

Document of
The World Bank
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Report No: ICR00002765

IMPLEMENTATION COMPLETION AND RESULTS REPORT
ON A
GRANT
IN THE AMOUNT OF US\$ 3.33 MILLION

TO THE
HASHEMITE KINGDOM OF JORDAN
FOR THE
JO-BADIA ECOSYSTEM AND LIVELIHOODS (P127861)

27 DECEMBER 2017

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

CURRENCY EQUIVALENTS

(Exchange Rate Effective {19 December, 2017})

Currency Unit = Jordanian Dinar (JOD)

JOD 1 = US\$ 1.14

US\$1 = JOD 0.71

FISCAL YEAR

January 1 – December 31

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ABBREVIATIONS AND ACRONYMS

B/C	Benefit Cost Ratio
BELP	Badia Ecosystem and Livelihoods Project
CBO	Community Based Organization
CPS	Country Partnership Strategy
DELP	Desert Ecosystems and Livelihoods Program
FAO	Food and Agriculture Organization
FO	Financial Officer
FY	Fiscal Year
GEF	Global Environment Facility
GOJ	Government of Jordan
HFDJB	Hashemite Fund for the Development of the Jordan Bada
IFC	International Finance Corporation
IGA	Income Generating Activities
ISR	Implementation Status and Results Report
IRI	Intermediate Results Indicator
IRR	Internal Rate of Return
JEBT	Jordan Eastern Badia Trail
M & E	Monitoring and Evaluation
MENA- DELP	Middle East and North Africa Desert Ecosystems and Livelihoods Program
MOA	Ministry of Agriculture
MOE	Ministry of Environment
MOPIC	Ministry of Planning and International Cooperation
MOTA DOA	Ministry of Tourism and Antiquities' Department of Antiquities
NCARE	National Center for Agricultural Research and Extension
NPV	Net Present Value
PAD	Project Appraisal Document
PDO	Project Development Objective
PIM	Project Implementation Manual
PMU	Project Management Unit
SC	Steering Committee
TOC	Theory of Change
RSCN	Royal Society for the Conservation of Nature
WBG	World Bank Group

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DATA SHEET

BASIC INFORMATION

Product Information

Project ID	Project Name
P127861	JO-BADIA ECOSYSTEM AND LIVELIHOODS (P127861)
Country	Financing Instrument
Jordan	Specific Investment Loan
Original EA Category	Revised EA Category
Partial Assessment (B)	

Organizations

Borrower	Implementing Agency
Hashemite Kingdom of Jordan	National Center for Agriculture Research and Extension (NCARE)

Project Development Objective (PDO)

Original PDO

The Project Development Objective (PDO) is to support sustainable livelihoods and enhance ecosystem services through participatory approaches in selected areas of the Jordan Badia.



FINANCING

	Original Amount (US\$)	Revised Amount (US\$)	Actual Disbursed (US\$)
World Bank Financing			
TF-12887	3,330,555	3,330,555	3,330,555
Total	3,330,555	3,330,555	3,330,555
Non-World Bank Financing			
Borrower	11,348,000	12,210,000	12,210,000
Total	11,348,000	12,210,000	12,210,000
Total Project Cost	14,678,555	15,540,555	15,540,555

KEY DATES

Approval	Effectiveness	MTR Review	Original Closing	Actual Closing
27-Nov-2012	28-Mar-2013	15-Feb-2015	30-Jun-2017	30-Jun-2017

RESTRUCTURING AND/OR ADDITIONAL FINANCING

Date(s)	Amount Disbursed (US\$M)	Key Revisions
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KEY RATINGS

Outcome	Bank Performance	M&E Quality
Satisfactory	Satisfactory	Substantial

RATINGS OF PROJECT PERFORMANCE IN ISRs

No.	Date ISR Archived	DO Rating	IP Rating	Actual Disbursements (US\$M)
01	24-Dec-2012		Satisfactory	0
02	26-Jun-2013		Satisfactory	.50
03	15-Nov-2013		Moderately Satisfactory	.50



04	10-May-2014		Moderately Satisfactory	.80
05	30-Oct-2014		Moderately Satisfactory	1.08
06	31-Mar-2015		Moderately Satisfactory	1.08
07	06-Oct-2015		Moderately Satisfactory	1.69
08	06-Apr-2016		Moderately Satisfactory	2.20
09	08-Sep-2016		Moderately Satisfactory	2.44
10	26-Jun-2017		Satisfactory	3.33

SECTORS AND THEMES

Sectors

Major Sector/Sector (%)

Agriculture, Fishing and Forestry 100

Irrigation and Drainage 20

Public Administration - Agriculture, Fishing & Forestry 20

Other Agriculture, Fishing and Forestry 20

Industry, Trade and Services 100

Other Industry, Trade and Services 40

Themes

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

Private Sector Development 100

Jobs 100

Finance 8

Finance for Development 8

Agriculture Finance 8



Urban and Rural Development	56
Rural Development	56
Rural Markets	8
Rural Non-farm Income Generation	30
Land Administration and Management	18
Environment and Natural Resource Management	38
Renewable Natural Resources Asset Management	38
Biodiversity	31
Landscape Management	7

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I. PROJECT CONTEXT AND DEVELOPMENT OBJECTIVES

A. CONTEXT AT APPRAISAL

Context

1. The Hashemite Kingdom of Jordan's large desert area which lies farther east of the western highlands is known as the Badia. It comprises 80 percent of the country's territory (about 73,000 km²) and is largely inhabited by impoverished nomadic communities. The Badia, whilst being a highly diverse and fragile ecosystem is under stress from mainly the lack of rainfall and intensive overgrazing.
2. Extending from north to south in the eastern part of Jordan, the Badia is home to approximately 240,000 people (five percent) of the country's population. Communities living in the Badia comprise mainly of nomadic, semi-nomadic, and settled societies that principally depend on raising livestock. Although efforts have been made nationwide to reduce the prevalence of poverty, decreasing from 20 percent in the late 1990s to 12.5 percent in 2008, higher poverty rates occur in the Badia while the southern and northern Badia are particularly impoverished.
3. Evidence of such has been proven by analyses conducted by the Jordan Department of Statistics, identifying 11 "poverty pockets" in the northern Badia and 3 in the southern Badia. The prevalence of poverty in both the north and south has been attributed to relatively large family sizes (7 in the Badia compared to the Kingdom's average of 5.7), scattered settlement patterns, high illiteracy rates and limited income sources. Moreover, it has been ascertained that unemployment was highest among young graduates, and particularly among young women, even though women were as educated as men. Against this backdrop, it was the Government of Jordan's (GoJ) vision for the Badia to reduce poverty and unemployment, and improve the living conditions of Badia communities.
4. The rationale for The Jordan Badia Ecosystem and Livelihoods Project (BELP) emerged from the World Bank Group's development of the FY12-FY15 Country Partnership Strategy (CPS) for Jordan. It was designed to help Jordan lay a foundation for inclusive growth and job creation. The Bank intended through this project to help strengthen the capacity of local communities, and build local economic and social assets through community-based approaches in order to reduce poverty pockets and empower communities.
5. The BELP was linked to Jordan's national strategies and plans as well as those of the World Bank at the time of appraisal. It was very relevant to Jordan's 2025 Strategy, which explicitly calls for investments focused on new tourism destinations, careful land use planning and water harvesting in view of limited natural resources, and generation of employment and livelihood opportunities. In addition, it is linked to the country's tourism strategy (2011-2015), Rangeland Strategy (2013-2014), and the World Bank Group's (WBG) Country Partnership Frameworks (CPFs) for 2012- 2015 and 2017-2022 for Jordan. The latter specifically identified the BELP as an important project for job creation in some of the poorest poverty pockets through ecotourism and protection of the Badia's ecosystems.
6. The BELP was one of five projects under the regional Middle East and North Africa Desert Ecosystems and



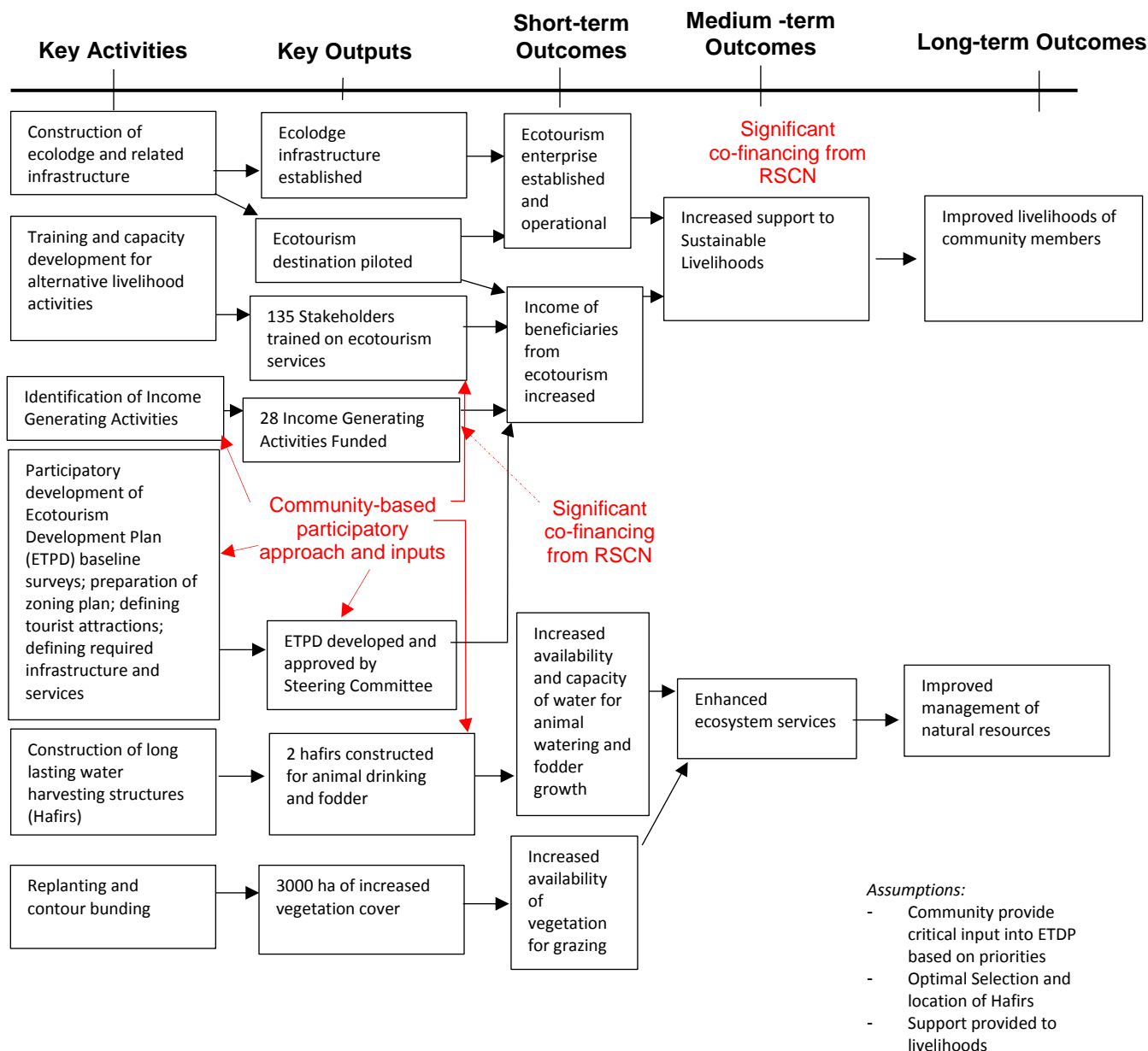
Livelihoods Program (MENA-DELP), developed as a Global Environment Facility (GEF) and World Bank partnership. The regional MENA-DELP included four other national level projects in Algeria, Egypt, and Morocco, as well as a regional knowledge sharing project. Each national project focused on improving the sustainability of investments in one or more productive sectors (including tourism, agriculture, and livestock grazing) through an integrated ecosystem management approach, participatory approaches, capacity building and harnessing of local knowledge.

