moved to PDO level as indicator #1 and revised



wetlands and dune ecosystems at Moulouya	rehabilitated: 20			for clarity. Target value changed from ha to numbers, but the scope remained unchanged. See target definition under new indicator PDO 1.
2.2. (a) Artificial reef is deployed in project area and operating under co-management regimes	Number of deployed reef: 1			Moved to PDO level as indicator #2 and revised for clarity.
2.2. (b) and (c) Feasibility of establishing seaweed and shellfish farms is studied	Number of feasibility studies completed: 2	2.1 Feasibility studies on establishing seaweed and shellfish farms completed	2	Continued and revised for clarity.
2.2. (d) and (e) Pilot seaweed and shellfish farms successfully launched and operating under co-management	Number of pilot farms: 2			Moved to PDO level as indicator #3 and revised for clarity.
2.3. (a) Restoration of degraded areas through soil and water conservation (SWC) measures	Number of hectares receiving SWC measures: 500			Dropped as the indicator was similar in nature to PDO 1.
		2.2 Hydrological and ecological studies of the Moulouya completed	2	New indicator added to capture medium-term outcome for Component 2. Target defined as: 1. Hydrological study of the Moulouya SBEI completed 2. Ecological and social economic diagnostic of the Moulouya SBEI updated
2.3. (b) Number of associations or cooperatives of women involved in apiculture	Number of associations or cooperatives: 3	2.3 Associations or cooperatives of women involved in apiculture	4	Continued, target adjusted upwards.
2.4. Small-scale ecolodges are established / rehabilitated and operating	Number of ecolodges established and operating: 6			The indicator was dropped in the October 2016 restructuring, however, implementation of Component 2.4 continued and achieved significant results, albeit less than initially planned. The rationale for dropping the indicator was that the activity could not be completed on time, as: 1. No new commitment would be signed by the Minister after December 16, 2016, due to the upcoming October elections;



				2. Bid was not yet ready, and only expected to be finalized by mid-October 2017; 3. ESMP needed to be prepared and validated, which would take about 1 month (finalized by Mid-November 2016); 4. Procurement process would take about 2 months (mid-January 2017).
<b>Component 3</b>				
3.1 (a) and (b) Progress reports are submitted in a timely manner and project website created/updated	Number of progress reports submitted (technical, fiduciary, and safeguards): 35			Dropped. Unrelated to the PDO as it captures project management.
3.2 (c) Project adheres to annual work program and budget	% completion of annual work program and budget: 95			Dropped. Unrelated to the PDO as it captures project management.
3.3 (d) Monitoring site visits are proceeding. Measurements and observations of progress and indicator values are being recorded	Number of site visits completed with measurements observed: 216			Dropped. Unrelated to the PDO as it captures project management.





## SECTION II.A: Relevance of PDO to current development priorities in Morocco (additional analysis)

129. The PDO is also relevant in the present context of Morocco and its development policies: it reflects the current focus of national strategies and policies on sustainable development, in general, and the potentials of coastal zones for food production and job creation, in particular. It focused on the vulnerability of coastline and local populations to climate change-related risks, which is still a main concern.

- In 2012, Morocco ratified the Protocol on Integrated Coastal Zone Management (ICZM) in the Mediterranean, the first legal reference instrument specifically aimed at coastal zone management. After that, the *2012-2019 Action Plan* – adopted in 2012 during the COP17 in Paris – supports all involved parties in the implementation of the Protocol.
- To some extent, the Project has contributed to the formulation of the *Law 81-12 of 2015 for coastal areas*, which establishes the principles and fundamental rules of sustainable integrated management of the coastline for its protection, development and conservation. The decree of application (*dahir n° 1-15-87* of July 1st, 2015 promulgating the law) adopts the principles and rules of the ICZM. At present, a National Coastal Plan is being developed as well as regional plans to establish ICZM at the national and regional levels. The Plan places the integration of the coastal protection dimension into sectoral policies, particularly the fields of industry, tourism, housing and infrastructure works, which are at the center of its objectives.
  - ➔ The 2015 law fits well within the objectives of the Framework Law bearing the 2014 *National Charter of Environment and Sustainable Development*: it lays down the fundamental principles of integrated coastal management as a transversal management process involving the simultaneous consideration of different interests in the coast, including in particular the systematic consideration of the environment for all decisions affecting this fragile territory.
- The Project design is aligned with recently published *2015-2020: National Strategy for Sustainable Development*,<sup>3</sup> whose Axis 1 is about the improvement of sustainable management of coastline, considered as “*a hypersensitive place that combines a multiplicity of economic and social stakes*” and that “*is subject to pressures of various kinds: uncontrolled town planning, tourism, industry, overexploitation of dune sand, etc.*” The Strategy refers to the need to formulate a comprehensive national plan for coastal development.

130. Finally, the Project is in line with the current *Aquaculture Management Plan (PAA)*<sup>4</sup>, promoted by ANDA, which is a master planning tool to identify areas favorable to aquaculture along the national coastline and the approach to be followed for better integration of aquaculture with regional development plans.

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<sup>3</sup> Ministry delegated to the Minister of Energy, Mines, Water and Environment, in charge of the Environment (2016), *National Strategy for Sustainable Development*.

<sup>4</sup> *Plan d'Aménagement Aquacole*.

## ANNEX 2. BANK LENDING AND IMPLEMENTATION SUPPORT/SUPERVISION

### A. TASK TEAM MEMBERS

Name	Role
<b>Preparation</b>	
<b>Supervision/ICR</b>	
Taoufiq Bennouna	Task Team Leader(s)
Abdoulaye Keita	Procurement Specialist(s)
Laila Moudden	Financial Management Specialist
Enos E. Esikuri	Team Member
Markus Friedrich Vorpahl	Social Safeguards Specialist
Ndeye Magatte Fatim Seck	Team Member
Soumia Driouch	Team Member
Elena Segura Labadia	Counsel
Mohamed Adnene Bezzaouia	Environmental Safeguards Specialist
Sanne Agnete Tikjoeb	ICR

### B. STAFF TIME AND COST

Stage of Project Cycle	Staff Time and Cost	
	No. of staff weeks	US\$ (including travel and consultant costs)
<b>Preparation</b>		
FY10	0	4,563.53
FY11	16.819	103,115.54
FY12	15.427	106,291.32
FY13	7.197	43,221.64
FY14	8.300	39,026.91
<b>Total</b>	<b>47.74</b>	<b>296,218.94</b>



<b>Supervision/ICR</b>		
FY13	1.015	2,014.01
FY14	5.443	22,463.56
FY15	4.975	91,054.36
FY16	2.847	19,383.62
FY17	7.317	56,192.72
FY18	6.794	69,978.94
<b>Total</b>	<b>28.39</b>	<b>261,087.21</b>

### ANNEX 3. PROJECT COST BY COMPONENT

Components	Amount at Approval (US\$M)	Actual at Project Closing (US\$M)	Percentage of Approval (%)
Incorporating ICZM and climate change adaptation in provincial and local development planning	0.68	.67	99
Improving coastal resource conservation and local livelihoods through co-management	4.12	4.11	100
Project management and M&E	0.38	.38	100
<b>Total</b>	<b>5.18</b>	<b>5.16<sup>5</sup></b>	<b>100.00</b>

131. According to the PAD, the NSP would provide the main parallel-financing to the project in terms of US\$20 million. At the end of the project, a total of US\$20.36 million had been provided in parallel financing through existing projects and related programs, most notably towards the installation of a purification station, forestry work, agriculture and fisheries projects in the Oriental region, and a feasibility study and environmental and social impact for the installation of seaweed and shellfish farms. These activities were separate from those financed under the GEF project, and as such there are no attribution issues concerning the outcomes of this project.

132. Direct co-financing to the project in the amount of US\$0.63 million was provided in government contribution mainly for the management and operation of the project.

<sup>5</sup> Datasheet shows \$5.18m due to system issues



## ANNEX 4. EFFICIENCY ANALYSIS

133. Project efficiency was assessed from various perspectives, including in: 1) An ex-post Incremental Cost Analysis, 2) evidence from a Socio-Economic Analysis undertaken at project closing, and 3) aspects of project design and implementation.

