



UNITED NATIONS ENVIRONMENT PROGRAMME

Programme des Nations Unies pour l'environnement Programa de las Naciones Unidas para el Medio Ambiente

Программа Организации Объединенных Наций по окружающей среде برنامج الأمم المتحدة للبيئة

联合国环境规划署



PROJECT DOCUMENT

SECTION 1: PROJECT IDENTIFICATION

- 1.1 Project title:** Healthy Ecosystems for Rangeland Development (HERD): sustainable rangeland management strategies and practices
- 1.2 Project number:** GEF ID: 9407
PMS (ADDIS): 01400
- 1.3 Project type:** FSP
- 1.4 Trust Fund:** GEF
- 1.5 Strategic objectives:**
GEF strategic long-term objective: Land Degradation: Integrated natural resources management.
Strategic program for GEF6: LD1-Prog.1: Agro-ecological intensification (Outcome 1.1);
LD3-Prog.4: Scaling-up SLM through Landscape Approach (Outcome 3.2)
- 1.6 UNEP priority:** Subprogram 3: Ecosystem management
EA(a) Use of the ecosystem approach in countries to maintain ecosystem services and sustainable productivity of terrestrial and aquatic systems is increased
Output 2. Tools and technical support provided to countries and partnerships established to improve food security and sustainable productivity in multifunctional landscapes through the integration of the ecosystem approach
ER (a) Global, regional and national policy-making is facilitated by environmental information made available on open platforms
POW2019-2020
EA(a) The health and productivity of marine, freshwater and terrestrial ecosystems are institutionalized in education, monitoring and cross-sector and transboundary collaboration frameworks at the national and international levels
Output 1. i) Increase in the number of countries and transboundary collaboration frameworks that have made progress to monitor and maintain the health and productivity of marine and terrestrial ecosystems
- 1.7 Geographical scope:** Regional multi-country
- 1.8 Mode of execution:** External
- 1.9 Project executing organization:** IUCN-ROWA: International Union for Conservation of Nature

and Natural Resources, Regional Office for West Asia

- 1.10 Duration of project:** 48 months
Commencing: 15 October 2017
Technical completion: 14 October 2021
Validity of legal instrument: 54 months

1.11 Cost of project	US\$	%
Cost to the GEF Trust Fund	3,515,982	29%
Co-financing	12,227,000	71%
<u>Cash:</u>		
The Hashemite Fund for Development of Jordan Badia (HFDJB)	1,900,000	16%
GIZ - German International Cooperation Agency	100,000	1%
Centre for Environment and Development for the Arab Region and Europe – CEDARE	300,000	2%
Desert Research Centre (DRC), Egypt	6,527,000	53%
Ministry of Environment, Jordan	2,000,000	
<i>Sub-total cash</i>	<i>10,827,000</i>	<i>88%</i>
<u>In-kind:</u>		
The Hashemite Fund for Development of Jordan Badia (HFDJB)	1,100,000	9%
IUCN regional office for west Asia & global	300,000	3%
<i>Sub-total in kind(at least)</i>	<i>1,100,000</i>	<i>8%</i>
Total	13,442,982	100%

Project summary

Rangelands that are subject to land degradation are the object of management interventions under this project. The concept of HERD – Healthy Ecosystems for Rangeland Development – is being consolidated through this project on the back of numerous projects, programs, initiatives, studies, scientific articles and policy papers. The current GEF intervention focuses on Jordan and Egypt and on the specific issue of desertification (or land degradation in drylands), which affects pastoral rangelands in these two countries. In addition, the project also proposes serve as a ‘catalyst’ for scaling-up of HERD, both regionally and globally. HERD builds on the sustainable management of pastoral rangelands for the provision of ecosystem services and protection of biodiversity.

The project’s objective is to strengthen restoration and sustainable management of pastoral rangelands for the provision of ecosystem services and protection of biodiversity in Egypt and Jordan and catalyzing scale up regionally and globally.

This will be achieved through the delivery of six results-oriented project Outcomes, grouped under four **Components** that focus on the following: (1) Provision of evidence-based technical assistance; (2) Institutional strengthening for rangeland governance; (3) Up-scaling of good practices in Sustainable Rangeland Management (SRM); and (4) Promoting SRM knowledge management, including at the global and regional levels.

The following are the project’s **Outcomes**: *Outcome 1.1*) Rangeland monitoring systems institutionalized nationally and regionally based on commonly agreed scale-dependent indicators appropriate for different end-user groups; *Outcome 1.2*) Good practices and effective policies in sustainable rangeland management and rangeland rehabilitation identified and prioritized for implementation; *Outcome 2.1*) Local organizations for rangeland management (community and government) engage in more inclusive dialogue for improved rangeland governance covering approximately 500,000 hectares; *Outcome 2.2*) Participating communities use PRMP to guide the establishment of rules and regulations for improved rangelands management (in line with the Voluntary Guidelines on Responsible Governance of Tenure); *Outcome 3.1*) Local farmers / pastoralists adopt good practices in rangeland restoration and management and supporting services with support from local government

agencies; and *Outcome 4.1*) Increased support for sustainable pastoralism in investments and public decision/policy- making, nationally, regionally and globally.

Table of Contents

SECTION 1: PROJECT IDENTIFICATION	1
ACRONYMS AND ABBREVIATIONS.....	9
SECTION 2: BACKGROUND AND SITUATION ANALYSIS (BASELINE COURSE OF ACTION)	11
2.1 <i>Background and context</i>	<i>11</i>
The core problem that the project is addressing	12
Regional context.....	13
Project context in Jordan	14
Rangelands in Jordan.....	14
The Badia	15
Trends in the livestock sector and implications for the degradation of Badia landscapes	15
Initiatives for restoring Jordan's rangelands	16
Project context in Egypt	17
Egypt as a rangeland country	17
Rangelands' ecosystem services	18
Degradation of Egypt's rangelands	19
Initiatives for restoring Egypt's rangelands	20
2.2 <i>Global significance.....</i>	<i>20</i>
2.3 <i>Threats, root causes and barrier analysis</i>	<i>23</i>
Causes of land degradation and drivers behind them	23
Increased stocking and overgrazing	25
Expansion of the agricultural frontier and associated practices and policies	25
Natural phenomena and climate change.....	26
Emerging threats	26
Summary threat profile in project countries.....	27
Solutions for Sustainable Rangeland Management (SRM) in Jordan, Egypt and in similar contexts.....	27
Barriers	28
Barrier #1) Gaps in specific knowledge and data for management.....	28
Barrier #2) Policy failures and institutional capacity constraints.....	30
Barrier #3) Limited practical experience with addressing the SRM challenges	32
Barrier #4) Learning is needed but not sufficiently promoted	34
2.4 <i>Institutional, sectoral and policy context.....</i>	<i>35</i>
Global Level	35
Regional and National Levels.....	36
National policies.....	37
2.5 <i>Stakeholder mapping and analysis</i>	<i>39</i>
2.6 <i>Baseline analysis and gaps.....</i>	<i>44</i>
Summary of the rangeland management status quo	44
The project's financial baseline	46
2.7 <i>Linkages with other GEF and non-GEF interventions.....</i>	<i>49</i>
SECTION 3: INTERVENTION STRATEGY (ALTERNATIVE)	54
3.1 <i>Project rationale, policy conformity and expected global environmental benefits</i>	<i>54</i>
Expected Global Environmental Benefits	55
Social- economic benefits	57
3.2 <i>Project goal and objective.....</i>	<i>57</i>
3.3 <i>Project components and expected results.....</i>	<i>58</i>
Component 1.....	58
Outcome 1.1.....	58

Outcome 1.2.....	60
Component 2.....	61
Outcome 2.1.....	62
Outcome 2.2.....	62
Component 3.....	63
Outcome 3.1.....	64
Component 4.....	65
Outcome 4.1.....	66
3.4 <i>Intervention logic and key assumptions</i>	67
Project sites.....	69
Criteria applied in site selection	69
Overview of sites.....	70
Gender Aspects.....	76
3.5 <i>Risk analysis and risk management measures</i>	78
3.6 <i>Consistency with national priorities or plans</i>	84
3.7 <i>Incremental cost reasoning</i>	87
3.8 <i>Sustainability and Innovation</i>	93
New Sustainable Practices' Adoption, Uptake and Spread.....	93
3.9 <i>Replication</i>	94
The Uniqueness of HIMA	94
Scaling up.....	95
3.10 <i>Public awareness, communications and mainstreaming strategy</i>	95
3.11 <i>Environmental and social safeguards</i>	96
SECTION 4: INSTITUTIONAL FRAMEWORK AND IMPLEMENTATION ARRANGEMENTS	97
4.1 <i>Implementation and execution</i>	97
4.2 <i>Roles of Implementing Agency</i>	98
4.3 <i>Roles of Executing Agency</i>	99
4.4 <i>Project management and technical support</i>	100
4.5 <i>Project Steering Committee</i>	101
Regional and Global levels	101
National Advisory Committees	101
SECTION 5: STAKEHOLDER PARTICIPATION	103
SECTION 6: MONITORING AND EVALUATION PLAN	103
SECTION 7: PROJECT FINANCING AND BUDGET	106
7.1 <i>Overall project budget</i>	106
7.2 <i>Project co-financing</i>	106
7.3 <i>Project cost-effectiveness</i>	106
APPENDICES	108
Appendix 1: <i>Budget by project components and UNEP budget lines</i>	109
Appendix 2: <i>Co-financing by source and UNEP budget lines</i>	115
Appendix 3: <i>Incremental cost analysis</i>	116
Appendix 4: <i>Results Framework and Theory of Change Diagram</i>	117
Appendix 5: <i>Workplan and timetable</i>	125
Appendix 6: <i>Key deliverables and benchmarks</i>	132
Appendix 7: <i>Costed M&E plan</i>	138
Appendix 8: <i>Summary of reporting requirements and responsibilities</i>	141
Appendix 9: <i>Organizational flowchart chart (organogram)</i>	142
Appendix 10: <i>Project Implementation Arrangements</i>	143
DIVISION OF RESPONSIBILITIES	143

Project Steering Committee (PSC).....	143
The PSC will be constituted during the project inception meeting. It is anticipated to have between eight and ten members. The inception meeting will be the 1st meeting of the steering committee. The PSC will meet annually thereafter.....	143
IUCN Regional Office for West Asia (ROWA).....	143
IUCN Global Drylands Initiative	143
National Advisory Committees	144
INTERNAL STRUCTURE	144
EXTERNAL STRUCTURE	144
OVERSIGHT MECHANISM	144
<i>Appendix 11: Terms of References for Staff involved in the Project.....</i>	<i>145</i>
<i>Appendix 12: Co-financing commitment letters from project partners.....</i>	<i>149</i>
Letter 1) The Hashemite Fund for Development of Jordan Badia (HFDJB).....	149
Letter 2) GIZ - German International Cooperation Agency (2 pages)	150
Letter 3) Centre for Environment and Development for the Arab Region and Europe – CEDARE.....	152
Letter 4) Desert Research Centre (DRC), Egypt	153
Letter 5) Ministry of Environment, Jordan (2 pages with official translation).....	154
Letter 6) IUCN.....	156
<i>Appendix 13: Endorsement letters of GEF National Focal Points</i>	<i>158</i>
<i>Appendix 14: Draft procurement plan.....</i>	<i>161</i>
<i>Appendix 15: Tracking Tools</i>	<i>164</i>
<i>Appendix 16: Social and Environmental Safeguards</i>	<i>165</i>
Section A: Project location	165
Section B: Environmental impacts	166
Section C: Social impacts	166
Section D: Other considerations	167
<i>Appendix 17: Maps.....</i>	<i>168</i>
<i>Appendix 18: Additional Context and Background.....</i>	<i>169</i>
<i>Appendix 19: Country Report – Jordan (separate file - 97 pages).....</i>	<i>169</i>
<i>Appendix 20: Country Report – Egypt (separate file - 84 pages).....</i>	<i>169</i>
<i>Additional Context and Background.....</i>	<i>170</i>
1) The HERD Concept and Hima	170
2) The economics of rangeland degradation in Jordan and Egypt.....	172
3) Baseline Finance Details	176
4) Project Bibliography	183

Lists of Tables, Figures and Boxes

Table 1. Intensity of and profile of land degradation in the project areas	27
Table 2. Stakeholder Analysis Overview	39
Table 3. Financial Baseline Summary Overview	46
Table 4. Project HERD core Linkages	49
Table 5. State of rangelands' degradation in project sites (preliminary PPG assessment).....	56
Table 6. Number of affected people within the project boundary	57
Table 7. Project Landscapes: Characterization of area in which project is located & Land Degradation Problem	71
Table 8. Brief Site Description Matrix	72
Table 9. Project Risk Matrix	79
Table 10. Incremental Cost Reasoning and Analysis	87
Table 11. Summary of contributions of Project Co-financing to Project Components (\$ millions)	115
Table 12. Incremental Cost Matrix.....	116
Table 13. Key deliverables for Egypt, Jordan and Regionally	132
Table 14. Indicative Monitoring and Evaluation Work Plan.....	138
Figure 1. Land uses by dryland category.....	21
Figure 2. Proximate and underlying driving forces of land degradation.....	25
Figure 3. Methodology: Defining HERD landscapes and site-level indicators.....	60
Figure 4. Sites in Jordan	74
Figure 5. Sites in Egypt	75
Figure 6. Organizational chart.....	97
Box 1. The extent of rangelands in Egypt assessed during the PPG	18
Box 2. Specific on rangeland management in Jordan – from the 2014 Strategy.....	34
Box 3. About the VGGT in Pastoral Lands and relevant for the HERD Project.....	36
Box 4. On rangeland restoration.....	68
Box 5. Gender mainstreaming in reviving the Al Hima In Jordan	77
Box 6. The Hima approach as an entry point for Sustainable Rangeland Management	171

Acronyms and Abbreviations

ACSAD	Arab Center for the Studies of Arid Zones and Dry Lands
AGIR	Arab Geographical Information Room
AWC	Arab Water Council
CBO	Community-based organization
CEDARE	Centre for Environment and Development for the Arab Region and Europe
CFS	Committee on World Food Security
CIHEAM-IAMM	Centre International de Hautes Etudes Agronomiques Méditerranéennes - Institut Agronomique Méditerranéen de Montpellier
COP	Conference of the Parties
CSO	Civil Society Organization
DELP	Desert ecosystems and livelihoods knowledge sharing and coordination project
DRC-Egypt	Desert Research Centre, Egypt
ENID	Egypt Network for Integrated Development
ENPARD	European Neighbourhood Program for Agriculture and Rural Development
EOAR	Environment Outlook for the Arab Region
FAO	Food and Agriculture Organization of the UN
FAO-PKH	FAO-led Pastoralist Knowledge Hub
FAOSTAT	Statistical Division of FAO
GEF	Global Environment Facility
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)
HERD	Healthy Ecosystems for Rangeland Development
HFDB	The Hashemite Fund for Development of the Jordan Baadia
ICARDA	International Center for Agricultural Research in the Dry Areas
IFAD	International Fund for Agricultural Development
IUCN	International Union for the Conservation of Nature
IUCN ROWA	IUCN's Regional Office in West Asia
LDN	Land Degradation Neutrality
LUCC	land use/cover change
M&E	Monitoring & Evaluation
MA	Millennium Ecosystem Assessment
MENA	Middle East and North Africa (Region)
MoE	Ministry of Environment /Jordan
MOPIC	Ministry of Planning and International Cooperation, Egypt
MRG	Minority Rights Group International, under the UNHCR
NAP	National Action Program, under the UNCCD
PES	Payment for ecosystem services
PPG	Project Preparation Grant
PRAIS	Performance review and assessment of implementation system, under the

	UNCCD
ProDoc	Project Document
PRMP	Participatory Sustainable Rangeland Management Planning
BRP	Badia Restoration Program
RBG	Royal Botanical Gardens, Jordan
RSCN	Royal Society for the Conservation of Nature
SDGs	Sustainable Development Goals
SDS	Sand and Dust Storm
UNEP	United Nations Environment Program
WISP	World Initiative for Sustainable Pastoralism

SECTION 2: BACKGROUND AND SITUATION ANALYSIS (BASELINE COURSE OF ACTION)

2.1 Background and context

1. Rangelands that are subject to land degradation are the object of management interventions under this project. The concept of HERD – Healthy Ecosystems for Rangeland Development – is being consolidated through this project on the back of numerous projects, programs, initiatives, studies, scientific articles and policy papers. The current GEF intervention focuses on Jordan and Egypt and on the specific issue of desertification (or land degradation in drylands), which affects pastoral rangelands in these two countries. Yet, the project also proposes serve as a ‘catalyst’ for scaling-up HERD, both regionally and globally. HERD builds on the sustainable management of pastoral rangelands for the provision of ecosystem services and protection of biodiversity.
2. By definition, rangelands can be found in a variety of land cover types: grasslands, shrublands, woodlands, wetlands, and deserts. The term rangeland is used in both an ecological and a social sense. Ecological the term relates to rangeland ecosystems which can be defined as “land on which the indigenous vegetation (climax or sub-climax) is predominantly grasses, grass-like plants, forbs or shrubs that are grazed or have the potential to be grazed, and which is used as a natural ecosystem for the production of grazing livestock and wildlife”.¹ Rangelands can also be more broadly defined as “land carrying nature or semi-natural vegetation which provides habitat suitable for herds of wild or domestic ungulates”.² At another level the term rangeland refers to the management unit – a socio-political construct, which may contain a great diversity of other ecosystem elements and areas suitable for other uses like cultivation. Some of these elements may not be classified as rangeland ecosystems. For example, oasis ecosystems, wetlands, riparian forests, woodland patches, areas of “rich patch” vegetation, and higher altitude forests (e.g. mist or alpine forests). Yet these resources within rangeland landscapes are often critical—sometimes seasonally essential—to the functioning of the rangeland management units and the associated livelihoods.
3. Globally, rangelands cover an estimated 50% of the total land area of the world³ and between two thirds and three quarters of all drylands.⁴ Most natural rangelands occupy land that is not suitable for cropping, because the climate may be too dry or too cold, or because the land is not cultivable for different reasons (e.g. topography, soils). Rangelands are also the subsistence basis of several pastoral societies throughout the world – likely 200 to 500 million people globally. Rangelands used by pastoral feeding systems account for 45% of ice-free land area and, according to FAO, 70 % of the world agricultural land area.⁵
4. The quest for managing rangelands sustainably is one of global relevance. For the rangelands comprised within drylands, the impact of the process of land degradation is particularly severe. It is a major barrier for sustainably exploiting the suite of ecosystem services that healthy rangelands can render to humanity: pasture, habitats for rare biodiversity, soil fixation, nutrient recycling and carbon storage, as well as the cyclical availability of water for renewing life and grazing grounds. The latter is especially important in drylands, which are some of the world’s most harsh environments. Land degradation – and desertification in its

¹ Allen et al., 2011.

² Pratt, Greenway and Gwynne, 1966.

³ See e.g. Friedel et al., 2000; Lean et al., 1990

⁴ MEA 2005, Neely et al., 2009

⁵ Asner et al. 2004, and FAO 2008 in Nkonya et al. (ed.), 2016.

extreme form – breaks down the balance that maintain rangelands healthy and curtails the flow of ecosystem services from these globally important areas.

5. The sustainable management of rangelands is also closely related to the maintenance and renewal of cultural traditions, some of which have lasted centuries and have been the basis for a balanced approach to rights and responsibilities linked to tenure land rangelands. Understanding how these traditions transform and adapt, and supporting this process to favor sustainability, is vital for maintaining rangelands productive under pastoral use. Therefore, the project will have a strong focus on governance, policies, knowledge management and up-scaling, as it will be explained in the background and strategy sections that follow.

The core problem that the project is addressing

6. Land degradation is one of the world's most pressing environmental challenges, although estimates of its global extent vary considerably. A recent analysis of long-term trends in land degradation, with a scope of 25 year and using an inter-annual vegetation index as an indicator of biomass production, found that land degradation hotspots cover about 29% of global land area and occur in all agro-ecologies and land cover types. While it is widely accepted that rangelands are susceptible to land degradation, the global extent of this degradation is contested. Le *et al.* (2014) find “Land degradation is especially massive in grasslands”, whereas Bai *et al.* (2008) find that only 20-25% of degrading land is rangeland, and of the 16% of land that is improving globally, 43% is rangeland.
7. Rangelands have been characterized in the literature as a one of the most degraded biomes in the world, with one author mentioning that 73% of world's rangelands are degraded, which represents almost 20% of global pasture.⁶ Grazing biomes are especially important for the world's livestock production and their degradation causes a serious threat to the global livestock productivity. Pastoralism plays a key role in preserving the livelihoods of poor, rural households, therefore livestock has not only economic, but also social functions.
8. It is therefore important to understand and consider the long-term trends and conditions that affect the productivity of rangelands for identifying the best management intervention in any given point in time and in the different locations. This also implies taking into account the policy and economic drivers that influence land use in rangelands, as well as the impact of natural and anthropogenic climatic drivers.
9. Most importantly, what is manageable is **societies' response to these drivers** – i.e. how adaptive land-use practices and land tenure policies are in the face of challenges. In Jordan and Egypt, which are the focus of this GEF intervention, climatic variability and land stewardship practices are the most relevant factors influencing the sustainability of rangeland management. These conclusions are backed by country analysis and surveys carried out during the PPG phase, which have oriented the development of the project strategy.⁷
10. In this light, addressing barriers to **sustainable rangeland management** (SRM) linked land use governance mechanisms, which both influence the prevailing land stewardship practices and shape land users' response to edaphoclimatic conditions, is the core focus of the project.
11. HERD stands for Healthy Ecosystems for Rangeland Development. Rangeland health is linked to the persistence of ecosystem function and, in general terms, healthy rangelands are those where their ecosystem services continue to produce the optimal range of benefits to

⁶ *Ibid.*

⁷ See PPG studies in the [ProDoc Annex 1a](#). See also IUCN (2011) and Davis et al. (2015).

society. However, it is recognized that different parties may value ecosystem services differently and the optimal use of rangelands is something that needs ongoing negotiation. For this reason, governance is at the heart of this initiative.

For a thorough description of the HERD Concept, including global and regional ramifications, refer to [Appendix 18](#)

Regional context

12. As a specific form of animal husbandry, pastoralism implies the strategic movement of herds in response to certain drivers, including access to seasonally-limited resources like fresh pasture and water, and avoidance of seasonal threats such as disease and resource competition. It is a successful strategy to support a population on less productive land, such as rangelands. Pastoralism has been defined as “extensive livestock production in rangelands” and pastoralists—including *inter alia* shepherds, agro-pastoralists and nomads—are the best positioned to be good stewards of these globally important landscapes.
13. The Arab world has a strong cultural heritage in relation to pastoralism, and as a predominantly dry region with limited arable land, pastoralism is the most widespread land use system. Linked to it is the Bedouin culture, thus defined in the literature: “*The name Bedouin comes from the Arabic badawi, which means ‘desert dweller’. The Bedouin are traditionally nomads. They live in tents and move from place.*”⁸
14. The Bedouin economy is largely based on livestock and herding, with goats and dromedary camels traditionally comprising the Bedouins’ livelihoods. As socio-economic conditions change, there is a tendency towards sedentism (or even sedentarization⁹), urbanization and economic diversification. The exact number of Bedouin tribespeople living in the MENA region¹⁰ is uncertain, but one source mentions approximately 21 million, with Sudan and Algeria harboring the largest numbers, with up to 10 and 2 million, respectively.¹¹
15. In Jordan, Bedouins are the second largest ‘minority group’, after the Palestinians, even though only 6% of them live a fully nomadic lifestyle.¹² Bedouins are often referred to as the “backbone of the Kingdom”, especially considering that most Jordanian nationals and a portion of the large Palestinian refugee population (many of whom are now considered mainstreamed into the country’s social-ethnic fabric), descend from the Bedouin or have related tribal origins.¹³
16. In Egypt, Bedouins reside mostly in the Sinai Peninsula, in the suburbs of Cairo and in the coastal areas of the Matrouh Governorate. In the Sinai Peninsula in particular, the Bedouins’ livelihoods are threatened by widespread unemployment and security challenges, in addition

⁸ Losleben, 2003.

⁹ Sedentarization (or forced sedentism) is referred to when a dominant group restricts the movements of a nomadic group.

¹⁰ The following countries are typically included in the MENA Region definition (Middle East and North Africa): Algeria, Bahrain, Djibouti, Egypt, Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Libya, Malta, Morocco, Oman, Qatar, Saudi Arabia, Syria, Tunisia, United Arab Emirates, West Bank and Gaza, and Yemen. Ethiopia and Sudan are sometimes included.

¹¹ Bedouin – Wikipedia, English, retrieved on 10 Dec 2016 (<https://en.wikipedia.org/wiki/Bedouin>).

¹² MRG (Minority Rights Group International, under the UNHCR), 2007. The source indicates that ethno-demographic statistics for Jordan should be interpreted with caution.

¹³ Demographics of Jordan – Wikipedia, English (https://en.wikipedia.org/wiki/Demographics_of_Jordan), retrieved on 13 Dec 2016.

to the erosion of their traditional values and land tenure rights (including access to grazing grounds).¹⁴

17. For the past decades, large numbers of Bedouin started to leave the traditional, nomadic life to settle in the cities of Midwest Asia. This is in part driven by desire for improved standards of living, often available in the rich oil States of the Gulf. It is also a response to social marginalization (in Syria, Algeria and Egypt e.g.) and but equally to the shrinking of the best available rangelands, i.e. areas with warmer winter temperature and sufficient grazing grounds after the rains.
18. Also, Bedouin populations in the region have grown since the 1950's, and at similar rate to that observed in mainstream society. This gradually created competition in the access to the ranges and added pressure on rangeland productivity. The trends in population growth experience among Bedouins were in part due to high fertility rates, and in part due to a marked decrease in child mortality rates. The latter was triggered by improved access to health care and immunization.¹⁵ Notably, some governments in the region also introduced inclusive policies aimed at reaching out to Bedouin people, offering access to health, education and housing services, which led inevitably to their sedentarization. Cultural transformation ensued and it is still on-going, although there has been insufficient consideration of how to balance the increasing sedentism of the human population with the continuing need for herd mobility to maintain rangeland health.
19. Finally, armed conflict is an extant factor with respect to rangelands in several countries in the MENA region. At times, armed conflict resulted in the unilateral closing of borders, with the consequence of hindering the traditional movement of livestock within trans-boundary rangeland. While it is known that livestock movement is a key factor that can contribute to the sustainability of rangeland management, it is difficult to predict how the prolonged closing of borders will affect the state of degradation of rangelands in the region – e.g. in connection with the on-going conflict in Syria. Yet, the response will necessarily need to include improved and adaptive management.

Project context in Jordan

Rangelands in Jordan

20. In Jordan, the concept of 'rangelands' is defined by law, in particular the Agricultural Law No. 20 of 1973, which predicates that rangelands are "*All lands registered as such and any other state-owned lands where annual rainfall is below 200 mm, and that the lands do not have sustainable irrigation, or are barred from public use*".
21. From the above definition, whether a piece of land of any size can be considered a rangeland, this is initially based a land cadastre entry ("*lands registered as such*"). To these, State owned lands with poor rainfall (<200 mm) are added, provided that irrigation is not viable in those particular lands. Also, based on this legal definition, it can be derived that at least 91% of the land surface in Jordan is covered by rangelands, including the Badia, steppes, and parts of Jordan Valley. In practice, it is estimated that rangelands can cover up to 97% of Jordan's

¹⁴ *Ibid.*

¹⁵ Total fertility rates (number of children born to a woman during her childbearing years) is decreasing in the MENA region, in tandem with global trends, but they are still relatively high. Half of MENA countries have e.g. rates that are above the global average of 2.4. In Jordan and Egypt, it is 3.18 and 3.53, respectively (source: CIA Factbook, 2015).

land area, considering that extensive livestock production is not perfectly confined to areas below 200mm precipitation. Furthermore, because of strong inter-annual variability of rainfall, rangelands in Jordan would in theory have a ‘minimum’ and a ‘maximum’ extent, depending on the year (see Appendix 19- PPG Report for Jordan in a separate file).

22. The legal definition of rangelands is useful in terms of asserting land use and tenure. It does differ however from the operational definition of rangelands under the project (discussed in Section 2.2) – that “rangelands are considered social ecological landscapes”, and to the extent that the key criteria for defining the location of rangelands, as per Jordanian law, is a measure of rainfall.

The Badia

23. The Badia is a part of Jordan, located in the northwest edge of the Arabian Desert. It is a flat and arid land, characterised by average annual rainfall between 50 and 200 millimetres and high seasonal contrasts of temperature. As a bio-geographical region, the Badia Steppes extend in a continuum into Syria, where it covers 55% of the country.¹⁶ The Badia comprises 80% of Jordan’s land mass, specifically arid and semi-arid rural regions. Its vegetation is classified as Saharo-Sindian and Saharo-Arabian types. The northern part of Badia region is far richer in biodiversity than the southern one, mainly because of the proximity of massive Azraq Basin, the oasis and a higher average rainfall. It also contains globally significant habitats, including 27 internationally important bird areas, and is a place where many indigenous and endangered species live.
24. Currently, around 350,000 people (6.5% of the Jordanian population) live in the Badia, including several Bedouin tribes. Although historically these areas were inhabited mostly by Bedouins, now they predominantly live in cities and villages scattered throughout the region. Additionally, Badia is considered as one of the most impoverished parts of the country, what is largely attributed to high level of illiteracy and the fact that the sources of income of Badia inhabitants are limited.