Theory of Change (Results Chain)

7. There are two higher level objectives to which this project contributed: (i) improved livelihoods of community members; and (ii) improved management of natural resources. The theory of change that underpins the contribution of the project to the objective of improved livelihoods of community members is as follows: Community -Centered Ecotourism project activities were focused on supporting ecotourism-based livelihoods in the target areas which over time would help to improve the livelihoods of the community. Key activities included construction of an ecolodge, training and capacity development for ecotourism livelihood activities, and the participatory development of an Ecotourism Development Plan (ETPD) and the subsequent approval of the plan. With the ETPD as the guiding framework, the ecolodge developed, and community members trained on ecotourism, the community was able to establish the ecotourism enterprise, and begin earning income from ecotourism activities. These activities, outputs and outcomes underpin the achievement of the first part of the project development objective (PDO) which was to support sustainable livelihoods.
8. The theory of change that underpins the contribution of the project to the objective of enhanced ecosystem services through adaptive rangeland management and alternative livelihoods support is as follows: by reducing pressure on, and improving management of rangelands, the project was able to support the regeneration of the rangeland ecosystems and thereby the improvement in rangeland ecosystem services. Key activities of the project included: replanting of rangeland vegetation which helped to reduce water retention capacity and groundwater recharge; construction of improved water storage structures (hafirs) which helped to improve water availability for livestock and reduce grazing pressure; training and capacity development for community members on improved rangeland management techniques that help to reduce grazing pressure on rangelands; and the establishment of community cooperatives for, and training and capacity development of community members on alternatives to livestock rearing as a livelihood. Through activities which reduce grazing pressure, reduce economic dependence on rangelands, and restore rangeland ecosystems, the project contributed to enhancing ecosystem services (second part of the PDO), and contribute to overall improved management of the natural resources in Badia.
9. The linkages between activities, outputs, and outcomes of the project, to the higher-level objectives to which the project contributes is shown in Figure 1.

Figure 1: Results Chain for the Project





Project Development Objectives (PDOs)

10. The Project Development Objective (PDO) was “to support sustainable livelihoods and enhance ecosystem services through participatory approaches in selected areas of the Jordan Badia.” This PDO was reflected in the Project Appraisal Document (PAD) and the grant agreement without any changes.



Key Expected Outcomes and Outcome Indicators

11. The objective of the Project was to a) support sustainable livelihoods and b) enhance ecosystem services through participatory approaches in selected areas in the Jordan Badia. Both of these objectives were to be achieved through participatory approaches, therefore the assessment of the objectives was performed through a “participatory” lens.

PDO Outcome (i): Support sustainable livelihoods.

PDO Outcome Indicator:

- Amount of new ecotourism-related income to communities along the Al Azraq/Shaumari-Burqu' corridor

PDO Outcome (ii): Enhance ecosystem services.

PDO Outcome Indicator:

- New areas outside protected areas managed as biodiversity-friendly (ha).

Components

12. The project has three components

a. COMPONENT 1: Community-Centered ecotourism in the Northern Badia

13. The component was executed by the Royal Society for the Conservation of Nature (RSCN) through a Small Works Direct Contract between RSCN and the National Center for Agricultural Research and Extension (NCARE) (Grant No. TF012887, Contract No. BERP.C1.002). This component sought to develop ecotourism facilities and experiences along a 250km corridor between the Al Azraq and Shaumari Nature Reserves and the (to be declared) Burqu' Nature Reserve. This component was to establish a 250km ecotourism corridor from west to east connecting the Al Azraq and Shaumari reserves managed by the Royal Society for the Conservation of Nature (RSCN), an independent non-profit NGO devoted to the conservation of Jordan's natural resources, with the proposed Protected Area (PA) of Burqu', also to be managed by RSCN.
14. The corridor was to be developed around a concept of low-volume, high-value, community-centered ecotourism, and was to provide income-generating opportunities to the Ar Ruwaished sub-district and nearby communities in the northern Badia, whilst contributing to the conservation of the area's biodiversity. The design, implementation, and management of the corridor was to be determined in close consultation with concerned communities and laid out in an Ecotourism Development Plan (ETDP) during the Project's first year. The ETDP was to include a mechanism for revenue sharing with the communities. It was expected that an ecolodge (10-12 room occupancy) and 1-3 campsites was to be established along the corridor at sites determined by the ETDP.
15. The Sub-components included:
- 1.1: Establishment of an Al Azraq/Shaumari-Burqu' ecotourism corridor*



1.2: Fostering community engagement in the planning, development and operation of the ecotourism corridor

Total planned	Co-financing	GEF	Total actual	Co-financing actual	GEF actual
US\$2.32 m	US\$0.85 m	US\$1.47 m	US\$3.19 m	US\$1.70 m	US\$1.49 m

b. COMPONENT 2: Adaptive Rangeland Management & Alternative Livelihoods Support in the Southern Badia

16. This component was executed by NCARE, which contracted the Hashemite Fund for the Development of the Jordan Badia (HFDJB) to execute the community engagement and alternative livelihoods activities. The component piloted sustainable rangeland management models by engaging local communities directly in the design and implementation of adaptive management of the natural resources on which they depend.
17. The component had three subcomponents:
- 2.1. Construction of long-lasting multipurpose water harvesting structures (hafirs)
 - 2.2. Establishment and/or rehabilitation of improved rangeland reserves
 - 2.3. Maintaining and enhancing livelihoods in target communities

Total planned	Co-financing	GEF	Total actual	Co-financing actual	GEF actual
US\$9.08 m	US\$7.65 m	US\$1.43 m	US\$8.54 m	US\$7.66 m	US\$1.41 m

c. COMPONENT 3: Project management, monitoring and evaluation

18. A Project Management Unit (PMU) was established in February 2013 as a condition of project effectiveness. The PMU managed the activities of the three entities undertaking different aspects components 1 and 2, namely NCARE, RSCN and HFDJB. The PMU was tasked with the preparation of annual work plans and budgets and conduct monitoring, evaluation and reporting on implementation of project components.

Total planned	Co-financing	GEF	Total actual	Co-financing actual	GEF actual
US\$3.28 m	US\$2.85 m	US\$0.43 m	US\$3.26 m	US\$2.85 m	US\$0.42 m

B. SIGNIFICANT CHANGES DURING IMPLEMENTATION (IF APPLICABLE)

Revised PDOs and Outcome Targets

19. The PDO and Outcome targets were not changed during the project's life.



Revised PDO Indicators

20. The PDO indicators were not revised.

Revised Components

21. The components were not revised.

Other Changes

22. RSCN secured significant amounts of additional co-financing which amounted to US\$ 1, 703,559.00 compared to the actual allocation US\$ 850,000.00. This helped in enhancing the results of the project beyond the expected targets.
23. Budget reallocation between components was processed from project saving towards activities supporting the ecolodge under the RSCN contract. These reallocations did not require restructuring as per the Bank's procedures due to the amount. The GEF allocation for sub-component 1.1 was US\$1,355,000, and it was later increased to US\$1,385,000 using project savings. In addition, the GEF allocation for sub-component 1.2 was US\$137,200 and it was later increased to US\$147,200 also using project savings. As of May 28, 2017, a savings of US\$16,236 was reflected and used towards furnishing the Ecolodge.

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

24. The significant co-financing secured from RSCN of over double the planned amount expanded efforts that contributed to improved livelihoods of community members.
25. The rationale for the reallocation pertains to the support of components that strongly enhanced the original theory of change and provided additional financial resources to effectively undertake those components.

II. OUTCOME

A. RELEVANCE OF PDOs

Rating: High

Assessment of Relevance of PDOs and Rating

26. As mentioned in the Country Context section, the BERP at project approval to completion was highly relevant to the GOJ and to its partnership strategy with the World Bank. Firstly, the PDO is directly relevant to the current GOJ FY17-22 Country Partnership Strategy (CPS Report No. 102746) and previous FY12-FY15 (Report No. 58114-JO) which both gave considerable attention to job creation and conservation of Jordan's scarce natural resources, especially in view of the refugee influx into the country which is still a current and ongoing concern. The WBG FY17-22 CPF for Jordan, specifically references the implementation of BERP as an important project for responding to the changing country circumstances in helping to create jobs in some of the poorest poverty pockets through ecotourism and protect the Badia's ecosystems, thus retaining the relevance of the project objectives throughout implementation.



27. Secondly, the PDO is directly relevant to Jordan's updated Rangeland Strategy (2013/2014) and all of its goals as it seeks to build sustainable rangeland development and management, improve social and economic conditions for livestock breeders and pastoral communities whilst also taking into account gender issues, the enhancement of capacity building (training and awareness) and the active monitoring and evaluation of rangeland status and the engagement of local communities in sustainable rangeland development and management.
28. Thirdly, the PDO is very relevant to the Jordan National Tourism Strategy for 2011-2015, which still guides tourism activities in Jordan as it prioritizes ecotourism in general but more specifically the development of tented camps and eco-lodges, and the promotion of eco-friendly practices within the tourism industry. All of which are themes and activities that the PDO guides. In the case of GOJ, the PDO is also very relevant to Jordan's new 2025 strategy which calls for investments in new tourism destinations, careful land use planning and water harvesting in light of the fact Jordan has limited natural resources and the need for the generation of employment and livelihood opportunities which are activities in the project. The PDO is also consistent with the GEF Biodiversity and Land Degradation strategies which include mainstreaming biodiversity conservation and sustainable use into production landscapes, increasing sustainably managed landscapes that integrate biodiversity conservation and maintaining the flow of agro-ecosystem services sustaining the livelihoods of local communities.
29. As mentioned in the country context section, the project was highly relevant to the World Bank and several strategies of the Government of Jordan, including the tourism sector and for the Badia rangelands. The relevance of the BELP continued to be high throughout the project lifetime even as it experienced setbacks, like the decline of tourism numbers due to the regional conflict and droughts that directly affected Badia communities, making project investments essential for the recovery of the sector by addressing job creation initiatives, ecotourism expansion, support of alternative livelihoods and responding to communities' water needs and range requirements.
30. The PDO is highly relevant to key GoJ institution's policies and agendas and for this reason and the Ministry of Agriculture (MOA), Ministry of Environment (MOE) and Ministry of Planning and International Cooperation (MOPIC) have repeatedly expressed interest during implementation in building on the BELP's success in other areas and regions, as documented in the project Implementation Status and Results Reports (ISRs). MOPIC plans to champion a specific Integrated Development Plan for the Jordan Badia, which will include similar design elements as the BELP. Moreover, the high level of co-financing and especially parallel financing attracted by the BELP from several donors is a good demonstration of the recognition of the project's relevance in the current context of Jordan.

B. ACHIEVEMENT OF PDOs (EFFICACY)

Rating: Substantial

Assessment of Achievement of Each Objective/Outcome

31. In assessing the project achievements, each part of the project development objective was considered separately and equally.



PDO Outcome: i) To support sustainable livelihoods, through participatory approaches

This objective was achieved through increase in ecotourism-related income and alternative income generating activities.

32. PDO Outcome Indicator 1: Amount of new ecotourism- related income to communities along the Al Azraq/Shaumari-Burqu' corridor (94% achieved). The above PDO outcome was measured by the amount of income generated for communities from new ecotourism- related activities along the Al Azraq/Shaumari-Burqu' corridor. Based on data provided before the closure of the project, a value of US\$536,545 out of the US\$570 000 end-of-project target value was achieved. As designed in the PAD, the income was from purchases of goods and raw materials from providers, salaries, payment for services provided by communities to the new corridor, revenue sharing with the communities and IGAs income (Annex 6 provides a breakdown of this figure). The datasheets provided to support the income generated are generated by RSCN, however the figures have not been independently verified.
33. A Socio-economic Assessment conducted at the beginning of the project provided important baseline information and specifically noted that there were very limited economic activities in the Badia. The Assessment went on to state that much of the economic development services were limited to government and military institutions.
34. Increased support for sustainable livelihoods was achieved through the establishment of an ecotourism corridor, associated infrastructure investments and the active involvement of the community in the planning, development and operation of the corridor. Ar Ruwashed (population of 5,700) benefited from the project as economic activities shifted from a heavy reliance on government, military and small service industries to an alternative livelihood of low-volume, high-value, community-centered ecotourism.
35. The achievement of this PDO objective was supported by the development and approval of an Ecotourism Development Plan (ETDP) for the corridor which is an intermediate result indicator (IRI). The ETDP served as the master plan on which the ecotourism corridor was established and it determined the location, design and operational requirements of interventions along the ecotourism routes; it also helped RSCN determine capacity building needs and marketing strategies to enhance ecotourism-related livelihoods for the communities along the corridor. This plan was prepared with community inputs on the choice on income generating activities that would benefit the communities the most.
36. One of the main income generating attractions of the corridor that is expected to attract tourists is the Burqu' Ecolodge, a 10-guest room accommodation facility with an authentic solar-powered yet modern atmosphere which provides an oasis of calm from which to explore stunning views of the area was established. To minimize the negative impact to the ecosystem; a pick-up station (Burqu lodge reception) that provides shuttle services, visitor center services and parking has been established 16km away from the ecolodge in Ruwashed. This service provides employment for members of the local community. The Ecolodge was not piloted for one year as original planned due to the delays in signing of the terms of the contract by the GoJ. However, the economic analysis (Annex 4) estimates that the rate of return for the project will be 25 percent and RSCN 2018 projections estimate that the lodge will accommodate 644 guests and bring in JOD 21, 584.00 with an expected community share of JOD 16, 188.00.