### I. Ex-Post Incremental Cost Analysis

134. At the time of appraisal, an Incremental Cost Analysis was conducted in lieu of standard economic and financial rates of return. In a qualitative analysis, the costs and benefits of the project activities were separated from a baseline set of activities, which were likely to be carried out independently of the availability of GEF resources, and then compared with an additional set of activities that were contained in the ICZM project. The results showed that without GEF grant support, the priorities identified – and included in the project - by the national and local governments, as well as by local communities might not be implemented until it would be too late to preserve all ecologically and culturally important sites in the coastal zone. From that perspective, the ICZM project was economically justified.

135. Table 6 below includes an ex-post analysis of the incremental costs and achievements at the time of project closing. The analysis lists incremental activities by component and relies on qualitative input to assess their achievement side-by-side expected outcomes. The results show that the project largely delivered the incremental benefits to the global environment and worked as a catalyst to change the baseline scenario.

136. For component 1, GEF's incremental investment of US\$677,000 has built the capacity of over 700 participants in 18 different workshops, thereby fostering the integration of ICZM into the LDPs of six communes on the eastern Mediterranean coast of Morocco. This a significant outcome, which contributes to the achievement of the PDO by demonstrating a successful pilot phase. In addition, the project has helped build momentum for other outcomes to materialize, including the promulgation of Law 81-12, and several aspects of the project are already being replicated based on an active commitment to share lessons learned and key results. Based on these outcomes, it reasonable to assume that the benefits accrued – and expected to be accrued - to the environment, natural resources, biodiversity, and local livelihoods in the sensitive coastal zone area far outweighs the value of the GEF incremental investment.

137. For component 2, GEF's incremental investment of US\$4.12 million has rehabilitated 20 hectares of the degraded wetlands and dune ecosystems at the Moulouya estuary, installed an artificial reef at Boudinar, promoted a sustainable fisheries sector and opportunities for alternative livelihoods, rehabilitated 500 hectares of degraded land through soil and water conservation and income-generating activities, and promoted eco-tourism as a means to conserve sensitive coastal resources and assets used in the tourism sector. As a result of these achievements, there are both immediate and longer-term environmental and economic benefits. Estimating the value of those benefits is beyond the scope of this ICR, but could potentially be considered in an ecosystem accounting framework, which is well suited to capture the economic value of services provided by the ecosystem and linking that to environmental sustainability and human well-being. Knowing the importance of the Eastern Mediterranean coast of Morocco to the national economy, and recognizing the contribution of the project outcomes to the successful application of an ICZM approach, the initial GEF incremental investment is reasonably justified.



**Table 4: Ex-Post Incremental Cost Analysis & Achievements**

INCREMENTAL ACTIVITIES	BASELINE	GEF ALTERNATIVE	GLOBAL BENEFITS	INCREMENTAL ACHIEVEMENTS
<b>Component 1: Capacity building and institutional strengthening to incorporate the ICZM approach into local development planning</b>				<b>GEF alternative: 912,000 Incremental: 677,000 Parallel-financing: 235,000</b>
1.1: promoting awareness of and building capacity in the application of the ICZM approach among key stakeholders including government and local communities through training workshops and public education campaigns	Management is based on sectors and there is little coordination in the provinces of Berkane, Nador and Driouch	The activities include: - training in terms of ICZM and climate change adaptation; - Training and raising awareness of coastal territory developers (policy makers and stakeholders) on the vulnerability of the coast to CC effects and the adaptation measures developed; - capacity building for co-management (how to set up associations and cooperatives; how to manage associations and cooperatives; etc.) and monitoring changes in the coastline; -coordinating and sharing knowledge among the project's various partner agencies, including through IW-LEARN	Strengthened ecosystems conservation and management along the Mediterranean coast.  Increased resilience of ecosystems to CC along the Mediterranean coast.	The project successfully piloted the integration of ICZM concepts into Local Development Plans of six participating communes. The LDPs were validated and approved at the central level by the Ministry of the Interior in a national workshop on March 30, 2017.
1.2. Institutional capacity building to mainstream ICZM approach at provincial level	Specific Permanent Coastal Commissions exist on paper at the provinces of Berkane, Nador and Driouch	- making functional the Specific Permanent Coastal Commissions as the mechanism to coordinate different sectors to apply ICZM; - organization of workshops to help the Specific Permanent Coastal Commissions coordinate among different sectors, including ICZM and adaptation to CC.	Better management of coastal ecosystems and resources.	Multi-sectoral committees and multi-disciplinary task forces were set up for planning, programming and monitoring activities.
1.3: piloting of spatial development planning and including ICZM into the communal development plans.		- providing technical assistance (expertise) to the municipalities and rural communes to help them use the spatial planning; - providing training and technical assistance to help them incorporate ICZM into in the 6 Communal Development Plans.	This will help local communities to take into consideration the limited capacity of nature and help better management (reduction of pollution, conservation of wetlands, related	The project built the capacity of local community representatives, communal officials, agencies, NGOs and businesses through the implementation of 18 workshops and training sessions on several topics including the ICZM



INCREMENTAL ACTIVITIES	BASELINE	GEF ALTERNATIVE	GLOBAL BENEFITS	INCREMENTAL ACHIEVEMENTS
			ecosystems).	approach, integrated water and land management practices, impact of climate change on coastal zones, environmental safeguards, biodiversity and wetlands – benefitting more than 700 people.
<b>Component 2: Investments to improve coastal resource management and livelihoods through co-management approach</b>			<b>GEF alternative: 23,259,000</b> <b>Incremental: 4,119,000</b> <b>Parallel-financing: 19,140,000</b>	
2.1: Improved conservation and management of sensitive coastal areas	Ramsar sites are designated.	The project will support conservation and restoration of key coastal ecosystems/areas (dunes, Ramsar sites). Activities include: -Preparation of a public awareness action plan for the conservation of the Moulouya SBEI; -Rehabilitating and restoring degraded wetland ecosystems and coastal dunes at the Moulouya estuary.	Improved conservation of Ramsar sites at Moulouya.	20 hectares of the Moulouya SBEI fixated and rehabilitated to improve the conservation of sensitive coastal areas (Ramsar) of particular importance to biodiversity.
2.2: Improved fisheries management	Some studies on artificial reefs and algae and tests have been started.	The Project will help pilot different types of win-win models for management of the protected fishery area for conservation and economic revenues. The activities include: - studying and installing one artificial reef between Boudinar and Saidia; -studying the feasibility of algae cultivation and development of a pilot algae farm, along with associated value-added activities in the community; -designing and testing small shellfish farming project for the benefit of a cooperative of local fishermen.	Fisheries are better managed because local people increase revenue through alternative livelihoods and more sustainable fisheries.	The installation of an artificial reef supports a more sustainable fisheries sector. Co-managed of pilot projects in seaweed and shellfish production provides opportunities for alternative livelihoods, thereby reducing pressure on sensitive coastal resources.



INCREMENTAL ACTIVITIES	BASELINE	GEF ALTERNATIVE	GLOBAL BENEFITS	INCREMENTAL ACHIEVEMENTS
2.3: Soil and water conservation and income-generating activity	The project will be undertaken based on Maroc Plan Vert at Saidia Ras El Ma, Beni Chiker, and Boudinar	The project will support those activities that use less water while generating revenues, and/or making local people less vulnerable to natural disasters. The activities will also include the promotion of good practices on controlling agricultural pollution. The planned activities concern: (a) soil and water conservation measures (e.g. terrace construction or rehabilitation, fruit tree planting, small physical works to facilitate water infiltration and reduce runoff and erosion; and (b) promotion of apiculture by supplying local women's groups with materials and technical assistance.	Land degradation reduced; fresh water use reduced for agriculture; related coastal ecosystems better protected.	500 hectares of degraded land has been rehabilitated through the planting of fruit trees and the co-management of an artisanal apiculture production by four women's cooperatives.
2.4: Promotion of ecotourism		This sub-component will include: (a) a feasibility study on ecotourism; (b) the rehabilitation and furnishing of six small-scale tourist lodges, including adapted equipment of solid waste and waste-water in locations based on the results of the feasibility study; and (c) training of tour operators and promotion of sustainable tourism activities, including raising	Better conserved coastal resources, including wetlands because they are assets for tourism and biodiversity. Pollution reduced out of better education, better coordination among different sectors, and better organization.	Three small-scale eco-lodges have been rehabilitated. Tour guides have received training in sustainable tourism activities and eco-lodge management. This lays the foundation for protecting coastal assets for sustainable tourism.
<b>Component 3: Project management and M&amp;E</b>				<b>GEF alternative: 1,009,000</b> <b>Incremental: 384,000</b> <b>Paralled-financing: 625,000</b>
Operation of the PMU.	Focus of M&E and Knowledge production	The objective of this component is to ensure adequate management and coordination of Project activities by supporting capacity building within, and activities of, the PMU. This component will finance incremental operating costs needed for:	Common knowledge strengthened and stronger focus on Mediterranean pollution in knowledge production. Good practices of	PMU established and operational. Design and execution of M&E adequate to track project implementation and achievements.