Trends in the livestock sector and implications for the degradation of Badia landscapes

25. Around 60-75% of the Badia is under active use by extensive livestock producers for grazing purposes. About one third of Jordan’s livestock (which counts between 800,000 to 900,000 heads of sheep) are raised in the Badia on the basis of semi-nomadic systems and seasonal grazing that is mostly based on natural vegetation. About 48% of the Badia rangeland communities depend on it in their livelihood.
26. Raising livestock through extensive systems is a way of life and source of income for a large number of rangelands’ inhabitants. Traditional grazing cycles were based on a transhumant system that enabled the natural regeneration of grasses and social regulation of access and tenure, governed at the local and even tribal level, with little interference from formal government. This system no longer exists or it is currently very limited, included by the closing of borders due to conflict, and traditional grazing rights are today mostly ignored.
27. Jordan’s rangelands are a source of valuable ecosystem services, in terms of habitats and availability of grazing grounds for livestock. Other services also include the purification and infiltration of ground water, the steady supply of medicinal herbs, and storing the genetic diversity of flora and fauna. Depending on conditions, rangelands can also contribute to climate change mitigation and adaptation. Throughout the area east and south of the western

¹⁶ Badia (region), Wikipedia, English, retrieved on 30 Dec 2016).

Jordan highlands, rangelands also play an important role in the water cycle, serving as the watersheds that receive rainfall, yield surface water and replenish groundwater.

28. However, for the last two decades, the rangelands of Jordan are being subject to progressive resource depletion and degradation due to multiple anthropogenic and natural factors. Overgrazing and precocious grazing are the main culprits behind the loss of topsoil and local decreases in biomass content. Another main cause is human encroachment and land conversion, which replaces natural rangelands with artificial pastures, with a predominance of cultivated grasses, a practice whose sustainability (economic and environmental) needs to be better studied and understood, given the prevailing dryland conditions of the Jordan's Badia and the land tenure condition in specific sites.
29. The land degradation status of rangelands is also constantly impacted by frequent droughts and unsustainable management practices. E.g. natural water harvesting practices and management systems such as the HIMA (a traditional system of resource tenure that has been historically used in the Arabian Peninsula) are gradually being abandoned.. In addition, various policy and economic factors contribute indirectly as drivers of land degradation. A study by IUCN assesses that ecosystem services in the Jordanian rangelands have been in decline over the past five decades, including: livestock fodder deficits, soil erosion, loss of biodiversity and vegetation cover, decline of carbon sequestration rates, and expanding desert margins.¹⁷ Drought and land degradation function in this context and self-reinforcing phenomena, which resulted in suite of negative consequences for the ecology of rangelands and the livelihoods of the people who depend on them.
30. The core problem of rangeland degradation in Jordan was thus defined in the Updated Rangelands Strategy of 2014 (mentioned in more detail in [Section 2.4](#)):

“The grazing resources used to sustain the flocks of grazing animals most of the year, and supplemental feeding was practiced only in drastic situations such as severe-prolonged drought or very cold conditions. At present, different studies reported that the natural grazing resources are highly degraded and their contribution to the feeding calendar of grazing animals is less than 20% [...]. The original productivity of the steppe and Badia before 1990 was estimated at [200kg and 80kg per hectare¹⁸] of dry matter, respectively. While after 1990 and due to the unsustainable policies and practices that prevailed during that era, the productivity of the rangeland represented by the steppe and Badia was estimated at [100kg and 40kg per hectare] of dry matter, respectively. This means that the traditional pastoral systems are at risk and about 250,000 of inhabitants (5% of Jordan's population) engaging directly or indirectly in pastoral activities will be severely affected.”
31. As it is, over the last twenty years, fodder production in Jordan decreased while imports of grain as complementary fodder took hold and a direct subsidy to livestock feed was being provided. At present, the rangelands of Jordan cannot provide animal feed for more than 3 month during the good rainy seasons and less than one month or none during the drought years. It is important to find solutions to this problem.

Initiatives for restoring Jordan's rangelands

32. In June 2005, Jordan was awarded funding for environmental compensation in the aftermath of the 1990-1991 Gulf War by the United Nations Compensation Commission (UNCC). Part of the funds, at an amount of \$160M, was slated to specifically target the rehabilitation and

¹⁷ BRP-NCDR (2011). The Badia Restoration Program and the National Center for Research and Development (BRP-NCRD) (2011): Securing Rights and Restoring Range Lands for Improved Livelihoods in the Badia of the Zarqa River Basin – Jordan. Baseline Study. IUCN, Amman.

¹⁸ In this passage, units were converted from “dunum”, a local land surface measurement unit, equivalent to 0.1 ha.

restoration of the Badia's terrestrial ecosystem. Decision by the UNCC's Governing Council on what came to be called the Badia Restoration Program (BRP) was made in 2013 and the implementation of activities started shortly after. The BRP is being implemented in the Northern Badia, where the great majority of Bedouins live by investing in water harvesting, improvement of vegetation cover and productivity, socio-economic activities and M&E. The BRP is targeting 2000 to 2300 Bedouin households and about 30 to 40 percent of the country's livestock population.

33. In 2014, Jordan adopted a new Rangeland Strategy, which places communal management and tenure at the centre of rangelands development, to improve the management of their area. However, the institutional and organizational factors, causing rangelands degradation are still being underestimated. Interventions have been largely sectoral with poor overall coordination, and with little focus on community rights and responsibilities, or legal processes for Sustainable Rangelands Management. There is potential for 'cross-fertilization learning' through this project, given that Egypt has experimented with similar community-based approaches.

Project context in Egypt

Egypt as a rangeland country

34. Beyond the areas of barren land (i.e. white desert¹⁹ and lands with rocky surface, which compose 94% of the country), Egypt has vast areas of rangelands within the semi-arid to hyper-arid range. Those areas sustain limited biodiversity compared to other areas, but it is high in terms of actual and potential ecosystem services. The entire area of Egypt's rangelands is estimated to be 4 to 10 million of hectares and it is very diverse.
35. Most of the entire rangeland area is covered with sparse vegetation – in 60% of the rangeland area, vegetation cover does not exceed 4% of total surface cover. The healthiest rangelands can be observed in the north part of the country. As the available data defining the size of Egypt's rangelands is rather scant, it is established that including rainfed croplands (treated as "mixed systems" in Egypt's Tracking Tool for this project – see [Appendix 14](#)), rangelands cover up to 15 million hectares. Northern rangelands have semi-arid climate, moderated by maritime influence and supports a fragile resource base, with a low and highly erratic rainfall averaged at about 150 mm on the coast and up to 20 km inland, but drastically declining thereafter, where core barren lands are found.

¹⁹ Areas where precipitation is too low to sustain any vegetation at all, or at most a very scanty shrub.

Box 1. The extent of rangelands in Egypt assessed during the PPG

Information related to Egyptian rangelands is very limited. During the PPG phase of project HERD, the best method for identifying the total area and location of rangelands in Egypt was studied with the assistance of a team from the LAS-AGIR/AWC (see note below*).

MODIS satellite images (250 m) acquired during the period from 2000 till 2014 have been used to assess vegetation cover and its frequency (NDVI was the key variable studied, against climatic data). The total area of the studied scene covered 70% of Egypt's total surface. The results of the study showed that Egypt has little effective rainfall (at most 200 mm annually) and that it is unequally distributed across time and space. This has important implications for the variability of the extent of Egyptian rangelands, which can be thus summarized:

"The Rangelands areas in the part of Egypt that was studied cover around 4 to 15 million hectares, and are characterized by a minimum and a maximum extent, depending on the year and influenced mostly by rainfall seasonal and distribution (both annual and inter-annual), as well as its intensity on a specific location. Hence, an area that may be considered rainfed croplands in one year could be a rangeland in another.

Furthermore, stocking density varies considerably during the grazing season and this parameter too has important implications for the extent of rangelands. Most flocks graze the southern rangelands during the rainy season, but have to abandon this pasture in the dry season due to lack of water. This lack of water is an important factor in restricting the extent, state and feasible use of a specific rangeland landscape and the strategy for its protection and management.

Fully defining the 'pendular' aspect of rangelands in Egypt and determining the key factors for their optimal management would require more studies." (from HERD, PPG Report #2, by Erian, 2016)

Additionally, the mentioned study showed the following:

- The results show that Egypt has vast areas of poor rangeland and that the total rangelands areas reach between 4- 10 million hectares and this is supported by scientific studies;
- The healthiest rangelands areas exist in the northern coast areas of Egypt;
- Due to inter-annual climatic variability, 40% of the rangelands areas have been observed in at least 11 years out of the 15 years that the study covers. These include areas with sparse vegetation cover, of which only 4-15% have total coverage;
- The remainder of the country's rangeland (i.e. 60% of the rangelands areas) have been observed in only 7 out of 15 years, they are scattered (less than 4% total coverage) to sparse vegetation's, and other shrubs, herbaceous vegetation's cover in brackish and salty water areas were also observed.

[*] Note: This refers to the Arab Geographical Information Room (AGIR), which has been instituted in 2015 and is hosted by the Arab Water Council (AWC), and supported by a Unit of Technical Excellence established by a decree of the LAS Arab Water Ministerial Council.

Rangelands' ecosystem services

36. The rangelands of Egypt contribute to production within the livestock sector, although they provide only 5 percent of animal product nationally. Else, the sector depends heavily on Egyptian clover (berseem) as the main forage crop and on crop residues and by-products. The cultivated area of clover ranges from 1.05 to 1.26 million hectares annually in the Delta and Nile Valley. There is a competition between berseem and wheat, especially on old land, where the productivity is the highest for both crops.²⁰
37. Even though the national contribution of rangelands to the livestock sector is limited, locally, the dependence is much higher, e.g. in the coastal Governorate of Matrouh, where rangelands consist of a sparsely vegetated land strip between coastal plains and the desert landscapes further south. Land use in Matrouh revolves around livestock production either through grazing of rangelands or through opportunistic barley (and to a lesser extent wheat) cultivation with both grain as well as the straw used for feeding of small ruminants or cattle. Bedouin people comprise 85% of the population in Matrouh and they pursue both mixed farming systems (sheep/goat-barley-tree and fruit crops) and rangeland use, all according to agro-climatic conditions. The further inland the more are the people nomadic. The rangeland strip is found approximately 15-50 km inland and inhabitants are semi-nomadic, who use the land largely for small ruminants grazing, with scattered barley cultivation in land depressions

²⁰ FAO, Country Pasture/Forage Resource Profile, Egypt, retrieved on 08 Dec 2016.

and wadis. Beyond 50-km inland, the ‘open-range’ area lies, where a nomadic population live almost exclusively on animal production, mainly camels. Tourist villages provide seasonal work for some of the young Bedouin.

38. Livestock production in Matroah has adapted to the climatic trends (with 2 or 3 dry years per decade). Although livestock production under prevailing climatic conditions is risky, livestock owners in Matrouh are able to avert this risk through: a) the purchase of barley and processed feed and b) by transporting their animals to the Delta or Siwa oasis during years of severe drought.
39. In this light, it can be said that rangelands in Egypt provide many important ecosystem services, such as regulating water flows and mitigating climate change, and they secure habitat to important biodiversity. Rangelands’ biodiversity provides the basic productive resources of pastoralism and pastoral resilience depends on protecting and sustainably using that biodiversity. The practice of mobile herding brings many environmental benefits by mimicking the natural wild herbivore movements on which rangelands depend for their existence.
40. Carrying capacity of Egyptian rangelands varies throughout their entire area and it highly depends on the rainfall, but also on management systems.²¹ A fundamental challenge to SRM is that rangeland managers should avoid using carrying capacity as a practical management tool for planning grazing activities and livestock movement, unless they use it dynamically. Else, all management recommendations would end up being too conservative, which can be harmful to livelihoods in grazing-dependent areas. Practical approaches to managing grazing pressure dynamically, coupled with the strengthening of other SRM tools, is one of things that the project proposes to do on the ground.

Degradation of Egypt’s rangelands

41. Egypt, as a drylands country, face unique challenges for sustainable management, mainly due to high uncertainty of precipitation and variability that affect any policy and development planning. This extreme variability has led to increased poverty and environmental degradation, and requires adaptations in many places, both in terms of drylands biodiversity, and in drylands livelihoods. The southern desert area, shows a stationary land degradation trend, as its use is limited by the lack of water, and consequently is mainly used by camels or, seasonally, by small ruminants.
42. The pressure on the northern rangelands in the settlement zone closer to the coast is much higher. Many social and biophysical stresses, including climate risks that affect pastoralists and communities that use the rangelands, have taken place in recent decade. They weakened the capacity of pastoralists to manage their land sustainably, which led to the gradual degradation of rangelands, contributing to loss of ecosystem services which results in increased poverty and vulnerability, greater risk of drought and other crises – all in a vicious cycle that appears hard to break.
43. Environmental constraints linked to land degradation comprise loss of top soil and biomass, habitat fragmentation, overgrazing, loss of biodiversity, salinization of soil, and over exploitation of nutrient and water (ground water) resources. This process of natural resources degradation is also related to local poverty and lack of viable livelihoods alternatives. This is particularly accentuated in the rangelands of the Sinai Peninsula.

²¹ PPG Report shows the variations according to the area.

44. From a national policies' point of view, process drivers include uncoordinated regional development, limited investment in improving and restoring rangelands productivity, as well as governance difficulties at both the local and national levels. As a result, the most productive grazing areas within rangelands are often transformed into agricultural land, leading to increased water and wind erosion of soil in surrounding areas, as well the gradual decrease in productivity of the cropland that had been converted. Ultimately, weak scientific support for good practices, disagreement over rangelands' ecology and their management, and weak evidence of rangelands' health or degradation also impede their sustainable management of rangelands in Egypt.

Initiatives for restoring Egypt's rangelands

45. The past decade has shown progress in the understanding of pastoralism, and particularly its environmental merits. Global initiatives for 'Sustainable Pastoralism' have demonstrated the growing number of success stories in sustainable pastoralist development and rangelands management.
46. The government of Egypt has e.g. invested in rangeland rehabilitation programs since the 1950's, mostly through project. Currently, governmental investment is done through the Drylands Development Center. An important program for north-western coastal zone and rangeland has been the Matrouh Resource Management Project (MRMP), which included GEF investment ran from 1993 to 2003. MRMP aimed at to establish improved pastures and conserve the existing grazing lands through multiple actions, such as restricted grazing, planting trees or shrubs for soil stabilization etc. Other projects followed, but there is a general tendency in the baseline programs to seek the sedentarization of nomadic people rather than seeking to enhance the sustainable use rangeland.

2.2 Global significance

47. For the purposes of this project, **rangelands are considered social ecological landscapes** that consist of a complex array of features, including grasslands, shrubland, forest and woodland, wetlands and other riparian zones and so on. As a result, they fall into the responsibility of many state institutions, including Ministries of Agriculture, Forestry and Environment, but because they are not the top priority for any single ministry, they sometimes fall between the gaps between institutions, receiving below average investment and poorly designed policies.
48. Although from a crop production perspective rangelands are considered 'marginal lands' in several countries, their global and local significance should not be underestimated. Rangelands play an important role in global carbon cycles, sequestering carbon at high rates and storing it in above- and below-ground biomass. They protect watersheds and maintain hydrological cycles which often have transboundary benefits. Rangelands also provide habitat for biodiversity and provide connectivity between different habitat types. Additionally, rangelands provide livelihoods for hundreds of millions of people as well as food, fiber and other resources for global consumers.²²
49. Globally, rangelands occupy up to half of all land and up to three quarters of the world's drylands, providing benefits to local communities, to economies and to global society.²³ In

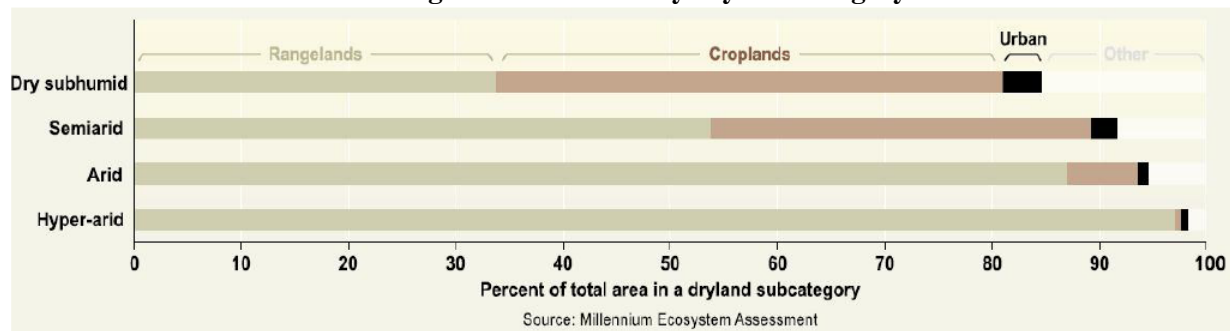
²² McGahey et al., 2014.

²³ Davies et al., 2015.

fact, the dryer the land type, the higher the proportion of land that is used as rangeland (see Figure 1).

50. Given the high level of geographic coincidence between rangelands and drylands, as displayed in Figure 1, there is a need for solutions to the problems and challenges that affect those specific sub-sets of land types and land-uses. This is particularly important for the countries and regions where the more arid climate sub-types predominate.
51. Furthermore, the demand for livestock products is rapidly increasing at the global level, in both medium and low-income countries. In 2003, FAO assessed that the total demand for animal products in developing countries would more than double by 2030.²⁴ Associated with it, two tendencies that are relevant for SRM are observed: (i) there will be a change in livestock production practices, from a local multipurpose activity to a more intensive, market-oriented and increasingly integrated production processes; and (ii) pressure on, and competition for, common property resources such as grazing and water resources would increase.

Figure 1. Land uses by dryland category



Source: Millennium Ecosystem Assessment (MEA), 2005.

52. This is relevant because a quarter of the world's land is used for grazing, and extensive pasture provides 30 percent of total beef production and 23 percent for mutton.²⁵
53. In Egypt and Jordan countries, extensive grazing systems have increased production by herd expansion, rather than by substantial increases in productivity. However, the global market share from extensive systems is declining relative to other, more intense production systems. Additionally, the availability of rangelands is decreasing, through arable land encroachment, land degradation, conflict and so on. Hence, the scope for further increasing herd numbers in these systems remains, on the one hand, limited. On the other, due to the unique environmental benefits of the rangelands, in a future world that is more conscientious of environmental impacts, it is possible that rangeland-based livestock production will be favored for its environmental and health benefits²⁶.

²⁴ FAO, 2003.

²⁵ FAO, 1996e, cited in FAO, 2003.

²⁶ McGahey et al., 2013. In addition, this has been documented by the GEF-funded "World Initiative on Sustainable Pastoralism". Numerous countries outside the Arab region explicitly promote pastoralism in order to protect rangeland landscapes. It is a goal of HERD to promote this vision. See also Davies *et al.* (2015).

54. Desertification, or land degradation in the drylands is the most important problem or challenge that rangeland managers and users face. There is therefore a strong case for managing rangelands sustainably – and SRM is a core concept explored by this project.
55. Sustainable management of rangelands in the project landscapes can contribute to unlocking the potential of these areas, which are considered marginal, by providing a wide range of goods and services. For rangeland users and managers, sustainable rangeland development must be based on harnessing this diversity, rather than intensive investment in single goods. In a recent technical brief, IUCN argues that economic valuations demonstrate the high value of rangeland ecosystem services like water cycling, carbon sequestration and sedimentation control, and indicate where investments are likely to have the greatest aggregate return.²⁷ The project will demonstrate how these benefits can be captured and will strengthen knowledge on their value to society.
56. Sustainable management of rangelands requires innovative solutions both to manage the high levels of climatic risk that are experienced there and to address the many other unique features of dryland ecology. Such innovations are found in customary management practices in the project areas, but such practices have been undermined by development and policy interventions. Re-enabling customary practices and supporting them to develop in a modern economy is central to sustainable rangeland management. Local institutions are vital for rangeland development and effective solutions tend to be grounded in improvements in local governance and communal resource rights.²⁸
57. The 2030 Agenda for Sustainable Development recognizes the importance of supporting pastoral systems while also increasing productivity in the agriculture sector and simultaneously protecting biological diversity, managing waste, and reducing greenhouse gases. It thus provides an opportunity to work globally towards a holistic transformation. Sustainable Pastoralism is a means to deliver on the global 2030 Agenda and Sustainable Development Goals through monitoring SDG 15, Life on Land and its interlinkages with all the 17 SDGs. UNEP is the custodian agency that has been tasked with monitoring environmental indicators and works closely with its member states and sister agencies to deliver the SDG agenda, at the national regional and global level.
58. The United Nations Environment Regional Office for West Asia (UNEP-ROWA) has a lead regional role in strengthening the environmental dimension of Sustainable Development, providing regional and national support including to Jordan and Egypt to monitor SDG environmental indicators using the integrated approach. This support entails building linkages of SDG 15 and Land Degradation Neutrality goal with all relevant sectors and promoting synergies and cooperation with related Multilateral Environmental Agreements (MEAs) and United Nations Development Assistance Frameworks (UNDAFs). UNEP-ROWA is supporting the regional SDG process and is supporting the mainstreaming of national environmental policies including Pastoralism into national and regional strategies and mechanisms.
59. Demand for livestock products is growing globally, and the livestock sector is increasingly regarded as an environmental threat. The United Nations Environment Assembly of the United Nations Environment Programme Second session (UNEA 2) adopted a resolution on Pastoralism, “Combating desertification, land degradation and drought and promoting sustainable pastoralism and rangelands. (UNEP/EA.2/Res.24; Nairobi, 3 August 2016). This resolution was supported by Jordan’s Minister of Environment. The resolution *Requests* the

²⁷ *Ibid.*

²⁸ *Ibid.*

United Nations Environment Programme, in partnership with Governments, scientific institutions, United Nations agencies, civil society, pastoralists, communities and other relevant stakeholders, to contribute to the strengthening of the science-policy interface on sustainable pastoralism and rangelands.

2.3 Threats, root causes and barrier analysis

60. Land degradation is triggered by drought, population growth, intensive farming practices, overexploitation, urbanization, climate change. Behind these direct causes are harmful policies and economic drivers. The project looks more specifically at rangelands and the land degradation process, from global, regional and national perspectives – the latter, by focusing on Jordan and Egypt through this GEF intervention.
61. The core constraints to using rangelands in the drylands of developing countries are linked to the natural climatic variability, with cycles of drought that can last decades and erratic rainfall, and the fact that most soils are nutrient deficient, particularly in nitrogen and phosphorus. In addition, there is often an uneven distribution of these nutrients across the surface of soils.
62. Rainfall, which in average is significantly more variable in (semi-)arid rangelands than in rangelands in other climatic regions has important consequences for vegetation growth and for the land carrying capacity, including animal numbers. In Australia, e.g. it showed to be 10-20% more variable than the world mean for comparable regions. Ignorance about this aspect lead early settlers (since 1840) and governments into implementing a suite of failed policies and practices for conquering the country's rangelands.²⁹ Today, we know that measures of stocking and overstocking, would need to ideally follow the dynamic patterns of rainfall over time through careful management of pastoral activities. Yet, this remains highly contextual and must rely on good analysis.
63. In North African and West Asian countries, rangeland management systems that persisted for years are those that have been adapted to natural conditions. They are based on mobility of livestock with very limited to no active cultivation of the soil. Overgrazing should be faced as a risk factor to be mitigated, although as stated below, the terminology can be misleading. Harsh climatic conditions that are typical of these regions will be most likely exacerbated by climate change, posing an even greater challenge to the resilience of current management systems.

Causes of land degradation and drivers behind them

64. A seminal study from 2002 on rangeland degradation analyzed the problem from a global perspective and pointed out to **cultivation and overgrazing** as the main direct causes of this process in the (semi-)arid regions in developing countries.³⁰ Both apply to Jordan and Egypt and both relate to human and animal population pressure, which challenges the land's carrying and recovery capacity. Firewood collection further denudes rangelands. Yet, both in Egypt and Jordan, it is assumed that the heart of rangelands is not very affected by woody biomass collection because the energy matrix in these countries makes limited use of fuelwood for cooking and heating.
65. Understanding the main culprits of land degradation in rangelands:

²⁹ Mannetje, 2002.

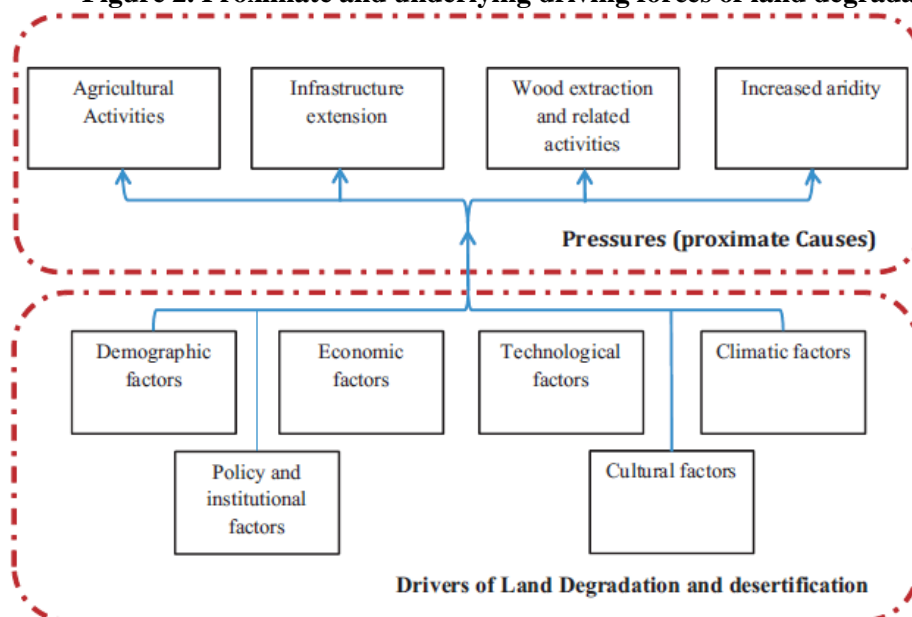
³⁰ *Ibid.*

- **Cultivation**, in this particular case, refers to the process of converting land use and changing the land cover of rangelands by actively introducing selected plant species, possibly using irrigation for cropping. This reduces the size of rangelands available for pastoral systems. Locally, it can also have a negative impact on the availability and quality of water resources and, depending on the settings, accelerate the process of topsoil loss.
- **Overgrazing** means the excessive grazing of plants by wildlife or livestock. The term is often used to describe situations where livestock graze an area permanently rather than necessarily in too high numbers. Permanent grazing, even in low numbers, can be highly damaging to rangeland health, since the most nutritious pasture species are consumed before they can reproduce, allowing less palatable species and non-pasture species to dominate. High stocking levels emerge locally in a typical situation after years of high rainfall. Overstocking often leads to overgrazing when animals are confined to limited areas, but where herd mobility is maintained, the total population size is not considered the biggest threat to rangeland health. The cyclical, but yet erratic abundance of rains give large responses in terms of vegetation growth, which in turn leads to high conception and birth rates of grazing animals (domestic, feral and wild). Animal populations imperfectly track the resource availability and, as vegetation levels decline again, there are often periods of fodder deficit and localized over-population. Eventually this would lead to die-off in the animal population. However, with today's technology, what would be a natural ecological ceiling for the animal population is removed, thanks to interventions to protect livestock mortality, including improved access to veterinary drugs and use of complementary fodder. Under such conditions, overstocking and overgrazing effectively causes land degradation. This requires new approaches to controlling herd pressures and movements, including improved use of markets to facilitate off-take, and usually demands a change in traditional herding strategies.

66. Land degradation processes are complex and there are many inter-related drivers and pressures. A typical land use succession that leads to the degradation of rangelands can be summarized as follows, where we highlight problems in the decision-making systems and practices:

- With an increased human population, natural habitats, including rangelands, are encroached into, giving way to settlements, infrastructure and croplands.
- As a result, we are experiencing throughout the developing world a rapid conversion of the best rangelands and seasonal resource patches to crop farming. This is likely happening at a faster pace than forest conversion.
- As demand for food increases, farmers may increasingly adopt shorter fallow periods, thus continuously reducing the area and quality of rangeland for an ever-increasing animal population reared through extensive pastoral systems.
- As rangelands are reduced and key resource patches are removed from the system, pastoralists are confined to smaller and less productive areas and their mobility is reduced.
- Measures are taken to address the subsequent symptoms of poverty, economic decline, increased vulnerability, and land degradation.
- These interventions often try to protect the livestock population at all costs without considering the need to adapt mobility patterns and herding strategies and the need to replace ecological caps on population growth with alternative mechanisms of control.

67. Poor decision-making functions as a driver of rangeland degradation. Beyond that, the basic model that summarizes the driving forces of land degradation can be thus simplified as in Figure 2.

Figure 2. Proximate and underlying driving forces of land degradation

Source: Adapted from Geist and Lambin (2004) by Davies et al., 2015 [Davies J., Ogali C., Laban P. and Metternicht G., 2015. *Homing in on the Range: Enabling Investments for Sustainable Land Management. Technical Brief 29/01/2015. Nairobi: IUCN and CEM. vi+23p*].