37. In an effort to further support livelihoods, the project piloted an ecotourism destination and established two mobile Bedouin campsites as part of the corridor that featured desert experiences run by local Bedouin guides which brought in additional income, along with two upgraded viewpoints at Wadi Dahek and Tal Qurma (also called Jabal Qurma) sites. These facilities provide a safe viewing experience to see significant geological formations of white chalk cliffs and stunning landscapes and for moon and stargazing, drawing visitors who contribute to enhancement of livelihoods of local communities through purchase of goods and services.
38. Based on the recommendations from the Socio-Economic Assessment changed the approach, instead of developing Income Generating Activities (IGAs) for Community Based Organizations (CBOs) that would only provide the necessary products and services to enrich the corridor's activities, it was decided to develop IGAs which catered to both the influx of expected tourists as well as the existing market in Ar Ruwaished and nearby Manshiat Ar Ghiath town (locals, passers-by or aid workers who are present in the area) thus making them more economically viable and therefore sustainable in the long-term by having a diverse source of income. Some project-funded IGAs that provide products to the Ecolodge, reception facility and services to communities in and around the corridor are noted below:
- Sewing and embroidery workshop, yogurt production workshop, catering kitchen, funded through a US\$34,800 grant to "Al Mawada Wal Rahma" Cooperative (33 members, 30 women and 3 men).
 - Traditional bread making, funded through a US\$7,000 grant to "Ahal Al Khair" Cooperative (10 members, all women).
 - Cultural events tent and tents rental, funded through a US\$15,000 grant to "Ahali Ar Ruwaished/Al Ruwasihed People Charity to Care for Persons with Disabilities" (32 members, 26 men and 6 women).
39. Training workshops for local cooperatives on ecotourism services, focusing on project management and project proposal writing, computer skills, accounting for nonaccountants, strategic planning, leadership and management, and sales and marketing to support the livelihoods initiatives were held. This was undertaken in accordance with a training needs and crafts skill assessment of CBOs. 135 men and women were trained, exceeding the indicator target of 115. Beneficiaries were members of local cooperatives who showed interest in opening new IGAs or enhancing exiting ones. The training is considered an essential element in sustaining the IGAs supported by the project. A community liaison officer employed by RSCN coordinates the different IGAs so that similar and complementary activities (food, handicrafts, equipment) are combined to the extent possible for maximum sales. The adaptive nature of recognizing the importance of combining efforts by the implementing agency for this part of the project contributed significantly to its success. At the end of the project, 3,556 beneficiaries directly benefited from alternative livelihood activities, including 28 cooperatives, equipment and alternative livelihoods, and HFDJB-funded small grants (including training) (Annex 6). Alternative livelihood activities included: an electric shop, a telecom shop, wedding accessories shop, kindergarten, handicrafts, sports ground, and other activities financed through revolving funds established by the project.
40. Support to sustainable livelihoods was achieved through a participatory approach by successfully building confidence within the communities, using recommendations from the Socio-economic Assessment, thus developing a trust that their concerns were being seriously addressed in developing livelihood initiatives. It was imperative that confidence be built amongst the community that this infrastructure initiative would indeed come to fruition and benefit the communities, and not be abandoned like the others (prior to this project, implemented by other donors) that the community referenced in the Assessment. To this end, RSCN



proactively established an office in Ar Ruwaished municipality and employed a community liaison officer and hired two rangers from the local community (part of the ranger task force). These proved to be crucial elements in the success of the project as they instilled confidence from the community in the physical investments, and in the level of acceptance of training and alternative livelihood support.

41. The marketing plan of this project-funded corridor had proactively taken into account external factors like the ongoing regional instability and the consequent decline in international tourism in Jordan. To achieve the PDO objective, an innovative marketing strategy was required given these external factors. This saw a national drive to rebrand Jordan to appeal to international, regional and national experience/adventure travelers visiting the corridor. To this end, RSCN branded the project-funded corridor as “Jordan’s Eastern Badia Trail” (JEBT) which is said to follow in the footsteps of nomadic Bedouins across an ever-changing natural desert landscape that connects protected areas rich with ancient history, tradition, culture, archaeology, geology, flora and fauna (See Annex 7 for brochure). The trail links Azraq Wetland Reserve and Shaumari Wildlife Reserve with the proposed Burqu’ reserve and this was showcased at a travel show in London during January 2017.
42. The project-funded corridor saw two key parallel investments for the development of the corridor which are expected to draw more visitors to the area and enrich the overall desert experience. First, the renovation of the Shaumari Wildlife Reserve at the start of the corridor (funding from USAID and the Royal Court); and second the restoration of Qasr Burqu’ (Burqu’ Castle) a Byzantine castle adjacent to the Burqu’ ecolodge, which began restoration by the Ministry of Tourism and Antiquities’ Department of Antiquities (MOTA DOA) as a result of project advocacy. These parallel investments provide a strong indication of government and RSCN’s commitment to sustaining the outcomes of the project and highlight the synergies and interest generated by the project with other active donors in the region.
43. Moreover, the project is likely to lead to other expected outcomes that would further contribute to its success. There is a possibility of designating the Burqu’ area as a national reserve, fulfilling a long-term plan of RSCN to add it to the country’s network of reserves. This is also encouraged by the fact that outside donors like the USAID and the Royal Court realize the importance of the corridor and the opportunities it presents, enough to fund certain activities for the establishment of the corridor.
44. **PDO Outcome: ii) To enhance ecosystem services, through participatory approaches.**
45. The project sought to enhance the following ecosystem services – rangelands and animal drinking water. In order to protect the livelihoods of herding communities, the project achieved the enhancement of the Badia ecosystem services by community managed grazing, thus allowing the regeneration of vegetation cover to support this important livelihood. The Bedouin communities in the Southern Badia heavily rely on the rangelands to provide fodder for their herds of animals and nomadically forage for the best grazing areas and thus provides such communities with a valuable ecosystem service for their livelihoods. Very low rainfall, drought as experienced during the project implementation (May 2017) and a high dependence on rangelands for animal fodder threaten the sustainability of this ecosystem service that support livelihoods in the Southern Badia to a population of about 20 000 inhabitants.
46. The managed reserves provided essential ecosystem services to Bedouin herders who were previously required to purchase and transport costly fodder as local lands are severely degraded. The project is therefore



saving communities' the costs of travel and of fodder and at the same time empowering communities to self-manage their resources and provide habitat protection and conservation.

47. PDO Outcome Indicator 2: New areas outside protected areas managed as biodiversity-friendly (ha) (100% achieved). The PDO indicator of the rehabilitation of 3,000 Hectares of community managed rangeland areas was achieved. This activity occurred in the two planned Rand Reserves (Al Hashemieh and Al Husseinieh) and an additional reserve in Al Jafr known as the Bayer range reserve. The reserves were successfully established and/or rehabilitated in a biodiversity-friendly manner, defined as the sustainable use of natural resources through habitat protection¹, as required by the PDO. The reserves were managed without using fences, through participatory efforts that saw the training and subsequent employment of 8 rangers from the community. Through the project, grazing agreements between communities and the HFDJB were signed to ensure the sustainability of the rangeland management.
48. The training of the rangers provided technical knowledge on healthy rangelands, faunal and floral species and their interactions, grazing carrying capacity and conservation. Equipped with this knowledge the rangers ascertained rotational grazing patterns for active grazing and rest periods which are communicated to communities and herders, and enforced by the rangers. Thus, ensuring the sustainable use of the rangelands and enhancing this important ecosystem service.
49. The instituted grazing rest periods was combined with replanting efforts through *in situ* and *ex situ* seed sourcing and vegetation coverage improvements through seedling planting which lead to the increase in vegetation cover. This provided species-abundant, species-rich and more secure pastures for livestock. The rangeland rehabilitation related activities in the Bayer area also resulted in the identification of a number of biodiversity hotspots with some species that have reemerged after about twenty years, or had never been identified before in Jordan. Through the efforts resulting from the project, the seeds of these species are conserved at NCARE's seed bank for future rehabilitation replanting efforts in the Badia.
50. Monitoring of vegetation cover to track efforts of rehabilitation was through biomass direct surveying assisted with the Food and Agriculture Organization (FAO) Collect Earth tool adopted by NCARE. Table 1 below provides the vegetation biomass values for the duration of the project. It is clear the all reserves experienced an increase in biomass from May 2014 to May 2016, with the rehabilitation efforts of replanting and reseeding and rest periods imposed. However, Al Husseinieh and Al Hashemeih reserves were clearly affected by the drought in May 2017 which was further compounded by the fact that a declaration to open rangeland reserves for grazing was made by the Minister of Agriculture (Declaration of Range Reserves No 3/1/9502 (Dated:26/3/2017)). It is important to note that a system of response is in place to learn from and to mitigate the effects of exceptional events like the severe drought experienced in 2017 and the sudden opening of reserves for grazing through public announcement by the Minister. The sustainability of these efforts will be supported by co-management by NCARE and HFDJB, which will continue for the years to come following BELP closure.
51. To further support the enhancement of ecosystem services through rangeland management efforts, the HFDJB established a virtual range school from its own resources that targets all members of the Badia community including women and youth, to create a generation that is aware of its natural resources and the need to

¹ Jordan's National Biodiversity Strategy and Action Plan (NBSAP, 2003)



preserve and develop sustainably for the benefit of generations that follow. The curriculum for the range school was developed in coordination with the U.S. Department of Agriculture, and combines traditional knowledge with the science of rangeland management.

Table 1: Range reserve Biomass from May 2014 to May 2017

Year	Range Reserve	Rainfall (mm)	NDVI	Total (kg/ha)		Palatable (kg/ha)	
				Fresh	Dry	Fresh	Dry
May 2014	Al Husseinieh	63	0.105	176	55	160	50
May 2015		79.6	0.127	201	63	183	57
May 2016		67.2	0.127	199	62	181	56
April 2017		37.7	0.129	-	63	-	-
May 2017		-	-	71	47	62	31
May 2014	Al Hashemieh	61	0.108	82	38	29	18
May 2015		73.5	0.112	79	39	28	18
May 2016		64.1	0.146	98	51	35	22
April 2017		35	0.129	-	45	-	-
May 2017		-	-	26	15	15	8
May 2014	Bayer	46	0.112	332	143	315	158
May 2015		53	0.141	372	180	353	176
May 2016		39.5	0.152	398	194	378	189
April 2017		21.7	0.141	-	180	-	-
May 2017		-	-	372	181	324	168

52. The BELP further achieved the outcome of enhancing ecosystem services by the construction of two long-lasting improved water-harvesting structures (Hafirs), one in Al-Husseinieh and the other in Al-Jafr sub-districts. The Hafirs provided water for animal drinking collected from rainfall which is a scarce ecosystem service in the Badia. The PDO objective was achieved by ensuring the communities chose which hafirs should be improved based on their needs, proximity to homesteads and grazing areas. This was done through intensive public meetings held with the communities and herders. The participatory selection with the local communities who had strong knowledge of the terrain, contributed to the success of the establishment and performance of the hafirs in terms of water harvesting capabilities and water retention. The hafirs have a capacity of 152,000 m³ which translate to 52,000 m³ beyond the target set. The water retention lifetime also goes beyond the design period of 6 months and can be 7-12 months depending on use. These provide the surrounding communities with much needed sustainable water resources for animal watering, even beyond the targets set by the project at design.
53. In terms of project beneficiaries, which is relevant to both objectives, the target of 10 570 beneficiaries was greatly exceeded with the total number of beneficiaries from the various activities reached 30,768 (of which 41% are female). It was found that this figure reflects the fact that more cooperatives than planned benefitted from the project under HFDJB-related activities, and several cooperatives had larger number of members than expected. Included in this result are the number of people who benefitted from water harvested in the hafirs, the herders who benefitted from planted barley, and other activities under both components 1 and 2. The planned percentage for female beneficiaries was not achieved with only 41% out of the target of 51% originally set. This is explained by the fact that there were a higher percentage of male beneficiaries from herding-related activities under component 2, and the overall cultural / traditional behavior of highly traditional



targeted communities, where female participation is overall restricted.

54. HFDJB provided support with GEF resources for viable alternative livelihoods activities to cooperatives in the targeted communities, with special emphasis on provision of support for women and youth, and through HFDJB small grant resources to cooperatives established in the target communities for income generating activities. In addition, HFDJB has been providing theoretical and practical training for the reserves' rangers. 28 cooperatives from Al Husseinieh and Al Jafr have benefited from these activities in excess of the 12 noted in the indicator. The success of the project is showcased on a website showing the benefits it has provided to communities at the following link <http://www.badiafund.gov.jo/en/node/435>.