INCREMENTAL ACTIVITIES	BASELINE	GEF ALTERNATIVE	GLOBAL BENEFITS	INCREMENTAL ACHIEVEMENTS
		(a) the operation of the PMU; and (b) project monitoring and evaluation.	ICZM scaled up.	
<b>TOTAL</b>				<b>GEF: 5,180,000</b> <b>Parallel-financing: 20,000,000</b>

## II. Evidence of efficiency from the Socio-Economic Impact Study (See Executive Summary in Annex 5)

138. Assessing the socio-economic impacts was limited by the fact that most of the actions carried out under this project were completed shortly before project closing, when the study was conducted. The short-term socio-economic impacts, despite their existence, are therefore quite low. In the medium to long term, however, the impacts are expected to be greater.

139. Two major findings emerge from the study. First, the study showed that the beneficiaries – both natural persons and institutional actors - were mostly satisfied with the implementation of project activities and the achievements made. The total number of beneficiaries was 8300 people of which 28% were women. Second, the study showed that the project has had an impact on job creation and income generation, which is likely to strengthen over the medium and long term.

140. Job creation: Nearly 300 jobs were realized in the short term, of which 42 were permanent jobs and 267 were temporary jobs. The impact on job creation is more pronounced over time, where the project has the potential for creating nearly 800 additional jobs, of which 277 may be permanent and 500 temporary jobs. The greatest potential for jobs creation exists in managing the plantation and in beekeeping.

141. Income generation: The impact of the project on local incomes is still low, as monetization of some of the activities will only happen over the coming year. In the short-term, incomes are likely to rise between 5 and 25 percent, while in the medium- to long-term incomes may rise between 20 and 500 percent (see also Table 7 below for more details).



**Table 5: Estimated income generation for beneficiaries in the short-term and in the medium- to long-term**

Activity	Estimated income generation for beneficiaries	
	Short Term	Medium to Long Term
<p><b>Action 2.1.1: Rehabilitation and restoration of degraded wet ecosystems and coastal dunes at the mouth of Moulouya (dune fixation, restoration of wetlands, etc.).</b></p> <p>Through the development of seaside tourism, adjustments made will allow for better management of visitor, in particular in regards to car parking and controlled accesses. This will impact positively on the livelihoods of the guards and itinerant traders, whose incomes are likely to rise 10% to 25% on average during the first year, and more in the medium to long term.</p>	10% - 25%	25% - 30%
<p><b>Action 2.2.1: Technical study and installation of artificial reefs on the eastern Mediterranean coast between Boudinar and Saidia, Al Amal Association of Artisanal Fishing in Ijatti - Sidi Driss (120 members)</b></p> <p>For the moment fishermen are content to monitor the reef to prevent illegal fishing. In the medium and long term, fishermen estimate that their income could improve from 50% to 100% to reach at least 3000 DH per month.</p>	0 %	50% - 100%
<p><b>Action 2.2.2: Feasibility study and implementation of a seaweed pilot project on the eastern Mediterranean coast. Marchica Cooperative (25 men)</b></p> <p>By capitalizing on the experience of the first harvest, the efficiency of the facility could reach 20,000 Kg per year, which will strengthen the financial situation of the facility and have a positive impact on the improvement of the incomes of the employees. For the fishermen, the income improvement is estimated at 10% in the short term, against 20 to 25% in the medium and long term.</p>	10%	20% - 25%
<p><b>Action 2.2.3: Feasibility study and implementation of a shellfish aquaculture project in the Eastern Mediterranean.</b></p> <p>AL Amal Cooperative of Artisanal Fisheries (34 men and one woman). No impact on revenue improvement in the short-term, but in the medium- to long-term incomes are expected to increase by 20-25%.</p>	0%	20% - 25%



<p><b>Action 2.3.1: Restoration of degraded land and planting of fruit trees adapted to local climatic conditions (olive, carob and almond tree), with appropriate adaptations according to local contexts for the collection of rainwater in plots</b></p> <p>Maamaran Association (olive tree) 174 beneficiaries  Association Al Maghreb Al Akhder (olive tree) 46 beneficiaries  Al Sadaka Association (carob tree) 30 beneficiaries</p> <p>The income per farmer has been estimated at around 2100 dh per year per hectare. The project will significantly increase the value added of production by considering the value of production, particularly the production and marketing of olive oil, the added value to be generated per farmer per year and by Hectar could to increase to 11500 dh for the cultivation of the olive tree and 13 000 DH for the cultivation of the carob tree, the income can be multiplied by 5 in an optimal situation</p>	0%	100% - 500%
<p><b>Action 2.3.3: Diversification of Income-Generating Activities and Water and Soil Conservation in the Context of Climate Change (Apiculture)</b></p> <ul style="list-style-type: none"> <li>• AL FATH Cooperative (83 beneficiaries, including 42 men and 41 women)</li> <li>• Cooperative ZEGZEL (33 beneficiaries, including 8 men and 25 women)</li> <li>• Al Ikhlass cooperative (31 women beneficiaries)</li> <li>• Al Binae Cooperative (37 women beneficiaries)</li> </ul> <p>Considering the production, the average income of beekeepers remains low (between 1000 and 3000 Dh/year). To improve their incomes, beekeepers count on a better valorization of the production and especially the increase of the quantities produced. These actions will have a positive impact on the estimated revenue improvement in the medium- to long term of between 25% and 30%.</p>	5% - 10%	25% - 30%
<p><b>SCp 2-4- Promote the development of ecotourism in the project area</b></p> <p>3 traditional houses converted into bed and breakfast</p> <p>The project to encourage young entrepreneurs to invest in ecotourism, will have a potential positive impact on improving their income by 20 to 50% in the medium and long term. Currently no impact to emphasize on the improvement of the income of the crabs since the exploitation has not yet started.</p>	0%	20% - 50%



### **III. Aspects of efficiency from project design and implementation**

142. The complex institutional arrangements, which were essential to fostering the kind of inter-agency collaboration necessary to realize the benefits stemming from ICZM, were inherently also creating obstacles for the efficient implementation of planned project activities. Add to that the inexperience of the EA with World Bank projects,

143. Procurement presented early implementation challenges. Procedural limitations in designating an authority to approve the spending of project funds held in the National Fund for the Environment caused bottle necks in the procurement process (see Section B(i)). Similarly, a requirement to only allow procurement packages to be processed, rather than individual contracts, ended up delaying works that were independent of other activities. The issues were resolved over time through increased capacity building and a deepened engagement and technical assistance from the Bank's side and at multiple levels.

144. The introduction of a new PMU team in May 2015, was mitigated by the efficient collaboration between the six participating communes, who enjoyed good coordination between the different agencies at the local level.

145. The project closing date was extended for less than a year (nine months), an indication of reasonable efficiency, and resulted in net efficiency gains as the project was able to meet all targets and successfully demonstrate the viability of the ICZM approach. There were no cost overruns.



## ANNEX 5. BORROWER, CO-FINANCIER AND OTHER PARTNER/STAKEHOLDER COMMENTS

### 146. Two translated Executive Summaries are included in Annex 5:

**Impact Evaluation:** First, as part of the closing workshop with project stakeholders during the final ISR/ICR mission, a power point presentation of the draft ICR was presented and discussed. Overall, the findings related to results and implementation process were well received by the audience. The Borrower prepared an Impact Evaluation, which is included herein.

**Socio-Economic Impact Report:** Second, the PIU prepared a Socio-Economic Impact Report for the project. The English version of the Executive Summary of that report is included below.