68. Specifically for the rangelands of Jordan and Egypt, the following are the direct causes of Land Degradation of relevance for this project:

- Increased stocking and overgrazing
- Expansion of the agricultural frontier and associated practices and policies
- Natural phenomena and climate change
- Emerging threats

Increased stocking and overgrazing

Increasing stocking of sheep, goats, as well as camelid species, without adequate management in areas with already low levels of vegetation cover causes overgrazing. This has results in loss of natural forage and associated species, bare ground, soil erosion, and increased soil compaction, especially near watering places. Both in the more fertile lands of the Jordan's Badia and in Egypt's northern coast rangeland stoking levels are high and likely in the increase (according to national statistics). Increased stocking immediately results in reduced vegetation cover, which in turn enhances the effect of wind erosion, excessive surface runoff and dune movement. In local habitats, increased stocking can also impact wetlands, where they exist, and associated ecosystems. Overall, overgrazing affects the production and regulation functions of ecosystems.

Expansion of the agricultural frontier and associated practices and policies

Both in Jordan and Egypt, there are attempts to expand the agricultural frontier through intense investment of irrigating and fertilizing marginal lands. This is normally a localized phenomenon in these countries, but it does affect the viability of rangelands for its most common use, which is extensive pastoralism. More

importantly, it results in sudden drops in the water table, pollution of aquifers (e.g. in nearby wetlands, as in the case of certain sites in Jordan), in the loss of natural biodiversity and in the soil salinization.

Cultivation expands first into areas with reliable access to water and inevitably these are areas that have traditionally provided drought refuge for pastoralists. These areas that are extremely critical to the viability of pastoralist activities. Hence, the disruption caused by agricultural expansion to the health of rangelands should not be underestimated. In the Near East/North Africa region, e.g. FAO projected that more than 90% of total arable land would be in use by 2030.³¹

Although Jordan has a Rangeland Management Policy (approved in 2014), it remains generic and it is yet to recognize the importance of ecosystem services rendered by ‘refuge habitats’ in the health of rangelands. Furthermore, well intentioned agricultural policies with a focus on food security, coupled with financial instruments and other incentives in use in target countries (e.g. credit, subsidies) can inadvertently result in the degradation of rangelands.

At times, fire is also used as a land conversion technique, even though several rangeland areas are not within usual the bushfire risk ranges. Yet, when used in higher biomass rangeland areas, fires also reduce the coverage of both grasses and woody species. At the same time, fire is a natural phenomenon in rangelands and it is used as a pasture management tool by pastoralists to cope with periodic surplus vegetation, since the risk of under-grazing of these surpluses will allow invasion of bush. Fire management is therefore used to limit woody biomass expansion and to favor grass growth. Where fire management has been restricted or banned the total woody biomass has frequently increased leading to fewer but more severe fires that are much more ecologically damaging.

Natural phenomena and climate change

Natural phenomena, such as strong winds and changes in rainfall distribution, are accentuating the human-induced land degradation processes that affect rangelands in both Jordan and Egypt. The region is experiencing increased natural disasters, including recurrent drought and sandstorms. These phenomena are taking place to differing degrees in the two countries. In addition, climate projections forecast reduced precipitation in both Egypt and Jordan, combined with higher temperatures, which will increase pressures on resources, particularly water, and may also exacerbate land degradation trends.

Emerging threats

Other emerging threats, which are bound to affect rangelands, include migration to cities and suburban areas, which is often associated with a loss of traditional knowledge and increased pressure on natural resources. Demographic changes can in turn also provide opportunities, besides the cultural transformation threat just referred. Opportunities would be linked to improved connections between the rural and urban economies, which could potentially capitalize on the advantages created by new markets, new resource flows and access to new knowledge and technologies.

Precarious land tenancy over rangelands is also an issue that undermines adoption of SRM practices. Given that this is an important but complex driver, it will be more thoroughly discussed in under the [Barriers’ section](#).

³¹ FAO, 2003.

Summary threat profile in project countries

69. At the level of the two target countries for this project, Jordan and Egypt, the threats and drivers behind land degradation in rangelands show tangible nuances, which have been summarized as follows:

Table 1. Intensity of and profile of land degradation in the project areas

Type of threat	Cause of LD	(1) Jordan, Sura and Bani Hashim (Middle and Northern Badia)*	(2) Jordan, Southern Badia*	(3) Jordan Al Hazeem (Northern Badia)	(4) Egypt, Abou-Mazhoud-El Zewaid*	(5) Egypt, Gaioin*	How land degradation manifests itself in the project areas:
General	Biodiversity loss	2	1	1	3	3-4	Loss of natural habitats due to disturbance, introduction of alien species and/or overharvesting of (e.g. of medicinal plants)
	Soil quality reduction	2	1	1	1	2	Soil is mostly sandy and increasing losing fertility; reduction of wetlands (in Hazeem-Azraq-Qattafi e.g.) due to fast capillary rise; soil and water degradation; soil chemical pollution is affecting all three sites
	Human Pressure	2	1	1	2	3-4	Increased pressure on water resources, increasing water deficits
	Animal Pressure	3	2	2	2	3-4	Increased pressure on natural pasture leading to overgrazing
	Water Erosion	3	1	2	1	1	Increased soil erosion, top soil washed away, formation of gullies and even canyons near steep slopes; loss of water regulation function
	Eolic Erosion	3	1	2	1	3-4	Increased soil erosion; reduced productivity & water regulation
Specific	Fire	0	0	0	0	0	Loss of ecosystem goods; changing soil composition.
	Agriculture expansion	1	0	1	0	0	Loss of vegetation; increased water demand for irrigation; water and soil contamination from excessive fertilizer use
	Overgrazing	2	2	1	2	3-4	Alterations in plant composition and productivity of natural pasture; increasing exposure and erosion of soil
	Irrigation	1	0	0	0	0	Increased salinization; increase water deficits; high indices of inefficient soil-water-plant management (36% efficiency)
	Mining (rocks; lime; gold; oil)	2	0	0	0	0	Increased soil alkalization and salinization; decreased quality and quantity of water, groundwater contamination.
Emerging	Climate change	2	2	2	2	2	Increase in extreme events; increased water and soil erosion and loss of fertility

* Location of sites (refer also to ProDoc Atlas in Annex):

(1) The landscapes of Sura and Bani Hashim are located in a close distance from each other in Northern and Middle Badia respectively.

(2) The landscape of Al Manshyah is located in the Southern Badia.

(3) The landscape of Al Hazeem is located in Northern Badia.

(4) & (5) Landscapes of Abou-Mazhoud-El Zewaid and Gaioin in North Western Coast, Governate of Matruh, Egypt

* Guiding legend for the overall intensity of land degradation in the different locations.

1. Light: The terrain has somewhat reduced agricultural suitability, but is suitable for use in local farming systems. Restoration to full productivity is possible by modifications of the management system. Original biotic functions are still largely intact.

2. Moderate: The terrain has greatly reduced agricultural productivity, but is still suitable for use in local farming systems. Major improvements are required to restore productivity. Original biotic functions are partially destroyed.

3. Strong: The terrain is non reclaimable at farm level. Major engineering works are required for terrain restoration. Original biotic functions are largely destroyed.

4. Extreme: The terrain is unreclaimable and beyond restoration. Original biotic functions are fully destroyed.

Solutions for Sustainable Rangeland Management (SRM) in Jordan, Egypt and in similar contexts

70. This project, with both a sub-regional and global perspectives, has selected Jordan and Egypt as focus countries to showcase management strategies for strengthening the restoration and

sustainable management of pastoral rangelands for the provision of ecosystem services and protection of biodiversity.

71. **The long-term solution** sought by the project is to strengthen restoration and sustainable management of pastoral rangelands for the provision of ecosystem services and protection of biodiversity. This will be done through this GEF intervention in Egypt and Jordan. The project will also contribute significantly to catalyzing the scale up of SRM, both regionally and globally.
72. The selection of these two countries is both timely and useful. One of the main environmental problems facing the Arab Region is land degradation and desertification which has become a serious socio-economic and health issue. We can expect that these problems will be exacerbated by climate change.
73. Additionally, when we consider land-use governance, the gender disparity that often characterizes societal relationships in the Arab Region needs to be taken into account, when solutions for sustainable rangeland management (SRM) are being sought.

The differences and commonalities between the rangeland management strategies that predominate in Jordan and Egypt respectively provide a good sample for mutual learning and for catalyzing the process of scaling-up sustainable practices, both regionally and globally. The same also applies to the governance frameworks that influence land use and the economics and rangeland management. There is also regional convergence on the matter, e.g. as seen the most recent Hima Forum held in October 2016, when several countries committed to taking into consideration the usefulness of Hima land governance frameworks in the management of rangelands and in the promotion of sustainable development for the people who protect them (see [ProDoc Annex 1a](#) for a description of the HERD Concept and Hima). Besides Hima, the project will also explore other forms of customary land use governance to strengthen SRM, including through its regional and global perspective.

74. In **Section 3 (Intervention logic and key assumptions)**, the implications of the proposed long-term solution and its scope are also discussed.

Barriers

75. The long-term solution described in the previous sub-section has been conceived to address the threats and drivers that specifically apply to this project. However, there are **four barriers** that impede the realization of the solution, as follows:
 - Barrier #1) Gaps in specific knowledge and data for management
 - Barrier #2) Policy failures and institutional capacity constraints
 - Barrier #3) Limited practical experience with addressing the SRM challenges
 - Barrier #4) Learning is needed but not sufficiently promoted

Barrier #1) Gaps in specific knowledge and data for management

The state of knowledge about rangelands is generally weak. To start with, there is no universal definition of rangelands and, as yet, no agreed measurement of their extent.³² Measurement of rangeland health is rendered challenging by the lack of easily-defined “natural” states, since the high levels of climate variability mean that rangelands are usually in a state of continuous non-equilibrium. Defining a baseline

³² Allen et al., 2011.

state against which degradation can be measured is therefore challenging. There is often little consensus over the desirable state of rangelands management between, for example, conservationists, foresters and livestock managers. Similarly, there is considerable disagreement, even between scientific communities, over the positive and negative impacts of factors like grazing and fire on the health of rangelands, when analyzed within vast landscapes.

Additionally, there are marked differences between official and scientific definitions of ‘rangeland’ and different popular perceptions of what rangelands are.³³ For example, grazing is an important use of rangelands but the term ‘rangeland’ is not synonymous with ‘grazing lands’. Livestock grazing can effectively be used to manage rangelands by harvesting forage to produce livestock, changing plant composition or reducing fuel loads. However, how this applies would be highly contextual. Regarding perceptions and definitions, it is notable e.g. that in Jordan the definition of rangeland is statutory.³⁴ Yet, for the purpose of management of specific areas, this could either turn out be an advantage or a barrier. Regardless, the lack of common denominator is a barrier to SRM.

Furthermore, the gaps in data, conceptual definition and more accurate information about rangelands have significant implications for investments in these areas. Notably, the UNCCD Second Science Conference showed convincingly that investment in ‘sustainable management’ of lands affected by land degradation is more cost effective than investing in ‘restoration’. In other words, rather invest in *preventing* land degradation, or in avoiding its aggravation, by sustainably managing these vast swaths of land, than to invest in *remediating* a process that is known to gradually denude the land and leave it virtually unproductive. The latter is assumed to be much more costly. Another problem is that the costs of restoring rangelands are variable and highly contextual and so are the techniques that may be prescribed for recuperating land productivity in each case. Therefore, it is at times difficult to make the case for SRM unless with very concrete and context specific data.

At the same time, the sheer scale of rangelands and the high value of their ecosystem services would in theory be powerful reasons for ensuring that appropriate investments and policies are in place to support their sustainable use. At the level of countries, this underscores the importance of understanding the cost of land degradation on rangelands, as well as the need for and usefulness of local assessments on land degradation. For example, in Egypt, the exact extent of rangelands is contested. It varies between 4 to 10 million of hectares. As this is a powerful multiplier, the costs – and benefits of addressing land degradation is either 4 million or 10 million hectares would be very different.

In the age of big data, it is notable that much data relevant for addressing Land Degradation is available or can potentially be gathered at low cost. Initiatives such as FAO’s Global Assessment of Soil Degradation (GLASOD) and its closely related LADA (Land Degradation Assessment in Drylands) are examples. Through a beta system, they made accessible an enormous amount of information to rangeland users and managers. However, many countries have weak capacity in the field of rangeland ecology to be able to explore the benefits of this data for SRM.

Another key problem has been lack of consistency in translating the results of assessments into identifying cost-effective management interventions strategies that take into account the role of pastoralism in reinforcing SRM.

³³ This is e.g. discussed in Mannetje, 2002.

³⁴ With reference to Agricultural Law No. 20 of 1973, which predicates that rangelands are “*All lands registered as such and any other state-owned lands where annual rainfall is below 200 mm, and that the lands do not have sustainable irrigation, or are barred from public use*”.

Also, the use of formally established mechanisms and methodologies for monitoring rangeland health is still very incipient in both Jordan and Egypt. Remote sensing technologies offer new possibilities but insufficient work has been carried out to ground-truth data.

Current experience with SRM points out to livestock management being a powerful tool for manipulating ecological communities in rangelands and for ensuring the ideal balance between trees, shrubs, grasses and other biodiversity, determined according to production requirements. The most sustainable practices are generally those, which pursue multiple production objectives—environmental as well as economic—and it is important to ensure a balance of regulations and incentives to promote this “multifunctionality”. IUCN’s publication “Minimum Standards in Sustainable Pastoralist Development” provides a framework for improved assessment of good practice. A key question remains in terms of how to combine the normative guidelines contained in these standards with science and viable land-use enforcement mechanisms.

At the heart of are the economics of rangeland management and development. Although many of the more harmful investments in rangelands—privatization of land, sedentarization, maximizing yields of single products—are increasingly discouraged, there remains a gap between recognizing which policies and investments to avoid, and proactively developing good policies and investments. Some would argue the importance of providing conservation-oriented economic incentives is another key tool for SRM. The key challenge though, which needs to be overcome at various levels, is to devise solutions, including by taking cost-benefit analysis into consideration, and to ensure the feasibility and applicability of these solutions to specific contexts.

In sum, the general uncertainty generated by the gaps in specific knowledge and data for rangeland management has at times functioned as a reason for inaction from the parts of rangeland managing authorities.

Barrier #2) Policy failures and institutional capacity constraints

Managing rangelands, across time and across large landscapes, it is necessary to manage grazing pressure, land use and the mobility of livestock. Within the HERD Concept, solutions imply reinforcing the governance of rangeland tenure with a view to both ensuring the long-term health of rangeland ecosystems and an equitable and responsible management of use and control rights. This requires an approach to governance of tenure that is both normative and utilitarian.

At the same time, a weak understanding of rangelands (as explained in [Barrier #1](#)) and the inappropriateness of some policies and investments has much to do with the long-term trend towards the marginalization of pastoralists – the principal managers of rangelands.

Pastoralism has evolved to guarantee survival in the high resource-variability of rangeland ecosystems, but pastoralists are frequently ignored in decision-making and policies and investments have been at best unhelpful, and at worst antagonistic to their management of rangelands. Long-term underinvestment in basic development, low consultation and weak natural resource governance are major factors in degradation of the rangelands.³⁵

Weakness in communal rangeland governance and tenure are amongst the most serious desertification risks in the target countries. Customary institutions for communal rangelands management have become weakened and have not adapted well to the requirements of engaging with the modern state. Mechanisms for creating rational grazing plans, incorporating seasonal patterns and refuge zones for use during harsh

³⁵ Niamir-Fuller, 1999; Davies et al, 2010.

climatic events, and for optimizing herd grazing and rest periods, need to be strengthened and adapted to new patterns of resource availability and emerging economic opportunities as well as new climate risks.

There is growing scientific validation that communal resource management is both necessary and efficient in the rangelands.³⁶ Emerging good practices revolve around building community rangeland institutions (Rangeland User Associations, Hima Communities, etc.) for improved governance and management of rangelands. These institutions strengthen local-level decision-making on a day-to-day basis for SRM, and simultaneously strengthen the relationship between pastoralists and government for improved public investment and policy. However, the skills required to replicate these institutions are often in short supply.

More specifically for Jordan and Egypt, rangelands development suffers from lack of agreement over the objectives for rangeland management, even though progress was made recently in Jordan through the adoption of the 2014 National Rangelands Policy. Still, in both countries, pastoralists are not always adequately consulted in key planning processes that affect their access to rangelands or their potential stewardship function vis-à-vis these areas. Additionally, and to different degrees in the two countries, there are inconsistencies in rangeland, livestock and other related policies, which generally results in negative impacts to rangelands (see e.g.). Policy failures and inconsistencies lead to poorly coordinated investments, as well as tension between land uses and the use and management of rangelands and their ecosystem services.

In fact, a number of policies in Jordan and Egypt could potentially support sustainable pastoralist development, but often the most favorable policies are poorly implemented because of funding shortfalls and uncoordinated efforts and limited stakeholder engagement. As for harmful policies and measures, there is a general tendency towards status quo and very few analytical studies on the effectiveness of these policies and measures. This point is made clear in the appraisal document (or ‘roadmap’) for Jordan’s Badia Restoration Program (BRP), quoted here:

“Access to the rangelands and the use of its water resources are largely free, and it is in the interest of individual livestock owners to utilize these resources to maximize the size of their herds. As there is no individual or collective responsibility to manage and maintain the rangelands, the livestock owners tend to overgraze and over exploit the resource to their advantage.

[...]

Granting property rights or at least very long-term grazing rights to local communities is the most important resources conservation and management tool, yet also the most complex one. Whatever the solution found to allocate a part of the rangelands to a specific group and whatever the means of protection from neighbors and intruders, the sustainability of any project will be lacking if the group of beneficiaries is not given enough security in terms of duration and inheritance for future generations.”³⁷

The mentioned BRP appraisal document also makes a specific critique of government policies that provide subsidized feed to livestock, among untargeted drought mitigation policies that have been implemented in Jordan, and which also had the side-effect of making the Bedouin population more sedentary. Given the volumes of supplementary feed provided and the way the cash transfers were delivered³⁸, these subsidies, as policy measures can be considered a ‘direct incentive’ for overgrazing and the destruction of the environment. According to the report, similar policies have also been implemented to different degrees in

³⁶ Ostrom, 1990.

³⁷ Ministry of Environment, Jordan (2008). Remediation and Restoration Projects Regarding the Terrestrial Ecosystems in Jordan. Roadmap - Overview and Phase I. Prepared for the UNCC by Envicon and GFA Consulting Group. pp. 36 and 38.

³⁸ Quoting again: “Capital accumulation has facilitated the purchase of tractors, water tankers and trucks as well as more stock--thus creating an upward spiral of demand for supplementary feed as the per capita rangeland contribution declines.” (*Ibid.*)

the Mashiq and Magreb countries. The report also concludes the following regarding the impact of government policies on livestock and the environment:

“At their current high population levels ruminant livestock are having a detrimental impact on the environment in the low rainfall areas, especially on the shrinking area of natural grazing lands, both through the escalation of livestock numbers, and through the expansion of mechanized barley cultivation for feed production. Productivity per head of livestock has not increased (although total output of meat and milk has). Productivity per hectare both of rangelands and of barley appears to have declined and there has been little technological change.”³⁹

The National Rangeland Strategy was developed in 2001. The Strategy and the related legislations have not been effective mainly because of the absence of national consensus and the lack of integrated plans. The status of poor management and use of the rangeland resources has not changed, which led to destruction of plant cover and weakening of productive capacities of rangelands.

In terms of awareness and the global and regional discourses, policy makers have a growing interest in engaging with indigenous, traditional and customary knowledge and mobilize community agency in support of SRM goals. Access to local and scientific knowledge at the policy-level has enabled a more detailed understanding of the social and environmental issues, and this is evident in policy strategies and national action plans. Also, both in Jordan and Egypt, attitudes amongst policy makers towards pastoralism and its role in combating desertification remain mixed, creating policy conflicts that can undermine progress towards environmental goals. In Egypt, uncoordinated regional development is considered a key policy barriers to SRM, even though a more rational use of the country’s rangelands offers sustainable and local development opportunities, in particular in the Matrouh Governorate.

Convincing arguments have been made that the most cost-effective strategy to management of the rangelands is to capitalize simultaneously on the multiple benefits of sustainable pastoralism⁴⁰, but this demands inter-sectoral cooperation and coordination, which is often missing. Regional declarations in support of pastoralism, such as the African Union Policy Framework for Pastoralism in Africa⁴¹, provide inspiration for better-coordinated investments, but a comparable regional framework is currently lacking in the League of Arab States Region (LAS).

Finally, at the global level, Voluntary Guidelines on the Responsible Governance of Tenure (VGGT) were launched in 2012 by FAO and partners, touching upon the most important global commons – namely land, fisheries and forests (discussed in ProDoc Section 2.4). Under the VGGT umbrella, specific guidelines for rangelands were designed by IUCN on rangelands.⁴² While this is a positive move in the global agenda, the challenge is how to apply these guidelines within the policy frameworks of specific countries.

Barrier #3) Limited practical experience with addressing the SRM challenges

Despite policies that could often enable sustainable management of rangelands, for example through more secure communal resource management arrangements, examples of good practices remain limited and policies remain poorly implemented in the rangelands. This is particularly true for the project’s targeted countries – Jordan and Egypt. When experiences do exist, or are being developed (e.g. through the BRP in

³⁹ *Ibid.*

⁴⁰ Davies et al., 2012; Davies et al., 2010

⁴¹ See e.g. AU, 2010

⁴² In 2016, IUCN wrote the FAO Technical Guide to implementing the VGGT in Pastoral Lands

Jordan), the long-term learning is often not catered for in baseline interventions, which links up to the [next barrier](#).

Throughout the MENA region there is a tension between the aims of the agricultural sector to maximize food output and how this can be reconciled with the goals of sustainable development, given the constraints imposed by the natural climatic and soil conditions to food production. Land degradation and anthropogenic climate change pose additional constraints.

IUCN's experience, particularly in the MENA region, has shown that investments in communal tenure and natural resource governance are among the most effective in delivering SRM at scale, and that in the long run these investments are low cost. These investments can initially be highly demanding in both time and facilitation skills and depend on governments and development partners making the right kinds of investments: prioritizing long-term change in attitudes and practices over short term delivery of physical investments. Many interventions fall into the trap of assuming that material investments are needed to solve development problems. Yet there are numerous examples of investment in rangeland water facilities that have led to rangeland degradation and reduced productivity.

Specifically for Jordan and Egypt, the following constraints apply, relating to the implementation of SRM practices on the ground:

Annex Table 1. Summary National level barriers for SRM in Jordan and Egypt

BARRIER MANIFESTATION	APPLIES JORDAN	APPLIES TO EGYPT
Inadequate planning SRM practices at scales required to reduce the threat of land degradation to rangelands	Applies to a great extent.	Applies to a great extent.
Insufficient inter-sectoral coordination among government entities, including poor commitment on the part of governments for pastoral areas.	Applies in part -- coordination exists, but needs improvement	Very limited coordination among entities and across administrative levels.
Insufficient experience with application of SRM practices in sites that would facilitate upscaling, including lack of trained rangeland and pastoral development specialists.	Does not totally apply -- there is significant and relevant experience, but limited long-term monitoring of outcomes and impacts. Yet, the 2014 Rangelands Management Strategy mentions the following barriers: (i) lack of appropriate training, planning and management units, as well as research units in the field of desertification, land degradation and drought; and (ii) lack of an Integrated approach in public planning in the field of desertification, land degradation and drought.	Applies - there is experience, but highly insufficient to address the issues affecting the majority of rangelands in Egypt.
Financial constraints, including lack of alternative employment opportunities in pastoral areas,	Applies in part -- see e.g. baseline finance section, showing the past investments in rangeland / Badia management. In general, rural finance remains restricted, except where targeting irrigated agriculture and livestock subsidies.	A strong barrier for Egypt. The financial baseline seems strong, but very few interventions are specifically targeting the challenges to rangeland management.
Weak systemic and institutional capacities for controlling land degradation & upscaling SRM at the national level, including poor quality of education among pastoralists limiting their access to appropriate technologies.	Applies and this has backing in national policies (Updated National Rangeland Strategy of 2014) -- there are dedicated institutions with an expanding capacity, yet always room for learning and improving. The Strategy mentions that previously relevant legislations have not been effective mainly because of the absence of national consensus and the lack of integrated plans.	Applies -- we observe fragmented institutional mandates and difficulties in implementation.

Box 2. Specific on rangeland management in Jordan – from the 2014 Strategy

Quoting from Jordan's 2014 Rangeland Management Strategy, the following passage clearly outlines the constraints in the baseline situation:

"Livestock contributes about 55% of the agricultural production. Sheep and goats are the predominant livestock species in Jordan. The animals are generally raised on a crop-residue, planted fodder and barley grain based system with the rangeland contributing about one month of livestock feeding in normal years. This contribution is severely reduced in overgrazed areas and during extended drought years.

The maximum potential contribution of improved rangeland is not expected to exceed 30% of the daily feed requirements of one adult sheep or goat [...].

Supplementary feed has been encouraged by the government barley subsidies and reducing forage availability and has as a result led to decreasing profit margins of producers and low competitiveness of their products at national and international markets.

Twenty years of subsidies and ease of transportation around the desert have encouraged the livestock industry to become dependent on barley, which accounted for 63% of feed costs for producers.

The government policy for subsidizing prices of imported inputs especially during the dry seasons has also encouraged livestock herders to keep large number of animals exceeding the carrying capacity of the rangeland."

In addition, the following have been highlighted in the Strategy as **specific threats, causes and barriers to SRM practices in Jordan**:

- Overgrazing and too early grazing.
- Encroachment of barley cultivation into grazing lands leading to soil erosion and loss of indigenous plant resources and consequently loss of land fertility, productivity of forage and biological diversity.
- Uprooting of bushes for firewood by pastoral communities.
- Uncontrolled arbitrary movement of vehicles in grazing lands and availability of modern low-cost transportation.
- Increasing livestock densities leading to overgrazing and degradation of grazing land with loss of an important source of feed.
- Loss of traditional grazing practices depending on availability of natural forage (eastward and westward flock movements, Hima etc.) mainly due to demographic and agricultural development in higher rainfall areas which caused elimination of grazing in these areas and forced the livestock to stay all the time in the eastern range lands causing early and over grazing.
- Ploughing of marginal lands to ensure property rights over the land.
- Lack of regulations for rangeland use. Large areas are allocated for mining, military training and other uses.
- Lack of legislation that is sufficient to protect and manage the ranges, and failure to enforce existing legislation.
- Tribal land problems.
- Insufficient institutional environment for range management.
- Lack of staff specialized in range development and management.
- Lack of reliable information on the condition, dynamics and trend of rangelands.
- Poor coordination between institutions and projects working in the field of range, and scattered efforts among the various institutions.

Barrier #4) Learning is needed but not sufficiently promoted

In a rapidly changing world, pastoral societies, among them, rangeland users, can be seen as either the culprit of land degradation or the bearers of reconciling solutions for SRM. They can themselves assume a role of "victims of climate change" or of 'failed government policies', or they can get organized and learn from each other.

The globalization of the discourse on sustainable pastoralism has created new learning opportunities, for example the World Initiative for Sustainable Pastoralism (WISP) and the FAO Pastoral Knowledge Hub.

The challenge is to ensure greater emphasis on developing partnerships for innovation between strong community institutions (e.g. pastoral associations), scientists and the state.

Although much greater emphasis is needed on securing government support for good practices and ensuring public sector buy-in to good practice approaches, cross-fertilization learning is not sufficiently promoted. The League of Arab States Region (LAS) covers a unique range of rangeland-dominated countries where there is significant, unexploited, scope for pioneering innovative approaches, boosting learning, improving coordination, and monitoring progress. Yet, this common denominator is clearly underexplored, as also seen under the description of Barrier #2.

Finally, in terms of what can be learned from country-level interventions, some have forwarded an argument that multi-target, multi-component interventions (e.g. those relying on more than one organization for implementation) are less likely to meet objectives than simple more straightforward projects.⁴³ Through this project, complex coordination is a barrier to be overcome through learning, adaptive management and feedback.

2.4 Institutional, sectoral and policy context

Global Level

76. Global attention to Land Degradation has been strengthened by adoption of Target 15.3 of the Sustainable Development Goals: “By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world”. In October 2015 the UNCCD adopted LDN as a principle target for the Convention and invited Parties to set voluntary national LDN targets. IUCN is implementing a GEF project that currently supports 108 countries to set their LDN targets and develop initiatives that will contribute to LDN achievement.
77. The global debate discussing the governance of the world’s commons is high on the global agenda, including within the context of operationalizing the achievement of Sustainable Development Goals. Rangelands are a very important global common. The global level agenda is important for this project and the project will also contribute to strengthening it.
78. More specifically, in 2012, the Committee on World Food Security (CFS) officially endorsed a set of Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security. FAO and partners – among them, IUCN and UNEP – have supported the process. In the years that followed, a series of technical guidelines called ‘Voluntary Guidelines on Responsible Governance of Tenure (VGGT)’ were launched covering several of the world’s commons.
79. In 2016, IUCN wrote the FAO Technical Guide to implementing the VGGT in Pastoral Lands (see Box 3). The project will work towards disseminating, applying and improving those guidelines. Their content and practical use will be elaborated in the project strategy.