Justification of Overall Efficacy Rating

55. The rating for overall efficacy is substantial. Per the results chain presented, the project has achieved its overall objective and enhanced ecosystem services through participatory community approaches, ensuring that project beneficiaries include women.
56. The project has demonstrated that proactive and adaptive management to changes faced provided a key to the achievement of its objectives. According to a socio-economic survey carried out toward the end of the project, the project itself had contributed to increased job availability, increased availability of funding for businesses, increased capacities of local cooperatives to establish and run IGAs, and, importantly, higher availability of water for animal watering as a result of the construction of the hafirs. The survey noted that water available in the hafirs is free of charge to community members, saving them and their families' precious resources, previously spent on buying water and transporting it from afar.
57. Notably, the project has built a replicable feasible model and example for the other DELP projects to be replicated in the foreseeable future. At a higher level of objectives, this has contributed to the GEF objectives of sustainable rangeland management and the environment.
58. All in all, there is clearly a solid causality between the activities, the outputs, and the outcomes. The results, which have been verified by the ICR team in terms of audit reports and contracts and plans beyond the project closing date for the sustainable management of livelihoods and ecosystems can be positively attributed to the activities implemented by the project. The project has effectively pursued actions and activities that are unprecedented in the Badia: the continued involvement of the communities in all the decision-making processes; the empowerment of the communities by signing tri-partite agreements (implementing partners – Governors – Communities) on sustainable use of assets and resources; and the ensured commitment of all partners well beyond project life. The BELP's sustainability stands recognized as the maintenance responsibility of the hafirs and range reserves will remain charged to NCARE after BELP lifetime. This had been stated by the Secretary General of the Ministry of Agriculture (MOA) during the September 2015 Steering Committee (SC) meeting of the BELP.



C. EFFICIENCY

Rating: Substantial

Assessment of Efficiency and Rating

59. Efficiency of the project is rated as Substantial based on: (i) results of an ex-ante economic analysis undertaken for the project which showed a benefits- to- costs ratio (B/C) greater than 1, positive net present value (NPV), and relatively high economic internal rate of return (IRR) of the project; and (ii) the achievement of the project relative to the size of the investment.
60. Marginal benefits of the project activities were estimated by the additional tourism specific features: increased number of visitors, increased number of overnight stays, increased spending person/night, and increased revenues for tourism related activities; and by the improved water access for animal herds, which are currently kept in rangeland areas at significant distances from main towns and villages. Before the project implementation, herders transported water by trucks to their herds over large distances and at high costs. Thus, the economic benefits of the hafirs can thus be assessed in terms of time saved by the herders in the transport of water to their herds and avoided costs of this transport. In economic terms, it is calculated that each 200-head flock owner would save about 3,600 dinars per year of water costs. Richer and more secure pastures for livestock in the area were also included in the estimation of marginal benefits, and therefore the economic benefit would result from a reduction in household expenditures on feed by extending the period of open grazing.
61. The economic analysis (Annex 4) considered a time horizon of 20 years, taking into account the long-term benefits of the project. The analysis used a baseline discount rate of 6 percent, as suggested by the World Bank, and an annual growth rate of 2.6 percent, which corresponds to the World Bank medium-term average forecast for Jordan. Yearly cumulative targets were assumed flexible (year 1: 10%; year 2: 40%; year 3: 70%; and year 4: 100%). Cost distribution was also assumed variable (year 1: 20%; year 2: 35%; year 3: 35%; year 4: 10%). The following assumptions were made for the analysis:
- i. Benefits accrued were greater at the end of the project, while costs burn at a higher rate at the beginning of the project.
 - ii. Annual maintenance cost for the project's investments were 1% of total project costs.
 - iii. Following the project implementation, benefits for component 1 were realized after the project was implemented. For component 2, benefits were realized in the second year of the project.
62. The economic analysis suggested that project-supported investments will generate substantial benefits for beneficiaries in areas served by the project, as well as substantial benefits for Badia's local population as a whole. Overall, the NPV is projected to reach US\$ 27.5 million (using a 6 percent discount rate). The investments evaluated for the economic analysis will generate an internal rate of return of 25 percent. The economic analysis thus shows that if project implementation is effective and efficient, project-supported investments will bring



substantial economic benefits to the beneficiaries. Results are robust to adverse changes in the key parameters. Increasing project costs by 10 percent, reducing project benefits by 10 percent, and varying the default discount factor by 2 percentage units do not change the conclusions. A summary of the economic and sensitivity analyses is provided in Table 2, and full details of the analysis are provided in Annex 4.

Table 2: Economic and Sensitivity Analyses Results

Analysis	Change	NPV (million US\$)	IRR	B/C ratio
Baseline Discount rate	6%	27.52	25%	3.4
Decrease in Discount rate	4%	36.64	25%	4.0
Increase in Discount rate	8%	20.67	25%	3.0
Increase in project costs	10%	26.12	23%	3.1
Decrease in project benefits	10%	23.37	23%	3.1

63. The benefits of the project are substantive considering that the project was a relatively small investment of US \$3.33 million. With this relatively small grant, the project was able to achieve and in many cases, exceed its set targets. This is largely attributed to the efficient use of resources during the project cycle, higher than expected leveraging of co-financing from donors, close monitoring of budget resulting in timely reallocation of savings among components and effective collaboration and clear and open communication among the executing entities.
64. At the close of the project, 100% of the funds were disbursed. The project leveraged US\$12.21 million in co-financing, translating to 7.5% more than what was planned at project appraisal. It must also be noted that although project implementation was delayed by one year, it still managed to disburse fully, undertake the activities envisaged and deliver a project in time and within budget without a need for extension.
65. There were no cost overruns and, reallocations were made based on cost savings for activities that required additional funding support. In addition, there were no cost overruns related to delayed implementation or extensions of project closing date even with the one year delay the project experienced.

D. JUSTIFICATION OF OVERALL OUTCOME RATING

Rating: Satisfactory

66. The justification for the overall outcome rating takes the following into account it i) the PDO is highly relevant to both the current CPF as well as the CPF at the time of project appraisal, ii) project efficacy was rated substantial with only inconsequential shortcomings in the achievement of PDO outcomes, which are expected to be fulfilled beyond the set targets and within a short timeframe, and the numerous positive outcomes that will support the project's sustainability, and iii) efficiency is rated substantial with a high rate of return and given the fact that so much was achieved on time with a limited budget despite setbacks beyond the team's control.



E. OTHER OUTCOMES AND IMPACTS (IF ANY)

Gender

67. The empowerment of women was certainly an outcome that will significantly impact the project area for years to come. The participation of women was recorded to be a 41% which is significant, considering the highly conservative Bedouin society. The local women received capacity building in various fields, awareness, skills and income and employment opportunities from project-funded activities. In most, if not all, cases this was undertaken by women facilitators to ensure cultural and religious sensitivity. That said, new women-only cooperatives were established in Al Jafr, namely the Taj Al-Shahra Cooperative and the Al Jafr Women Cooperative. These women are expected to provide additional income to their families, and develop individually through new skills and opportunities.

Institutional Strengthening

68. The project has certainly strengthened the position of RSCN as a social development actor in the country. It is noted that RSCN has been approached by several national and international development entities to carry out social development activities in the northeast Badia and elsewhere in the Badia given its achievements under the project. Therefore, what can be considered to have been a small part of the organization's work program (having focused mainly on conservation and ecotourism), could be expanded and further developed in the future based on the RSCN's involvement in this project.
69. NCARE through the project has increased its capacity to implement World Bank- and other donor-funded projects and strengthened ties with communities as a result of the success of hafirs in the southern Badia. It has also committed to maintaining the hafirs going forward. HFDJB also benefitted as the project further strengthened its prestige with southern Bedouin communities as a key organization to support livelihoods in the Badia.

Mobilizing Private Sector Financing

N/A

Poverty Reduction and Shared Prosperity

70. The impact on poverty reduction as a result of the project was described in the socioeconomic survey carried out toward the end of the project. It showed increased job availability, increased availability of funding for businesses (through the funding of several revolving funds), and increased capacities of local cooperatives to establish and run IGAs in what was and still is considered a poverty pocket in Jordan.
71. The project supported one of the weakest segments of Jordanian society and provided economic options and change in community mindset from reliance on the government and military for economic activities/employment to local community enhanced income generating activities and provision of scarce



ecosystem services (grazing and watering).

Other Unintended Outcomes and Impacts

72. The project's recognition of traditional collective rights of Bedouin tribes was key to the success of this project, as it re-established awareness of local knowledge and strengthened tribal rights. In addition, the traditional knowledge was used to select the location of hafirs and reserves, select the species to be replanted in the reserves, and taught at the ranger school resulting in regained awareness and appreciation of such knowledge.
73. The HFDJB advised that thanks to the successful involvement in the project, additional donors have partnered/plan to partner with it to invest further in Badia communities. It was noted that the HFDJB is about to implement the GEF-6 UNEP/IUCN managed 'Healthy Ecosystems for Rangeland Development' (HERD) Project, and according to HFDJB staff, this opportunity was offered to the organization because of the recognition gained as a result of its involvement in the BELP
74. The project managed to regain confidence from local communities with higher levels of acceptance and collaboration. This outcome is important given the prevalent skepticism and suspicion recorded at the beginning of the project due to past failed interventions. This renewed confidence and the materialization of investments drew and continue to draw the attention of donors wishing to engage in various ecotourism and social development projects in Ar Ruwaished, with RSCN becoming a facilitator and implementer in the engagement with communities. It is clear that the project has made a considerable positive impact on donors' perceptions and the opportunities for further social development in these affected communities.
75. Through the project rangeland rehabilitation related activities, some species in South Badia have reemerged after about twenty years and new species identified that had never been identified before in Jordan. The seeds of these species are to contribute to further rehabilitation efforts in the Badia.
76. The restoration of Qasr Burqu' (Burqu' Castle) as a result of project advocacy was also an unintended positive outcome.

III. KEY FACTORS THAT AFFECTED IMPLEMENTATION AND OUTCOME

A. KEY FACTORS DURING PREPARATION

77. Based on lessons learned described in the PAD which draw from past and ongoing projects in Jordan, the design was based on the need for the project to have a strong theme of community participation and engagement in the activities. The design also drew from other Government and donor-funded interventions in the Badia that tried to address livelihoods and improve rangeland management. The need for sound diagnostics that spoke to the situation on the



ground made recommendations that facilitated the roll out of the project was an integral part of the success of the project.

78. The design also took into consideration the need to change the current rangeland management approach from fenced and government guarded to non-fenced and community managed using rangers from the community. This played an important part in the community buy-in to the rangeland management. The design acknowledged the need for technically sound implementing entity and organization with a successful track record of addressing poverty and community development and RSCN and the HFDJB provided this comparative advantage. Lastly, the design also considered the need for ecotourism as a tool for nature conservation and community development for the best outcome. The project design was therefore built on early stakeholder participation and engagement with greater local cooperation as a prerequisite for sustainable ecosystem management and livelihoods.
79. The preparation entailed a participatory and inclusive process of direct and systematic engagement with beneficiary communities in the planning, selection, and implementation of activities. Most of these was done during the design stage as part of the safeguard requirements. The requisite safeguards studies in the form of a Socio-economic Assessment and the Environmental Impact Assessment Report provided a solid basis for the informed roll out of the project and identified the most pressing and sensitive issues that required addressing in the project approach, ensuring its successful implementation.
80. Implementation readiness was demonstrated by the project's ability to be implemented smoothly and achieve most and exceed some of its identified results indicators. The project was able to identify a suitable set of indicators to demonstrate the achievement of the PDO (Annex A). The project was optimally designed to use the comparative advantage of all entities in the implementation of the project. The arrangements strengthened all entities' position and their credibility and capacity to handle community conservation efforts and sustainable livelihoods development. The project also sought to build a broad coalition of partners through the Steering Committee which would significantly contribute to overcoming implementation issues like the one-year delay experienced.
81. The project design identified several potential risks associated with stakeholders and financial management. The overall risk of the project was rated Moderate at approval and related mainly to (a) discontinued community management of the rangeland reserves in the south due to an unchanged approach toward utilization of resources; and (b) potential delays in the flow of funds from the World Bank to NCARE as a result of a centralized FM system. These were mitigated for in the risk analysis at appraisal and continued engagement through NCARE with southern communities took place and flow of funds was dealt with through close supervision and training. The rating proved to be appropriate for the type and scale of the proposed interventions as well as the level of capacity, commitment, and governance within which the project was to be implemented. The project design mitigated these risks by intensive participatory community involvement in decision making and close supervision and training for all stakeholders (beneficiaries and government), ensuring meaningful participation of all eligible beneficiaries in all stages of the project cycle, and enhancing capacity of implanting bodies.