### EXECUTIVE SUMMARY OF THE PROJECT-FINANCED IMPACT EVALUATION (Translation)

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#### 1. BACKGROUND AND MOTIVATION OF THE PROJECT

The project is supported by the Global Environment Facility, administered by the World Bank, and implemented by the State Secretariat for Sustainable Development. The overall objective is to accelerate growth, combat poverty, reduce social disparities and contribute to the sustainable exploitation of natural resources in the eastern Mediterranean region of Morocco.

The project focuses on piloting technical, governance and managerial approaches aimed at initiating the implementation of the ICZM approach by focusing on improving the living conditions of coastal populations through increased income of farmers / fishermen / beekeepers and developing income-generating ecotourism activities. These actions should directly and indirectly integrate the protection of the environment and the regeneration of biodiversity.

This project started on November 5, 2012 with an original closing date of March 31, 2017. However, taking into account the constraints encountered, it was extended for an additional period of nine months. The new closing date was December 2017.

This project came in a particular context, marked by the establishment of a number of initiatives, constituting a favorable framework for its development and the sustainability of its results. In this respect, it is worth mentioning in particular: i) the Halieutis strategy with its sustainability axis oriented towards the rational management of fisheries resources with the development of aquaculture; an Aquaculture Management Plan for the Mediterranean is currently being finalized; (ii) the Master Plan for Protected Area Management and Management, focusing inter alia on the conservation of wetlands, in particular RAMSAR sites; and iii) the strategy protection of biodiversity, etc. It should also be pointed out that three years after the start of the ICZM project, Law 81-12 on the coastline has been promulgated. This stipulates the elaboration of a National Integrated Coastal Management Plan (PNL) and Regional Schemes of the Littoral. These two regulatory planning instruments will have to be based, as provided by the said law, on the ICZM approach.



## **2. BRIEF DESCRIPTION OF THE PROJECT**

### **2.1. Project objectives**

The overall objective of the project is to "pilot the implementation of the integrated coastal zone management approach in the project area on the eastern Mediterranean coast of Morocco".

The global objective is to contribute to growth, the fight against poverty, the reduction of social disparities and the contribution to the sustainable exploitation of natural resources in the eastern Mediterranean region of Morocco.

Specific objectives have been targeted by the project and fall into two categories:

- The realization of "SOFT" actions: integration of ICZM in territorial planning, information, awareness and capacity building,
- The realization of "HARD" actions: pilot physical actions targeting the aquaculture activity, fruit plantations for the conservation of soil and water, the protection of the mouth of the Moulouya and the regeneration of its biodiversity, ecotourism, the beekeeping, etc.

We conclude that the underlying goal of this pilot project is to learn and initiate the process of implementing the ICZM approach.

### **2.2. Stakeholders**

The main stakeholders are: i) the State Secretariat for Sustainable Development, project leadership institution hosting the PMU, the World Bank team, and institutional partners (ADA, ANDA, Secretariat of State in charge of Tourism, the focal points at the national and regional level, the DRE, and all the institutions at the regional, provincial and local levels.

The World Bank provides close supervision of project implementation and financial management and ensures alignment with operational environmental and social safeguard policies.

### **2.3. The intervention zone**

The project's intervention zone covers the following sites: i) the rural commune of Beni-Chiker, which houses two SBEIs (Cape Three Forks and Jbel Gourougou), ii) the Rural Municipality of Boudinar, and (iii) the five communes bordering the Nador Lagoon which is a Ramsar site, and iv) the Ras el Ma - Saïdia area which includes a Ramsar site, represented by the mouth of the Moulouya River. See also Annex 6.

## **3. THE RESULTS OF THE EVALUATION**

### **3.1. Project design and formulation**

The relevance of the project is still high, given: i) its relevance to national priorities in terms of sustainable development and especially with the flagship principle of sectoral integration, for the protection of the environment and natural resources, adopted in the development of the National Strategy for Sustainable



Development (NSSD), and (ii) by its inclusion in the regional co-management approach, the Mediterranean Sea and its biodiversity, initiated by the SUSTAINABLE program, MED. In addition, the enactment of Law 81-12 on the coastline confirms the timeliness of the project's objectives. It establishes the basic rules for the development, protection, enhancement and conservation of the coastline.

Substantial improvement in the formulation of the logical framework and its indicators reported in the restructured results framework is to be noted. The recommendations issued by the mid-term evaluation have largely been adopted. However, impact indicators remain absent.

### **3.2. Stakeholder participation in the implementation of the project**

Overall, there is good stakeholder participation in project design and updating of action plans. This is attributed to the mobilization of these parties by the new permanent members of the PMU and the allocation by the institutional partners of the focal points at the central and regional levels. This allows close monitoring of the implementation of the actions.

### **3.3. Level of integration of the concern for sustainability in the design of the project**

Sustainability activities should be an integral part of the project to ensure, for example, the empowerment of agricultural, apiculture and aquaculture cooperatives. However, it was only in the extension phase that certain sustainability actions were deemed relevant, urgent and necessary (orchard irrigation, transhumance beekeeping, support of cooperatives for the marketing of their products, etc.).

### **3.4. Project implementation**

The initial design of the project was, however, subject to some changes during implementation: (i) a relevant amendment, which improved efficiency and reflected the Bank's flexibility and the performance of implementing partners was the reallocation of funds between activities, ii) the restructuring of the results framework after the project extension agreement, and iii) the implementation of additional sustainability actions.

#### **3.4.1. Level of application of the ICZM approach**

Although the technical coordination committee (TCC) was set up to have a collaborative framework, between the stakeholders, governed by an operational coordination system for cross-sectoral integration, its functions were limited, in the eyes of the stakeholders, to the sharing of the progress of actions or sectoral projects. In addition, it was not until May 2015 that this TCC was formalized and increased its meeting rate. Indeed, 11 meetings were held during the two years 2016 and 2017.

However, there is a weak application of the ICZM approach in terms of sector integration (aquaculture, olive cultivation, tourism).

It should be noted, however, that the project has added an extra dimension to the governance process by liaising between relevant sectors and coastal ecosystem processes. Also, all evaluative findings of ICZM at the international level, have shown that the ICZM "culture" is established in a progressive way, and that the initiation towards partial integration is a driving force to its eventual full establishment. This is



particularly so in considering the pilot nature of this project.

### **3.4.2. Monitoring and evaluation of implementation**

The monitoring and evaluation system, designed and improved during implementation, was piloted by the central PMU, satisfactorily, in particular following EMP's assignment of a new PMU. The central PMU ensured the task of monitoring the implementation of the project in collaboration with the relevant units at the SEDD, Financial Management Entity, and Regional PMU) and other institutional implementing partners. These institutions had been quite collaborative and provided all the relevant data on the execution of the activities for which they were responsible.

With regard to the implementation of this mechanism, it can be concluded that it has worked very satisfactorily through the establishment of various coordination and consultation mechanisms. Examination of the quality of M&E implementation makes it possible to conclude that the system responded effectively to the problems encountered. This was supported by the flexibility of the Bank and the performance of the Executing Agency, both of which contributed significantly, and in a timely manner, to the readjustments that proved necessary.

### **3.4.3. Quality of execution**

Although the M&E performance is satisfactory in terms of the protocol adopted by the central PMU in consultation with the regional PMU and local entities, some factors have made it relatively cumbersome: i) PMU overload which, at times, was unable to carry out the monitoring and steering tasks that they were tasked with given the inadequacy of its human resources and the multitude of actors and stakeholders with whom it engaged with for information purposes, planning, management and implementation; (ii) extended delays in obtaining authorizations for access to equipment coming from abroad, particularly that relating to the installation of the reef, (iii) the cumbersome administrative procedures specific to the ICZM project, and iv) the corollary procedures for the validation of the terms of reference and the CPS of the services, marrying abnormally long circuits, and the fact that some calls for tenders had been deemed unsuccessful, and (v) project deadlines were relatively short for actions requiring the completion of construction and installation of infrastructures requiring time-consuming procedures before their execution.

## **3.4. Evaluation of performance criteria**

### **3.4.1. Relevance**

As previously stated, and underpinned by the mid-term evaluation, the project's priorities, through its overall objective and its resulting individual projects, were and are relevant and consistent with objectives and management needs to ensure sustainability of ecosystem services.