⁴³ E.g. Ministry of Environment, Jordan (2008).

Box 3. About the VGGT in Pastoral Lands and relevant for the HERD Project

The new FAO Technical Guide to implementing the VGGT in Pastoral Lands builds on a number of initiatives and studies from recent years that have shone a light on pastoral governance and land tenure: on the inherent challenges pastoralists face, the shortcomings of governments in securing pastoral tenure, and the emerging examples of success and progress from around the world. It provides solutions to securing pastoral governance and tenure without undermining the inherent, necessary complexity of customary arrangements. The solutions are within a rapidly changing context, in which traditional practices and crucial patterns of livestock mobility are transforming.

The technical guide on Improving the governance of pastoral lands is designed for several audiences including government and non-government actors. While most readers will have a basic knowledge of pastoralism, many will be unfamiliar with the great diversity of pastoralist systems and cultures throughout the world. It addresses those who recognize the importance of securing pastoral land tenure and who are looking for practical guidance on how to proceed. The guide is, therefore, not an advocacy document, but it provides arguments in Section 1 for securing pastoral tenure that can be used by different actors to strengthen their justification for such work.

While these guidelines provide practical advice that can be operationalized, further work will be required to translate the current document into more local user-friendly products for pastoral communities.

Project HERD will work towards disseminating, applying and improving the VGGT guidelines. This is duly reflected in several activities described in Section 3, under Component 1, 2 and 3.



Regional and National Levels

80. At the regional level, policy-makers within MENA countries share similar views about the importance of combating desertification and land degradation. More specifically, within the Arab States Region, the League of Arab States (LAS) has been vocal in different international fora about the management of rangelands and approved the **Sharm El Sheikh Declaration on Disaster Risk Reduction and the Sustainable Development Goals SDG's in November 2015**. This was in the aftermath of the UNCCD's COP12, which invited all countries to formulate voluntary targets to achieve Land Degradation Neutrality (LDN) according to their specific national circumstances and development priorities. In connection with it, the LAS launched the Climate Risk Nexus Initiative addressing food security, water scarcity and social vulnerability to build resilience in the region.
81. In relation to the Climate Risk Nexus, LAS representatives met in Ankara at UNCCD COP12 and recommended a regional initiative on LDN. In response IUCN, UNEP and others attended a meeting convened by the LAS in Cairo (on February 28th, 2016) which proposed that the current project would support the development of an "Initiative to Support LDN Implementation in the Arab Countries".
82. Rangelands Arab States countries are found within varied climatic zones, have varied land cover types and are managed through a number of governance approaches. Although rangelands are assumed to be the largest land use category across LAS countries, their exact extension is also not well defined, but it is undoubtedly a hugely important asset for these countries.⁴⁴ Their sustainable management, tenure and stewardship can make more positive

⁴⁴ Drylands account for about 90% of the total area in the Arab States Region, with 33% grasslands, 19.1 % deserts, 6.6% forests and 14.1% arable land. (Source: UNEP 2010. Environment Outlook for the Arab Region (EOAR). The First Comprehensive Policy-Relevant Environmental Assessment Report for the Arab Region Spring.)

contribution to food security. In some LAS countries, the management of rangelands is also a matter of national security.

83. Additionally, in the Arab States region, land degradation has also aggravated the frequency and intensity of sand and dust storms (SDS) thus affecting human health. Unsustainable rangeland management and over-grazing by animals, over-working of farm areas, poor use of water, land clearing, and lack of re-vegetation of cleared land is one of the key factors contributing to the rising issue of Sand and Dust Storms (SDS) in the Arab region (North Africa a North Africa and West Asia). Sand and Dust Storms is a natural transboundary feature in an arid region, however, the frequency and intensity of dust storms have increased in the last 30 years, where it has recorded up to two hundred incidents in a single year in some West Asian countries. According to climate models developed by United Nations Environment and World Maritime Organization (IMO), dust storms are predicted to increase in time and scale. The North African region is the largest source of SDS with the West Asia Region (including the Arabian Peninsula and Middle East) as the second largest source; human interference with natural land features is a significant contributing factor in generating SDS. Given the large scale of many SDS transboundary events, there is a critical global need to collaborate on developing integrated solutions (better land and water management) in source areas and measures to reduce or prevent impacts in the SDS receiving areas. This includes mitigating the degradation of rangeland ecosystems and soil erosion compounded by climate change. The matter of SDS is being more closely studied by UNEP and new initiatives supported by the agency and benefitting the Arab States may arise in the near future.
84. Finally, because drylands are so important in the Arab World, Arab countries established in 1971 the Arab Center for the Studies of Arid Zones and Dry Lands (ACSAD) within the framework of the specialized organization of the League of Arab States Region (LAS). Its mandate is to conduct the studies required to develop the fragile environment and arid and semi-arid areas. ACSAD has been reporting to the UNCCD since COP1, providing a shared policy framework for LAS countries and it has been a strong voice of advocacy in different global fora.

National policies

85. National support for pastoralism can be identified in some national policy documents, as well as in Rio Conventions' reporting documents, in particular the NAPs, NBSAPs and NAPAs that provide a framework for coordinated action.
86. Both Jordan and Egypt have reported regularly to the UNCCD. The most recent reports date from 2007 and 2014 for Jordan, and from 2012 and 2014 for Egypt. The 2014 reports for these two countries were produced, as required, within the PRAIS reporting format and they include a wealth of information on baseline programs financed by the two governments and partners. Both mention the importance of GEF and other related interventions and describe relevant national policies, while providing information on stakeholders. Furthermore, the reports include indicators for each of the five Operational Objectives for UNCCD reporting⁴⁵ for each of the two countries.
87. Jordan's revised National Strategy and Action Plan to Combat Desertification for the period 2015 to 2020 foster for example "Community-based approaches through participatory methodologies and multi-stakeholder dialogue (e.g. Hima system, Rangeland Cooperatives,

⁴⁵ The five Operational Objectives are: (1) Advocacy, awareness raising and education; (2) Policy framework; (3) Science, technology and knowledge; (4) Capacity-building; and (5) Financing and technology transfer.

Community- based Grazing Management, Co-Management or Protected Areas)”. While Hima is a traditional system for governance of rangelands that is common throughout the Arab Speaking world – and it has indeed analogues in many other pastoralist cultures – the mentioned Strategy and Action Plan recognized the importance of the application of locally-agreed rules aimed at returning rangelands to a sustainable management state.

88. A more relevant policy development for Jordan with respect to SRM has been the approval of the country’s Updated Rangeland Strategy in 2014 as a new and specific policy instrument, conceived under the Directorate of Rangelands and Badia Development of the Ministry of Agriculture, with assistance from IUCN and the European Commission. Vis-à-vis the 2001 National Rangelands Strategy, the 2014 Updated one recognizes that the previous frameworks and related legislations have not been effective in achieving the stated goals, mainly because of the absence of national consensus and the lack of integrated plans. The Updated Strategy notes that *“the status of poor management and use of the rangeland resources has not changed, which led to destruction of plant cover and weakening of productive capacities of rangelands”*. With a vision towards conserving and sustainably managing rangelands, the following is the stated objective (or mission) of Jordan’s Rangeland Strategy:

“[To] support and develop the rangelands sector as to attain a sustainable development and increased productivity and preserve achievements, and enhance the integrative role of concerned parties and participation of local communities in natural resources management as to have improved standards of living in light of climate changes and recurrent droughts which have significantly aggravated the deterioration of natural resources and wild life.”

89. Five main strategic goals are embedded in the Strategy, which also proposes to operationalize them through a series of initially developed and roughly costed project ideas, some of which can be catered for under this project:
- 1) *Rangelands sustainable development and management.*
 - 2) *Improvement of social and economic conditions for livestock breeders and pastoral communities taking into consideration gender issues*
 - 3) *Enhancement of capacity building (training and awareness)*
 - 4) *Monitoring and evaluation of rangeland status*
 - 5) *Engagement of Local communities in sustainable rangeland development and management.*
90. Egypt’s UNCCD National Action Program NAP dates from 2005 and aims for “integration of pastoral systems into the broad agricultural domain after long years of marginalization”. It recognizes the need for stronger human resources and increased public awareness and participation in addressing land degradation as well as mobilizing financial resources. Egypt’s NAP equally recognizes the need for multidisciplinary policy and programs of intervention across sectors. The following are the main axes foreseen in Egypt’s NAP:
- 1) *Principal programs, including: (a) evaluating and monitoring desertification; (b) capacity building program.*
 - 2) *Pastures Improvement programs, including: (a) rehabilitating degraded pasture/range lands; (b) preserving land and water resources; (c) managing natural grazing lands.*
 - 3) *Sand dunes stabilization programs, including: (a) protecting Nasser Lake shores against sand dunes; (b) stabilizing sand dunes in Siwa Oasis; (c) stabilizing sand dunes in north Sinai.*

- 4) *Irrigated agriculture programs, including: (a) improving and modernizing irrigation techniques; (b) integrated management of irrigation projects; (c) managing and improving lands; (d) treating soil and water pollution; (e) treating environmental pollution in Wadi Al-Rayyan pan/Depression.*
 - 5) *Rain-fed agriculture programs, including: (a) planning land usage in the north coast; (b) improving animal wealth; (c) improving small ruminant animal's productivity in the north part of Sinai; (d) limiting soil erosion.*
91. Of importance, under Program #2 above is a specific “Program for Rehabilitation, Conservation and Sustainable Use of Range Resources”, which advocates for a holistic approach to management of rangeland resources that integrates conservation, development and sustainable use. The Program plans for “integration of pastoral systems into the broad agricultural domain after long years of marginalization”.
92. Both in Jordan and Egypt, a suite of national policies can have a bearing on the fate of rangelands. Among them, it is worth mentioning:
- *Overarching development policies*, that may stress e.g. the thrust towards either “developing” or rather “conserving” rangelands in their more natural state, as well as how ‘rangeland development’ is to be interpreted;
 - *Agricultural policies and strategies*, as well as the economic investment and financial flows that are relevant to these, and under these, *irrigation and specific livestock policies strategies and the relevant finance* are of utmost importance;
 - *Land tenure policies and legislation* are particularly important because they could crystalize practices of open-access, endorse land privatization tendencies in rangelands or favor good land stewardship with controlled access and sustainable use;
 - *Environmental and nature protection policies*, which will be crucial for the land use outcome, e.g. whether particular sites within the rangelands should be protected, whether quarries and other mining activities should be licensed within rangelands etc.

In [ProDoc Annex 1a](#), an analysis of current national policies for Jordan and Egypt has been included.

2.5 Stakeholder mapping and analysis

93. During the project development phase, a thorough stakeholder analysis has been carried out, including several levels, given that the HERD project proposes to have both a global/regional entry point and a national one with Jordan and Egypt as countries on focus through this GEF intervention.

Table 2. Stakeholder Analysis Overview

Stakeholder	Context and expected role in the project
<i>Globally</i>	
UNEP	UNEP is the implementing agency for this project, providing quality assurance, oversight, support. It may also facilitate linkages to other relevant programs and projects, access to data and specialized technical advisory services. UNEP will also be responsible for the project’s GEF specific M&E function, including evaluation services according to its UNEP-GEF procedures, as well as compliance with GEF requirements. In addition, UNEP-Science Division will be involved in monitoring the SDGs delivery in the project. For this project, and

Stakeholder	Context and expected role in the project
	with a mandate provided by project's countries in their respective endorsement letters, UNEP assigned project execution responsibilities to IUCN, which had conceived the project in its idea stage.
IUCN	As a multi-lateral body with a broad nature conservation global mandate, IUCN will be the executing agency. IUCN will be responsible for project execution at the global, regional and national levels, given that the project has all of these three entry points. IUCN will be therefore accountable to UNEP for delivering on the project objective and outcomes and for using the project's budget in accordance with the Project Document. It is also expected that IUCN will be able to draw on specialized knowledge and expertise among its staff, commissions and members, for advising on relevant project activities and global policy matters as needed. IUCN hosts the World Initiative for Sustainable Pastoralism (WISP), an important forum for connecting global HERD stakeholders and improving the knowledge base regarding rangelands, as well as IUNC's Global Drylands Initiative and the IUCN Commission on Ecosystem Management.
Partner agencies, donors and funds	<p>At the global level, several entities have been involved in discussing at the Committee on World Food Security (CFS) the governance of the world's commons, among them, rangelands, as well as the implications of key conclusions for the achievement of Sustainable Development Goals. FAO is a relevant partner in this regard, not only for hosting the CFS, but also for sponsoring the compilation in 2016 of specific VGGT for rangeland management. Key donors are supporting these and related initiatives, among Germany, the EU and Danida. Furthermore, FAO collects, processes and avails data on land degradation and statistics agriculture and related matters, including livestock and pastoral resources. This is relevant for analyzing and monitoring the state of rangelands. Also, FAO has been hosting the World's Pastoralist Knowledge Hub as a related initiative to IUCN's WISP.</p> <p>Other relevant partners to be mentioned at the global level include: (i) the International Livestock Research Institute (ILRI), which is one of the CGIAR centers; (ii) International Fund for Agricultural Development (IFAD); (iii) other UN agencies, including UNDP due to its Global Policy Centre on Resilient Ecosystems and Desertification (GC-RED), the World Bank (WB) and bilateral multilateral donors, due to their role in relevant global baseline projects; plus related scientific partnerships such as the Global Rangelands, hosted by the University of Arizona.</p> <p>In addition, in terms of funding resources, entities and initiatives such as the Land Degradation Neutrality Fund (LDNF) under the UNCCD could be in the future highly relevant for bringing the HERD Concept to scale.</p>
Regionally	
IUCN's Regional Office in West Asia (IUCN ROWA)	National governments participating in the project (Jordan and Egypt) have endorsed the project and assigned to IUCN ROWA, located in Amman, Jordan) a core mandate for coordinating the project with country level partners, including with and among governments in Jordan, Egypt and in other countries in the region. More specifically, IUNC ROWA will be the budget holder for the project through an agreement to be signed with UNEP for the purpose, once the

Stakeholder	Context and expected role in the project
	project had been endorsed by the GEF CEO.
League of Arab States (LAS)	LAS is a key project partner for what regional policies are concerned. For the past few years, LAS has been playing a strong advocacy role in the region on issues of land degradation neutrality, sandstorms, climate change and resilience, and now also rangeland management. The project will keep an open dialogue with LAS through IUCN ROWA to fully explore synergies and collaboration.
UNEP's Regional Office for West Asia UNEP-ROWA	The Regional Office for West Asia is the project partner for component four, Knowledge management to promote an enabling environment for regional scale-up of Sustainable Rangeland Management. UNEP-ROWA lead the Arab Regional LDN initiative and hosts a strong knowledge base of regional mechanisms, policies, and networks to foster dialogue, capacity development and partnerships and promote synergies with MEAs and SDGs. UNEP-ROWA is IUCN-ROWA's partner in a number of regional environmental programs and operates through the Regional Coordination Mechanism (RCM) with LAS/CAMRE and ESCWA.
Centre for Environment and Development for the Arab Region and Europe – CEDARE	Based in Cairo, Egypt, CEDARE is a knowledge-based and technology-driven Centre of Excellence established by the Arab Ministers of Environment and which received support from UNDP. CEDARE maintains a strong network of governmental, non-governmental and supra-national partners within the Arab region and it can be engaged to help raise awareness about rangelands and disseminate the models proposed for SRM under the HERD project.
The Arabian Pastoralist Communities Network	The Network is created to revive, document and develop the traditional knowledge in the Arabic Region in order to invest it in the development of Bedouin pastoral groups and building their capacities for effective participation in rehabilitation and improvement of sustainable participatory management of rangelands. This happen through mainstreaming and networking with civil society organizations, researchers, experts, decision makers and other stakeholders and networks. Also, partnerships through the Arabian Pastoralist Communities Network aim to foster capacity building, shared learning, networking and exchange of experience of the indigenous peoples (local people) in our region, sharing a deep concern for the respect of cultural rights and rights to land and natural resource.
Other CSO partners working at the regional level	<p>A number of CSOs that are active in the environmental area play a role in and maintain projects and initiatives that are relevant for HERD. Among them, the Arab Center for the Studies of Arid Zones and Dry Lands (ACSAD), the WANA Institute, OXFAM, CARE International and others. The project will reach out to them through networks, including through the revived WISP and other channels.</p> <p>As for OXFAM Italy, it is a project co-financier and it is expected to contribute through their support to environmental management policies and community development programs in Jordan.</p>
<i>In Jordan</i>	
Hashemite Fund for Development of the Jordan Badia –	The Badia Development Fund is a key project partner at the national level and co-financier, and hence a member of the Project Steering Committee. Based in Amman and established in 2003 under Royal patronage, the Hashemite, the

Stakeholder	Context and expected role in the project
HFDJB	Fund's aim is to improve the socio-economic conditions in the Badia by building the capacities of local communities, and by implementing well-planned projects in various relevant sectors. The Fund way of working includes both direct and indirect involvement in development activities taking place in the Badia. It maintains a corps of research experts and networks with government, local NGOs, donors and community based organizations, permitting it to implement a suite of projects relevant for Badia development. Previously responsible for Badia restoration projects, the Hashemite Fund for Development of the Jordan Baadia can potentially play a role in the implementation of activities in relevant project components, the details of which will be clarified after due process.
Ministry of Environment and Ministry of Agriculture and Water	Both ministries are project partners and co-financiers, responsible for ensuring the project is aligned with national priorities and investments and for supporting adoption of SRM approaches in national policies and budgeting processes. They are expected to participate actively in the Project Steering Committee. At the national level in Jordan, both line ministries will also facilitate for liaison with other ministries, sub-national governments (at the governorate and district levels e.g.), with local authorities and with foreign partners through LAS dialogue, to ensure coordination at the national and regional levels.
Royal Botanical Gardens (RBG)	RGB's is a key project partner at the national level. Its role in supporting research on rangeland management is equally important. RGB is also a close project partner, co-financier and member of the project steering committee.
Royal Society for the Conservation of Nature (RSCN)	Because of RSCN's role in supporting research relevant for the sustainable management of rangelands, they are well positioned to assist in the implementation of certain project activities. More specifically, of the selected landscapes (Hazeem) has protected areas is in its vicinity, under the responsibility of RSCN and collaboration with the project in the management of the wider landscape can be beneficial to both. The exact collaboration framework regarding the management of Hazeem's landscape will be further detailed during the project inception.
GIZ Jordan	A project partner and co-financier. GIZ and IUCN have been instrumental in supporting a PES project in Jordan through each a key study on the economic valuation of a large-scale rangeland restoration has been implemented in Jordan, building on the Hima system. The lessons from the PES project are crucial for disseminating the model in other sites in Jordan, besides the pilot in Bani Hashem and the Zarqa Basin.
<i>In Egypt</i>	
Desert Research Centre (DRC), Egypt	As a parastatal linked to the Ministry of Agriculture and Land Reclamation, the DRCs has been mandated by the government to support the implementation of the UNCCD in Egypt. The DRC is a key project partner at the national level and co-financier, and hence a member of the Project Steering Committee. The Center functions mostly as a research entity, made up of experts and specialists on all aspects of managing drylands in Egypt. Responsible for other and on-going rangeland management projects, the Center is expected to play a role in the implementation of activities in relevant project components, the details of which will be clarified after due process.

Stakeholder	Context and expected role in the project
Ministry of Agriculture and Land Reclamation, Ministry of Environment, Ministry of Water Resources and Irrigation	Similar to their peers in Jordan, these core line ministries are project partners responsible for ensuring the project is aligned with national priorities and investments and for supporting adoption of SRM approaches in national policies and budgeting processes. They are expected to participate actively in the Project Steering Committee. At the national level in Egypt, both line ministries will also facilitate for liaison with other ministries, sub-national governments (at the governorate and district levels e.g.), with local authorities and with foreign partners through LAS dialogue, to ensure coordination at the national and regional levels. Under the Ministry of Environment, more specifically, the Egyptian Environmental Affairs Agency can potentially support the project with researching and categorize pastoral lands and species, documenting indigenous knowledge, the economic value of pastoral plants and in reinforce environmental laws, including in the management of biodiversity.
Sub-national authorities in the Matrouh Governorate	Because the on-the-ground implementation of the project in Egypt will focus on rangelands within the Matrouh governorate, the involvement of sub-national authorities in Matrouh will be crucial, including in terms of fully participating in the mainstreaming of SRM in the land-use planning for the Governorate.
Agricultural Research Center	The Center's role in research relevant for the livestock sector and crops will be particularly useful informing the management.
<i>In both countries</i>	
Pastoralists, including local communities of agro-pastoralists, transhumants and nomads	They are a key beneficiary of the project, given their absolutely central role in managing rangelands. They are often not organized into CBOs. An innovation to be brought by the project is to find ways of connecting pastoral communities using mobile technology and in this way create networks among them to support the implementation of landscape management plans in rangelands. During the PPG, some of the pastoralist stakeholders have been surveyed, consulted at site level and engaged in the project. The project mechanisms at the site level will involve the signature of agreements for SRM.
Local farming communities	Along with pastoralists, sedentary farmers should part of the solutions for rangelands and the transition towards SRM. While livestock production systems are still highly dependent on complementary feed produced by cropping, this may change, to the extent that rangelands become more sustainably managed and its pasture resources can contribute more significantly to livestock rearing systems. Mechanisms of the involvement of local farmers will be similar to those of pastoralists.
Local rangeland service providers	Extension agents will be the main intermediaries for participatory planning and will be trained to roll out the methodology. They will facilitate community planning and will be responsible for channeling community priorities into local government planning processes. They will also advise on project actions due to their established role in the management of rangeland. Their role will be more closely defined during project implementation and after due capacity assessments.
Local government departments	Responsible for endorsing the project approach at local level, help prepare and endorse land use management plans that have a bearing for SRM, and identifying opportunities and community priorities that will reinforce the project objectives and agenda. This includes coordinating across public sectors to avoid

Stakeholder	Context and expected role in the project
	conflicting investments. Local government departments will be represented on project steering committees at the local level.
National and local CSOs/CBOs	Various CSOs and COSs at the national and local levels can potentially participate in the implementation of project activities. More specific roles are assigned through the project strategy. As with rangeland service provider, they may be made responsible for the delivery of specific actions in partnership with IUCN ROWA, playing a role that will be more closely defined as calls for proposals and service agreements are rolled out.
Secondary stakeholders in both countries	Private Sector, the media, donor agencies that support baseline activities are important but secondary stakeholders. They will be involved in the project according to activities and relevance.

2.6 Baseline analysis and gaps

Summary of the rangeland management status quo

94. The project's baseline included **two main levels**: (1) the Global and Regional one and (2) the national level, which pertaining to Jordan and Egypt respectively.
95. *At the global and regional levels*, the following represents the current situation and **the status quo without the GEF project**:
 - The majority of countries that are considered as Affected by desertification according to the UNCCD are currently establishing national voluntary targets for LDN. Degraded rangelands will form a significant proportion of total degraded lands, and according to the principles of LDN (i.e. restoring “like for like”), this necessitates action to restore and sustainably manage rangelands in order to achieve neutrality. This is a challenge for many countries that still lack consensus over both the current state of rangeland health and the appropriate solutions to restore rangelands.
 - The state of knowledge about rangelands is generally weak – e.g. there is no universal definition of rangelands and, as yet, no agreed measurement of their extent.
 - There is also little consensus over the desirable state of rangelands management and which techniques should apply for managing it sustainably.
 - The gaps in specific knowledge and data for the management of rangeland has significant implications for investments in these areas.
 - In addition, the costs of restoring rangelands are variable and highly contextual, and so are the techniques that may be prescribed for recuperating land productivity in each case – which reinforces the idea of limited consensus.
 - Within the MENA Region, many countries have weak capacity in the field of rangeland ecology to be able to explore the wide benefits of SRM.
 - In addition, a key problem has been lack of consistency in translating the results of assessments into identifying cost-effective management interventions strategies that take into account the role of pastoralism in reinforcing SRM.
 - In terms of policies and institutional capacities at both the global and regional levels, there has been progress in the agenda for discussing the governance of rangeland tenure, considering

that rangelands are a major ‘global common’. Although a positive development, this yet to revert the long-term trend towards marginalization of pastoralists – the principal managers of rangelands – and to influence global financial flows that will favor rangeland restoration and sustainable management.

- Another positive development has been the formulation of the Voluntary Guidelines on the Responsible Governance of Tenure (VGGT) a common denominator for land use governance, but without practical experiences, the Guidelines will remain underexplored and without resonance among countries through practical applications.
- Furthermore, throughout the MENA region there is a tension between the aims of the agricultural sector to maximize food output and how this can be reconciled with the goals of sustainable development, given the constraints imposed by the natural climatic and soil conditions to food production. Land degradation and anthropogenic climate change pose additional constraints.
- At the same time, experience from the MENA region has shown that investments in communal tenure and natural resource governance are among the most effective in delivering SRM at scale, and that in the long run these investments are low cost.
- Yet, there seems to be a tendency towards prioritizing long-term change in attitudes and practices over short term delivery of physical investments.
- Finally, in terms of lifting lessons from several interventions (that is projects, programs and initiatives) in the areas of rangeland management, pastoralism, rural development and land use policies, the following can be said: The globalization of the discourse on sustainable pastoralism has created new learning opportunities, for example the World Initiative for Sustainable Pastoralism (WISP) and the FAO Pastoral Knowledge Hub. The challenge is to ensure greater emphasis on developing partnerships for innovation between strong community institutions (e.g. pastoral associations), scientists and the state.

96. *At the national level*, the following summarizes the state of rangeland management in Jordan and Egypt:

- Neither Jordan nor Egypt have formally established mechanisms or methodologies for monitoring rangeland health.
- Remote sensing technologies offer new possibilities but insufficient work has been carried out to ground-truth data, but this is just one tool to solving a problem that has many facets.
- Rangelands development, in both Jordan and Egypt, suffers from lack of agreement over the objectives for rangeland management, even though progress was made recently in Jordan through the adoption of the 2014 National Rangelands Policy.
- Still, in both countries, pastoralists are not always adequately consulted in key planning processes that affect their access to rangelands or their potential stewardship function vis-à-vis these areas.
- Additionally, and to different degrees in the two countries, there are inconsistencies in rangeland, livestock and other related policies, which generally results in negative impacts to rangelands. The [ProDoc Annex 1a, Section 1, point 3](#) (Causes of land degradation and drivers behind them) provides an overview of how this manifests itself.

97. The above *status quo* for the management of rangelands, both globally/regionally and at the level of the two projects has both strengths and weaknesses. As the baseline status, these points provide build the justification for the alternative GEF interventions proposed by the

project. It is underpinned by a strong financial baseline of programs, projects and initiatives implemented at the global, regional and country levels, some of which serve as co-financing to the HERD Project. This is presented in the next section.

The project's financial baseline

98. The project's financial baseline consists of all relevant programs, projects and initiatives, including governmental budgets, which make the GEF intervention incremental in the way it is conceived, i.e. aimed at achieving global environmental objectives.
99. In theory, various types of interventions could be included in the project's baseline finance. For example, rural development interventions in the two countries abound and can reach hundreds of millions of dollars in current finance. Also, the development oriented investments in the agricultural sectors of Jordan and Egypt are massive. However, the majority of these programs are likely peripheral to the subject matter of the HERD project. Many agricultural initiatives would e.g. encourage and fund irrigation, which is within the land management models adopted under the HERD project. In this light, the selection of baseline interventions needed to be restrictive. Identifying the relevant baseline finance for the HERD Project looked at criteria in terms of sector, timing, location and convergence towards the project objective. The current and future interventions analysed included therefore relevance within the following topics⁴⁶:
- Land resources, its degradation, use and tenure, including NRM more broadly;
 - Livestock sector, as a distinct sub-sector of 'Agriculture';
 - Agriculture, as a sector, and with focus on policies relevant for land use and livestock;
 - Environmental policies and management, with focus on: (i) land (including land use and tenure); (ii) water (restricted to IWRM); (iii) biodiversity (in particular, ecosystem services and, to some extent, protection); and (iv) biomass and biosphere protection); and
 - Rural Development programs, but only with the same geographic focus as project sites, and mostly including local community development, capacity building, support to 'marginalized groups' and 'women in development'.
100. The full list of baseline interventions with details on their objectives, descriptions, along with considerations on baseline relevance is included in [ProDoc Annex 1a](#). Below is a summary of baseline interventions and the rounded-off amounts considered in the incremental cost calculus:

Table 3. Financial Baseline Summary Overview

#	Baseline Finance Interventions (<i>selected programs, projects and initiatives, plus governmental and non-governmental budgets / programs of work</i>)	Responsible entity	Relevance to HERD Components	TOTAL (\$ million)	Contribution to HERD co-financing
1	IUCN The World Initiative for Sustainable Pastoralism (WISP), Global	IUCN	1, 3	\$0.6	IUCN co-financing to the project is leveraged, not part of baseline.

⁴⁶ By default, GEF projects and initiatives that co-finance other GEF project are not included in the baseline finance selection.