B. KEY FACTORS DURING IMPLEMENTATION

82. Project implementation was completed satisfactorily within the originally proposed completion date, meeting all outcome/output targets and with 100 percent grant funds disbursed by financial closure (reported as of June 2017). Implementation progress was reported, in Aide Memoires and Implementation Status and Results Reports (ISRs), to be Moderately Satisfactory throughout the project except of the first 6 months and last 9 months of the project period, which were Satisfactory. The Moderately Satisfactory ratings were due to the first-year project delay and some fiduciary and safeguard weaknesses. It became Satisfactory during the last nine months of implementation, acknowledging the efforts made by the implementing agencies to address delayed procurement activities and improvements made on the disbursement rate.
83. Project implementation began approximately one year after the project effectiveness due to several factors including (i) delays in finalizing the terms of the two main project contracts, (ii) government's internal discussions on the signatory of the contracts (iii) Cabinet reshuffling in August 2013, which re-opened the discussion on the signatories, and (iv) procedural delays in paying the advances on the contracts to RSCN and HFDJB.
84. Given these challenges, throughout implementation the three executing entities made considerable and concerted efforts to make up for lost time by allocating additional technical staff, merging consultancies where feasible, and working beyond their agreed deliverables to support each other. This clear commitment was key in seeing the successful implementation of the project to completion. Accordingly, the work plans of the three entities shifted by one year and with the high level of effort all project deliverables were completed by the original closing date of June 30, 2017.
85. The Mid-term review identified that 32% of the grant was disbursed and was on track given the delay and the proposed expected disbursement during the second half of the 2015 was to increase with the completion of the hafir contracts and start of interventions along the ecotourism corridor. This was clearly realized and 100% disbursement of funds was reached by the closing date.
86. The project team, both in the Bank and in the PMU, overcame the major obstacles presented by a challenging political environment to achieve the original development outcomes in a timely manner, specifically noting the issues around delays in the signing of contracts and the declarations of open grazing by the Minister for reserves included in this project. With the difficult circumstances presented by the delay, a project extension could have been requested but the team's perseverance and close collaboration averted this possible further delay in delivering the outcomes. The Bank and PMU certainly kept the project on track and the continued team engagement with the client to work through all issues and advance project activities and achieve intended results is commendable. This proves the adaptive and proactive management style and team's flexibility to diagnose, prepare and implement the project, as well as the commitment, motivation and competence of the overall project team.



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

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

Rating: Substantial

M&E Design

87. Monitoring and Evaluation (M&E) was an integral part of the project and the evidence of this is the fact that two intermediate result indicators were dedicated to reporting on the presence of an M&E system as well as the submission of progress reports. The responsibility to carry out ongoing M&E activities was placed within the PMU and included an M&E specialist who was initially employed on a part-time basis and whose contract was modified to full-time in 2014.
88. The indicators of the Results Framework were overall adequate to report on the objectives of the project. The indicators were designed mostly to respond to component-level objectives and less on the theory of change needed to achieve the PDO. Direct indicators to measure the increase in vegetation cover, were not included as part of the key results indicators.
89. At project preparation, the Bank noted that it would assist the PMU in identifying capacity building needs to strengthen its M&E capacity, and provide further technical support as required to support the PMU during implementation. At this stage, it was foreseen that the PMU would establish and maintain a M&E system, which would include elaborating, implementing and tracking progress towards the overall results framework as well as data collection and monitoring from project sites.

M&E Implementation

90. The M&E system was implemented and available for use in October 2013 by the PMU. The report template used was as described in the Project Implementation Manual and submission schedule as described in the Grant Agreement. The PMU operated an effective M&E system throughout project implementation which included information from NCARE, RSCN and HFDJB, as well as first-hand engagement of the PMU in field-level activities. RSCN provided Beneficiaries Reports on income from ecotourism activities. The M&E system was based on reports from the three executing entities, discussions within the Technical Working Group and frequent field observations carried out by the PMU. The monitoring of vegetation cover was undertaken through biomass direct surveying assisted with the FAO Collect Earth tool adopted by NCARE. Semi-annual reports (8 in total) utilized the results framework to evaluate progress, using the intermediate results and PDO level indicators and were submitted in a timely fashion.



M&E Utilization

91. The M&E system was utilized by the PMU throughout the project to evaluate progress and key issues, and used this information to report to the World Bank and to the Steering Committee, which in turn ensured that progress was made and results were achieved. Information directly collected through field visits and meetings with stakeholders and beneficiary communities was used for the selection of activities, hafirs and reserves and used to assess capacity building needs, requirements of the local community and delivering related training programs to empower and enable the community to participate in the management of the activities along the corridor.

Justification of Overall Rating of Quality of M&E

92. The overall quality of the M&E system is rated Substantial. The justification is that throughout the design, implementation and utilization phases of the M&E system it added value to the progress of activities and even with the delay in place it was relied on to undertake the project activities in a timely manner. The implementation of the M&E system contributed to the successful completion of the project.

B. ENVIRONMENTAL, SOCIAL, AND FIDUCIARY COMPLIANCE

93. The project was designated as an Environmental Assessment Category 'B' considering the risk associated with social considerations around restrictions on common land use in rangeland reserves on which grazing would be restricted and environmental and possible impacts around the construction of various infrastructure along the corridor and the hafirs.
94. Throughout the project, full compliance with the relevant safeguard policies was maintained as Satisfactory. The policies triggered included OP 4.01 on Environmental Assessment, OP 4.04 on Natural Habitats, OP 4.11 on Physical Cultural Resources and OP 4.12 on Involuntary Resettlement. Given the fact that the BELP was designed to support the social, environmental, and economic needs of people living in the Badia, the project was designed with similar goals of the safeguard policy objectives of "do no harm" and enhanced the principle of the safeguards policies by the implementation of activities that involved inclusion, community engagement and ecosystem protection and recovery. A thorough and meaningful consultation process with the target communities was undertaken during the project preparation period, and communities were continuously engaged, informed and involved in decision making throughout the preparation and implementation periods. The Environmental Impact Assessment and the Socio-economic Assessment that were prepared provided recommendations and translated into the Management Plan for the project were taken seriously by the team. This contributed significantly to the success of the project and also ensured that the impacts of possible ecological degradation and pollution as well as negative impacts on the community were addressed adequately.
95. With regards to fiduciary matters, a financial management (FM) action plan had been developed and implemented and technically supported by the Bank. FM was rated as Satisfactory (S) at Mid-Term review after being rated Moderately Satisfactory (MS) in a previous ISR. Even though the project was delayed, there were no instances of non-compliance. An external auditor was contracted to carry out



the project audits for the project lifetime and issued unqualified “clean” audit opinions and the management letters did not report any significant weaknesses in internal controls. In addition, the PMU hired a qualified part-time replacement after the former Financial Officer (FO) left the project. Even after the closing date and during the grace period, the FO continued carrying out his financial management duties, and was paid by NCARE’s internal budget.

96. In terms of procurement, the two large works contracts (NCARE and RSCN contract) observed satisfactory implementation and modifications were made where needed. NCARE exercised more diligent supervision after concerns that the engineer of the hafirs did not complete works satisfactorily in 2016. Project entities were committed to observing the closing date of June 30, 2017, and used the grace period for processing payments related to the external audit and other minor activities like procuring furniture for the completed lodge.

A three-level grievance redress mechanism (GRM) had been put in place, following the design recommended by the communities during preparation of the Process Framework. It is noted in the aide memoirs that any grievances raised during the course of implementation were resolved successfully by the executing entities. The grievances were mainly those of possible use of shared community water sources (Burqu’ Dam) by the contractor to construct the Ecolodge and concerns this project would not make the mistakes of previous development projects in these areas (that had not consulted local communities and had failed as a result). These were resolved through focus group consultations with those raising grievances and actions recommended by both communities and executing entities.

C. BANK PERFORMANCE

Quality at Entry

97. At project preparation, the Bank team employed a precautionary approach in building the project on socio-economic and environmental recommendations to guide the project approach and especially the entities responsible for the different components. Adequate analysis was done to inform project design. The Bank also placed great emphasis on the lessons learned from other past and current projects as mentioned in key factors for preparation. Key risks were identified with mitigation measures proposed, and M&E arrangements were in place with the services of an M&E specialist.
98. In addition, the results framework was characterized by measurable, achievable, relevant, specific and time-bound indicators at both the PDO and intermediate level indicators. It is important to mention that the Bank team also recognized and addressed shortcomings in the RF before approval, as in the case where one indicator was amended to reflect the reality on the ground and required that a monetary value for income generated be used as a measure as opposed to the number of income generating activities. However, the project would have benefited with a detailed and economic cost benefit analysis since it targeted income generating activities.
99. At project preparation, the Bank team employed a precautionary approach in building the project on socio-economic and environmental recommendations to guide the project approach and especially the entities responsible for specific activities. Whilst the project itself had only two components that were relatively



straightforward it still had many different stakeholders to consider, the implementation plan was well-structured and defined to reflect this. Project readiness for implementation at entry was in an advanced stage with all necessary assessments completed and provisions for procurement, financial management and safeguards were all adequate at the design stage.

100. Given the above, the Bank Performance quality at entry is rated as satisfactory.

Quality of Supervision

101. The Bank demonstrated commitment, dedication, perseverance and was very detail orientated in its approach, reporting and guidance to the project. This can be seen in how well the team addressed technical, safeguards and fiduciary issues efficiently and effectively throughout implementation. Based on the mission schedule and ISRs the World Bank task team conducted an average of two supervision missions a year. The Bank should be commended for its high level of commitment to the project and for expediently supporting the PMU to overcome obstacles as they arose.

102. The Bank's open and frank approach with reporting ratings and discussions with the clients on important matters steered the project ahead even during the delays and episodes of stalling. Action plans were developed to ensure the momentum of the pace of implementation was steady until the closing date. The Bank's proactive approach of immediately dealing with matters of concern like the lag in disbursement and procurement issues with the poor construction of the hafirs by the engineer contributed to success of the project.

103. Detailed aide memoirs showed that missions included lengthy and detailed discussions with the executing entities, government officials and with the communities to gain first hand insight of progress and issues and resolve them at the most appropriate level. All missions included detailed field visits that were reported on in the aide memoires which were informative and provided a frank evaluation of project performance. Detailed comments and no objections were provided on deliverables, terms of reference and on progress reports in a timely manner, which led to improved quality of deliverables and reports.

104. Given the above, the Bank Performance quality of supervision is rated as satisfactory.

Justification of Overall Rating of Bank Performance

105. The overall Bank performance is rated Satisfactory, justified by the adequate preparation and supervision of the project. Even though the project faced significant challenges during implementation, these were overcome by the close and supportive supervision of the project by the Bank which allowed for the intended results to be achieved.



D. RISK TO DEVELOPMENT OUTCOME

Rating: Modest

106. Success of the project and of the pilot activities has certainly provided a basis for growth and development that can certainly be adopted, replicated and expanded across the Badia by various stakeholders. Based on feedback and arrangements for next steps from the implementing entities, the BERP has confirmed itself as an instrumental investment with lessons that can be widely shared among stakeholders in similar ecosystems, thus a benefit for the DELP countries and others across the region. However, the risk of political instability and security cannot be downplayed as they are very probable in Jordan. The risk to the development outcome is therefore Modest.
107. The established project Steering Committee (SC) will continue functioning beyond project closure and continue the momentum and the required policy oversight on the BERP experiences and successes. This will further strengthen the sustainability of the development outcome. Furthermore, with regards to ecotourism corridor and livelihoods in the northern Badia the probability of the continued sustainability of investments and income generating activities (IGAs) established by RSCN under the project is very high.
108. Regarding the sustainability of hafirs, range reserves and IGAs in the southern Badia, the MoA confirmed once again that NCARE will continue to be responsible for the maintenance and operation of project-established hafirs' and range reserves at least for the next three years following project closure. In addition, funds required to retain the 8 rangers contracted under the project (two each in Hashemieh and Husseineh reserves, and four in Bayer reserve), will also be provided to NCARE.
109. In addition, following project closure the HFDJB will support project-established cooperatives for a period of 10 years. This support includes technical support and training and co-ops that are successfully operating their new businesses for a period of 2 years will be eligible to receive an additional grant from the HFDJB for further expansion.

V. LESSONS AND RECOMMENDATIONS

110. The project has demonstrated the importance of having Community Liaison Officer coordinating the different IGAs. This allowed the organization and combination of similar and complementary activities to reap optimal benefits for communities. Future projects involving IGAs could use this important aspect in the design of such initiatives.
111. The project has provided a good example of a new type of rangeland reserve which are unfenced and run by communities. This steers away from the conventional and conservative exclusion concept of managing reserves that is prevalent in the region. The lesson lies in the fact that this project presents a combined management (government and community) example of a shared resource to improve the management of natural resources.



112. There is also a lesson on the importance of allocating resources for maintaining a respectful presence in communities that are hesitant/reluctant to slowly build their confidence and achieve project results. As seen in this project, intensive community participation and involvement of the executing agencies through the use of allocated resources contributed to building trust by actioning recommendations made by communities in key activities of the project. This was integral in the project's success and should be considered in future projects involving community buy-in.