### **3.4.2. Effectiveness**

The unsatisfactory project status at the time of the mid-term evaluation was turned around to become a satisfactory completion at the time of this final evaluation. Actions that were relatively late to be implemented relate to the rehabilitation of a few target sites and to a lesser extent the installation of the





artificial reef. In sum, the effective completion of both the overall objective indicators and those indicating the intermediate results is generally satisfactory.

### **3.4.3. Efficiency**

a) Compliance with the Bank's environmental and social safeguard policies: The implementation of all sub-projects was in line with the Bank's safeguard, environmental and social policies and national environmental assessment legislation.

(b) Compliance of the implementation with the procurement, financial management and monitoring and evaluation systems and procedures: Although a certain slowness is noted, and the Bank's proposed procurement system is quite restrictive, the procurement procedure was in line with the provisions of the project's Inception Report. These procedures are systematically validated by the Department of Public Establishments and Enterprises (DEPP) under the Ministry of Economy and Finance.

(c) Compliance with disbursement plan, budget commitments, counterpart funding and co-financing: Financial performance during the project implementation period up to 30 September 2015 was considered relatively low. This is attributed to: i) delay in setting up the project's governance units (coordinator, permanent PMU, support consultants, focal points, TCC, etc., ii) change of government, iii) delay in NFE approval, etc. Differences between forecasts and achievements are attributed to: (i) validation, signing of project documents and approval of contracts and contracts that go through multiple stakeholders, (ii) stopping commitments and payments, at least 5 months, iii) late approval of postponements, etc. In 2015, following the change in Project Management, the PMU regularly prepared, in the TCC, the annual action plans on the basis of which the financial performance forecasts were drawn up.

(d) Investment / profit ratio for actions involving associations and cooperatives: For certain actions, particularly in the field of aquaculture and beekeeping, the profit margin is relatively low compared to the volume of the investment. This raises the question of the replicability of this type of project in the absence of a contribution of external funds or a large grant.

### **3.4.4. Sustainability**

Technical, institutional and governance sustainability as well as socio-political sustainability have been found to be satisfactory (likely). The ability to mobilize financial resources for the sustainability of project outcomes is considered moderately likely.

## **4. Lessons Learned and Recommendations**

The main lessons that can be drawn from the project and the conditions for its implementation are as follows:

- 1) Despite the slowness of its implementation, the project enjoyed excellent support from institutional partners. In fact, getting the stakeholders involved when designing the project is a big part of the project's success and consulting with them all along the project's implementation makes it possible to reach the remaining share.



- 2) The actions presenting little risks are those which integrate into initiatives, plans and programs as it is the case for the actions of plantations and aquaculture.
- 3) For a better targeting of the reinforcement actions, and technical assistance, it would have been wise to evaluate the needs at the start of the project. The resulting capacity building plan should be conducted over time in the form of accompanying actions and not in the form of ad hoc training activities.
- 4) The interventions were dominated by the sectoral nature. Integration would have been possible through integrated planning and consultation on terms of reference for studies, particularly site selection;
- 5) The timing of project implementation should take into account the deadlines intrinsic to the procurement procedures, and particularly those inherent in construction work, impact studies and public inquiry that require often outdated regulatory deadlines;
- 6) Flexibility in the preparation of the Annual Action Plan of the project allows adaptation and avoids constraints;
- 7) The actions defined in the projects must also have an integrated aspect to consider long-term sustainability;
- 8) To avoid unsuccessful, time-consuming AOs, the budget estimate should be based on recent feasibility studies.

**The main recommendations are:**

*In terms of governance:*

- 1) It is recommended that the members of the PMU be permanent and designated prior to the launch of the project implementation. They must be empowered by the project director but also motivated;
- 2) A reduction in the number of stakeholders would prevent severe increases in project implementation. It is thus recommended and give full responsibility to the Project Director;
- 3) When a weak performance is noted, an alert must be triggered immediately by the project governance entities and / or the donor team. The present ICZM project was down by almost a year and a half, with no urgent action being taken to remedy the situation.

*In terms of financial performance:*

- 1) Adopt the "green circuit" for projects funded by donors;
- 2) Adopt direct payment as the sole means of payment. And if there is a contribution from the Government, the destiny for actions separate from that of the donors;
- 3) Although the GID (Budget Information System) system is designed to speed up the processing of expenditure-related acts and simplify the circuits and procedures for their execution, the effectiveness of its adoption remains dependent on the connection internet, to the availability of the authorizing officer for electronic signatures, to changes in the institutions governmental, etc. Thus, a strict obligation as to its adoption could constitute a handicap of advancement of the projects;
- 4) The establishment and implementation, within the framework of the TCC, of a plan for the sustainability of results through the support of beekeeping cooperatives for their empowerment, and the completion of the action concerning the installation / rehabilitation of tourist



establishments;

5) Development of a portfolio of projects with funding requests;

6) Integration of the experience of this pilot project into the development of regional coastal schemes (RLS) provided by the Coastal Act 81-12.



EXECUTIVE SUMMARY OF THE SOCIO-ECONOMIC IMPACT STUDY

Integrated Coastal Zone Management Project in the Oriental Region
Assessment of socio-economic impacts

Executive summary

The work of assessing socio-economic impacts was limited by the fact that most of the actions carried out under this project were completed shortly before starting the investigation work. Some actions have been completed, others are in the process of being started, so the short-term socio-economic impacts, despite their existence, are quite low. Nevertheless, the projects carried out will certainly have greater impacts in the medium and long term.

Three major findings emerge from this evaluation work. This concerns the level of satisfaction of the beneficiaries of the various actions carried out, either by natural persons or institutional actors. The investigations have shown that these beneficiaries are mostly satisfied with the achievements made. The number of these beneficiaries is 8300 people, 28% of whom are women. Job creation is one of the main objectives of ICZM, the actions will certainly have an impact on the creation of jobs in the medium and long term more than the figure found in this evaluation. At the moment the jobs created directly are estimated at nearly 300 for the short term and will be 800 jobs for the medium and long term.

Beneficiaries of the project components

- ◆ Institutional strengthening for the implementation of an ICZM approach at the provincial level: 707 of which 27% women and 18% NGOs.
◆ Rehabilitation of SIBE wetlands in Moulouya: 4,700 direct beneficiaries;
◆ Installation of the Artificial Reef: 280 direct and 1840 indirect beneficiaries (fishermen from the region);
◆ The seaweed farm: 25 direct;
◆ The shellfish farm: 20 direct;
◆ Plantation of 500 hectares: 275 direct including 11% women;
◆ Beekeeping: 251 of which 87% are women;
◆ Promotion of ecotourism: 3 families.

Table with 5 columns: Number of beneficiaries, Actions, Total, NGO, women, Indirect. Row 1: TOTAL, 1 561 + 4700 Users (near 6300), 13, 439 (28%), More than 2000

More than 8,300 beneficiaries

Impact on job creations



Job creation is one of the main objectives of ICZM and the actions will certainly have an impact on the creation of more important jobs in the medium and long term. These jobs are estimated at nearly 300 for the short term and close to 800 jobs for the medium and long term.

The work carried out in the context of the rehabilitation and restoration of degraded wet ecosystems and coastal dunes at the mouth of the Moulouya is aimed first and foremost at restoring wet ecosystems and coastal dunes, which have been degraded because of several activities carried out in the area. Both banks of the SIBE, including agriculture, livestock, fishing, sand mining and especially tourism through a summer overexploitation of the beach.

The job-generating forecasting activities have two axes; the first concerns the development of ecotourism through the preservation of the ecological properties of SIBE thanks to the adjustments made, which will have a positive impact on the development of ecotourism in the region and consequently the creation of jobs. The first step is to recruit eco-guards to monitor the site. In the short term, 3 eco-guards have been recruited, but these are still insufficient to cover a very large area, so it is planned to strengthen the surveillance teams through more medium and long-term recruitment forecasts. Other activities are planned which will generate more direct and indirect jobs through the organization of tourist circuits, by calling on tourist guides, carriers, ecotourism professionals, cottages, etc.

The potential of this activity depends on the initiatives that will be undertaken in the site, and the willingness of the public authorities to promote ecotourism in the region.

The second axis related to seaside tourism which represents a flourishing sector at the level of the region. This sector has previously suffered the negative effects of degradation and pollution at the level of the SIBE, but will be better controlled through the developments made including access tracks, beacons, car parks and other amenities, which will have a positive impact on the creation of jobs, especially guards and street vendors, this activity, on the other hand, is developing in the summer period and will create occasional jobs.