#	Baseline Finance Interventions (<i>selected programs, projects and initiatives, plus governmental and non-governmental budgets / programs of work</i>)	Responsible entity	Relevance to HERD Components	TOTAL (\$ million)	Contribution to HERD co-financing
2	ICARDA's Projects (The International Center for Agricultural Research in the Dry Areas)	ICARDA and partners	1, 2, 4	\$6.0	-
3	FAO Led Pastoralist Knowledge Hub - network initiative, Global	FAO and partners	1, 2	\$1.8	-
4	Joint EU Rural Development Program (ENPARD approach) - Egypt, Algeria, Jordan	Centre International de Hautes Etudes Agronomiques Méditerranéennes - Institut Agronomique Méditerranéen de Montpellier (CIHEAM-IAMM)	2, 4	\$10.6	-
5	Environmental programs of League of Arab States (LAS) and Centre for Environment and Development for the Arab Region and Europe – CEDARE	LAS and CEDARE	1, 3, 4	\$3.6	-
6	WANA Institute's Program of Work, Regional	WANA Institute (Jordan based NGO with regional outreach)	1, 4	\$0.2	-
7	WB Water Sector Reform DPL, Jordan	Ministry of Planning and International Cooperation (MOPIC)	1, 3	\$25.0	-
8	WB Project MSME Development Project for Inclusive Growth, Jordan	Hashemite Kingdom of Jordan, Central Government	2, 3	\$3.5	-
9	Sustainable Use of Ecosystem Services in Jordan, GIZ and partners	GIZ	1, 2, 3	\$1.8	Yes
10	Program of Work of the Hashemite Fund for Development of the Jordan Badia (HFDB), including the Badia Restoration Program (BRP), Jordan	HFDB - Hashemite Fund for Development of the Jordan Baadia	1, 2, 3	\$1.0	Yes, refer to co-financing letter dated 10 Jan 2017, where baseline is mentioned
11	RBG CBRR: Community-based Rangeland Rehabilitation Program of the Royal Botanic Garden (RBG) / Royal Society for Conservation of Nature (RSCN) - Jordan	RBG / RSCN, Jordan	1, 2, 3	\$0.6	-
12	Program of Work of the Desert Research Centre (DRC), Egypt	DRC, Egypt	1, 2, 3, 4	\$7.0	Yes
13	WB EG-Enhanced Water Resources Management	EG-Enhanced Water Resources Management	1, 3	\$1.7	
14	Egypt Network for Integrated Development (ENID) - Multi-donor	UNDP and Government of Egypt	1, 2, 3	\$1.5	

#	Baseline Finance Interventions <i>(selected programs, projects and initiatives, plus governmental and non-governmental budgets / programs of work)</i>	Responsible entity	Relevance to HERD Components	TOTAL (\$ million)	Contribution to HERD co-financing
16	UNDP Mine Clearing and Agricultural Development, Matrouh, Phases I and II	UNDP and Government of Egypt	1, 2, 3	\$1.3	
17	WB Regional Coordination for Improved Water Resources Mgt. & Capacity	Regional Coordination for Improved Water Resources Mgt. & Capacity	1, 3	\$0.2	
Total baseline (B)				\$66.3	

2.7 Linkages with other GEF and non-GEF interventions

Table 4. Project HERD core Linkages

Related initiatives	Brief description and rationale	Linkages
<i>Other GEF Projects</i>		
Badia Ecosystem and Livelihoods Project (BEP)	This one of five projects under the MENA-DELP, a new GEF and World Bank partnership. The project includes four national country pilot projects (Algeria, Egypt, Jordan and Morocco), and a regional knowledge sharing and coordination project. The program's framework seeks to maintain and improve the flow of desert ecosystem services for sustainable development in a positive feedback loop. The program focuses on piloting enabling economic opportunities specific to deserts that integrate the health and diversity of the desert biome with the vast potential for innovative livelihood opportunities that also sustain valuable repository knowledge linked to adaptive practices. It is intended that this approach will ultimately enhance desert livelihood opportunities and increase the resilience and adaptation responses of desert communities and ecosystems to projected pressures, in particular climate change impacts.	This project will contribute to Knowledge Management and Sharing, Monitoring and Evaluation, and regional Coordination. HERD will benefit from MENA-DELP through access to improved regional assessment data, since HERD is focused more closely on implementation of good practices on the ground. However, the regional component of HERD focuses on regional opportunities to advance scale-up: generating specifically awareness of innovative rangeland management approaches; strengthening the evidence to justify investment; developing policy at the national and regional level to support scale up; developing global leadership on communal rangeland development within the Arab Region (under the LAS); and leveraging regional financing through recognition of the regional environmental benefits.
Mainstreaming Sustainable Land and Water Management Practices, IFAD-GEF ⁴⁷	This initiative will demonstrate and scale-up successful sustainable land management practices for the control and prevention of desertification and deforestation. The total cost is 39.6 million, including \$6.8 million from GEF, \$11.6 million from IFAD and other co-financing of US\$21.2 million.	The project shares common objectives with the regional World Bank GEF initiative MENA- DELP: "Desert ecosystems and livelihoods knowledge sharing and coordination project". The project is coordinated by the Observatoire du Sahel et Sahara (OSS) and aims to strengthen cooperation among national institutions in partner countries and improve understanding of the linkages between desert ecosystem services and desert livelihoods for an informed decision- making.

⁴⁷ https://books.google.co.ke/books?id=32L9z-j102AC&pg=PA23&lpg=PA23&dq=Mainstreaming+Sustainable+Land+Management+Practices,+IFAD+jordan&source=bl&ots=K1uOctw-10&sig=Ujpo8sSoJ6Z3OiRswPnDUHskt8&hl=en&sa=X&redir_esc=y#v=onepage&q=Mainstreaming%20Sustainable%20Land%20Management%20Practices&f=false

Related initiatives	Brief description and rationale	Linkages
Participatory assessment of land degradation and sustainable land management in grassland and pastoral systems, FAO-GEF (GEF ID#5724)	IUCN is executing this project which is funded by GEF and implemented by FAO to develop a common rangeland assessment methodology which will be rolled out in 5 further countries starting in 2017.	As with the MENA-DELP (Desert ecosystems and livelihoods knowledge sharing and coordination project), regional monitoring and knowledge sharing have a good leverage through such initiatives. IUCN and UNEP will seek synergies and collaboration with FAO, and where needed, in consultation with the GEF Secretariat.
Land Degradation Neutrality Target Setting Project (LDN TSP)	<p>Achieving Land Degradation Neutrality (LDN) worldwide by 2030 is included as target 15.3 in the framework of the Sustainable Development Goals (SDG), which were adopted by the United Nations General Assembly in September 2015. At the 12th session of the Conference of the Parties of the United Nations Convention to Combat Desertification (UNCCD COP.12), held in Ankara in October 2015, country Parties endorsed LDN as “a strong vehicle for driving the implementation of the Convention”.</p> <p>This project will support LDN target setting in 70 countries from all continents, representing a diversity of socio-economic and ecological contexts. The project objective is to support/enable countries to establish national voluntary targets for LDN with the overall goal to achieve LDN by 2030 as a mean to sustainably increase food security, reduce biodiversity losses and contribute to climate change adaptation and mitigation. The project will provide critical support to countries for the application of the LDN response hierarchy to avoid, minimize and reverse land degradation.</p> <p>The project will enhance countries preparedness to achieve LDN by 2030. It will ensure strong Government leadership and active involvement of all stakeholders and sectors impacting and benefitting from the land based natural capital in order to achieve project objectives and related expected results.</p>	IUCN implements the GEF “enabling activities” project “Land Degradation Neutrality-Target Setting Project”, which is executed in 108 countries by the Global Mechanism of the UNCCD. This project has a total fund of approx.. 7 million USD (3 million USD direct grant from the GEF). The project supports countries, including both Egypt and Jordan, to map the extent of land degradation and identify national voluntary targets for achieving LDN by 2030, following the UNCCD Conceptual Framework for LDN. The project will also develop national strategies for LDN delivery, which include rangelands restoration interventions such as that proposed in this document.
<i>Baseline interventions in general</i>		
World Initiative for Sustainable Pastoralism (WISP) [*] and	The WISP is a network initiative spearheaded by IUCN and with a very prolific production of publications, workshops,	The project will build from the achievements and efforts towards developing the capacity of rangelands stakeholders, in particular

Related initiatives	Brief description and rationale	Linkages
other related initiatives, in particular the FAO-led Pastoralist Knowledge Hub	<p>events and other ramifications and results.</p> <p>The WISP had its auspices in 2003, under the leadership of IUCN. Initially, the initiative was supported by a UNDP-GEF project with a funding amount of \$1.3 million in GEF funds, plus co-finance. From 2008 to 2012, the WISP benefitted from \$1.2 million in funding from IFAD, and between 2013 to 2014, it received \$300,000 from UNEP. Currently, it continues with core funding from IUCN.</p> <p>As for the FAO-led Pastoralist Knowledge Hub, it was launched in April 2015 by FAO, the European Union, Germany and other partners – enables mobile livestock keepers to connect, to meet and discuss issues like agricultural innovations or land regulations and find shared solutions to common challenges. The hub brings together partner institutions including the African Union, the European Union, the International Fund for Agricultural Development, the International Union for Conservation of Nature, the United Nations Environment Program, the World Bank and non-governmental organizations as well as pastoralist civil society groups.</p>	<p>those spearheaded by the WISP.</p> <p>This is important because the focused cross-country dialogues promoted by WISP have shown to benefit not just pastoralist groups, but also regional, national and local institutions with a stake in SRM. For several years, the WISP was the only global initiative focused on the shared issues of diverse groups of pastoralists. The WISP has also specifically helped fostered the leadership of indigenous pastoralists and pastoralist women, who found common ground and common goals by learning with each other and from each other.</p> <p>Currently, there is no potential duplication between the WISP and the FAO-led Pastoralist Knowledge Hub. WISP and the FAO-PKH coordinate closely and WISP is revising its role now that FAO-PKH has embarked on the work that WISP formerly covered. The HERD initiative will contribute to redefining the role of WISP. Both initiatives are highly relevant for the objective of HERD. Synergies and collaboration are being developed at the global level through IUCN's offices in Nairobi and Gland.</p>
Relevant baseline programs for Jordan and Egypt	Refer to the relevant table with the Stakeholder Analysis Overview for thorough descriptions, as well as to the Baseline tables, both further up and in ProDoc Annex 1a .	<p>Baseline interventions that contribute with co-financing to the project will have a key role in advising the project through its steering committee.</p> <p>Other baseline interventions will serve to draw lessons and seek collaboration, possibly partnerships in connection with the future up-scaling of the HERD Concept.</p>
Past projects		
Matrouh Resource Management Program, WB/IDA, 1993-2003	Financed by WB/IDA over three projects and disbursed approximately \$35 million, of which about \$1.8 million were for range management. This initiative supported 38 Bedouin communities in the preparation of community action plans, annual work plans and budgets and supported skills development through training for participatory approaches and sustainable land management.	The HERD project will learn lessons from the WB Program, including evaluation reports, anecdotal stories by local communities and other relevant information. The HERD Project will attempt to retrieve and refer to previous plans for range management, putting them into a SRM perspective.

Related initiatives	Brief description and rationale	Linkages
Range Management Project, Government of Egypt, 1997-2002	Covered 4 thousand hectares in the North-West coast of Egypt. Government investment reached the equivalent of \$400K, financed government of Egypt. This project supported the improved management of 4,000 ha rangelands in the Northwest Coastal region of Egypt.	The governmental Range Management project had close links to the WB Matrouh Resource Management Program. The approach will be the same.
Government: Program for Rehabilitation of Rangelands - Ras El Hekma (Government) – On-going since the 1950’s.	<p>Composed of three main projects:</p> <p>Project 1) for improvement of rangelands of Ras El Hekma in Matrouh Governorate.</p> <p>Project 2) for improvement of arid lands carried out by the Authority for the Northwest Coast in collaboration with National Research Center (1980-87),</p> <p>Project 3) For range areas improvement in 10,000 feddans west of Mersa Matrouh carried out by the Authority for the Northwest Coast and the DRC (1987-1992).</p>	The Program is now mainstreamed into the program of work of DRC. The interventions have been crucial for creating a basis for SRM, upon which HERD is building.
Securing Rights and Restoring Land in Jordan, EU-Danida-IUCN partnership, 2010-2015	<p>The project had a budget tag of approximately \$500K and it was one of the key factors leading to development of the HERD PIF.</p> <p>It supported restoration of rangeland ecosystems for livelihood resilience, through improved governance and management practices and led to revision of the Jordanian National Rangelands Strategy and the Jordan UNCCD-NAP by IUCN in 2014. A major outcome has been mobilization of high-level political support in Jordan and Egypt for scaling-up community based approaches to rangeland restoration.</p>	<p>Most of the knowledge assets and data from the previous project will be fully utilized in the development and implementation of the HERD project, because of the close relationship between them with respect to SRM in the Badia. Needless to say, lessons will be (have been) learned and will be incorporated into the HERD Project.</p> <p>For Egypt, there is potential for cross-fertilization with respect to the excellent policy and practices outcomes.</p> <p>Finally, IUCN is developing scale-able approaches for rangeland monitoring through the “Sustainable Rangelands Project” (Danida funded, including Jordan as a target country).</p>
Mainstreaming Biodiversity in the Sylvo-pastoral and Rangeland Landscapes in the Al Sharah Agricultural Development Region of Southern Jordan, IFAD-GEF MSP, 2013-2016.	The specific Goal of this project is to Increase Biodiversity Conservation in Productive Landscapes in Pockets of Poverty in Southern Jordan. The project is designed to achieve this goal in three specific Ministry of Agriculture (MOA) Reserves (exclosures) which are intended to protect portions of the rangeland and sylvo-pastoral landscapes within the Agricultural Directorate for Developing the Sharah Region (ADDSR). By improving government and community understanding of the value of biodiversity, it is also intended	The HERD project will coordinate with the IFAD-GEF project “Mainstreaming Sustainable Land Management Practices” in Jordan. This project is designed to enhance the quality of life of rural communities, consistent with development objectives to improve economic productivity of land and enhance gendered empowerment of communities affected by land degradation. It also supports sustainable land management best practices at the local level and mainstream them in local, sub-national and national planning and incentive frameworks. IUCN is an existing partner of

Related initiatives	Brief description and rationale	Linkages
	to demonstrate that there are economic benefits and alternative livelihoods available if biodiversity conservation is improved. It is further intended that the successful outcomes of the project become sustainable and replicable within other geographic areas of Jordan.	this initiative and will draw on experiences in both projects for cross-fertilization of ideas.

* Notes: In terms of the project's baseline, only the post-GEF finance for the WISP, funded by other partners, is considered as part of the baseline for the HERD Project.

SECTION 3: INTERVENTION STRATEGY (ALTERNATIVE)

3.1 Project rationale, policy conformity and expected global environmental benefits

101. The project rationale is well aligned with the GEF Land Degradation Focal Area Strategy. The goal of the land degradation focal area is to contribute to arresting and reversing current global trends in land degradation, specifically desertification and deforestation. This will be accomplished by promoting and supporting effective policies, legal and regulatory frameworks, capable institutions, knowledge sharing and monitoring mechanisms, together with good practices conducive to sustainable land management (SLM) and that are able to generate global environmental benefits while supporting local and national, social and economic development. The LD strategy is to promote system-wide change necessary to control the increasing severity and extent of land degradation. Investing in sustainable land management (SLM) to control and prevent land degradation in the wider landscape is an essential and cost-effective way to deliver multiple global environmental benefits and national socio-economic benefits.
102. The proposed project is slated to serve as a ‘catalyst’ for scaling-up the HERD Concept, both regionally and globally. HERD builds on the sustainable management of pastoral rangelands for the provision of ecosystem services and protection of biodiversity. Rangelands that are subject to land degradation are the object of management interventions under this project, which approaches it both from an ecological and socio-economic points of view. Rangeland occupy land that is not suitable for cropping, because the climate may be too dry or too cold, or because the land is not cultivable. Yet, at the global level they cover an estimated 50% of the total land area of the world and between two thirds and three quarters of all drylands.
103. The project has two main entry points: one at the global/regional levels and another one at the national level, with Jordan and Egypt as countries on focus through this GEF intervention, which is intended to be first of a program of interventions (or projects) that revolve around the concept of HERD.
104. Both IUCN, a global and regional partner selected as the Executing Agency, and UNEP, the Implementing Agency, will use its wide range of partnerships to assist the participating countries to realize their national goals of SRM through the project. They will also expand the learning and networking through the project for lifting its outreach to the regional and global levels, in view of scaling up the HERD Concept. In the MENA region, SRM is closely related to the maintenance and renewal of cultural traditions, some of which have lasted centuries and have been the basis for a balanced approach to rights and responsibilities linked to tenure land rangelands.
105. The global debate discussing the governance of the world’s commons is high on the global agenda, including within the context of operationalizing the achievement of Sustainable Development Goals. Rangelands are a very important global common. Project HERD will reinforce the global agenda and work towards disseminating, applying and improving ‘Voluntary Guidelines on Responsible Governance of Tenure (VGGT)’ with respect to rangelands.
106. Jordan and Egypt, the two participating countries in this project have ratified the UNCCD and are committed to implementing strategies that will arrest land degradation. Both countries have chosen to address this issue by focusing on the management of rangelands and are ready to adhere to the HERD Concept, with combined interventions

that pertain to policies, institutions, practices and knowledge management, which are respectively the four strategic pillars of the HERD Project, duly reflected in its components.

Expected Global Environmental Benefits

107. The Project is directly in line with the objectives of the UNCCD, and the country reports to the UNCCD. In particular, it will contribute to implementation of UNCCD's 10-year strategy: *"The 10-year strategic plan and framework to enhance the implementation of the Convention (2008–2018)"*. This proposed Project has been designed to contribute to all four strategic objectives of this 10-year strategy (i.e. to improve the living conditions of affected populations; to improve the condition of affected ecosystems; to generate global benefits through effective implementation of the UNCCD, and; to mobilize resources to support implementation of the Convention through building effective partnerships between national and international actors). Moreover, the Project's internal strategy is based on the operational objectives of the UNCCD 10-year strategy.
108. The project will generate global environmental benefits both at the site level and through the influence that the project will exert on countries and regional bodies to adopt policies and practices that are consistent with HERD with the ultimate intention of arresting the process of rangeland degradation through SRM. This implies policies and practices that will promote biomass growth, conservation of biodiversity and the maintenance of a suite of ecosystem services linked to water, soil and carbon – increasing thereby rangelands' potential for food production in a sustainable way.
109. SRM is one of the land management options that delivers the widest range of global and local environmental benefits, by maintaining the optimal productivity level of rangelands. This means grazing only at stocking rates commensurate with the land's carrying capacity, cultivating only in areas of adequate rainfall with an addition to or a return of nutrients and rangeland improvement where the production system allows it.
110. SRM contributes to combating desertification by increasing rangeland vegetation cover and particularly perennial species that protect soils and reduce soil erosion. Well-managed rangelands have a higher capacity to trap and store water (see below) and nutrients, including soil organic carbon, sustaining primary productivity. The Millennium Ecosystem Assessment reported that expansion of cropland into forests and pastures is the single most important factor in land degradation. Such land use change is frequently the outcome when rangelands are viewed as low value or wastelands⁴⁸ and the project will demonstrate the value of rangelands in order to reduce such pressures.
111. SRM contributes to conserving biodiversity by maintaining a diversity of vegetation cover, protecting habitats and maintaining landscape connectivity through livestock/wildlife corridors. Pastoral rangelands possess significant biodiversity, and sustainable pastoralism depends on this diversity: on a range of grasses with different nutritional properties and seasonal availability and on a range of shrubs and trees which provide fuel, shelter, fodder and numerous economic and cultural values. Many rangelands are *de facto* Community Conserved Areas and pastoralists can be supported to secure compensation for environmental services related sustainable herding practices, including seasonal mobility and fire management. When pastoralism is based on carefully managed herd mobility, it can stimulate pasture growth, improve rangeland mulching, reduce invasive species and improve mineral and water cycling.

⁴⁸ Gallagher, 2008; Gaia, 2008.

112. Rangelands can play a role in mitigating climate change, even though carbon sequestration is not particularly on focus in this project, nor have specific biocarbon indicators been measured at site level. Yet, it is worth noting that the restoration of rangelands contributes to carbon sequestration, and protecting rangelands from conversion to other land uses maintains significant carbon stores. Many rangelands are dominated by C4 grasses which are among the most efficient sequesters of atmospheric carbon. Additionally, the majority of rangeland biomass is sub-surface where it has a high degree of permanence, so long as those lands are not ploughed. It has been estimated that there is scope globally to rehabilitate 5000 Mha of rangeland which would sequester an additional 1300-2000 MtCO₂.⁴⁹
113. Pastoralism is a highly adaptive system and has evolved in unpredictable climates as a way of managing uncertainty and seasonal variability. Lack of support for sustainable pastoralism contributes to failure to adapt to climate change, which is contributing in turn to rural urban migration and environmental refugees who impact directly and indirectly on neighboring countries and globally. Resilient rangeland ecosystems and more sustainable management of rangeland resources contribute to adaptive capacity and enable rangeland systems to remain vibrant in the face of climate change in areas where alternative land uses would succumb.
114. Sustainable Rangeland Management restores important ecosystem services. SRM improves hydrological cycles by improving infiltration of water, improving water holding capacity, reducing evaporation and run off. These contribute to more stable transboundary water flows and reduced risks of flooding and landslides, which are projected to become a greater risk due to climate change and the increase in severe storm events.
115. Table 5 shows the estimated extent of degradation in the target landscapes. Egypt's target landscapes include 164,549ha rangelands and 168,393ha of mixed landscapes, of which 34% and 90% respectively are considered degraded. However, indicators of degradation are different between rangeland and mixed landscapes and these data will be validated during the project. Jordan's target landscape consists of 184,461ha rangelands, of which an estimated 37% are considered degraded.

116.

Table 5. State of rangelands' degradation in project sites (preliminary PPG assessment)

	Target Rangelands within Landscapes (ha)	% of Rangelands degraded Areas	Target Mixed Systems within Landscapes (ha)	% of mixed systems degraded Areas
Egypt	164,549	34%	168,393	90%
<i>Site 1 (Abou-Mazhoud-El Zewaid)</i>	<i>139,645</i>	<i>65%</i>	<i>68,781</i>	<i>90%</i>
<i>Site 2 (Gaioin)</i>	<i>24,903</i>	<i>90%</i>	<i>99,613</i>	<i>72%</i>
Jordan	184,461	37%	0	n/a
<i>Site 1 Bani Hashim</i>	<i>1,636</i>	<i>30%</i>	<i>0</i>	<i>n/a</i>
<i>Site 2 SURA</i>	<i>9,703</i>	<i>30%</i>	<i>0</i>	<i>n/a</i>
<i>Site 3 Hazeem</i>	<i>169,355</i>	<i>37%</i>	<i>0</i>	<i>n/a</i>

⁴⁹ Tennigkeit and Wilkes, 2008.

Site 4 Jafir-ALManshyah	3,767	100%	0	n/a
Overall PROJECT	349,009	64%	168,393	-

Social- economic benefits

117. SRM will contribute to poverty reduction: a global benefit enshrined most notably in the UNCCD. Research has shown that pastoral systems are significantly more productive, in terms of gross value, than alternative land uses (including irrigation agriculture) in the majority of the world's rangelands and pastoralism contributes above its weight to many agrarian economies even despite long-term underinvestment.

118. At site level, four target landscapes have been selected in Jordan and two in Egypt. An overview of potential project beneficiaries per site have been is shown below:

Table 6. Number of affected people within the project boundary

	Male	Female	Total
Egypt	5,813	4,967	10,780
Site 1 (Abou-Mazhoud-El Zewaid)	3,011	2,573	5,584
Site 2 (Gaioin)	2,802	2,394	5,196
Jordan	10,784	8,376	19,160
Site 1 Bani Hashim	8,500	6,500	15,000
Site 2 SURA	98	36	134
Site 3 Hazeem	45	25	70
Site 4 Jafir-ALManshyah	2,141	1,815	3,956
Overall PROJECT	16,597	13,343	29,940

119. The Country PPG Reports and the Tracking Tool, in [ProDoc Annex 1a](#), contains several details on the generation of global and national benefits under the project.

3.2 Project goal and objective

120. The project's goal is in line with LD Strategic Objective LD-1: Agriculture and Rangeland Systems: Maintain or improve flow of agro-ecosystem services sustaining the livelihoods of local communities and LD-3: Integrated Landscapes: Reduce pressures on natural resources from competing land uses in the wider landscape. In particular, the project contributes to the following GEF6 LD Outcomes:

1.1 Improved agricultural, rangeland and pastoral management and

3.2 Application of integrated natural resource management (INRM) practices in wider landscapes.

121. The combination of these strategic objectives is expected to contribute to arresting and reversing current the current trends in land degradation in Egypt and Jordan, while also

catalyzing change in other countries where pastoralist systems in rangelands are important.

122. Specifically, the project will support capacity building rangeland stakeholders in the two participating countries (Jordan and Egypt) and beyond, using the catalytic outreach of IUCN ROWA and its partners in the West Asia, North Africa and other parts of the world.

123. The following four project components are foreseen and described in the next section:

- Component 1: Technical assistance for adaptive management and learning (evidence- based decision- making)
- Component 2: Stronger institutions for rangeland governance
- Component 3: Identifying and up- scaling good practices in Sustainable Rangeland Management, based on Participatory Sustainable Rangeland Management Planning (PRMP)
- Component 4: Knowledge management to promote an enabling environment for regional scale up of sustainable rangeland management

3.3 Project components and expected results

Component 1

Technical assistance for adaptive management and learning (evidence-based decision-making)

124. Under this first Component, the project will institutionalize rangeland monitoring systems using scale-dependent indicators appropriate for different end-user groups, linking monitoring at regional, national and community levels. This will improve identification of cost-effective good practices and policies in SRM and rangeland rehabilitation using agreed methodologies such as Total Economic Valuation and tools such as the “Minimum Standards in Sustainable Pastoralist Development”.⁵⁰

125. This Component will also provide insights into the desired rangeland ecological communities to enable appropriate forest and rangeland mosaics are restored and to protect high-value components like wetlands within dryland ecosystems. The project will strengthen knowledge and capacity for implementing policies in support of SRM, using tools like the Pastoralism Learning Forum (www.iucn.org/wisp), as well as the Arabian Pastoralist Communities Network, mentioned in the Stakeholder Matrix (Table 2).

Outcome 1.1

Rangeland monitoring systems institutionalized nationally and regionally based on commonly agreed scale-dependent indicators appropriate for different end-user groups

126. PRAGA, or Participatory Rangeland and Grassland Assessment, is a methodology designed by IUCN for improving assessment of rangeland and grassland health at a

⁵⁰ IUCN, 2011

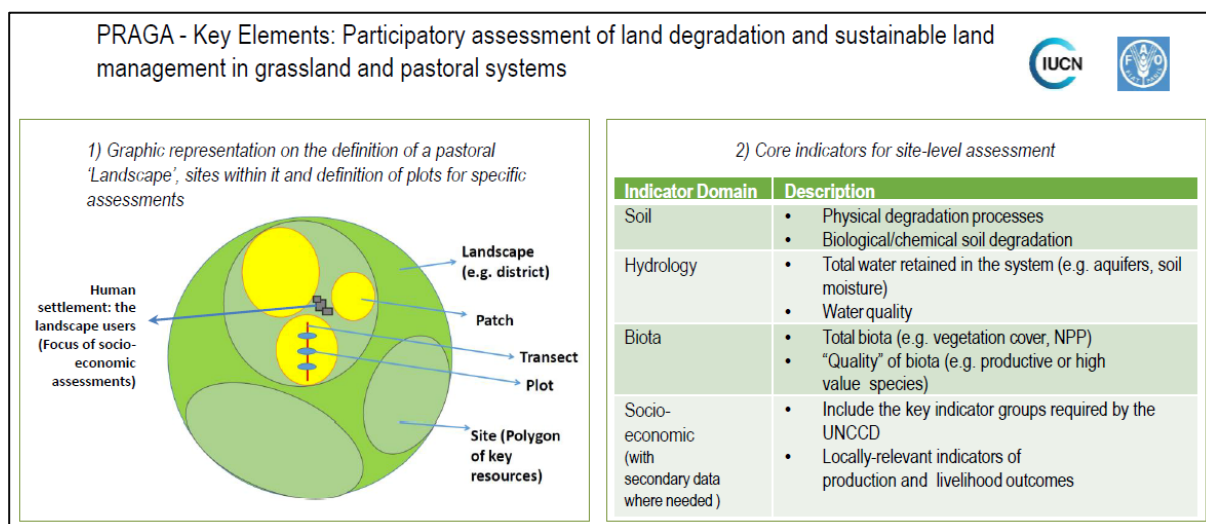
suitable scale to inform sub-national level planning and action. The tool is being elaborated under a GEF funded project, implemented by FAO. The tool combines a participatory approach for defining land use objectives and local indicators with expert-led field assessment and use of remote sensing data. The methodology is informed by a number of common challenges in assessment of rangeland and grassland landscapes, including:

- Poor availability of data
- Established methodologies may be misleading (e.g. excessive reliance on Net Primary Productivity) and bush encroachment, which can be a form of degradation, often shows up as a positive change in grassland assessments
- Ecological challenges, including when dealing with non-equilibrium systems (e.g. drylands)
- Highly detailed assessments can be prohibitively expensive
- Some of the more detailed methodologies are designed for small scale assessment
- Conflicting production & conservation objectives (as it is often the case in rangelands)

127. By testing and rolling out PRAGA in Jordan and Egypt in selected sites, a goal behind the efforts is to strengthen the capacity of local and national stakeholders in grassland and pastoral areas to assess Land Degradation and make informed decisions by promoting SRM in a way that preserves the diverse ecosystem services that grassland provide. This has the benefit of supporting long-term planning by herders and local government, while also combining locally-relevant and globally-comparable data and indicators. Two Outputs and a series of activities are implied. These are herein described.