ANNEX 1. RESULTS FRAMEWORK AND KEY OUTPUTS

A. RESULTS INDICATORS

A.1 PDO Indicators

Objective/Outcome: The Project Development Objective (PDO) is to support sustainable livelihoods and enhance ecosystem services through participatory approaches in selected areas of the Jordan Badia.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Amount of new ecotourism-related income to communities along the Al Azraq/Shaumari-Burqu' corridor	Amount(USD)	0.00 17-May-2012	57000.00 30-Jun-2017	570000.00 30-Jun-2017	536545.00 30-Jun-2017

Comments (achievements against targets): Target 94%: Substantially achieved. As of the date of project closure the figure US\$536, 545 from project activities towards establishing and supporting the corridor including local labor, rent paid locally, material and services purchased locally, salaries paid to local staff and income to project-supported IGAs. The data provided for this was not verified or audited but drawn from RSCN's records.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Direct project beneficiaries	Number	0.00 17-May-2012	10720.00 30-Jun-2017	10720.00 30-Jun-2017	30768.00 30-Jun-2017



Female beneficiaries	Percentage	0.00	51.00	51.00	41.00
		17-May-2012	30-Jun-2017	30-Jun-2017	30-Jun-2017

Comments (achievements against targets): Target exceeded: 287%. The number of project beneficiaries is 30,768 (of which 41% are female), exceeding the end-of-project target. The larger than expected result is due to more cooperatives than planned benefitting from the project under HFDJB-related activities, and several cooperatives had larger number of members than expected. The number of people who benefitted from water harvested in the hafirs is included in this result, as are the herders who benefitted from planted barley, and other activities under both components 1 and 2. The slightly lower than planned percentage of female beneficiaries is the result of higher percentage of male beneficiaries from herding-related activities under component 2, and the overall cultural / traditional behavior of targeted communities.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
New areas outside protected areas managed as biodiversity-friendly (ha)	Number	0.00	3000.00	3000.00	3000.00
		17-May-2012	30-Jun-2017	30-Jun-2017	30-Jun-2017

Comments (achievements against targets): Target 100% achieved. Target achieved in YR2. Ecosystem services were enhanced by successfully establishing and rehabilitating range reserves for a total area of 3000 ha. The increase in vegetation cover and species abundance was the achieved through the protection of habitats through managed rest periods, thus a biodiversity-friendly management as defined by Jordan's National Biodiversity Strategy and Action Plan (NBSAP).

A.2 Intermediate Results Indicators

Component: Established ecotourism in the Northern Badia

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
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Ecotourism Development Plan (ETDP) developed and approved by the Steering Committee	Yes/No	N 17-May-2012	Y 30-Jun-2017	Y 30-Jun-2017	Y 30-Jun-2017
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Comments (achievements against targets): Target 100% achieved. Target achieved in YR3. The ETDP served as the master plan on which the ecotourism corridor was established, therefore leading to ecotourism-related livelihoods for communities.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
First ecotourism destination piloted	Yes/No	N 17-May-2012	Y 30-Jun-2017	Y 30-Jun-2017	Y 30-Jun-2017

Comments (achievements against targets): Target 100 % achieved in YR4. Excursions to Wadi Dahek and Tal Qurma are operational as per the ETDP approach. New visitor facility at Shaumari reserve—starting point of ecotourism corridor—is operational. These facilities draw visitors who contribute to enhancement of livelihoods of local communities through purchase of goods and services.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Ecolodge infrastructure established	Yes/No	N 17-May-2012	Y 30-Jun-2017	Y 30-Jun-2017	Y 30-Jun-2017

Comments (achievements against targets): Target 100% achieved. The ecolodge infrastructure was completed and furnishing of the interior was completed in mid-June 2017. Although the operation of the ecolodge started in September 2017, and did not have the 1 year operational period, the planned target of establishing the infrastructure was the indicator considered as completed. The economic analysis estimates that the rate of return for



this investment over 20 year will be 25 percent and RSCN projections fro 2018 estimate that the lodge will accommodate 644 guests and bring in JOD 21 584.00 with an expected community share of JOD 16, 188.00.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Number of target stakeholders trained on ecotourism services	Number	0.00 17-May-2012	115.00 30-Jun-2017	115.00 30-Jun-2017	135.00 30-Jun-2017

Comments (achievements against targets): Target 117% achieved. Two sets of training sessions were carried out by RSCN in December 2015 and May 2016, totaling 135 trained men and women. Training was provided on project management and project proposal writing, computer skills, accounting for nonaccountants, strategic planning, leadership and management, and marketing. Beneficiaries were members of local cooperatives who showed interest in opening new IGAs or enhancing exiting ones. The training is considered an essential element in sustaining the IGAs supported by the project.

Unlinked Indicators

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Number of improved hafirs constructed	Number	0.00 17-May-2012	2.00 30-Jun-2017	2.00 30-Jun-2017	2.00 30-Jun-2017

Comments (achievements against targets): Target 100% achieved: Target achieved in YR3 and exceeded. The hafirs planned capacity of 50 000m3 to 100 000 m3 was the target set with 6 months water retention. The project saw the capacity of the harirs increased to 152,000 m3, 52 000m3 above the target . The water retention lifetime also goes beyond the design period of 6 months and can be 7-12 months depending on use. These provide the surrounding communities with much needed sustainable water resources for animal watering, even beyond the targets set by the project at design These provide the surrounding communities with much needed sustainable water resources for animal watering, even beyond the targets set by the project at design in terms of water volume) and water retention period. Hafirs (traditional name for animal watering reservoirs) for animal watering and fodder production



were constructed to improve water access for animal herders, which previously had to buy and transport water from distance at high costs. The hafirs were constructed in an innovative way which helped retain collected runoff water for an extended period of time, especially important during times of drought.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Increased vegetation cover in two rangeland reserves in Al Husseinieh and Al Jafr	Hectare(Ha)	0.00	3000.00	3000.00	3000.00
		17-May-2012	30-Jun-2017	30-Jun-2017	30-Jun-2017

Comments (achievements against targets): Target 100% achieved. Fully achieved by creating three (instead of two planned) range reserves for a total area of 3000 ha. Vegetation cover has constantly increased (2014, 2015, and 2016) and was interrupted in one range reserve (Al Hashmieh) due to an exceptional weather event in 2017 (severe drought); and to a lesser extent in another (Al Husseinieh); and no interruptions in the third (Bayer). Remedial management measures of coordinating alternative grazing patterns and non-grazing feeding are in place to mitigate potential future events like drought. The reserves were replanted with local plant seeds purchased and collected in situ and underwent a rest period. Biomass ground surveying and sample collection has been done annually since 2014, showing overall increased values in vegetation terms.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Number of men and women members in at least 12 cooperatives benefitting from alternative livelihoods activities in Al Jafr and Al-Husseinieh	Number	0.00	1000.00	1000.00	3556.00
		17-May-2012	30-Jun-2017	30-Jun-2017	30-Jun-2017

Comments (achievements against targets): Target 356% achieved. At the end of the project, 3,556 beneficiaries directly benefited from alternative livelihood activities, including 28 cooperatives, GEF-funded equipment and alternative livelihoods, and HFDJB-funded small grants (including training).



Alternative livelihood activities included: an electric shop, a telecom shop, wedding accessories shop, kindergarten, handicrafts, sports ground, and other activities financed through revolving funds established by the project.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
M&E system operational	Text	No M&E in place	M&E System utilized	M&E system being utilized by PMU	M&E system in place and operational.
		17-May-2012	30-Jun-2017	30-Jun-2017	30-Jun-2017

Comments (achievements against targets): Target 100% achieved. M&E system established from year one

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Progress reports are submitted in a timely manner	Yes/No	N	Y	Y	Y
		17-May-2012	30-Jun-2017	30-Jun-2017	30-Jun-2017

Comments (achievements against targets): Target 100% achieved. 8 semi-annual progress reports submitted, including a mid-term report. All submitted on time



B. KEY OUTPUTS BY COMPONENT

Increased support for sustainable livelihoods	
Outcome Indicators	<ol style="list-style-type: none"> 1. Amount of new ecotourism- related income to communities along the Al Azraq/Shaumari-Burqu' corridor Income is expected from the ecotourism supply chain: purchases of goods and raw materials from providers, salaries, payment for services provided by communities to the corridor, and revenue sharing with the communities. The Beneficiaries Report is an annual report produced by RSCN for each of the sites it manages, showing income which goes directly to communities. 2. Direct Project Beneficiaries <ol style="list-style-type: none"> 1. The number of project beneficiaries is 30,768 (exceeding the end-of-project target) 2. 41% of beneficiaries were female
Intermediate Results Indicators	<ol style="list-style-type: none"> 1. Development of an Ecotourism Development Plan (ETDP) 2. Ecotourism destination piloted 3. Ecolodge infrastructure established 4. Number of target stakeholders trained on ecotourism services
Key Outputs by Component (linked to the achievement of the Objective/Outcome 1)	<ol style="list-style-type: none"> 1. The ETDP served as the master plan on which the ecotourism corridor was established, therefore leading to ecotourism-related livelihoods for communities 2. Excursions to Wadi Dahek and Tal Qurma are operational as per the ETDP approach. New visitor facility at Shaumari reserve—starting point of ecotourism corridor 3. The ecolodge infrastructure was completed and furnishing of the



- interior were completed with energy and resource efficient materials
- 4. 135 trained men and women on management of business
- 5. Publicity of the trail via brochures, trips for tour operators, and participation in conferences to showcase the corridor
- 6. Two Bedouin campsites purchased with needed equipment
- 7. Income generating activities established along the corridor for cooperatives involved in food production, handicrafts
- 8. Rangers employed to manage rangeland reserves
- 9. Community liaison officer employed to assist communities and address their concerns
- 10. RSCN office in Ar Ruwaished close to communities

Enhancement of ecosystem services through participatory community approaches

Outcome Indicators	<p>1. New areas outside protected areas managed as biodiversity-friendly (ha)</p> <p>Hectares of rangelands managed by communities in a biodiversity-friendly manner in Al Jafr and Al-Husseinieh. The rangelands will be within reserves which will be replanted, offering an extended grazing period.</p>
Intermediate Results Indicators	<ul style="list-style-type: none"> 1. Number of improved Hafirs constructed 2. Increased vegetation cover in two rangeland reserves 3. Gender demographic of 12 cooperatives benefiting from alternative livelihood activities
Key Outputs by Component (linked to the achievement of the Objective/Outcome 2)	<ul style="list-style-type: none"> 1. Two Hafirs constructed that exceeded volume expectations by 152,000 m3 and retained water longer (7-12 months) than the anticipated 6 months 2. 3,556 people directly benefited from alternative livelihood activities, including GEF-funded equipment



ANNEX 2. BANK LENDING AND IMPLEMENTATION SUPPORT/SUPERVISION

A. TASK TEAM MEMBERS

Name	Role
Preparation	
Supervision/ICR	
Banu Setlur	Task Team Leader
Lina Fares	Procurement Specialist(s)
Walid Hamoud Ali Al-Najar	Financial Management Specialist
Ayala Peled Ben Ari	Operations Specialist, Consultant
Marie A. F. How Yew Kin	Senior Program Assistant
Carolyn Winter	Social Development Specialist
Hocine Chalal	Environmental Safeguards
Viviane Wei Chen Clement	Social Safeguards
Turi Fileccia	Senior Agronomist FAO
Supervision/ICR	
Banu Setlur	Task Team Leader
Turi Fileccia	Senior Agronomist FAO
Ayala Peled Ben Ari	Operations Specialist, Consultant
Bruce McPhail	Rural and Urban Specialist
Walid Hamoud Ali Al-Najar	Financial Management Specialist
Lina Fares	Procurement Specialist(s)
Viviane Wei Chen Clement	Social Safeguards
Jean Michel Pavy	Environmental Safeguards
Marie A. F. How Yew Kin	Senior Program Assistant
Shafick Hoossein	ICR Author

**B. STAFF TIME AND COST**

Stage of Project Cycle	Staff Time and Cost	
	No. of staff weeks	US\$ (including travel and consultant costs)
Preparation		
FY12	12.588	88,877.38
FY13	10.370	39,136.39
Total	22.96	128,013.77
Supervision/ICR		
FY13	0	7,200.85
FY14	2.925	11,338.67
FY16	12.010	81,000.66
FY17	15.525	101,547.83
FY18	.926	12,818.24
Total	31.39	213,906.25



ANNEX 3. PROJECT COST BY COMPONENT

Components	GEF amount at approval (US\$M)	Co-financing at approval (US\$M)	Total at approval (US\$M)	GEF actual at project closing (US\$M)	Co-Fi actual at project closing (US\$M)	Total at project closing (US\$M)	Percentage of Approval (US\$M)
Component 1: Community-Centered Ecotourism in the Northern Badia	1.47	0.85	2.32	1.49	1.70	3.19	137.5
Component 2: Adaptive Rangeland Management and Alternative Livelihoods Support in the Southern Badia	1.43	7.65	9.08	1.41	7.66	9.07	99
Component 3: Project Management	0.43	2.85	3.28	0.42	2.85	3.26	99
Total	3.3	11.3	14.6	3.32	12.2	15.52	



ANNEX 4. EFFICIENCY ANALYSIS

The economic analysis is broken down by component with associated benefits and cost streams for each of the following components: Component 1 (Community-centered ecotourism in the Northern Badia) and Component 2 (Adaptive Rangeland Management & Alternative Livelihoods Support in the Southern Badia). The first component represents nearly 16 percent of the total resource allocation, while the second component represents the bulk of the budget –nearly 62 percent of the total resource allocation–. Component 3 refers to the project management.