Regarding the activity related to the installation of an artificial reef off Boudinar, it will have no impact on job creation in the short term. On the other hand, in the medium and long term the site has potential to be used for underwater dives which could create new jobs.

The first section of the seaweed farm at the Nador Lagoon has created 11 permanent jobs and 4 casual jobs. The extension of the farm, as well as the expected increase in production, will generate more jobs in the medium and long term, reaching about 20 permanent jobs and 20 casual jobs.

The shellfish farm off Nador is at a standstill due to the damage caused by the trawlers, therefore no impact can be attributed to this job creation project, so there is still no visibility on the delay. necessary for the restoration of the facilities, therefore several fishermen initially engaged



eventually. In case of operation, the site has the potential to create 9 permanent jobs and 2 casual jobs.

Concerning the project of plantations of 500 ha of fruit trees, the young plantations can not give fruit until at least 3 years, while the beneficiary farmers must take care of the maintenance and the irrigation of the trees with the support and the assistance of the provider and the Ministry of Agriculture through the DPA, ORMVAM and the ADA. As a result, it is expected that this project could create around 7,000 additional work days from 2020, from 5,000 JT currently to 12,000 days of work in a cruising year.

It is expected that this project will contribute to the creation of about 200 permanent jobs and about 350 occasional jobs in the medium and long term. For the moment job creation on the operating sites remains limited to about 200 casual jobs.

As part of the project to promote the activity of beekeeping, 4 associations have benefited from the distribution of full and empty beehives as well as beekeeping materials to reinforce the production, in addition to the development of a honey farm for the cooperative Al Fath. This activity has had a fairly low impact on job creation since production has not yet reached a satisfactory level to encourage the creation of job positions, the recourse is more for casual jobs according to the study. Indeed, job creation is estimated at 16 permanent and 28 occasional in 2017. However beekeepers remain optimistic about their ability in the medium and long term to increase their production and generate more jobs.

The delay in the implementation of rehabilitation project and equipment of 3 traditional houses in tourist houses did not favor the creation of enough jobs, the launch of the 3 cottages will create 5 permanent jobs and 5 casual jobs. In the medium and long term, ecotourism will have a very important development potential, so gites will be able to create up to 12 permanent and 20 casual jobs.



## The impacts on job creation

flagship components

- ◆ Institutional strengthening for the implementation of an ICZM approach at the provincial level:
  - CT: 10 permanent 30 casual jobs.
  - M and LT: 15 permanent 50 casual jobs.
- ◆ The seaweed farm:
  - CT: 11 permanent 4 casual jobs.
  - M and LT: 20 permanent 20 casual jobs.
- ◆ Plantations of 500 hectares:
  - CT: 200 casual jobs.
  - M and LT: 200 permanent 350 casual jobs.
- ◆ Beekeeping:
  - CT: 16 permanent 28 casual jobs.
  - M and LT: 30 permanent jobs 60 casual.
- ◆ Promotion of ecotourism:
  - CT: 5 permanent 5 casual jobs.
  - M and LT: 12 permanent 20 casual jobs.

Actions	Short term		Medium and long term	
	Permanent jobs	Casual Jobs	Permanent jobs	Casual Jobs
<b>TOTAL</b>	<b>42</b>	<b>267</b>	<b>277</b>	<b>500</b>

**Nearly 1,100 jobs in total**

### Impacts on improving the income of the local population

At the level of the impacts on the improvement of the incomes of the local population, the effects were of different degrees from one project to another. Indeed, for the project of rehabilitation and restoration of degraded wet ecosystems and coastal dunes at the mouth of the Moulouya, it is expected that through the development of seaside tourism, the arrangements made will allow a better channelling of visitors. In particular, in the case of car parks and controlled access, caretakers and street traders will generate an average income of 10 to 25% during the first year, or more in the medium and long term.

The project to install an artificial reef off Boudinar has had no impact on job creation in the short term, but in the medium and long term the site has the potential to be used for scuba diving which could create jobs. The artisanal fishery in the Boudinar area has about 60 boats usually equipped with 15 CH engines, each used by two to three fishermen. Thus, the overall number of fishermen is about 280, whose average income does not exceed 2000 Dh / month, they generally make about 15 outings per month in winter and 25 outings per month in summer period.

In terms of income improvement, fishermen simply monitor the reef to prevent illegal fishing, thus no positive impact on their income in the short term. In the medium and long term,



fishermen estimate that their income could improve from 50% to 100% to reach at least 3000 DH per month.

During the first year of operation of the seaweed farm at the Nador lagoon, the harvest is estimated at 500 kg net against a potential of 19 000 kg, this difference being justified by several factors. By capitalizing on the experience of the first harvest, the efficiency of the facility could reach 20,000 kg per year, which will strengthen the financial situation of the facility and have a positive impact on improving the incomes of employees. Especially fishermen, this improvement is estimated at 10% in the short term, against 20 to 25% in the medium and long term.

The project of the shellfish farm off the coast of Nador, no impact has been noted on the improvement of the income, to see a negative impact since the fishermen cash expenses while waiting for the restoration of the project.

The cereal crops previously practiced by the farmers benefiting from the olive and carob tree planting work allowed to generate fairly low and irregular income, given their dependence on climatic hazards, the income per farmer was estimated at around 2100 dirhams per year per hectare.

This project will therefore make it possible to increase the added value of production in a considerable way by considering the valorization of the production, in particular the production and the marketing of the olive oil, the added value to be generated per farmer per year and per hectare. This could thus increase to 11500 dh for the cultivation of the olive tree and 13 000 DH for the culture of the carob tree, the incomes can be multiplied by 5 in an optimal situation.

The income of beekeepers depends on their production capacity. 2017 was a difficult year because of the lack of bee food areas, in addition to the use of pesticides by farmers caused high mortality of bees. Beekeepers must then move in search of areas suitable for grazing, the provision of pick-up could facilitate this task, in addition to a mapping of grazing areas would be of great help.

Considering the production, the average income of beekeepers remains limited (between 1000 and 3000 Dh / year). To improve their income, beekeepers rely on a better valuation of production and especially the increase in quantities produced. These actions will have a positive impact on the estimated revenue improvement between 25 and 30%.

The project of rehabilitation and equipment of 3 traditional houses in tourist cottages intended to encourage young entrepreneurs to invest in ecotourism will have a positive impact on the improvement of their income from 20 to 50% in the medium and long term. Currently no impact to highlight on the improvement of the income of the spoilers since the exploitation has not yet started.





## Impacts on improving the income of the population

### flagship components

- ◆ Rehabilitation of the wetlands of the SIBE of Moulouya:
- ◆ CT: 10 to 25%.
- ◆ M and LT: 25 to 30%.
- ◆ Artificial reef:
- ◆ M and LT: 50 to 100%.
- ◆ The seaweed farm:
- ◆ CT: 10%.
- ◆ M and LT: 20 to 25%.
- ◆ The shellfish farm:
- ◆ M and LT: 20 to 25%.
- ◆ Plantations of 500 hectares:
- ◆ M and LT: 100 to 500%.
- ◆ Beekeeping:
- ◆ CT: 5 to 10%.
- ◆ M and LT: 25 to 30%.
- ◆ Promotion of ecotourism:
- ◆ M and LT: 20 to 50%.

**ST : 5 at 25 %**

**M and LT : 20 at 500 %**

### Impacts on improving the living conditions of the local population

The improvement of the living conditions of the local population depends on the improvement of several intrinsic factors, notably: Improving income, improving access to networks (roads, electricity, drinking water, sanitation, etc.), the level of education (teaching / training and socio-cultural equipment), the quality of housing conditions and the employment situation.

At this stage, when project activities have just been completed, no impact can be measured in terms of improving the standard of living of the local population, apart from the improvement in projected income. A period of 3 years will be required to compare the above factors with a baseline situation in the ICZM project areas.

In addition, the drainage rehabilitation has improved the living conditions of the riparian population of the marias Chararba as this population is better protected against floods, and the site now has significant potential for developing economic activities, like eco-tourism by the local population.