Output 1.1.1 Rangeland landscape assessments conducted at local, and national levels using agreed biophysical and socio-economic indicators and participatory approaches where applicable

- Implementation of PRAGA methodology (national and local inception process, collection of secondary data and remote sensing data, selection of indicators, preliminary field work, full assessment, data analysis and reporting, validation workshops).
- Detailed studies of target landscapes, including drought monitoring, contour mapping, rangeland characteristics, livestock production data, socio-economic data, role of Gender in rangeland management and restoration.

Figure 3. Methodology: Defining HERD landscapes and site-level indicators

Output 1.1.2 Development of Prototype National platforms for information sharing and exchange, including data on land degradation and good practices in Sustainable Rangelands

- Concept paper on National SRM Platforms for Jordan and Egypt prepared and finalized, guiding the Call-for-Proposals process.
- Sub-grant to national partner(s) to establish or upgrade a web-based database to host assessment data.
- Results assessed on a rolling basis.
- Distillation of good practices feed into the Outputs and Activities under Outcome 1.2.

Outcome 1.2

Good practices and effective policies in sustainable rangeland management and rangeland rehabilitation identified and prioritized for implementation

128. The focus of Component 1 is on evidence-based decision making. It will specifically look into policies and practices that are either counter-productive vis-a-vis the SRM goal or conducive to it, and which Project HERD may be able to influence through studies and advocacy. Building from the baseline analysis and the Barriers section. Policy domains will include agriculture, water, forest, wildlife, land, and governance. They will also include over-arching government strategies, including National Action Programs to Combat desertification, National Adaptation Plans of Action, National Biodiversity Action Plans, and sector-specific plans such as Jordan's 2013 Rangeland Strategy and the Matrouh Governorate Development Strategy.

Output 1.2.1 Review of policies and laws, including relevant international agreements, related to sustainable rangeland management, identifying opportunities and barriers policy implementation

- Consultant-led study and consultative workshops.
- With respect to the livestock feed subsidy policy in Jordan, which is an untargeted drought mitigation policy, was considered in the Barriers section as a 'direct subsidy

for overgrazing'. Subsidies to livestock owners for purchasing imported barley as a feed complement are provided through cash transfers according to the size of one's herd. The effectiveness of the policy as a means of fighting drought will be assessed by looking into whether it had any unintended side-effects, such as making the Bedouin population more sedentary, whether it contributed to increasing livestock numbers and whether it possibly resulted in an over-reporting of livestock numbers by herders. This will be linked to the work under Output 1.2.2, where cost-benefit methods may also apply for assessing the above-referred policy effectiveness. Recommendations will be made in an open dialogue with policy makers.

- In Egypt, the initial advocacy work will focus on probing the extent to which the Governorate of Matrouh may be interested in technical assistance for the development of its first rangeland management strategy, piloting this kind of initiative in the country.
- Other work may focus on the review of implementation of Jordan's Updated Rangeland Strategy of 2014.

Output 1.2.2 Cost-benefit analysis of sustainable rangeland management policies and practices using economic methodologies

UNEP is conducting the 'TEEB for Agriculture & Food' (TEEBAgriFood) study, which seeks to bring together scientists, economists, policymakers, business leaders, and farmers organizations in order to undertake a comprehensive economic evaluation of agricultural systems, practices, products, or policy scenarios against a comprehensive range of impacts and dependencies across the value chain. The project will seek collaboration options with the TEEBAgriFood initiative.

- Consultant-led economic valuation and mapping of restoration opportunities combined with local and national consultative workshops.
- Exact sites or segments of the livestock sector – or themes relating to land use management -- will be defined during project inception.
- The actual studies foreseen will be preferably conducted towards the end of the project when data on implementation methods are available.

Output 1.2.3 Good practices and policies in integrated rangeland management validated following agreed methodologies and indicators

- Development of project monitoring strategy with agreement on indicators for evaluation of good practices
- Midterm and final evaluation of project actions drawing on evidence from rangeland landscape assessments and economic valuations.
- Publication of project lessons in English and Arabic

Component 2

Stronger institutions for rangeland governance

129. Under the second Component, the project will draw on the IUCN-authored Technical Guide for implementing the Voluntary Guidelines on Responsible Governance of Tenure (VGGT) in Pastoral Lands.⁵¹ The project will strengthen local organizations for communal range management (e.g. Hima Communities) according to national legislation and preferences of stakeholders.

⁵¹ FAO, 2015

130. This will entail capacity assessment and capacity building at different scales. Participatory Rangeland Management Planning (PRMP) will be institutionalized in community rangeland groups and including women groups local government through training of trainers. National or local laws that strengthen community rangelands resource rights will be identified and better-implemented in line with the VGGT. This will entail documenting existing rules and regulations (government and community) and developing appropriate mechanisms to strengthen their enforcement, including by-laws and local conventions. Component 2 will pay particular attention to the resource rights and governance capabilities of women pastoralists and will ensure space for women's representation and participation in all decision-making processes and public fora. The role of women groups in advocacy and policy dialogues will also be considered. From past projects, it has been shown that women participation is more effective when they are in groups. The project will therefore work with women groups to ensure their participation in decision making processes. In cases where these groups are not in place, the project will facilitate their formation and ensure women are adequately represented in decision making discussions. Women champions / role models from the communities will also be incorporated in the capacity building initiatives to ensure the women from the community are able to freely contribute to discussions. (see Box 3).

Outcome 2.1

Local organizations for rangeland management (community and government) engage in more inclusive dialogue for improved rangeland governance covering approximately 500,000 hectares

Output 2.1.1 Capacity/needs assessment of local organizations, including community groups and local public service providers

- Detailed stakeholder analysis and baseline needs assessment (against key governance indicators) with strong emphasis on the capacities and needs of women and any social inclusion groups (Vulnerable groups)

Output 2.1.2 Stronger organizational capacities through appropriate training, including training of partner institutions in Participatory Sustainable Rangeland Management Planning (PRMP)

- Training of local partners in Sustainable Rangelands Management etc. (Pastoral Learning Forum methodology)
- Training on remote sensing, GIS, drought and land degradation modeling and mapping methods
- Publication of brochure on SRM in Arabic and distribution to all partners and communities

Outcome 2.2

Participating communities use PRMP to guide the establishment of rules and regulations for improved rangelands management (in line with the Voluntary Guidelines on Responsible Governance of Tenure)

131. This implies actively applying recommendations for the VGGT on rangelands that predicate the following with respect to planning:
- Map the network of tenure niches and the overlapping nested rights, including those that apply to pastoral infrastructure (corridors, grazing, watering points), taking transboundary resources into account.

- Describe and account for the customary and statutory systems governing pastoralism, including laws, rules and norms as well as the complex relationships that govern pastoralism and ensure they are properly considered in the plan.
- Include pastoralism as a legitimate and effective land-use system that contributes to national and local economies. Cost-benefit analysis of pastoralism and other land use systems can be carried out to determine the most appropriate use of land, taking into account indirect as well as direct values of different land uses.
- Ensure that plans support specific aspects of pastoralism. For example, in relation to mobility this can include developing indicators for mobility (livestock tracks and other pastoral infrastructure) and mapping of access to water resources and grazing along livestock corridors.
- Ensure gender mainstreaming in every step of the way, given the risk for limited participation by women, by e.g. explicitly consulting women on the establishment, endorsement and enforcement of rules in connection with PRMP; giving them a voice in several processes and fora; and ensuring that they reap equitable benefits from SRM.

Output 2.2.1 PRMP implemented in all participating communities and updated annually

- Implementation of PRMP methodology by trained local partners (validation of stakeholder analysis, preliminary discussions to ensure Free, Prior and Informed Consent, PRMP workshops with mapping and planning exercises⁵²⁵³).

Output 2.2.2 Documentation of existing community land use practices (rules and regulations over rangeland resource management: pasture, water, trees, wildlife, livestock corridors, etc.)

- Consultancy-led study and consultation with local stakeholders as part of planning.
- Additional end-of-line study, as needed, to document and disseminate good practices.

Output 2.2.3 Local agreements between communities and between communities and state institutions (Hima agreements, local conventions, bylaws etc.) developed according to national legal opportunities

- Multi-stakeholder dialogue to draft local natural resource management agreements.
- Participation in government dialogue to pursue adoption of local agreements (where relevant)
- Activity led by local partner (e.g. community based organization) through dialogue with local government.
- Details will be developed during the project's inception.

Component 3

Identifying and up-scaling good practices in Sustainable Rangeland Management, based on Rangeland Management Planning

132. For the third Component, the project will focus on work that will bring SRM results to scale. This be based on PRMPs and will support activities in rangeland rehabilitation and sustainable integrated landscape management, such as (but not limited to) managed

⁵² <https://www.iucn.org/regions/west-asia/our-work/drylands-livelihood-and-gender-programme/securing-rights-and-restoring-lands-improved-livelihoods>;

⁵³ IUCN, 2011

natural regeneration, integrated land and water resource management, social-fencing, exclosures for short-term rangeland regeneration, demarcation of rangelands and livestock corridors, and establishment of Community Conserved Areas. In the establishment of community conserved areas, the role of women will be taken into consideration for instance in the collection and drying of medicinal herbs and processing them for marketing.

133. The project will strengthen supporting services for SRM, including markets for rangeland goods and services (including livestock and non-livestock products), market information systems, ecotourism training and support, pilot PES schemes, pilot grassland carbon payments, livestock disease surveillance and control, and support for access basic social services for rangeland communities. Women groups will be specifically targeted under this component for the identified income generating activities. In cases where there are no women groups, the project will support their formation to ensure women participation is integrated in the project. By drawing on the PRMPs, Comp 2 will explicitly address priorities identified by women pastoralists.

Outcome 3.1

Local farmers / pastoralists adopt good practices in rangeland restoration and management and supporting services with support from local government agencies

134. This output is concerned with creating enabling conditions for the adoption of SRM. It will build on training, planning and support for local organizations to develop the means of land use governance for SRM. Guiding principles such as the VGGT will be part of the ‘packages’ in both training and planning.
135. Considerations on gender equity will be taken in every step of activities under this outcome, in particular because it involves land-use planning and allocation, grant-making and important decision-making on all of these respects. These are all processes where the project identified as bearing **a risk for poor participation by women**. Therefore, specific mitigation measures will need to apply in both planning and implementation. The benefits derived from the activities (both monetary and non-monetary) and how these benefits are shared by men and women, respectively, will also be duly monitored.

Output 3.1.1 Training and awareness raising in rangeland restoration and management innovations and adapting services for sustainable rangeland management

- Publish a technical brief on community based rangelands management in local language targeting local and national level public servants.
- Public events to communicate innovative approaches in community rangelands management.
- Exchange visits to established rangeland Hima sites in Jordan.

Output 3.1.2 PRMP based sustainable rangeland management systems are piloted

Activities are indicative and will be more closely determined according to results of the PRMPs. Work will be carried out in partnership with local government and community groups:

- Demarcation of protected pasture zones (e.g. bush planting, sign boards, public notices).
- Reintroduction of native pasture and tree species.
- Strategic water interventions.

- Demarcation of livestock corridors.
- Establishment of Community Conserved Areas.

Output 3.1.3 PRMP-based supporting activities are piloted

Activities are indicative and will be more closely determined according to results of the PRMPs. Work will be carried out in partnership with local government and community groups

- Grants to local groups for processing and marketing non-timber forest products and other rangeland resources
- Review of market opportunities and threats including gathering of relevant market data.
- Targeted training in income generating opportunities
- Dialogue to support progress towards PES schemes for water supply
- Review of opportunities for grassland carbon payments
- Dialogue between pasts and financial services providers to identify opportunities and needs

Component 4

Knowledge management to promote an enabling environment for regional scale-up of Sustainable Rangeland Management

136. Component 4 will stimulate learning and dialogue for the adoption of regional decisions in relation to pastoralism, for implementation of international agreements to which a substantial number of countries have signed up, and for coordinated input to those global institutions. This includes regional actions to promote implementation of Land Degradation Neutrality, following a meeting convened by the League of Arab States (Cairo, February 28th, 2016) where it was proposed that the current project would support the development of an “Initiative to Support LDN Implementation in the Arab Countries”, lead by the UNEP-Regional Office for West Asia based on existing implemented regional programs.
137. will also support the region to demonstrate its global leadership in this field, supporting engagement of experts and pastoralist representatives in international fora, exchange of experiences worldwide, and technical support from regional experts to initiatives on pastoralism and rangelands outside of the region.
138. This also includes establishing a regional Communal Rangelands Leadership network of scientists, pastoralists and Civil Society Organizations to improve South-South learning and cooperation and to engage regional experts in global dialogue on pastoralism. This network will combine electronic networking with public events at international fora and participation of experts in the development of comparable initiatives in other regions.
139. More specifically, the project will contribute to development of a global initiative on scaling up communal rangelands management (under the umbrella of “HERD”), which will be spearheaded by Jordan and Egypt, and the LAS region more widely, providing South-South collaboration, knowledge sharing, capacity building and inspiration. The network will initially be based in IUCN Jordan and the project will explore options for establishing the network within a regional center of excellence, through dialogue with the LAS members.

140. Lessons for experience sharing will be drawn from Jordan and Egypt as well as key champions of communal rangelands management in the region, such as Lebanon and Morocco.
141. Finally, Component 4 will strengthen regional and global dialogue to improve awareness of the values of rangeland ecosystems, including global dialogue to generate recognition of rangeland ecosystem services in international policy. This will be used to encourage additional countries worldwide to develop initiatives under the HERD umbrella and prioritization is not appropriate at the start, but countries that have already expressed an interest include Iraq, Lebanon, Sudan, Mauritania and Kuwait within the LAS region, as well as Chad and Senegal and others informally.
142. The project components outcomes and expected outputs are outlined in below.

Outcome 4.1

Increased support for sustainable pastoralism in investments and public decision/policy- making, nationally, regionally and globally

Output 4.1.1 Lessons on the value of rangeland ecosystems and good practices in SRM are documented and communicated through a regional Communal Rangelands Leadership network of scientists, pastoralists and Civil Society Organizations for South-South learning and cooperation

- Compilation and publication of validated good practices, policies, strategies and decisions in the restoration and protection of communal rangelands in the Arab region and globally (estimate 15 case studies).
- Presentation of experiences at academic and policy conferences and events regionally and globally and publication in peer reviewed journals together with the national experts and scientists.
- Annual meetings of the two project's National Advisory Committees.
- One regional conference of rangeland leaders (scientists, policy makers, political leaders, pastoral Civil Society leaders) to launch a Regional Communal Rangelands Leadership network.

Output 4.1.2 Regional dialogue to influence the design and implementation of policies and investments for SRM, including coordinated influence of international agreements

- One regional policy forum on the challenges and opportunities to SRM, with support for regional decisions in favor of SRM/LDN (target 50 mid-level policy makers from the LAS region and beyond).
- Review of regional and global policies in support of SRM (especially LDN), their value-addition to national policies, and opportunities for leveraging further funds for regional SRM initiatives.
- Publication of a LAS regional rangeland situation analysis, including an overview of the state of rangeland health and estimated cost benefit of restoration and protection.
- Convening of regional investment forum for SRM/LDN.

Output 4.1.3 Sustainable Rangeland Management initiatives are submitted (regionally and outside the region) for funding under the HERD umbrella, based on "bankable" investment options and innovative financing strategies

- Identification of target countries and preparation of supporting commitments

- Five national assessments of conditions for scaling up SRM (state of rangelands, state of pastoral rights, existence of good practices)
- Stakeholder analysis and consultation in target countries
- Five national workshops for collaborative proposal design and fund raising strategy.

3.4 Intervention logic and key assumptions

143. A core acknowledgement – and assumption – behind the project strategy is that data on the state of rangelands is generally weak and there is no universal definition of rangelands and, as yet, no agreed measurement of their extent.⁵⁴ This data gap has significant implications for investments in the world's rangelands, since the UNCCD Second Science Conference showed convincingly that investment in 'sustainable management' is more cost effective than investing in 'restoration'. In other words, rather invest in *preventing* land degradation, or its avoiding aggravation, by sustainably managing these vast swaths of land, than to invest in *remediating* a process that is known to gradually denude the land and leave it virtually unproductive. The latter is assumed to be much more costly, even though the costs of restoring rangelands is variable and highly contextual. So are the techniques that may be prescribed for recuperating land productivity in each case.
144. Additionally, the sheer scale of rangelands and the high value of their ecosystem services are powerful reasons for ensuring that appropriate investments and policies are in place to support their sustainable use. This underscores the importance of understanding the cost of land degradation on rangelands, as well as the need and usefulness of local assessments on land degradation. Understanding the drivers behind this degradation, identifying cost-effective management interventions strategies, including the role of pastoralism, are therefore key. Reinforcing sustainable management strategies and functional rangelands governance models that successfully combine science and viable land-use enforcement mechanism is equally important.
145. Another key assumption behind the project is the idea that for, managing rangelands, across time and across large landscapes, it is necessary to manage grazing pressure, land use and the mobility of livestock. Within the HERD concept, solutions imply reinforcing the governance of rangeland tenure with a view to both ensuring the long-term health of rangeland ecosystems and an equitable and responsible management of use and control rights. This requires an approach to governance of tenure that is both normative and utilitarian.
146. For addressing this issue, the project will, on the one hand reinforce evidence-based decision-making through its first component, where the regional and global entry points will be prominent. This implies technical assistance, tools methods and sound monitoring systems that country stakeholder can readily use, adapt and further develop. On the other hand, the project proposes to explore 'traditions' that are important in North African and West Asian countries through a regional perspective, to the extent that these traditions can effectively enforce an equitable and sustainable management of rangelands. In the MENA Region, the HIMA system is prominent. Yet there are other land tenure governance approaches that are being successfully adopted – whether they are "branded" or not – as these societies, evolve, transform themselves, and as States develop useful synergies between customary and statutory systems.

⁵⁴ Allen et al., 2011.

147. The project will explore different approaches to governance of tenure through dialogue, exchanges and other networking that go beyond the scope of the sub-region where the project is being implemented through a regional-global nexus. The principles behind the recently agreed Voluntary Guidelines on the Responsible Governance of Tenure (VGGT) of Land, Fisheries and Forests in the Context of National Food Security will function as a common denominator for defining guiding parameters for any approach to governance tenure.
148. Proposed solutions aligned with the HERD concept that will be supported by the project will include careful planning and monitoring. This yields best results, when done locally, with the full participation of stakeholders – an aspect that should not be neglected, if the goal is to both secure valuable ecosystem services rendered by rangelands and ensure the long-term interests of rangeland users. Gender equity is also strongly at play when the governance of tenure over rangelands is negotiated.
149. Therefore, in both Jordan and Egypt the project will invest in assessing stakeholder needs and in capacitating them to negotiate this tenure, to draw agreements, where they are needed and to review policies and practices that affect rangeland management, both at the local and the national level. This will be done through the project's component 2 and will include both governmental and non-governmental entities, with a special focus on women and marginalized groups. In addition, though component 3, the focus will be on selected landscapes targeted for management, covering up to 500,000 ha, and which have been prioritized by national project partners.
150. At the global level, IUCN and UNEP are joining forces with other likeminded partners to reinforce the achievement of initiatives that focus on the knowledge, science and dialogue on rangelands and provide continuity to them. This will be catered for activities of component 4, helping foster an enabling environment for regional and global scale-up of the HERD concept on SRM.
151. Overall, the project will help devise solutions for strengthening the restoration and sustainable management of pastoral rangelands for the provision of ecosystem services and protection of biodiversity in Egypt and Jordan.⁵⁵
152. By mentioning 'restoration', it is important to qualify that the inclusion of this concept into the project's objective is to revert the negative trends that will put rangelands impacted by land degradation back on the path of recovery. Different sites selected for benefitting from the project in Jordan and Egypt currently face different levels of land degradation and challenges (see [description of project sites](#) further down).
153. Different techniques and approaches would be warranted for achieving cost-effective results. More importantly, rangeland restoration is a complex and long-term process – often involving a decade or more. Because rangelands restoration is at the heart of the project strategy, this is discussed further down in Box 4 below, as well as in [Section 7.3 Project Cost Effectiveness](#).

Box 4. On rangeland restoration

⁵⁵ With reference to the project's objective.

Restoration of ecosystems can be interpreted in different ways and the literature on the matter is vast.

In the case of **rangelands**, any investments in improving the state of rangelands that are subject to land degradation should be focused on restoring their long-term productivity.

Restoring rangelands may include a gradient of techniques for reestablishing, recuperating or rehabilitating the vegetation cover: from a more passive approach termed 'natural regeneration' to active fencing and cultivation of grasses that are palatable to livestock, the planning of useful trees, etc. This would involve seed collection, the establishment of plant nurseries and soil work, with the associated investment in equipment, materials and labor.



Typical rangeland managed by grazing in Matroah, Egypt. Photo by Dr. Wadid Erian (Jan 2017)

Water collection and harvesting techniques are often part of an integrated approach, and possibly imply the construction of strategic water points for livestock to facilitate mobility.

Regardless of the techniques that may apply to the vegetation cover, soil and water resources, it is essential to **manage the livestock grazing pressure** on rangelands – in time and space. In other words, it requires planning and coordination among users.

This, in turn requires **security of tenure** over land and resources, which can only be achieved through **governance of the commons** and policies that favor a sustainable management.

154. A final key assumption behind the project strategy is that securing pastoral tenure is important for the sustainability of rangeland management. Yet, because this touches upon rights, duties and relationships, and because tenure can be both legally or customarily defined among people, as individuals or groups, the topic is complex. The project will address this complexity, but without losing sight from its global environmental objective of improving the flow of agro-ecosystem services to sustain food production and livelihoods.

Project sites

Criteria applied in site selection

155. The project intervention zone comprises the areas within two countries: Jordan and Egypt and 4 administrative districts altogether: Zarqa, Ma'an and Mafraq Governorates in Jordan and Matruh Governorate in Egypt. Selected areas are extending over a total of 566,307 hectares and they are home to a population of approximately 30 thousand people.
156. Numerous interventions aiming at rangelands conservation are expected to take place within these sites. Selected landscapes are home to numerous plant species, that are essential to the continuous flow of ecosystem services across the landscapes. Within the individual landscapes, specific habitats have been preliminarily identified for restoration efforts, but further assessments on their status and trends vis-à-vis LDN indicators remain to be assessed. The target landscapes will be object of management and proper management will likely yield good results. The following criteria were applied in the final selection of the Project's sites, citing the following in order of importance:

- A rangeland landscape with a number of degradation challenges and degraded sites
- A site within the landscape that is degraded
- A site that has potential for restoration to healthy rangelands and a high potential for measuring vegetation changes and will likely positively response to undertaken management actions
- A site that is communally used and where the community can be defined
- A site where the community can realistically assert their rights to manage and to periodically exclude others
- Sites that are located in such a way that they can be good pilot sites (comparison areas) – i.e. other communities can easily visit to learn from
- Sites that have not received widespread efforts at restoration in the past
- Sites that are somewhat representative of other sites in the landscape1- Represent the overall range site in which it is located. Including: soil, topography, abiotic factors, wind and water
- Landscapes that are representative of the other landscapes in the country
- Contain key species of interest (important from the point of view of plant communities, serving as change indicators, used as a forage)

Overview of sites

157. During the PPG, site level assessments were carried out and sites were selected in collaboration with the Desert Research Center in Egypt and the Hashemite Fund for the Development of the Jordan Badia. The detailed results are presented in the [ProDoc Annex 1a](#). The Tables and Maps that follow provide an overview.

Table 7. Project Landscapes: Characterization of area in which project is located & Land Degradation Problem

Ref. to TT Questions and Notes	Agro-ecological context	Overall PROJECT	Site 1 (Abou-Mazhoud-El Zewaid)	Site 2 (Gaioin)	Egypt	Site 1 Bani Hashim	Site 2 SURA	Site 3 Hazeem	Site 6 Jafir-AIManshyah	Jordan	% of Productive Landscape
	OVERALL ("Outer") Landscape (in hectares)	566,337	208,426	124,516	332,942	6,058	12,767	193,641	20,929	233,395	108%
1.a	Agroecological zone(s) is the project situated	Arid	Arid	Arid	Arid	Arid	Arid	Arid	Arid	Arid	-
1.b	Production systems targeted by project target	<i>Rangeland and mixed systems</i>	<i>Rangeland and mixed systems</i>			<i>Rangeland</i>					-
[a]	Productive Landscape/ Project target in hectares	525,563	208,426	124,516	332,942	5,089	12,767	169,742	5,023	192,621	100%
	i. Agriculture (including food crop, tree crop, and crop-livestock)	3,869	0	0	0	545	2,936	387	0	3,869	1%
[b]	ii. Rangeland	349,009	139,645	24,903	164,549	1,636	9,703	169,355	3,767	184,461	66%
	iii. Pastoral	0	0	0	0	0	0	0	0	0	0%
	iv. Forestry	4,291	0	0	0	2,908	128	0	1,256	4,291	1%
[c]	v. Mixed Systems	168,393	68,781	99,613	168,393	0	0	0	0	0	32%
	TOTAL area of production systems targeted	525,563	208,426	124,516	332,942	5,089	12,767	169,742	5,023	192,621	100%
	Other and non-productive Landscape	40,774	0	0	0	969	0	23,899	15,906	40,774	0
	Urban	969	0	0	0	969	0	0	0	969	
	Bare rocks	20,774	0	0	0	0	0	4,868	15,906	20,774	
	Protected Areas	19,031	0	0	0	0	0	19,031	0	19,031	
1.c	Extent of land degradation within the project boundary										% of land use category
	i. Agriculture (including food crop, tree crop, and crop-livestock)	773	0	0	0	147	587	39	0	773	20%
	ii. Rangeland	182,324	90,770	22,413	113,182	491	2,911	61,973	3,767	69,142	52%
	iii. Pastoral	0	0	0	0	0	0	0	0	0	n/a
	iv. Forestry	0	0	0	0	no data	no data	0	no data	0	0%
	v. Mixed Systems	151,554	61,903	89,652	151,554	0	0	0	0	0	90%
	Extent of land degradation within productive landscapes (ha)	334,651	152,672	112,064	264,736	638	3,498	62,012	3,767	69,915	-
	Extent of land degradation (% of productive landscapes)	64%	73%	90%	80%	13%	27%	37%	75%	36%	-

Notes:

[a] The **Productive Landscape** or the Project target ("project boundaries" as referred to in the Tracking Tool) includes the following land use categories: rangeland, agriculture, pastoral, forest and bare soil that is part of the of range. Although the target of management will be '*rangelands*' in Egypt and '*rangelands and mixed systems*' in Jordan, there is a small portion of the productive landscapes (2%) that are under agriculture and forestry in Jordan sites (unless otherwise decided during project inception). Because the areas are small, they will be considered for the purposes of target area calculation, part of the

object of management within the target landscapes. The following land use feature have been excluded from the project target: protected areas, urban areas, industrial/mining sites and bare rocks.

[b] Rangelands comprise 96% of the surface of target landscapes in Jordan, but only 49% in Egypt, where a gradient that includes mixed systems to open rangelands have been included as part of the target landscapes.

[c] Four agro-ecological zones are distinguished in the project area. (i) a narrow coastal strip, about 5 km inland, which has good alluvial soils and horticulture is the main farming activity, with livestock and barley; (ii) a mixed production strip, 5-15 km inland, of lower rainfall and soil quality, and a mixed small ruminants-barley farming system prevails with orchards grown in the wadis; (iii) a rangeland strip, 15-50 km inland, of semi-nomadic population, largely used for small ruminants grazing, with scattered barley cultivation in land depressions; and (iv) an open-range area lies beyond 50-km inland, where a nomadic population are living on animal production, mainly camels.

Table 8. Brief Site Description Matrix

Country	Landscapes and their surface	Administrative unit	Commune or other feature	Stakeholders	Key characteristics
Jordan	[1] Bani Hashim Targeted area: 5,089 ha Rangelands area: 1,636 ha Agriculture area: 545 ha Forestry area: 2,908 ha	Zarqa Governate		1. Ministry of Environment (MoEnv) 2. Hashemite Fund (HFDJB) 3. IUCN 4. Ministry of Agriculture (MoA): <ul style="list-style-type: none"> Rangeland Department Forestry Department 	Site was a subject of restoration under HIMA.
	[2] Sura Targeted area: 12,767 ha Rangelands area: 9,703 ha Agriculture area: 2,936 ha Forestry area: 128 ha	Mafrq Governate	Transhumant communities	5. National Center for Agricultural Research and Extensions (NCARE) 6. Royal Society for Conservation Nature (RSCN)	Neglected rangeland reserve. A subject of land degradation; rich in biodiversity.
	[3] Al Hazeem Targeted area: 169,742 ha Rangelands area: 169,355 ha Agriculture area: 387 ha Forestry area: 0 ha	Zarqa Governate	Transhumant communities	7. Royal Botanic Garden (RBG) 8. Royal Administration of Environmental Protection 9. Pastoralists	Arid area in Azraq Basin, poor in biodiversity. Grazed mostly by camels. Reduced surface water supply.