Component 1 developed ecotourism facilities and experiences along a 250km corridor between the Al Azraq and Shaumari Nature Reserves and the (to be declared) Burqu' Nature Reserve. This was undertaken through the establishment of an Al Azraq/Shaumari-Burqu' ecotourism corridor with several key interest points along the corridor. The main attraction is an ecolodge in Burqu for the benefit of targeted northern Badia communities. Component 2 executed community engagement and alternative livelihoods activities. It involved the construction of two long-lasting multipurpose water harvesting structures referred to from hereon as Hafirs. It also involved the establishment and/or rehabilitation of improved rangeland reserves to provide richer and more secure pastures for livestock in the area.

Our results show that the approximately US\$ 15 million to be invested in the Project generated efficiency benefits with a net present value of US\$ 27.5 million using the 6 percent discount rate recently adopted by the World Bank for project evaluation. The internal rate of return (IRR) to this investment is 25 percent. Results are robust to adverse changes in the key parameters.

Analytical Approach

Most of the beneficiaries are local nomadic communities and systematic data at the community level is scarce and not easily available. Therefore, additional or marginal benefits were calculated based on indicative intermediate indicators prepared by the local project team combined with background reports prepared for the project.

In the case of **Component 1**, estimated benefit stream focuses on increased tourism in Northern Badia, increased expenditures in local services, and improved income generating activities for local communities. In the case of **Component 2**, estimated benefit stream focuses on benefits related to improved water access and increased time saved by the herders in the transport of water to their herds, as well as feeding cost savings due to rangeland rehabilitation/regeneration. Table 1 shows qualitatively the direct associated benefits. It is clear that the full set of identified benefits cannot be measured due to data constraints.

Component 1's marginal benefits were estimated by the additional tourism specific features: increased number of visitors, increased number of overnight stay, increased spending



person/night, and increased revenues for tourism related activities. Component 2's marginal benefits were estimated due to improved water access for animal herds, which are currently kept in rangeland areas at significant distances from main towns and villages. Before the project implementation, herders must truck-transport water to their herds over large distances and at high costs. Thus, the economic benefits of the hafirs can thus be assessed in terms of time saved by the herders in the transport of water to their herds and avoided costs of this transport. Component 2's marginal benefits were estimated due to richer and more secure pastures for livestock in the area. Thus, the economic benefit would result from a reduction in household expenditures on feed by extending the period of open grazing.

Finally, the economic analysis considers a time horizon of 20 years, to take into account the long-term benefits of the project. The analysis uses a baseline discount rate of 6 percent, as suggested by the World Bank, and uses an annual growth rate of 2.6 percent, which corresponds to the World Bank medium-term average forecast for Jordan.² Yearly cumulative targets are assumed flexible (year 1: 10%; year 2: 40%; year 3: 70%; and year 4: 100%). Cost distribution is also assumed variable (year 1: 20%; year 2: 35%; year 3: 35%; year 4: 10%). Implicitly, we assume that benefits accrue more at the end of the project, while costs burn at a higher rate at the beginning of the project. After the project, 1% of total project cost is assumed as annual maintenance cost for the project investments. Following the project implementation, benefits for component 1 are realized after the project was implemented. For component 2, benefits start to realize in the second year of the project. Results are quite robust to variations of these assumptions.

Conclusions

The ex-ante economic analysis suggests that Project-supported investments will generate substantial benefits for beneficiaries in areas served by the Project, as well as substantial benefits for Badia's local population as a whole. Overall, the NPV is projected to reach US\$ 27.5 million (using a 6 percent discount rate). The investments evaluated for the economic analysis will generate an internal rate of return of 25 percent (see Table 2). The economic analysis thus shows that, project-supported investments will bring substantial economic benefits to the beneficiaries. Results are robust to adverse changes in the key parameters. Increasing project costs by 10 percent, reducing project benefits by 10 percent, and varying the default discount factor by 2 percentage units do not change our conclusions (see Table 3).

² World Bank. Jordan's Economic Outlook- April 2017.

<http://www.worldbank.org/en/country/jordan/publication/economic-outlook-april-2017>



Table 1: Project Characteristics, Identified Benefits and Achievements by the Project

Project Components	Description	Main activities	Identified Direct	Achievements by the Project
Component 1: Community-Centered Ecotourism in the Northern Badia (US\$ 2.32 M GEF 63%)	Establish a 250 km ecotourism corridor from west to east connecting the Al Azraq and Shaumari reserves managed by the Royal Society for the Conservation of Nature (RSCN).	Establishment of an Al Azraq / Shaumari-Burqu' ecotourism corridor Construction of the Burqu' ecolodge Fostering community engagement in the planning, development and operation of the ecotourism corridor Training and investment support on income generating activities to enrich corridor's activities	Increased tourism in Northern Badia and increase expenditures in local services	The project has served as key enabler for a new tourism hub in the northeastern Badia. It has put in place a solid foundation to expand the economic growth of the country by creating a new tourism hub. It is also expected to generate considerable benefits to participating communities. This tourism hub would be the first of its kind in Jordan's northeastern Badia.
			Improved income generating activities for local communities	Bank support via the Project has contributed to finance sub-projects for necessary products and services to enrich the corridor's activities and further engage the community. In addition, local cooperatives will be beneficiated through a revenue sharing mechanism that will be agreed with the private sector.
			Strengthened institutions at regional and local levels through targeted capacity building for planning, management of land conservation and ecotourism	The project has helped to carried out two sets of three training workshops for local cooperatives. Both training sets had the objective of providing local cooperative members with skills required to participate in management and development of the various ecotourism interest points along the new corridor, either as goods providers or as service providers.
Component 2: Adaptive Rangeland Management and Alternative livelihoods Support in	Finance the establishment and/or rehabilitation of two strategically sited and improved hafirs, two community-	Construction of two long-lasting improved water-harvesting structures Protect the Badia rangelands by allowing regeneration of the vegetation cover	Improved water access for animal herds throughout the year	The project helped to improve two hafirs increasing the number of months with water from 4-5 months to 7-12 months. In 2017, it is likely that water will last for the entire year.
			Increased time saved by the herders in the transport of water to their herds as well as	The two improved hafirs have increased water access for animal herds, which are currently kept in rangeland areas at



the Southern Badia (US\$ 9.08 M GEF 16%)	based rangeland reserves, and capacity building and support for alternative livelihoods activities.	Provide a range of support for alternative livelihoods initiatives in the communities, with some special focus on women and youth	reduced water transportation costs	significant distances from main towns and villages. Distance from Al Jafr may be calculated in two-way 80 km. for a 2 m3 tank (equal to two-day watering of 200-head flock of sheep). In economic terms, it is calculated that each 200-head flock owner would save about 3,600 dinars per year of water costs.
			Increased effective management and conservation of hyper-fragile ecosystems	The establishment and rehabilitation/regeneration of rangeland reserves provided richer and more secure pastures for livestock in the area as well as increased food for herds. The economic benefit would result from a reduction in household expenditures on feed by extending the period of open grazing. Measures using NDVI values (Normalized difference vegetation index) of Landsat 8 images indicate that the biomass productivity has increased vegetation cover has increased gradually since 2014. Image and NDVI value results also show that between May 2014 / May 2016 the vegetation index has increased by 21% - 35%, under normal conditions. (NDVI values for 2017 were not considered due to severe droughts).
			Increased local capacity on alternative livelihoods activities to cooperatives in the targeted communities	The promotion of alternative livelihoods activities supported alternative livelihoods activities in existing community-based cooperatives and complemented the benefits gained from the other community investments.



Table 2: Measures of project worth – Total Benefits, Costs, and Net benefits (Million US\$)

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	...	Year 20
Component 1: Community-Centered Ecotourism in the Northern Badia									
- Without Project		0	0	0	0	0	0	...	0
- With Project		0	0	0	0.2	0.2	0.2	...	0.3
Component 2: Adaptive Rangeland Management in the Southern Badia									
2.1) Cost reduction in water transportation									
- Without Project		0.7	2.9	5.1	7.3	7.5	7.7	...	10.7
- With Project		0.4	1.5	2.6	3.6	3.7	3.8	...	5.4
2.2) Cost reduction on rangeland rehabilitation/regeneration									
- Without Project		0.1	0.3	0.6	0.8	0.9	0.9	...	1.2
- With Project		0.1	0.3	0.5	0.7	0.7	0.7	...	1.0
Net Benefits		0.4	1.5	2.6	4.0	4.1	4.2	...	5.9
Actual Costs	-2.9	-5.1	-5.1	-1.5	-0.1	-0.1	-0.1	...	-0.1
Net Benefits - Actual Costs	-2.9	-4.8	-3.6	1.2	3.8	4.0	4.1	...	5.7
Net Present Value (Million US\$, IR 6%)	27.52								
IRR	25%								
B/C Ratio	3.4								

Source: Own Estimates.

Table 3: Sensitivity Analysis

Sensibility Analysis	Change	NPV (million US\$)	IRR	B/C Ratio
Baseline	6%	27.52	25%	3.4
Decrease in Discount rate	4%	36.64	25%	4.0
Increase in Discount rate	8%	20.67	25%	3.0
Increase in project costs	10%	26.12	23%	3.1
Decrease in project benefits	10%	23.37	23%	3.1

Source: Own Estimates.



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

Attached – Borrower ICR

Client Comment

The draft ICR was sent to the Client on 8th December 2017 for comments by 22nd December 2017. The ICR team had not received any comment by the 29th of December, 2017.



ANNEX 6. INCOME AND BENEFICIARY DATA

BREAKDOWN OF INCOME (SOURCE: RSCN)

	Methodology of calculation for increased income	
#	Activity	Amount in USD Up to April 2017
1	Construction of lodge community benefit MAR	55,085
2	Construction of lodge community benefit APR	37,782
3	Construction of lodge community benefit MAY	82,486
4	Construction of lodge community benefit JUNE	44,209
5	Construction of lodge community benefit JULY	35,692
6	Construction of lodge community benefit AUGUST	26,766
7	Construction of lodge community benefit SEPTEMBER	32,782
8	Construction of lodge community benefit Oct.	24,195
9	Construction of lodge community benefit Nov.	25,621
10	Construction of lodge community benefit Dec.	25,720
11	Reception point renovation	21,186
12	Income Generated @Shaumari Visitor Center (construction)	9,230
13	IGAs	24,472
14	Guard Salary	3,432
15	Community Liaison Officer Salary	14,258
16	Ranger Salaries	25,747
17	Rent of RSCN Office	3,362
18	Operational Expenses	7,964
19	Rent of Training Room, meals, & Field Trip	3,355
20	Lodge Furnishing	33,200
	TOTAL Fiscal Community Benefits July 2017	536,545



Number of Co-ops Trained in Alternative Livelihoods (SOURCE: RSCN)

Training no.	Date	Location	Course Description	Cooperatives Participating	Direct Beneficiaries*			Other Beneficiaries**	Total beneficiaries
					Male	Female	Total		
1	August 24-28th, 2014	Al Husseinieh	1) Strategic Planng, 2) Planning ,Fesibility study and 3) Marketing	Al Husseinieh For military retirees Cooperative.	35	0	35	210	245
				Tal Burma Agricultural Cooperative.	55	0	55	330	385
				Yellow valley Cooperative	275	25	300	1800	2100
				Saidat Al Badia Cooperative .	0	76	76	456	532
				Noor Al Hussein Charity.	28	2	30	180	210
				Saidat Al hashmyah Charity.	0	30	30	180	210
				Al Husseinieh for Care and rehabilitation of the handicap Charity.	17	10	27	162	189
				Algadeer Charity .	25	0	25	150	175
				Al Thorayah Cooperative.	11	14	25	150	175
				Livestock breeders Cooperative.	0	210	210	1260	1470
				Lamsat ALkair Charity.	18	9	27	162	189
				Ahl ALkair Charity.	11	14	25	150	175
				Robou AL Badia To revive the heritage Charity.	3	17	20	120	140
				AL kair and Barkah Charity.	0	37	37	222	259