### Impacts on the assimilation, by local actors, of the principles of ICZM

The training provided for the benefit of the local actors allowed to improve their capacities in assimilation of the principles of the ICZM, in particular their knowledge of the axes cited below:

Participation in this training included ministerial executives, provincial and municipal officials, representatives of various associations and NGOs as well as academics. They were able to improve overall their knowledge of the ICZM project, its principles, methods and technical tools, they were able to better know the ICZM monitoring indicators, the ICZM plan development process and the legal and institutional framework of ICZM. ICZM in Morocco. Overall the level of assimilation has gone from a very low level to a fairly good level.

### Impacts on improving the beneficiaries' ability to organize and self-manage

The principle of co-management of projects implemented by ICZM has led to better supervision of beneficiaries, through technical training and regular monitoring. Several trainings have been provided, the aim of which is to guarantee the sustainability of the actions carried out by improving the capacity of the beneficiaries of the projects in terms of organizational awareness and technical management.

As part of the installation of the artificial reef: Training of departmental managers in scientific and technical monitoring of the establishment of artificial reefs and supervision of cooperatives:

*1. Training of senior staff of the Department of Maritime Fisheries in scientific and technical monitoring of the establishment of artificial reefs.*

This training was provided by INRH experts during 6 training days in Rabat, for the benefit of the executing agency of the project to ensure its success and sustainability. This training achieved the following objectives:

- Acquisition of skills in the choice of implantation sites and design of artificial reefs;
- Importance of artificial reefs as a means of improving the income of artisanal fishermen;
- General information on reefs (typology, materials ... etc);
- Resource management by artificial reefs.

*2. Supervision of fishermen cooperatives / associations of the municipality of Boudinar in terms of scientific and technical monitoring of the establishment of artificial reefs, through a training of 6 days in Boudinar.*

This training, provided by INRH experts, benefited more than 50 fishermen from the town of Boudinar and focused on the role and importance of artificial reefs as a management tool for artisanal fishery and achieved the following objectives:

- Sensitization of fishermen on the importance of artificial reefs in terms of habitat rehabilitation and improved catches, in order to ensure their adhesion;



- Development of skills to ensure, eventually, a possible construction of self-built modules by fishermen;
- Training to ensure a good valuation of fishery products;
- Demonstrate the activities that can be generated by setting up artificial reefs, apart from fishing (ecotourism, scuba diving ... etc);

*3. The two trainings were supported by the realization, for the benefit of DPM executives and the fishermen of the Municipality of Boudinar, of the visits of the building site where the modules will be constructed as well as the visit of the reef dumping site.*

These visits made it possible to share with the managers of DPM and the fishermen of the municipality of Boudinar the various components of the project.

As part of the installation of a seaweed culture farm at the Nador lagoon: Several training sessions were provided by the contractor "Setexam", for the benefit of all staff and contractors before and during the project.

As part of the Plantation of 500 ha of fruit trees: Several theoretical and practical courses were offered to the members of the beneficiary associations of the project.

### **Impacts on the ability of civil society to influence the decision on coastal management**

The civil society represented by the different associations, were involved throughout the implementation process of the ICZM projects, this involvement was materialized by:

- The choice of actions within each component of the project,
- Project management according to the principle of co-management with stakeholders
- Participation in theoretical and field training
- Mobilization of human and technical resources
- Commitment to ESMP environmental and social management plans

However, their power to influence decisions is limited, if not a proposal or consultation role. Indeed, apart from a few associations such as the example of the men and environment association, the agricultural cooperative AL FATH and the association Maamrane d'olivier, the other actors of the civil society have no influence on the taking of decision on coastal management. These three actors have this capacity to influence because they have something in common: one or two people from the office members are members of decision-making committees at local, provincial or regional level so they can convince decision-makers of their points of view and pass on their ideas for good coastal management.

Also the weight of the association in the region and its network are decisive for influencing the decision. Add to this the degree of coordination with state agencies.

### **Assessment of the project's performance in adapting to climate change**



The development of the ICZM Project Action Plan was carried out with the consideration of climate change in the identification of activities. As a result, the results of these activities and their impacts on mitigation of damage caused by climate change and adaptation of local populations were analysed.

Capacity building of actors on the aspects of climate change is an essential component that has ensured the success of implemented projects, through the involvement of the executing agencies, project stakeholders, NGOs and NGOs (beneficiaries of the actions). In addition to the training workshops, the Environmental and Social Management Plan (ESMP) also incorporates measures to strengthen the institutional capacities of the Project, with emphasis on monitoring the implementation of measures aimed at the correct mitigation of the most significant impacts of the project.

The capacity building of the participants involved the following aspects: In addition to its impact on capacity building, this workshop allowed the integration of climate change impact considerations into local development planning, and served actors for setting up projects related to climate change adaptation.

The integration of climate change mitigation measures into territorial planning has been materialized by the finalization and adoption of six CAMPs (Municipal Action Plan) concerning six communes namely: the Municipalities of Arkemane, Beni Chiker, Boudinar, Madagh, Ras El Ma and Saidia.

As a result, municipalities are held to the principles of ICZM, and the integration of climate change mitigation measures in their territorial planning.

The drainage rehabilitation project at the SIBE of Moulouya was carried out with the aim of allowing the restoration of the wetlands of the SIBE of Moulouya strongly impacted by the drought sequences through the realization of the infrastructures of leveling. In fact, some wetlands were no longer receiving runoff water due to rains because of the drainage of these waters through artificial canals and the fragmentation of wetlands by the communication channels causing the reduction of hydrological exchanges between marshes and water. continental (plains). The succession of dry years and the retention of inputs from Moulouya by dams and the withdrawal of irrigation water (pumping in the lower Moulouya and Ain Zebda and Ain Echabak drain) accentuated the phenomenon of dewatering of part of the wetland. The combination of all these factors had contributed to reducing the natural flow feeding the wetlands of the mouth of Moulouya.

The works consisted of setting up water management works intended to maintain the functionalities of the wetland (retention structures, improvement of water circulation, etc.) on the drainage channels.



The works carried out within the framework of this activity clearly showed the restoration of the hydrological balance at the level of the zone, in particular between Ain chebbak and the marsh charba.

The positive impact of this work met the expectations of the associations, who expressed their entire satisfaction at the reception of the works. On the other hand, the destruction of part of the canal following the floods of January 2017, involves speeding up the restoration of the destroyed parts and increasing the capacity of the canal.

The fixation of the dunes consists in slowing down the movement of the sand by erecting palisades, in order to cause a sand accumulation which allows the formation of an artificial dune at the level of these palisades. This activity was carried out in addition to the work of the flow and signage channel and the hydrological management of wetlands, it aims to slow down the movement of sand at the El Halg perimeter.

The restoration work on the dune cord had several positive impacts, in particular the reduction of wind erosion on the area concerned, which prevented the invasion of the coastal plain by the sea, the invasion of sand by the developed areas (roads, habitat, and beach) and wetlands. This activity helped to restore the natural functioning of SIBE Moulouya in addition to the water and beach development. The restoration of the original vegetation and fauna is progressively visible.

To face the problems that threaten the coastal zones and in particular with the constant pressures exerted by the human activities on the littoral and with the degradations of the marine environment and its resources, the installation of an artificial reef is an action which takes both the conservation of living resources and the precarious situation of fishermen.

The principle of the artificial reef is to voluntarily submerge offshore structures to anchor and shelter local marine organisms and restore complete ecosystems.

Indeed, the artificial reef will increase the abundance of living resources and their diversity, improve fishing catches, and restore degraded habitats.

The impact of this action on the improvement of fish potential and the development of fish species is already beginning to be felt by fishermen, but cannot bear fruit until at least 6 months, or even a year. The fishermen of Boudinar remain optimistic about the potential of this project.

The project to plant 500 ha of fruit trees aimed at improving farmers' incomes by reducing the dependence of agricultural production on climatic hazards through the replacement of cereal crops in zones of erosive slope and unprofitable by the profitable arboriculture, not very demanding in water and whose production can be valorized by processing, packaging and packaging.

This project has therefore aimed at strengthening farmers' resilience to climate change and consequently improving their standard of living.



This resilience to climate change has been reinforced by the provision of project beneficiary associations, each a cistern and a tractor to allow young plantations to be irrigated. This action has been greatly appreciated by farmers, despite the claim of some. One is that the size of the tanks is not adapted to some hard-to-reach areas where one has to think about using more suitable tanks. Also the cost of operation and maintenance of the tractor is a problem for some farmers who claim not to be able to bear this cost. On the other hand, this project has made it possible to fight effectively against soil erosion.