Country	Landscapes and their surface	Administrative unit	Commune or other feature	Stakeholders	Key characteristics
	[4] Al Manshyah Targeted area: 5,023 ha Rangelands area: 3,767 ha Agriculture area: 0 ha Forestry area: 1,256 ha	Ma'an Governorate			The area heavily dependent on seasonal rainfall. During humid season, it is rich in biodiversity, including endemic species of medicinal herbs.
Egypt	[1] Abou-Mazhoud – El Zewaid Targeted area: 208,426 ha Rangelands area: 139,645 ha Agriculture area: 0 ha Mixed systems: 68,781 ha	Matruh Governorate	<ul style="list-style-type: none"> • El Mahafiz • El Garara • Abou Mazhoud • El Negaila • El Zewaid 	1. Marsa Matrouh Governorate 2. Ministry of Agriculture <ul style="list-style-type: none"> • Desert Research Center 3. Pastoralists 4. Local Communities Development Associations – El Rames Association 5. Ministry of Water Resources and Irrigation 6. Ministry of Environment	Dry Mediterranean climate. Area rich in flowering plants species. Goats, camels, sheep. Moderate but striking land degradation.
	[2] Gaioin Targeted area: 124,516 ha Rangelands area: 24,903 ha Agriculture area: 0 ha Mixed systems: 99,613 ha		<ul style="list-style-type: none"> • El Soryhat • Gaioin 		Dry, Mediterranean climate severely degraded area with no palatable plant species.

Figure 4. Sites in Jordan

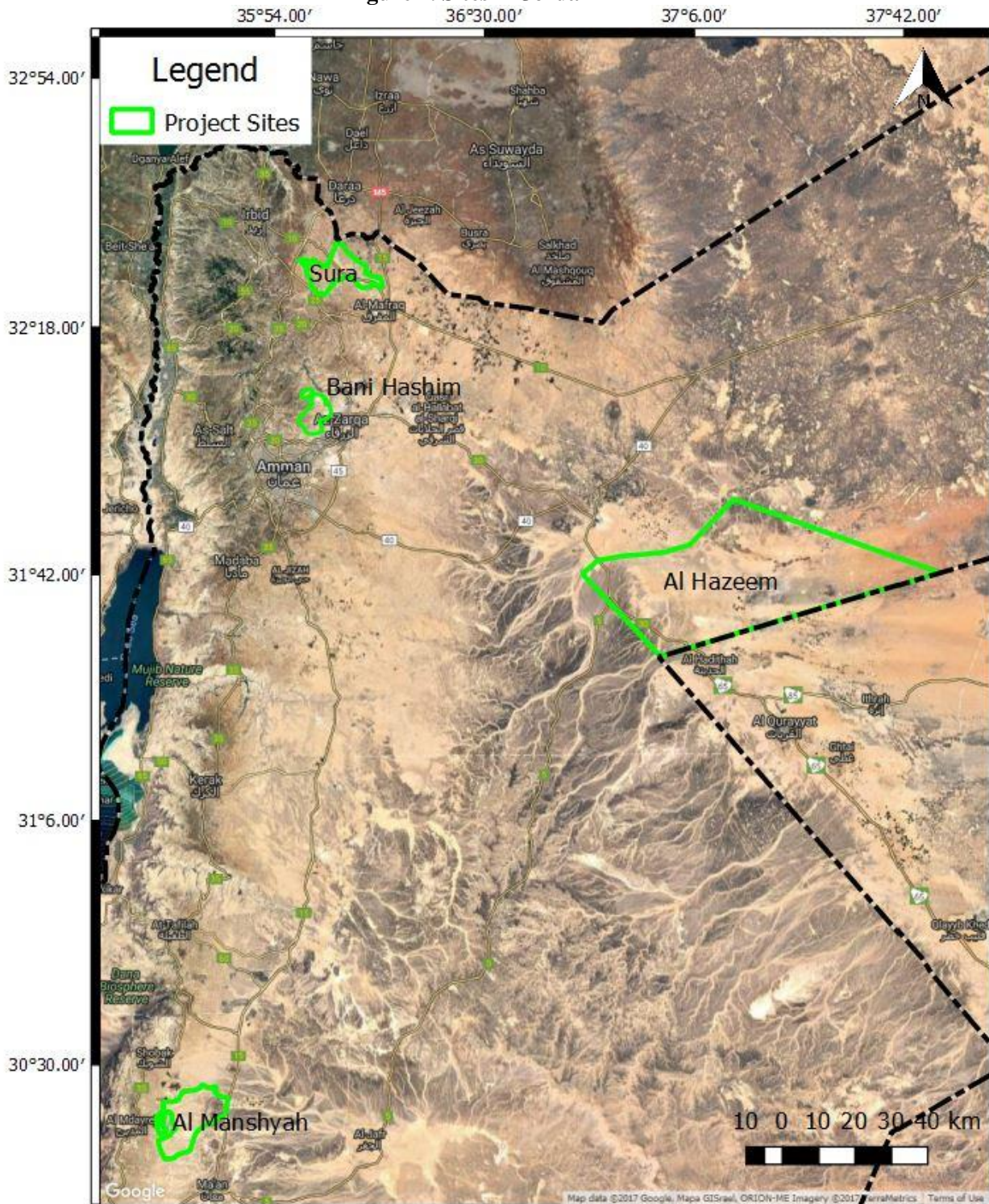
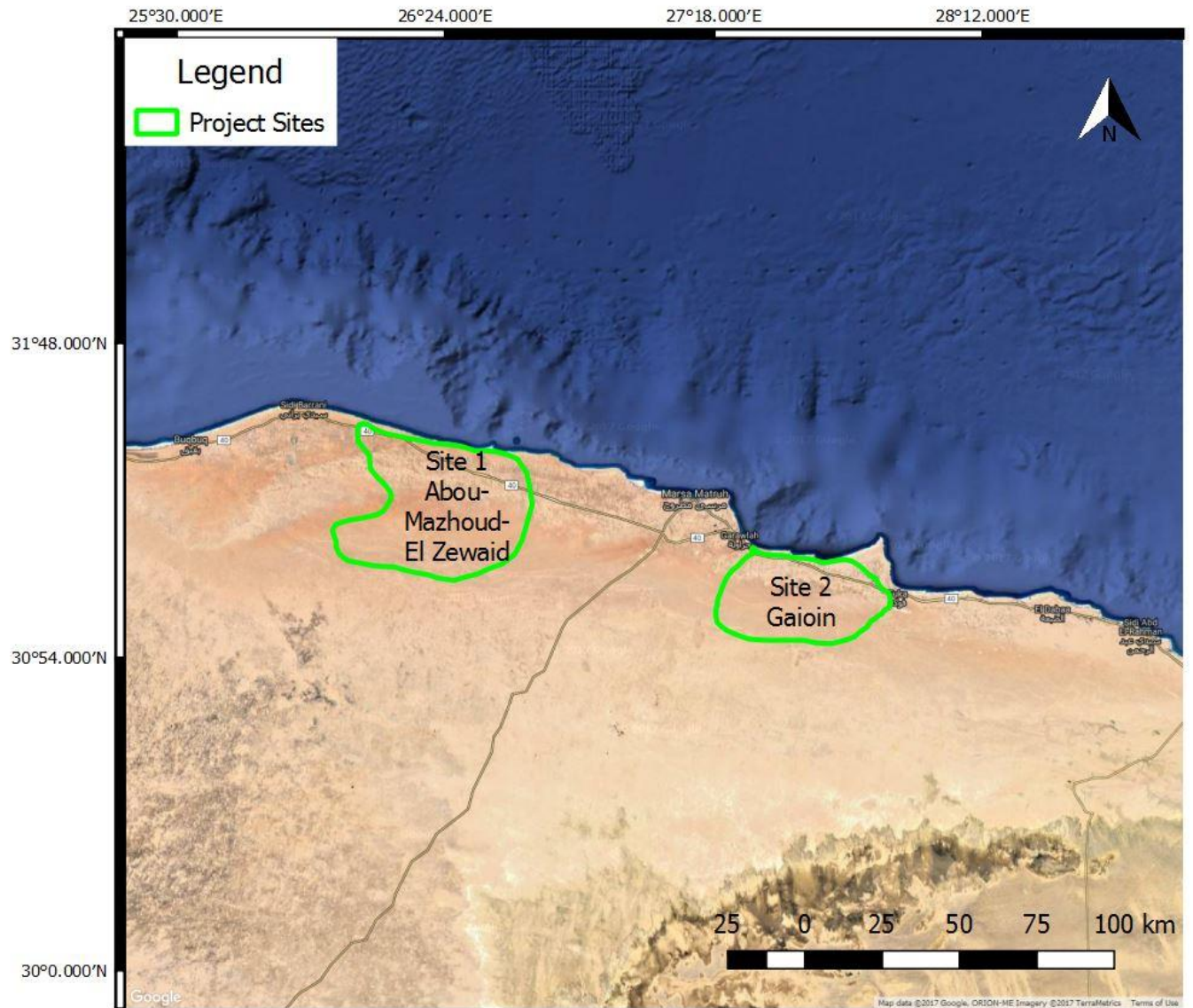


Figure 5. Sites in Egypt



Gender Aspects

158. Studies from the early 2000's show that an estimated 70 percent of the poor are women, for whom livestock represent one of the most important assets and sources of income.⁵⁶ Pastoralist women are key agents in livelihood development. They engage in socioeconomic and cultural activities, and in the conservation and management of natural resources. Despite the many challenges they face, pastoral women are resourceful in finding ways to ensure that their households' basic needs are met. However, their valuable role is only partially recognized. Pastoral women are particularly disadvantaged by the limitations they face within their own societies, for instance in property ownership or participating in decision-making processes. Increasing women's participation in decision making and resource planning is essential in improving resource planning and management in rangelands. Understanding women's concerns and the value of their specific input in resource planning and management is a step to strengthening their role in pastoral communities thus reducing their vulnerability to external shocks.
159. Women's rights and responsibilities over rangeland resources have traditionally been differentiated from those of men, although as discussed below, this is changing. This initiative will focus on strengthening local governance by securing rights, promoting participation and developing accountability. In particular, it will focus on the relationship between pastoralist communities and the State. However, there is an inherent risk in such approaches of empowering men at the expense of women and therefore the project will emphasize strengthening the effective participation of women in rangelands management and in influence public decision making.
160. Project activities will specifically target women's groups as rangelands users, as well as women within other rangeland organizations, to ensure they are central to project delivery and to the development of scale-up initiatives and policy dialogue.
161. This will be achieved through partnerships with women's organizations and through insistence on effective women's representation in dialogue at community, local government and national government levels, as well as in international dialogue. Women groups will also be targeted for PRMP based supporting activities which will aim at diversifying their income sources and act as alternative income generating activities. Collecting and drying of herbs is one such initiative that started during the revival of Hima in Bani Hashem.
162. To further integrate gender into relevant activities, the project will collaborate with the Ministries in charge of gender. In component 2, gender specific indicators and targets will be developed to monitor the progress of gender mainstreaming into rangeland governance. The project will promote targeting especially women and youth for alternative livelihoods activities (value added activities of livestock such as milk, gee, butter, cheese, leather, weaving and local handcrafts). Under all Components, gender sensitivity will be incorporated into trainings so that female participants are empowered to participate fully in the training sessions and related project activities. Trainers will be required to have the skills and experience necessary to plan and facilitate gender-sensitive training.
163. Community Environmental Management Planning is a central component of the project approach and this provides an important entry point for strengthening the voice of women. All participatory planning exercises require the participation of women and in

⁵⁶ DFID, 2000a cited in FAO, 2003.

most cases the planning exercises are disaggregated into men and women's groups. This not only allows women to be more vocal, but also allows planners to get an insight into how women view or manage their resources differently to men.

164. Women in pastoralist communities are among the most disadvantaged sub-groups in the world due to their weak access to resources and to government services. The project will address the vulnerability and low adaptive capacity of women to degradation of dryland and climate change by mainstreaming gender considerations into the design and implementation of project activities.
165. For example, women's groups will be supported to develop more diverse livelihood activities through improved transformation and marketing of rangeland produce (livestock and non-livestock). The project will also work directly with Rangeland Associations and HIMA communities to include female members in project activities.
166. Although women in pastoralist societies have traditionally had differentiated roles in rangeland and herd management, those roles are rapidly changing due to a combination of economic and social forces. The project will provide important lessons on these changing roles and responsibilities in order to improve the targeting of responses. For example, women's evolving rights as decision makers over rangeland resources within common property regimes need to be upheld in local agreements. Similarly, women's roles as herd managers will be accommodated in the development of innovative financing mechanisms for scaling up good practices. This implies significant challenges for facilitating equitable outcomes at the community level and will rely on the skill and experience of the leading project partners.

Box 5. Gender mainstreaming in reviving the Al Hima In Jordan

In principle, the state law in Jordan does not give advantages to any ethnic groups regarding rights. The state law does not also differentiate between men and women in terms of access and rights to natural resources. However, local or customary laws treat men and women differently, and do not give women rights to own or access natural resources such as land or water. This is despite the acknowledged role women play in natural resource planning and management. Through awareness campaigns, the role of women in resource use and management was incorporated in the revival of the Hima Initiative in Bani Hashem.

The underlying concept of the Hima approach is development of grazing protocols whereby herds of flocks are regularly and systematically moved to rested areas with the intention of maximizing the quality and quantity of forage growth while at the same time respecting women's rights to use and benefit from the Hima land by collecting and processing herbs. To further institutionalize the management of Hima a private society was established that coordinates the actions of the community members. This joint effort allowed better local women empowerment by giving them complete ownership of a herbal/medicinal plant workshop. During grazing seasons, local community women will cultivate native plants which are processed and packed in the workshop to be later sold for extra income.

Through this approach, women and marginalized groups became more involved in the planning and management process of their lands and at the same increased.

Gender mainstreaming in the project will be done with a focus on gender responsive and equitable participation for development planning and implementation, as well as ensuring participation of women and other vulnerable groups in project implementation and community representation and decision-making. This will include training and awareness raising in (i) gender responsive participatory approach in identification of development needs with specific focus on social inclusion of women and other vulnerable groups in the community decision making process such as water user committees, village development committees, etc., (ii) gender responsive monitoring and evaluation of project implementation and progress, (iii) training in community mobilization, management and leadership skills, including training in micro-projects identification and formulation.

3.5 Risk analysis and risk management measures

167. A number of project risks had been identified at PIF stage. During the PPG, they were validated and updated.

Table 9. Project Risk Matrix

<i>Log #</i>	<i>When identified</i>	<i>Identified Risk and</i>	<i>Notes and explanations</i>	<i>Likelihood and severity</i>	<i>Proposed risk management measures</i>
1	At PIF stage	Non-participating ministries are unfavorable to prioritizing investments in rangelands.	This risk is no longer applicable, given the support obtained by relevant line ministries, including through co-financing.	[N.A.]	No longer applicable.
2	At PIF stage	Dialogue on rangeland policy or investments is not open to the public.	This risk was considered MEDIUM level at PIF stage, now downgraded to LOW.	LOW	The multi-stakeholder processes to initiate this project will be crucial to lay out expectations and identify potential barriers to participation in decision-making. During the PPG, a number of strategic alliances among relevant policy and planning stakeholders have been formed. However, to avert this risk during implementation, it is important to maintain the dialogue on policies. A number of activities under Component 1 are geared towards policy dialogue. It is important to carefully select stakeholders and events in connection with those activities to ensure the effectiveness of policy dialogues.
3	At PIF stage	Pace of change through the project is too slow to see genuine environmental and economic gains during the project cycle.	Refer to Section 3.4 and Box 4 on rangeland restoration for a more in-depth analysis. This risk was considered MEDIUM level at PIF stage, now downgraded to LOW.	LOW	There is very high likelihood that some impacts will be felt beyond the project cycle, and a medium risk that few impacts will be identifiable during the project itself. Nevertheless, the project will contribute essential changes that will enable the long-term changes to take effect. The project builds on an intervention logic that has mapped the key stages in the expected progress towards the long-term objectives, and these stages, including changes in knowledge, attitude and practice, will be critically monitored. Retained project activities are those that are slated to achieve a good balance between those that give quick-wins and those that require longer to deliver. Overall, the project focuses on restoration of rangelands by helping rangeland managers to follow an evidence-based pathway towards restoration.
4	At PIF	Instability and	The Syrian conflict has	MEDIUM	In Jordan, there may be a risk of Syrian refugees putting additional

<i>Log #</i>	<i>When identified</i>	<i>Identified Risk and</i>	<i>Notes and explanations</i>	<i>Likelihood and severity</i>	<i>Proposed risk management measures</i>
	stage	conflicts in countries and the region.	been aggravated since PIF approval. However, it has been assessed at PIF stage, and it is still valid, that conflict within the LAS region as a whole will not hinder implementation of this project, although it may have implications for how regional rangeland issues are prioritized in intergovernmental dialogue.		pressure on the rangelands. However, IUCN's approach (which originated in the challenge of managing pressure from Palestinian refugees) recognizes that pressure can only be alleviated if local governance is first strengthened to ensure the implementation of rules for sustainable rangeland management. There is a lower risk of conflict in the project countries but there is always the possibility of local level conflict, given the sensitive nature of rangeland resource management and governance. Conflict management is an integral component of IUCN's approach and the risk will be mitigated through transparent participatory approaches and exhaustive efforts to identify and include key stakeholders in decision making. Both UNEP and IUCN have security plans in place and share information on country and project level security risks.
5	At PIF stage	Climate change creates a scale and rate of ecological change to which pastoralist societies are unable to adapt.	This risk remains unchanged.	LOW	<p>Whilst the risk of climate change may be considerable, the project supports revival of pastoralism as the most resilient and adaptive way to manage the rangelands. Climate change factors could create initial challenges to initiating work with communities, but the risk of climate change will also provide a powerful argument in favor of more sustainable range management and more resilient rangeland and pastoral systems.</p> <p>As a result of climate change, climate becomes more unreliable and traditional adaptive strategies become even more relevant. Although there is a risk of increased climate variability, the project proposes to address this directly</p>
6	At PIF stage	Participating communities are unwilling to collaborate with government on PRMP.	This risk remains unchanged.	LOW	Long-standing distrust can jeopardize these relationships and success is often accomplished by NGOs rather than government agencies. Key to mitigating this risk is to develop strong multi-stakeholder processes from the start and to engage interlocutors like civil society groups and existing CBOs/associations etc. The more open the initial formulation stage the greater chance there is

<i>Log #</i>	<i>When identified</i>	<i>Identified Risk and</i>	<i>Notes and explanations</i>	<i>Likelihood and severity</i>	<i>Proposed risk management measures</i>
					to have widespread acceptance and community buy in. The key to overcoming this risk is in the hands of the executing agency. Community consultations during the PPG phase give every indication that communities fully support the project approach and are eagerly anticipating the project.
7	At PIF stage	The pace of implementation between countries will be variable and countries will hold each other back	This risk remains unchanged.	LOW	The risk that countries will operate at different paces is high, but countries will be supported to execute their activities at their own pace and national activities will not be tied to other countries. The only activities that will be constrained in this way will be the regional/global learning and policy work which will be designed to accommodate different rates of progress.
8	At PIF stage	Inability to reach consensus on the basis or definition of good practices in sustainable rangeland management	The mitigation strategy for this risk was updated.	LOW	There are anticipated challenges around the political acceptability of some important rangeland management practices, most notably herd mobility. The project will overcome this by a) ensuring information dissemination and awareness raising over the principles of rangeland ecology and management and b) developing objective indicators based on biophysical and socio-economic metrics, and drawing on established methodologies. Currently the VGGT provide an excellent framework for the land-use governance and a common denominator for defining guiding parameters for any approach to governance tenure.
9	During the PPG	Women's participation in the project is weak.	This risk has been clearly identified during the PPG and may have been overlooked at PIF stage.	MEDIUM	During the PPG, a number of strategies have been developed for the engagement of women in the project and for ensuring that they benefit equitably from results. Various project activities are specifically targeting women's groups as rangelands users, as well as women within other rangeland organizations, to ensure they are central to project delivery and to the development of scale-up initiatives and policy dialogue. This will be achieved through partnerships with women's organizations and through insistence on effective women's representation in dialogue at community, local government and national government levels, as well as in international dialogue. Women groups will also be targeted for

<i>Log #</i>	<i>When identified</i>	<i>Identified Risk and</i>	<i>Notes and explanations</i>	<i>Likelihood and severity</i>	<i>Proposed risk management measures</i>
					PRMP based supporting activities which will aim at diversifying their income sources and act as alternative income generating activities. Collecting and drying of herbs is one such initiative that started during the revival of Hima in Bani Hashem. These are slated for replication.
10	During the PPG	Monitoring systems and platforms are not fully adapted to the local needs and leads to poor ownership of tools promoted by the project.	There have been changes in context in this respect since PIF approval.	LOW	Monitoring systems and platforms are important for a number of project activities, but they will not undermine project success if there are issues with them. A number of different tools can be used and tested. Effective participation is more important than the platforms themselves. Nevertheless, the project will be testing a new methodology called 'PRAGA', or Participatory Rangeland and Grassland Assessment, designed by IUCN for improving assessment of rangeland and grassland health at a suitable scale to inform sub-national level planning and action. It is assumed that the tool will be well accepted among stakeholders, because it combines a participatory approach for defining land use objectives and local indicators with expert-led field assessment and use of remote sensing data. Where needed, written and oral translation will apply to ensure ownership and strong participation.
11	During PPG	The project is not able to tackle complex land tenure issues and their links to land degradation.	New risk.	MEDIUM	Currently the VGGT provides an excellent framework for the land-use governance and a common denominator for defining guiding parameters for any approach to governance tenure. It is an approach of choice, together with the PRAGA methodology for a number of activities for which land tenure issues should be taken into consideration. In addition, key activities under Component 2 will entail documenting existing rules and regulations (government and community) and developing appropriate mechanisms to strengthen their enforcement, including by-laws and local conventions. Information and policy openness will ensure that, although complicated, land tenure issues and their potential negative impact on land management can be adequately tackled. Evidence has also shown that considerable progress can

<i>Log #</i>	<i>When identified</i>	<i>Identified Risk and</i>	<i>Notes and explanations</i>	<i>Likelihood and severity</i>	<i>Proposed risk management measures</i>
					be made in strengthening community governance over rangelands in the absence of formally secured tenure, and the process of strengthening governance can itself be an important stepping stone towards more secure tenure in future.
12	During PPG	Potential risk between farmers /vulnerable communities and pastoralists.	This risk has been clearly identified during the PPG and may have been overlooked at PIF stage.	Low	The stakeholder analysis process which is part of the project inception process will ensure all potential stakeholders in the project sites are identified and their collective needs identified. This will ensure that all community groups in the project sites are identified to avoid any potential conflicts during project implementation.

3.6 Consistency with national priorities or plans

168. Environmental performance within the Arab region is well below global averages, measured against several environmental indices. Among the leading environmental challenges in the region are Land Degradation, water shortage, and inefficient resource use. Urbanization in the region is rapid and population growth rates are among the highest in the world. However, it is a highly diverse region, with some countries responsible for among the world's highest per capita carbon emissions, and some countries particularly vulnerable to climate change effects (UNEP, 2000).
169. Performance against environmental indicators in the Arab region is particularly poor considering the comparatively advanced state of economic development, which in other parts of the world tends to lead to greater engagement in environmental affairs. The region is quite disengaged from global environmental discourse and lags behind the world on environmental governance. Public debate on environmental matters is inadequate (Esty et al., 2003).
170. Inter-governmental environmental initiatives within the League of Arab States are not widespread. However, significant statements have been made at the regional level by Ministers from member states. Arab Environmental Ministers met in a special session of the "Council of Arab Ministers Responsible for the Environment" (CAMRE) in Abu Dhabi and released a significant statement on the state of environmental affairs and the need for concerted action (UN, 2001). This statement highlights the environmental issues faced by the region and particularly emphasizes the need for greater environmental governance, and for greater engagement of Civil Society in environmental dialogue.
171. In relation to this project, members of the Arab League that are also members of the African Union have already endorsed an intergovernmental agreement on Pastoralism (AU, 2010). This policy framework highlights the environmental role that pastoralism can play as well as its role in sustainable development and food security. The existence of this agreement could provide an entry point for wider dialogue throughout the Arab Region, where there is particularly strong cultural heritage associated with pastoralism and the rangelands.
172. Preserving the Environment is Priority Area 4 of Jordan's United Nations Development Assistance Framework (UNDAF), 2013-2017. UNDAF outcome 5 is "Government and national institutions have operationalised mechanisms to develop and implement strategies and plans targeting key cultural, environmental and Disaster Risk Reduction issues (including a transition to a Green Economy) at national and sub-national levels." This is consistent with the aims of the Executive Development Programme 2011-2013, including: to preserve the Kingdom's cultural heritage and market it globally; to integrate local communities into the development and planning processes; securing adequate water supplies for various sectors; and to protect environment elements and their sustainability. According to Jordan's UNDAF, "Preserving the Environment" will give support to improved integrated water resources management, climate change adaptation measures, enhanced mechanisms for disaster risk reduction, better management of ecosystems, as well as cultural and natural heritage, and support Jordan in its transition to a Green Economy.'
173. Environmental Sustainability and Natural Resource Management is Goal 5 of Egypt's UNDAF. This project contributes to UNDAF Outcome 5.2: "The Government of Egypt,

private sector and civil society have complied with Multilateral Environmental Agreements, adopted policies, and implemented operational measures towards a green and sustainable economy and society including, EE, RE, low carbon cleaner technologies, SWM, POPs, ODS, and Carbon Finance Mechanisms”. The project also contributes to UNDAF Outcome 5.3: “The Government of Egypt and local communities have strengthened mechanisms for the sustainable management of, and access to, natural resources such as land, water and ecosystems.”

174. This project is designed to support countries to implement their National Action Program to Combat Desertification and to demonstrate synergy with objectives of their National Biodiversity Strategic Action Plans and National Adaptation Plan of Action. The project will specifically support the NAP in relation to rangeland restoration and management through strengthening of local institutions.
175. The NAPs of participating countries including strengthening institutions for sustainable land management, improving the engagement of different stakeholders, and strengthening inter-sectoral collaboration for improved ecosystem management:
176. Jordan’s NAP fosters “community-based approaches through participatory methodologies and multi-stakeholder dialogue (e.g. Hima system, Rangeland Cooperatives, Community-based Grazing Management, Co-Management or Protected Areas)”.
177. Egypt’s NAP supports “integration ... and well-coordinated efforts of the government (or governorates), international, regional and national organizations, research centers and the active participation of target communities, NGO’s...”.
178. The NAPs also prioritize rangelands and pastoralism as neglected systems. For example, Egypt’s NAP aims for “integration of pastoral systems into the broad agricultural domain after long years of marginalization”. They recognize the need for stronger human resources and increased public awareness and participation in addressing land degradation as well as mobilizing financial resources. Jordan’s NAP was revised in 2014 to align it with the UNCCD 10 Year Strategy as well as to align it with the revised NBSAP. It also underscores the importance of improving consistency between policy frameworks and harmonizing the NAP with other domestic policies. Egypt’s NAP similarly recognizes the need for multidisciplinary policy and programs of intervention across sectors.
179. Jordan’s NAP also provides a strong indication of the changing attitudes towards community governance of rangelands. It demonstrates the changing awareness of the cost effectiveness of community approaches and their value in addressing multiple environmental and development benefits simultaneously. Jordan’s NAP also shows the aspiration to present the revival of the Hima system for rangelands governance as a potential global solution to rangelands degradation and biodiversity loss.
180. The project contributes to all Operational Objectives of the UNCCD 10 Year Strategy, through knowledge, capacity building, policy and investment. The project contributes to CSOs synergy and strengthening concerted action (Operational objective 1: Advocacy, awareness raising and education) by influencing international, national and local processes and actors in adequately addressing desertification/land degradation and drought-related issues. This particularly relates to strengthening community rangeland institutions and strengthening concerted action and integration between sectors and stakeholders. The project contributes to identification and scaling up of good practices (Strategic objective 2: To improve the condition of affected ecosystems) in order to

restore and sustain rangeland productivity and other ecosystem goods and services contributing to improved livelihoods. The project will also contribute to resource mobilization (Strategic objective 4: To mobilize resources to support implementation of the Convention through building effective partnerships between national and international actors), both through partnership building and through valuation of the multiple ecosystem service benefits of sustainable rangeland management. The project will increase financial, technical and technological resources available to implement the convention and will contribute to enabling policy environments—particularly improved policy implementation—for UNCCD implementation at all levels.

181. The project also contributes to the achievement of The Aichi Biodiversity Targets, which provide a range of support for sustainable rangeland management (SRM): Target 5 (the project will increase protection of rangeland habitat through Indigenous and Community Conserved Areas); Target 7 (SRM to conserve biodiversity for efficient pastoralism); Target 13 (promote management improvement of indigenous breeds for efficient rangeland management); Target 14 (strengthen ecosystem management of rangelands in order to protect watersheds and other ecosystem functions); Target 15 (SRM to mitigate desertification and contribute to ecosystem-based climate change mitigation and adaptation); Target 18 (strengthen institutions for engaging indigenous peoples in policy development and planning from local to global levels).