Training no.	Date	Location	Course Description	Cooperatives Participating	Direct Beneficiaries*			Other Beneficiaries**	Total beneficiaries
					Male	Female	Total		
				Alrayah Al hashmyah Charity.	130	70	200	1200	1400
				Environment Society in south Badia.	15	17	32	192	224
				TOTAL Beneficiaries	623	531	1154	6924	8078
2	August 31 - Sept. 4th, 2014	Al Jafr	1) Strategic Planng, 2) Planning ,Fesibility study and 3) Marketing	Al Jafr Cooperative	18	37	55	330	385
				Bayer Agricultural Cooperative	18	12	30	180	210
				Zahrat Alrayan Charity.	10	25	35	210	245
				Al Thersee Cooperative.	11	11	22	132	154
				Shams Al Jafr Charity.	15	15	30	180	210
				Al Mdefeyat Cooperative.	22	24	46	276	322
				Al Jafr Project Cooperative.	44	0	44	264	308
				Young Ladies Center.	0	10	10	60	70
				TOTAL Beneficiaries	138	134	272	1632	1904
Training no.	Date	Location	Course Description	Cooperatives Participating	Direct Beneficiaries*			Other Beneficiares**	Total beneficiaries
					Male	Female	Total		
3	May 12-28th, 2015	Al Jafr	Product design training (weaving)	Al Jafr Cooperative	0	26	26	156	182
				TOTAL Beneficiaries	0	26	26	156	182
4	August 25-31st, 2015	Al Husseinieh	Planning, Feasibility Study	Al Husseinieh For military retirees Cooperative.	35	0	35	210	245
				Al Thorayah Cooperative.	11	24	35	210	245



Training no.	Date	Location	Course Description	Cooperatives Participating	Direct Beneficiaries*			Other Beneficiaries**	Total beneficiaries
					Male	Female	Total		
				Lamsat Alkair Charity	18	19	37	222	259
				Alrayah Al hashmyah Charity	130	70	200	1200	1400
				Al Husseinieh for Care and rehabilitation of the handicap Charity.	17	10	27	162	189
				Saidat Al hashmyah Charity.	28	7	35	210	245
				Robou AL Badia To revive the heritage Charity	3	17	20	120	140
				Environment Society in south Badia.	15	17	32	192	224
				Ahl -entemaa Charity	13	13	26	156	182
				TOTAL Beneficiaries	270	177	447	2682	3129
5	September 8-12th 2015	Al Jafr	Planning, Feasibility Study	Jawhrt aljafr Cooperative.	23	20	43	258	301
				Al Thersee Cooperative.	11	11	22	132	154
				Shams Al Jafr Charity.	15	15	30	180	210
				Young Ladies Center.	0	10	10	60	70
				Zahrat Alrayan Charity.	10	25	35	210	245
				Taj -alsahra Cooperative.	0	10	10	60	70
				Aljafr for orphans raising charity	0	25	25	150	175

[illegible]



Funded Co-operatives for Alternative livelihoods (Equipment and Small Grants) (SOURCE: RSCN)

GEF funding (equipment for alternative livelihoods)										
Grant no.	Recipient	Date Awarded	Location	Activity	Amount (US \$)	Direct beneficiaries*			Other beneficiaries**	Total beneficiaries
						Male	Female	Total		
1	Husseinieh For military retirees	2014	Al Husseinieh	Electric shop	18,955	35	0	35	210	245
2	Al Jafr Agricultural Cooperative	2014	Al Jafr	Projects Support	11,300	18	37	55	330	385
3	Bayer Agricultural Cooperative	2014	Al Jafr	Solar Energy system	19,774	18	12	30	180	210
4	Yellow valley Cooperative	2014	Al Husseinieh	Agricultural Equipment	19,774	275	25	300	1800	2100
5	Taj Alsahra Cooperative	2016	Al Jafr	Revolving fund	20000	0	10	10	60	70
6	Joharat Aljafer Cooperative	2016	Al Jafr	Kindergarden	20000	16	27	43	258	301
7	Ahel Alaentm"a Cooperative	2016	Al Husseinieh	Revolving fund	20000	19	21	40	240	280
8	Saidat AL jafr Cooperative	2016	Al Jafr	Handcraft	20000	0	40	40	240	280
9	Al- derse cooperative	2015	Al Jafr	Telecom Shop	20000	11	11	22	132	154
10	Al -Anab for livestock Breeding cooperative	2015	Al Jafr	Wedding Accessories	20000	89	0	89	534	623
11	Al- Thorayeh cooperative	2015	Al Husseinieh	Revolving Fund	20000	14	22	36	216	252
12	AL- Rashediah cooperative *	2016	Al Husseinieh	Agriculture Pool	20000	21	10	31	186	217
13	Al Husseinieh sport youth club	2017	Al Husseinieh	Sport Ground	20000	0	0	0	0	0
14	Shams-Aljafer Cooperative	2017	Al Jafr	Revolving Fund	20000	0	0	0	0	0
	TOTAL				269,803	516	215	731	4,386	5,117



GEF funding (equipment for alternative livelihoods)										
Grant no.	Recipient	Date Awarded	Location	Activity	Amount (US \$)	Direct beneficiaries*			Other beneficiaries**	Total beneficiaries
						Male	Female	Total		
	*Replaced instead of Khaled Bin Alwaleed Coop.									
Small Grants (HFDJB funding)										
Grant no.	Recipient	Date Awarded	Location	Activity	Amount (US \$)	Direct beneficiaries*			Other beneficiaries**	Total beneficiaries
						Male	Female	Total		
1	Sidat AL-badia AL- Jnobia.	2014	Al Husseinieh	Revolving Loan	14,124.3	0	76	76	456	532
2	Tal Burma Agricultural Cooperative	2014	Al Husseinieh	Agricultural Equipment	14,124.3	55	0	55	330	385
3	Bayer Agricultural Cooperative	2014	Al Jafr	Solar Energy system	14,124.3	18	12	30	180	210
4	Shams-Aljafer Cooperative	2015	Al Jafr	Revolving fund	14,124	3	27	30	180	210
5	Al Najd Cooperative	2015	Al Jafr	Revolving fund	14,124	5	15	20	120	140
6	Saidat Al modaourah Cooperative	2015	Al Jafr	Wedding accessories	11300	0	41	41	246	287
7	Roboo"a Albadia Cooperative	2015	Al Husseinieh	Handcraft	9887	0	24	24	144	168
8	Ahel Alkher Cooperative	2015	Al Husseinieh	Revolving fund	7062	12	14	26	156	182
9	Algadeer Charity	2016	Al Husseinieh	Revolving fund	10653	0	25	25	150	175
10	Bashayer Alkair charity	2016	Al Husseinieh	Revolving fund	10653	13	19	32	192	224
11	Al Husseinieh sport youth club	2016	Al Husseinieh	Sport Ground	20000	128	0	128	768	896
12	Khaled Bin Alwaleed cooperative	2016	Al Husseinieh	Agricultural Equipment	14205	36	0	36	216	252
13	Roboo "odroh charity	2016	Al	Revolving fund	10653	0	31	31	186	217



GEF funding (equipment for alternative livelihoods)										
Grant no.	Recipient	Date Awarded	Location	Activity	Amount (US \$)	Direct beneficiaries*			Other beneficiaries**	Total beneficiaries
						Male	Female	Total		
			Husseinieh							
14	AlSharah charity	2016	Al Husseinieh	Revolving fund	10653	8	23	31	186	217
	TOTAL				175,688	278	307	585	3,510	4,095
					Amount (US \$)	Direct beneficiaries*			Other beneficiaries**	Total beneficiaries
						Male	Female	Total		
				GRAND TOTAL	445,491	794	522	1,316	7,896	9,212

* As per the project's definition, the number of direct beneficiaries is defined by the number of members of the benefitting cooperatives (cf. Project Appraisal Document and Implementation

** As per the project's definition, the other beneficiaries are the family members of the direct beneficiaries, which is estimated to be 6 on average (cf. Project Appraisal Document and Implementation Manual)



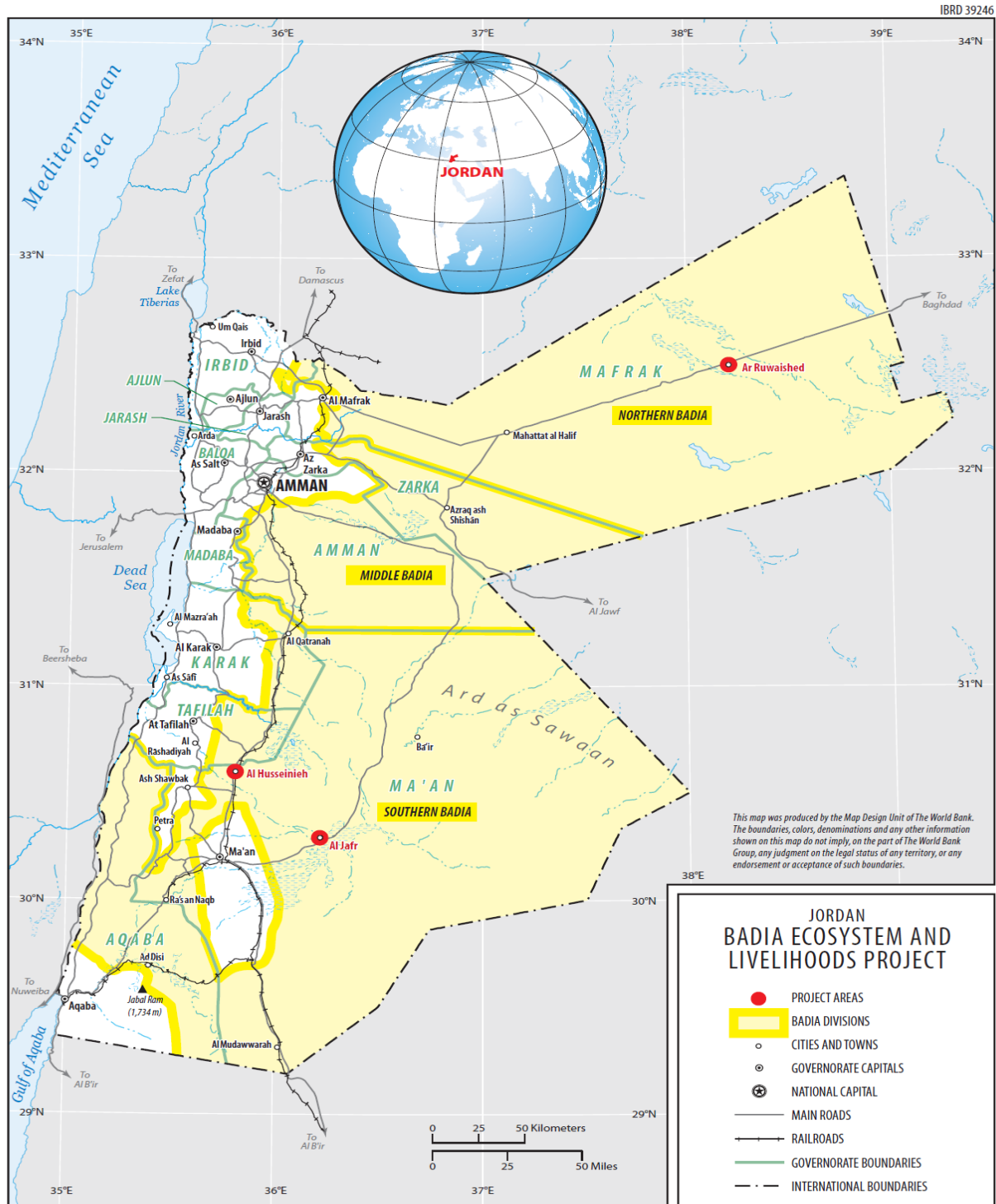
ANNEX 7. Jordan Badia Brochure

Attached

(<http://www.wildjordan.com/eco-tourism-section/jordans-eastern-badia-trail-jebt>)



ANNEX 8. MAP





ANNEX 9 SUPPORTING DOCUMENTS (IF ANY)

Project Documents:

- Project Appraisal Document.
- Grant Agreement.

Implementation Supervision Reports:

- Sequence 1-8

Aide Memoires (and related mission documents):

- Sequence from 2012- 2017

Additional Documents

- Borrower ICR (**attached**)

Additional Documents prepared for the project:

- Socio- Economic Assessment and Process Framework Final report (project entry)
- Environmental Impact Assessment
- Socio- Economic Survey Final report (project closure)
- Ecotourism Development Plan

- **Community Training and Crafts Needs Assessment**
- **JEBT Brochure**
- **Map of Jordan**