The beekeeping activity is dependent on climatic hazards since the yield of the bees depends on the abundance of grazing resources in the areas of bee deployment, the difficult agricultural years have always had a negative impact on the production of the bees. honey.

The availability of Pick-up beekeepers will undoubtedly improve the resilience of beekeepers as they will be able to move their hives to the best pasture areas.

In this sense the project of planting fruit trees will provide beekeepers areas suitable for the installation of hives, also the role of bees to improve the production of trees is not to be demonstrated. It is therefore two complementary projects that will improve the resilience of both beekeepers and farmers to the effects of climate change.

In summary, five major findings emerge from impact evaluation work:

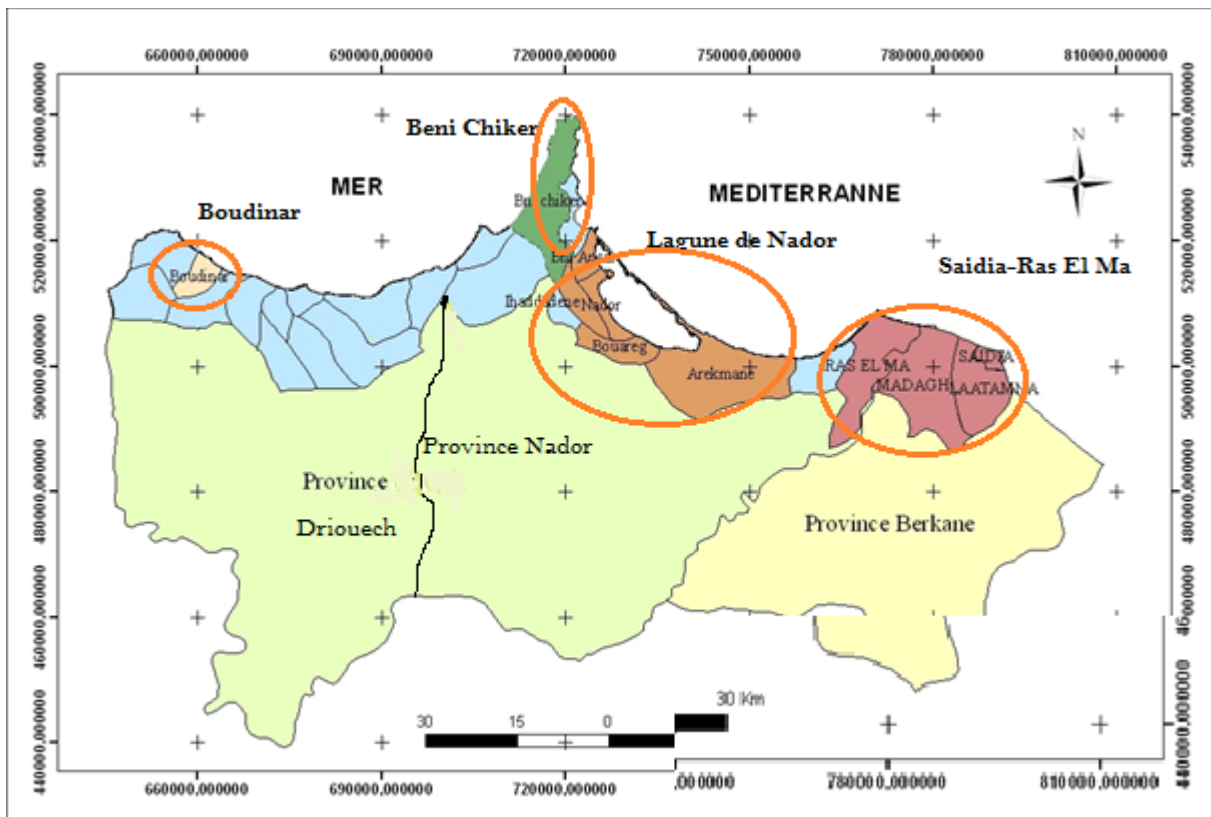
- A large number of beneficiaries in relation to the size of the investment;
- The investigations showed that these beneficiaries are mostly satisfied with the achievements made;
- The number of direct beneficiaries of this project is 6300 people, 28% of whom are women;
- Job creation is estimated at nearly 300 for the short term and will be 800 jobs in the medium and long term;
- Revenues have improved on average from 5 to 25%, this improvement will increase during MT and LT.



### ANNEX 6. PROJECT AREA & BENEFICIARIES

**Geographical scope:** Focused activities will be piloted in four project sites within the Oriental Region (administrative unit) of Morocco. These are:

- (a) **The coast of Saidia-Ras El Ma**, including the Ramsar site of the Moulouya River estuary. This area comprises two rural communes and two urban centers covering part of two provinces:
  - a. Nador Province: Urban center of Ras el Ma; and
  - b. Berkane Province: rural communes of Madagh, Laatamna, and the urban center of Saidia;
- (b) **The rural commune of Beni Chiker**, including the SBEI of Cap des Trois Fourches and a part of the SBEI Gourougou Mountain. This commune is located in the Nador Province;
- (c) **The Nador Lagoon**. This area comprises two municipalities and two rural communes, all located within the Nador Province:
  - a. Municipalities of Nador and Beni Nsar;
  - b. Rural communes of Bouareg and Arekmane; and
- (d) **The rural commune of Boudinar**, located in the Driouech Province.



**Rationale for the choice of Project area:** The choice of Project area along the Mediterranean coast reflects the



priorities of the Government of Morocco, and enables the Project to build on the results of projects funded by other donors (European Union, IDRC/DFID). The general area of the Project is the Eastern Mediterranean Coast (EMC), which is home to a number of ecologically important sites, recognized either as Ramsar sites (wetlands of international importance), or SBIE sites. Selection of the four specific pilot areas was finalized after a series of public consultations with local stakeholders that were held to gauge their interest, and to select from a list of activities previously identified in the Coastal Management Action Plans, those that would be funded under the Project. The four sites were also selected for pilot projects because local conditions are indicative of the different resource-use challenges facing the whole of the Moroccan Mediterranean coast.

**Project Beneficiaries:** The direct beneficiaries for this project range from small-holder farmers and fishermen to private sector investors, as project activities sought to promote more profitable and sustainable use of natural resources while maintaining biodiversity and ecological values. At the community level, primary beneficiaries are expected to be small-holder farmers, subsistence and semi-industrial fishermen, local residents employed in the tourism sector, women's groups involved in apiculture, young people who will be involved in ecotourism activities and community planners who will benefit from project investment in ICZM and linked spatial development planning. Altogether, direct beneficiaries were expected to number about 7,500. In addition, the project expected to bring indirect benefits to all inhabitants in the project area. According to the 2004 census, the population of the targeted areas was estimated at approximately 300,000.

Institutional beneficiaries of the ICZM project were expected to include decision makers at the national and regional levels, civil society, boards of communes, etc. who would gain experience in applying the ICZM approach.





## ANNEX 7. SUPPORTING DOCUMENTS

### **Project Documents:**

- Project Appraisal Document. June 13, 2012 (Report No.: 66413-MA)
- Grant Agreement. July 27, 2012 (Grant No.: TF012284)

### **Restructurings Papers:**

- Restructuring Paper. October 3, 2016 (Report No.: RES23811)

### **Implementation Supervision Reports:**

- Sequence 1-11

### **Aide Memoires:**

- October 2017
- September 2016
- April 2016
- November 2015 (Technical Mission)
- May 2015 (Mid-Term Review)
- September 2012

**Website:** <http://gizc.environnement.gov.ma>

### **Additional Documents**

- Latest Progress Report: Etat d'avancement du Projet GIZC (March 2017)
- Impact Evaluation prepared by the Borrower: Etude d'Evaluation de l'Impact Environnemental et Social, M. Qarro (February 2013) – See Annex 5.
- Socio-Economic Impact Study prepared by the Borrower: English-translated Executive Summary of the full report “Integrated Coastal Zone Management Project in the Oriental Region, Assessment of socio-economic impacts” – See Annex 5.
- Mid-Term Review - Background Report: Rapport d'Evaluation à Mi-Parcours, B. Soudi (December 2017)