3.7 Incremental cost reasoning

182. The project's complete incremental cost reasoning and analysis is presented herein in matrix form. Refer to [Appendix 3](#) for a Summary.

Table 10. Incremental Cost Reasoning and Analysis

Baseline (B)	Alternative (A)	Global Environmental Benefits (A - B)
<p><i>At the global and regional levels:</i></p> <ul style="list-style-type: none"> The state of knowledge about rangelands is generally weak. There is little consensus over: the desirable state of rangelands management and gaps in specific knowledge and data for the management of rangeland. The costs of restoring rangelands are variable and highly contextual, and so are the techniques that may be prescribed for recuperating land productivity in each case. This has significant implications for investments in these areas. Within the MENA Region, many countries have weak capacity in the field of rangeland ecology to be able to explore the benefits of “big data” for SRM. Hence, it is difficult to translate the results of assessments into cost-effective SRM interventions. The potential role of pastoralism in sustainable development remains marginal. In terms of policies and institutional capacities at both the global and regional levels, there has been progress in the agenda for discussing the governance of rangeland tenure, considering that rangelands are a major ‘global common’, but this yet to revert the long-term trend towards the marginalization of pastoralists – the principal managers of rangelands – and to influence global financial flows that will favor rangeland restoration and sustainable management. Until then, the common denominator that the VGGT represent in this respect will remain underexplored and without resonance among countries through practical applications. Throughout the MENA region there is a tension between 	<p><i>In the Alternative</i></p> <p>The project will strengthen restoration and sustainable management of pastoral rangelands for the provision of ecosystem services and protection of biodiversity in Egypt and Jordan and catalyzing scale up Regionally and globally.</p> <p>It will contribute to improving the flow of agro-ecosystem services to sustain food production and livelihoods in Egypt and Jordan, while also catalyzing the dissemination of sustainable practices in other countries, where pastoralist systems prevail.</p> <p><i>Under Component 1</i></p> <ul style="list-style-type: none"> Rangeland monitoring systems will be institutionalized both nationally and regionally, based on commonly agreed scale-dependent indicators appropriate for different end-user groups. There will be a wide range of beneficiaries to activities foreseen. A robust monitoring system with a focus on rangelands' health will be established and sustained by the project. A suite of good practices and effective policies in sustainable rangeland management and rangeland rehabilitation will be identified and prioritized for implementation. The core focus of the project's 	<p><i>GEBs to be generated by the project:</i></p> <ul style="list-style-type: none"> The project will generate global environmental benefits both at the site level covering at least 350,000 ha of rangelands (the approximate surface coverage within the project's target landscapes). The project will reduce the extent of land degradation in sites by at least 10%. It will also revert the trend of degradation in these sites, by instituting systems, which will in the long run put rangelands back on a sustainable management path. Through the influence that the project will exert on countries and regional bodies to adopt policies and practices that are consistent with HERD

Baseline (B)	Alternative (A)	Global Environmental Benefits (A - B)
<p>the aims of the agricultural sector to maximize food output and how this can be reconciled with the goals of sustainable development, given the constraints the imposed by the natural climatic and soil conditions to food production. Land degradation and anthropogenic climate change pose additional constraints. At the same time, experience from the MENA region has shown that investments in communal tenure and natural resource governance are among the most effective in delivering SRM at scale, and that in the long run these investments are low cost. Yet, there seems to be a tendency towards prioritizing long-term change in attitudes and practices over short term delivery of physical investments.</p> <ul style="list-style-type: none"> Finally, in terms of lifting lessons from several interventions (that is projects, programs and initiatives) in the areas of rangeland management, pastoralism, rural development and land use policies, the following can be said: The globalization of the discourse on sustainable pastoralism has created new learning opportunities, for example the World Initiative for Sustainable Pastoralism (WISP) and the FAO Pastoral Knowledge Hub. The challenge is to ensure greater emphasis on developing partnerships for innovation between strong community institutions (e.g. pastoral associations), scientists and the state. <p><i>At the national level</i></p> <ul style="list-style-type: none"> Neither Jordan nor Egypt have formally established mechanisms or methodologies for monitoring rangeland health. Remote sensing technologies offer new possibilities but insufficient work has been carried out to ground-truth data, but this is just one tool to solving a problem that has many facets. Rangelands development, in both Jordan and Egypt, suffers from lack of agreement over the objectives for rangeland management, even though progress was made recently in Jordan through the adoption of the 2014 	<p>Component 1 will be on the technical assistance for adaptive management and learning, also termed as 'evidence- based decision-making'.</p> <p><i>Under Component 2:</i></p> <ul style="list-style-type: none"> The project will focus on strengthening institutions for rangeland governance. Local organizations for rangeland management (community and government) engage in more inclusive dialogue for improved rangeland governance covering at least 500,000 hectares. Participatory Rangeland Management Planning (PRMP) will be a key tool used to achieve these goals. Participating communities will be trained in using PRMP to guide the establishment of rules and regulations for improved rangelands management. Much of this work will focus on aligning practices and principles with the Voluntary Guidelines on Responsible Governance of Tenure - VGGT. PRMP will implemented in all participating communities, reaching some 30,000 local community members in both Jordan and Egypt, of which 45% are women. Plans will be updated annually. Local agreements between communities and between communities and state institutions will be developed. These may 	<p>with the ultimate intention of arresting the process of rangeland degradation through SRM.</p> <ul style="list-style-type: none"> Policies and practices infused by the project will promote biomass growth, conservation of biodiversity and the maintenance of a suit of ecosystem services linked to water, soil and carbon – increasing thereby rangelands’ potential for food production in a sustainable way. SRM contributes to combating desertification by increasing rangeland vegetation cover and particularly perennial species that protect soils and reduce soil erosion. Well-managed rangelands have a higher capacity to trap and store water and nutrients, including soil organic carbon, sustaining primary productivity. Pastoralism based on carefully managed herd mobility, it

Baseline (B)	Alternative (A)	Global Environmental Benefits (A - B)
<p>National Rangelands Policy.</p> <ul style="list-style-type: none"> • Still, in both countries, pastoralists are not always adequately consulted in key planning processes that affect their access to rangelands or their potential stewardship function vis-à-vis these areas. • Additionally, and to different degrees in the two countries, there are inconsistencies in rangeland, livestock and other related policies, which generally results in negative impacts to rangelands. ProDoc Annex 1a, Section 1, point 3 (Causes of land degradation and drivers behind them) provides an overview of how this manifests itself. <p><i>The status quo of rangelands' health</i></p> <ul style="list-style-type: none"> • Widespread land degradation, characterized by loss of top soil, decreased availability of water, the shrinking of essential habitats, resulting in loss of biodiversity, a reduction in available biomass within the landscape – and therefore of associated carbon, both in the soil and in the vegetation, where net primary production is a key indicator of it. This culminates with marked decline the productivity of land. With both biotic and abiotic cycles involved, land degradation relates to the loss of ecosystem services that sustain life and economic activities • Project sites display a degradation level that range from 13% in Bani Hasheem (Jordan) to 90% in Gaion (Egypt) – see ProDoc Table 5. 	<p>unclude Hima agreements, local conventions, bylaws etc., all according to national legal opportunities and possibilities.</p> <ul style="list-style-type: none"> • The gender equality aspects will always be taken into account in the governance of tenure and in the sharing of benefits from SRM, by not just recognizing women's privileged role in sustainably managing rangelands and its special resources, among them water sources, medicinal plants, polination services among others. <p><i>Under Component 3:</i></p> <ul style="list-style-type: none"> • The project will identify and up- scale a suite of good practices in RSRM, based on PRMP. The implementation of plans, based on assessments and evidence-based decision-making will come to fruition through focused activities slated to realize the multiple benefits from SRM. • Both training and on-the-ground rangeland restoration actions will be part of the SRM packages to be realized by the projec through partnerships with local stakeholders. • The excellent results from baseline activities, e.g. the Bani Hashim experience from Jordan will be up-scaled and replicated according to local conditions and context in a suite of other sites. Wide landscapes of “approx. 	<p>can stimulate pasture growth, improve rangeland mulching, reduce invasive species and improve mineral and water cycling.</p> <ul style="list-style-type: none"> • SRM also contributes to conserving biodiversity by maintaining a diversity of vegetation cover, protecting habitats and maintaining landscape connectivity through livestock/wildlife corridors. Pastoral rangelands possess significant biodiversity, and sustainable pastoralism depends on this diversity and which the project will help sustain by promoting SRM. • Rangelands can play a role in mitigating climate change. The restoration of rangelands contributes to carbon sequestration, and protecting rangelands from conversion to other land uses maintains significant carbon stores. Many rangelands are

Baseline (B)	Alternative (A)	Global Environmental Benefits (A - B)
	<p>500,000 ha” will benefit from SRM measures with the potential for multiplying the techniques into other areas by example and dissemination through project supported networks.</p> <p><i>Under Component 4</i></p> <ul style="list-style-type: none"> • The global and regional aspect of the project will be realized more specifically. • This includes a focus on knowledge management to promote an enabling environment for regional scale up of sustainable rangeland management. • The project will increased its support for sustainable pastoralism both in investments and in public decision/policy- making on a three-tier scale: nationally, regionally and globally. • Lessons on the value of rangeland ecosystems and good practices in SRM will be documented and communicated through e.g. the Regional Communal Rangelands Leadership network, the WISP and others. <p><i>Overall:</i> The various actions foreseen under the project, the HERD Concept will be bound to become an 'umbrella' for SRM, based on “bankable” investment options and innovative financing strategies.</p>	<p>dominated by C4 grasses which are among the most efficient sequesters of atmospheric carbon. The majority of rangeland biomass is sub-surface, where it has a high degree of permanence, so long as those lands are not ploughed. It has been estimated that there is scope globally to rehabilitate 5000 Mha of rangeland which would sequester an additional 1300-2000 MtCO₂.</p> <ul style="list-style-type: none"> • Pastoralism is a highly adaptive system and has evolved in unpredictable climates as a way of managing uncertainty and seasonal variability. Resilient rangeland ecosystems and more sustainable management of rangeland resources contribute to adaptive capacity and enable rangeland systems to remain vibrant in the face of climate change in areas where alternative land uses would succumb.

Baseline (B)	Alternative (A)	Global Environmental Benefits (A - B)
		<ul style="list-style-type: none"> SRM restores important ecosystem services linked to water: it improves hydrological cycles by improving infiltration of water, improving water holding capacity, reducing evaporation and run off. These contribute to more stable transboundary water flows and reduced risks of flooding and landslides, which are projected to become a greater risk due to climate change and the increase in severe storm events. <p><i>In Sum</i></p> <ul style="list-style-type: none"> Ecosystem services that healthy rangelands can render to humanity: pasture, habitats for rare biodiversity, soil, nutrient and carbon fixation, and the cyclical availability of water for renewing life and grazing grounds in some of the world's most harsh environments.
Total financial baseline estimates (B)* <i>Component 1</i> \$20.3 million <i>Component 2</i> \$12.4 million <i>Component 3</i> \$16.5 million	Total estimates for the Alternative (A) <i>Component 1</i> \$24.065 million <i>Component 2</i> \$14.831 million <i>Component 3</i> \$23.140 million	Total costs for the generating GEBs (A-B) <i>Component 1</i> \$3.765 million <i>Component 2</i> \$2.431 million <i>Component 3</i> \$6.640 million

Baseline (B)		Alternative (A)		Global Environmental Benefits (A - B)	
<i>Component 4</i>	<i>\$9.2 million</i>	<i>Component 4</i>	<i>\$11.639 million</i>	<i>Component 4</i>	<i>\$2.439 million</i>
<i>[* excludes baseline that contributes to co-financing]</i>		<i>Project Mgt</i>	<i>\$0.167 million</i>	<i>Project Mgt</i>	<i>\$0.167 million</i>
<i>TOTAL</i>	<i>\$58.4 million</i>	<i>TOTAL</i>	<i>\$73.68 million</i>	<i>TOTAL</i>	<i>\$15.443 million</i>

3.8 Sustainability and Innovation

New Sustainable Practices' Adoption, Uptake and Spread

183. This project will use innovative approaches to community rangeland management that deliver significant improvement in ecosystem services in response to low-cost investments in communal governance and decision-making. These approaches demand a high level of skill but relatively low investment in physical infrastructure and will draw on IUCN's established training and capacity development approaches. The advantage of this human-centered approach is that it is highly sustainable and knowledge/skill transfer is at the core of the methodology. In addition, use of participatory tools allows for innovative outputs and promotion of proactive resilient behaviours among targeted local communities. Such tools build the capacities of pastoral communities which will provide basis for informed negotiation with governments regarding the most appropriate interventions to restore rangelands and stop land degradation. Accordingly, this will help in transforming policies and future interventions in land degradation. Innovative methodologies will also be deployed to measure the ecosystem service benefits of rangeland management and the cost-benefit analysis of these investments.
184. Institution building, particularly at the community level, is a relatively new focus in rangeland development. Institution building helps focus rangeland development on the rangeland user groups, enabling them to assume their responsibilities over sustainable rangeland management. Effective institution building focuses both on the rules and regulations of communal rangeland management and on the operational effectiveness of community groups.
185. Component 2 emphasizes strengthening community and local government organizations to coordinate and to institutionalize participatory rangeland management planning. Sustainability is addressed through the process of capacity building and also through support for national governments to institutionalize PRMP. In Jordan, this is already in process through the adoption of the revised National Rangelands Strategy which was led by IUCN based on the PRMP process that is central to HERD. The project will support further policy dialogue to ensure policy support in Egypt and implementation of policy in both countries.
186. Ecosystem-scale rangeland management is also an innovative approach that establishes new processes (e.g. investment planning at the suitable scale) and mechanisms (e.g. intersectoral coordination bodies) for integrated resource planning. The approach uses multi-stakeholder dialogue to secure buy-in, coordinate investments across sectors and actors, and ensure equity. An important tool in this process is Participatory Rangeland Management Planning (PRMP), which has been implemented widely by IUCN and by a number of participating countries. PRMP provides practical outputs in terms of improved management of communal resources and provides a foundation on which improved local institutions are built. PRMP is designed to be embedded in community rangeland institutions and local government as a standard, low cost operational approach that routinely influences rangeland monitoring and planning.
187. Rangeland Management has much in common with Forest Landscape Restoration and indeed many rangelands overlap significantly with forests. Woodland patches and individual trees within grassland landscapes are critically important for overall ecosystem function. They also have exceptionally high value in rangeland production systems,

providing seasonal fodder, food, shade, fuel, building materials and much more. This project will demonstrate these linkages and will provide evidence and guidance for integrating rangelands strongly in global FLR and related initiatives, such as the Bonn Challenge and UN Targets on Forest and Landscape Restoration.

188. The emphasis on local governance for SRM creates opportunity for innovation, for example in adaptive planning of herd movements or community rehabilitation of resources. The approach is flexible and can be adjusted to the policy context of each country, benefitting from policies or laws related to Community Based Natural Resource Management, devolved decision-making, communal tenure etc. The emphasis on improved monitoring to validate good practice and building skills and knowledge to enable implementation of existing policy in support of good practice offers an innovative approach to partnership-based sustainable development. Moreover, building on widely accepted concepts in the region (like the concept of Hima due to its historical significance) will facilitate encourage more investments in rangeland movement and facilitate scaling up.
189. *Sustainability* in the project is addressed through the identification and marketing of environmental benefits, improving income and pastoralists livelihood, and building capacities and development of relationships and institutions for SRM. Sustainability will be validated through improved monitoring and better-defined indicators and goal-setting. Sustainability of the project interventions will be delivered through emphasis on capacities and institution building. Improved rangeland management revolves around stronger local decision-making for collective action (e.g. through PRMP), which depends on the capacity for informed dialogue at local level (both the community and local service providers), and on the opportunity for equitable dialogue between stakeholders. To secure the sustainability of his approach requires working closely with local government and communities to secure their buy-in to the overall goals and process, and to provide them with the necessary skills and institutional support.

3.9 Replication

The Uniqueness of HIMA

190. The LAS region is uniquely placed to champion SRM and community-based approaches like Hima, which enjoys unrivalled social and political acceptance in several Arab countries. Hima allows communities to negotiate opportunities with government for improved management of communal rangelands. By demonstrating and validating progress this project can help to raise the confidence of many governments towards pastoral management of rangelands.
191. Analogues to Hima are found in most traditional pastoralist societies and in recent years there has been growing interest in reviving traditional practices and institutions for sustainable pastoralism. Promoting communal rangelands management through strengthening of local organizations is an innovative approach that is gradually gaining traction (for example in Mongolia, Morocco and Spain). It has been pioneered in Jordan and Egypt by IUCN and others, showing how progress can be achieved by combining field-level actions with close government partnership and focusing on policy implementation. HERD is designed to become a global initiative that is led by the LAS region, where current political momentum is favorable, with the intention of inspiring multiple countries worldwide to join the initiative in the long term. HERD will evolve on the basis of a new understanding of sustainable pastoralism: as a dual economic-environmental management system; as a

system of rangeland stewardship based on managed herd mobility; and as a system of communal governance based on vibrant local institutions and effective governance arrangements between communities and the State.

Scaling up

192. Explicit within the project is the identification of good practices for scale up and establishment of condition to enable rangelands users to adopt proven approaches. The critical area of scale-up is related to scaling-out the institution-building processes, which requires both policy support and capacity amongst government actors. The project contributes through training of trainers in PRMP and institution building, and through emphasis on implementation of existing policies that support scale up. Activities under component 2 and 3 will increase the awareness of rangeland sectors and users and establish the institutions that will drive demand for sustainable rangeland management practices.

3.10 Public awareness, communications and mainstreaming strategy

193. Component 4 of the project focuses explicitly on knowledge management, particularly to promote the development of an enabling environment for regional scale up of sustainable rangeland management. Knowledge management will focus on documenting evidence and strengthening communication of evidence in order to improve understanding amongst key actors, and building capacities for taking action on SRM. The component on knowledge management will also promote regional dialogue for policy and investment frameworks to enable scaling up of SRM. Particular emphasis will be given to creating a Communal Rangelands Leadership network for South-South learning and cooperation, which will build on the strong cultural and economic history of the Arab region in relation to pastoralism and will harness the existing capacities within the region for championing SRM in global dialogue.
194. Knowledge management will include managing both internal and external knowledge for the benefit of this project and for influencing regional and global discourse and investment.
195. Internal knowledge management refers to the adaptive management of the project based on closely monitoring and evaluating progress. This includes Component 1 where the project will strengthen rangeland monitoring systems and the identification of good practices and policies in sustainable rangeland management. The project implementation plan will be informed by prior understanding of the countries. This was strengthened through the PPG process (see results of assessments in the [ProDoc Annex 1a](#)). Further improvements in the project's delivery of knowledge management products based on the assessments undertaken during project implementation, in agreement with all project partners.
196. Special focus will be given to learning from and sharing lessons with the projects outlined earlier, which this project is designed to complement. The project will enable scale-up of established approaches using Component 1 to strengthen the validation of good practices. At local level, knowledge and practices will be disseminated through the strategy of "learning by doing", with focus on mobilizing local and indigenous knowledge, such as the capacity of herders to enable natural regeneration of degraded rangelands or to reach agreement on natural resource governance and management. Other relevant initiatives will be engaged right from the project inception phase through project implementation, to ensure that good practices and lessons learned during their implementation and incorporated into this project's development.

197. External knowledge management will focus on capturing lessons from the project in order to influence decision-making by investors and policy makers at all levels, from local to global. This will include publication of experiences and convening of dialogue, for example to influence national policy and investment.
198. The project includes attention to regional and global scale-up under the umbrella of “HERD” and the World Initiative for Sustainable Pastoralism (WISP). The project aims to leverage multiple projects under the HERD umbrella in order to catalyze a global initiative on rangelands and pastoralism, using GEF and non-GEF financing.
199. The publication on good practices in rangelands development, entitled “Minimum standards for Sustainable Pastoralist Development” by the World Initiative for Sustainable Pastoralism will be updated through this project, based on continuing learning and new experiences, and will be used to reach consensus on Minimum Standards across the HERD initiative and the wider GEF portfolio. In addition, FAO’s Technical Guide to implementing the VGGT in Pastoral Lands (see Box 3) provides a more specific framework for dissemination of good practices.
200. Knowledge on project results and lessons as well as specific studies conducted through the project will be publicly available through the IUCN website and the website and list-server of WISP and of other project partners. It will also be fed into global fora including the UNCCD, CBD and UNFCCC, the World Conservation Congress and other significant international events.

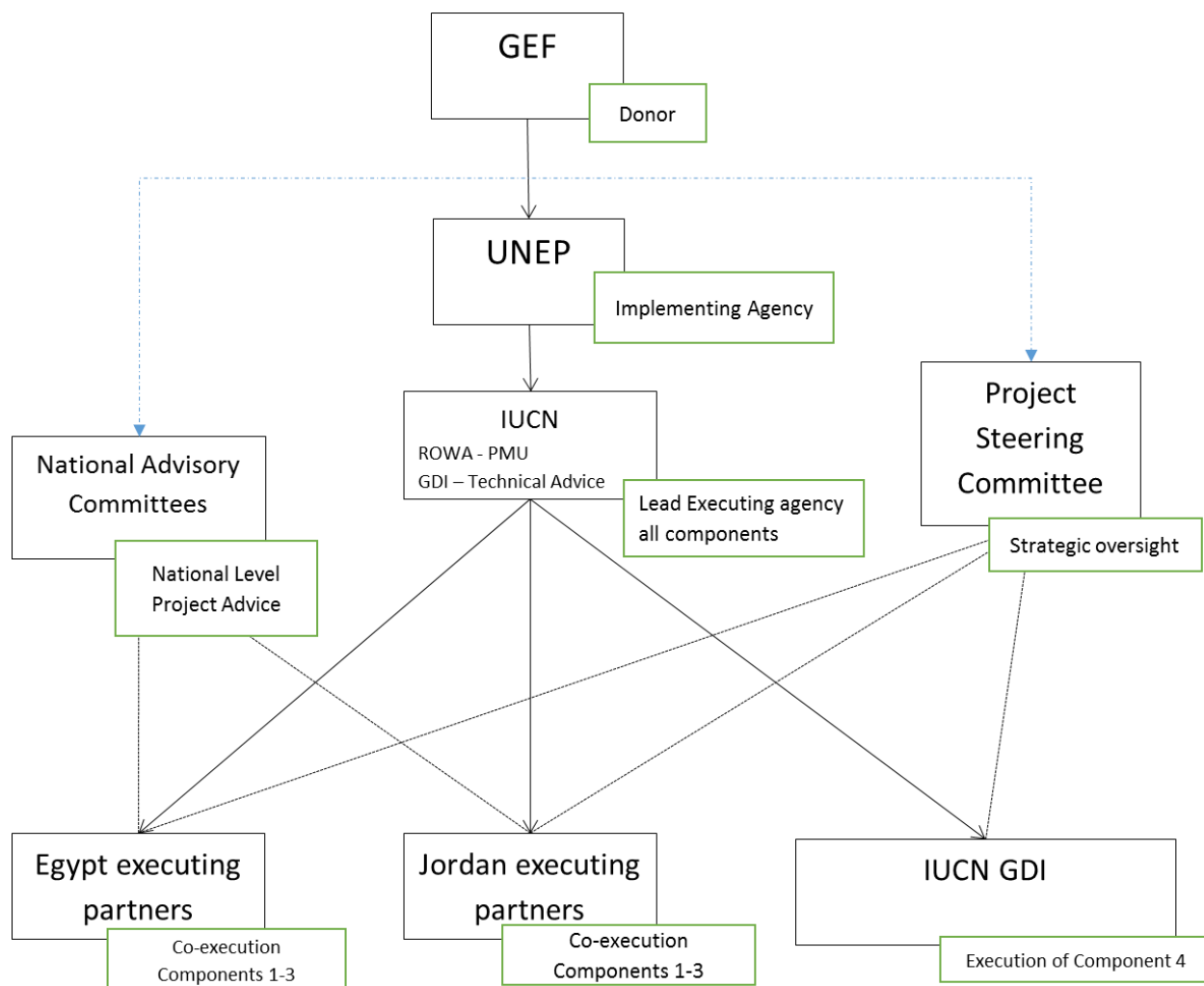
3.11 Environmental and social safeguards

201. During the PPG phase, the project underwent the UNEP Environmental, Social and Economic Review (refer to Appendix 16: Social and Environmental Safeguards).
202. The review is based on UNEP’s Environmental, Social and Economic Sustainability Framework. This Framework sets minimum sustainability standards for UNEP and its implementing/executing partners, and enables UNEP to anticipate and manage emerging environmental, social and economic issues. The assessment finds no major threats on the seven safeguards since the project is basically scaling up tested SRM practices and not involved in major infrastructural development, introduction of new technologies, displacement of populations or introduction of GMOs.
203. No specific environmental concern was raised with respect to this project. The only social concern related to the need for a more thorough gender engagement strategy
204. The project will otherwise work very closely with regulatory authorities to ensure compliance of environmental and social safeguards as provided in various statutory regulations. The VGGT pertaining to rangelands will provide a framework for socio-environmental good practices (see Box 3) and will orient these assessments. In addition, the community groups will also be trained to monitor environmental indicators including biodiversity and critical ecosystems to ensure that the ongoing project activities do not harm the environment or cause carbon leakages.

SECTION 4: INSTITUTIONAL FRAMEWORK AND IMPLEMENTATION ARRANGEMENTS

205. This section provides details of the project's institutional framework and implementation arrangements. The Figure below presents an organizational chart.

Figure 6. Organizational chart



4.1 Implementation and execution

206. The International Union for the Conservation of Nature (IUCN) will act as executing agency for the overall project, with all associated responsibilities. After the endorsement of the GEF CEO to UNEP and before project start, an executing agency agreement will be signed between UNEP and IUCN, through its Regional Office in West Asia (IUCN ROWA).

207. As a next step, IUCN will conclude sub-grants agreements with implementing partners in each of the participating country. These are:

- The Hashemite Fund for Development of the Jordan Baadia (HFDB: Jordan);
- The Royal Botanical Gardens (RBG: Jordan)
- The Desert Research Centre (DRC: Egypt)
- The Centre for Environment and Development for the Arab Region and Europe (CEDARE: Egypt/Regional)

208. These partners have approved the project work plan and activity plan during the validation meeting in March 2017, but final negotiation over roles and responsibilities will take place during the national inception meeting, which will be the correct time to bring a wider group of partners into the discussion. Sub-grant agreements will be prepared based on agreed responsibilities, with clear guidance on how actions by different partners have to be carried out sequentially and in a strongly coordinated manner (e.g. participatory planning to guide restoration actions).

209. IUCN will be responsible for technical support and oversight of country-level work (see project management below for related arrangements). Additionally, IUCN ROWA will be responsible for implementing regional level activities and will draw, as needed, on its in-house expertise located that can be availed by other offices of IUCN for support global level work foreseen under the project – e.g. the IUNC’s Global Drylands Initiative and the IUCN Commission on Ecosystem Management.

4.2 Roles of Implementing Agency

210. UN Environment is responsible for the implementation of the project, which “entails oversight of project execution to ensure that the project is being carried out in accordance with agreed standards and requirements”. UN Environment is responsible for project cycle management services. These services comprise project approval and start-up, risk management and mitigation, project supervision and oversight, and project completion and evaluation. A list of tasks of the implementing agency is provided below:

Project Approval and Start-up

- (i) Appraise the project and finalize project implementation arrangements, including mission travel.
- (ii) Advise the project proponent on the establishment of a project management structure in the recipient country/countries.
- (iii) Assist project management to draft TORs and advise on the selection of experts for implementation.
- (iv) Advise on and participate in project start-up workshop.

Project implementation and supervision

- (i) Conduct at least one supervision mission per year, including briefing operational focal points on project progress.
- (ii) Provide technical guidance, as necessary, for project implementation.
- (iv) Oversee procurement and financial management to ensure implementation is in line with UN Environment’s policies and timeline.

- (v) Disburse funds to the EA and review financial reports.
- (vi) Oversee the preparation of the required reports for submission to the GEF Secretariat.
- (vii) Monitor and review project expenditure reports.
- (viii) Prepare periodic revisions to reflect changes in annual expense category budgets. Undertake the mid-term review, including possible project restructuring. Send a copy to the GEF Secretariat.

Project completion and evaluation

- (i) Oversee the preparation of the Project Completion Report/Independent Terminal Evaluation, submit the report to the GEFIEO and send a copy to the GEF Secretariat.
- (ii) Prepare project closing documents and inform the GEF Secretariat.
- (iii) Prepare the financial closure of the project and inform to the GEF Secretariat.

4.3 Roles of Executing Agency

211. A project executing entity (EA) receives project-specific GEF funding from a GEF Agency to execute a GEF project. Thus, IUCN, as the Executing Agency, undertakes the execution of projects, which implies the ability to manage and administer the day-to-day activities of a project.

Execution generally includes the management and administration of project activities, in addition to managing the delivery of project outputs. This is in accordance with specific project requirements outlined in the approved Project Document and the agreement with UN Environment.

Executing Agency is accountable for intended and appropriate use of funds, for procurement and contracting of goods and services, and for timely delivery of inputs and outputs. A list of tasks of the executing agency is provided below:

Staffing:

- (i) Project manager;
- (ii) Project assistant technical specialist(s);
- (iii) Procurement specialist; and/or Financial specialist

Project Cycle Management related activities;

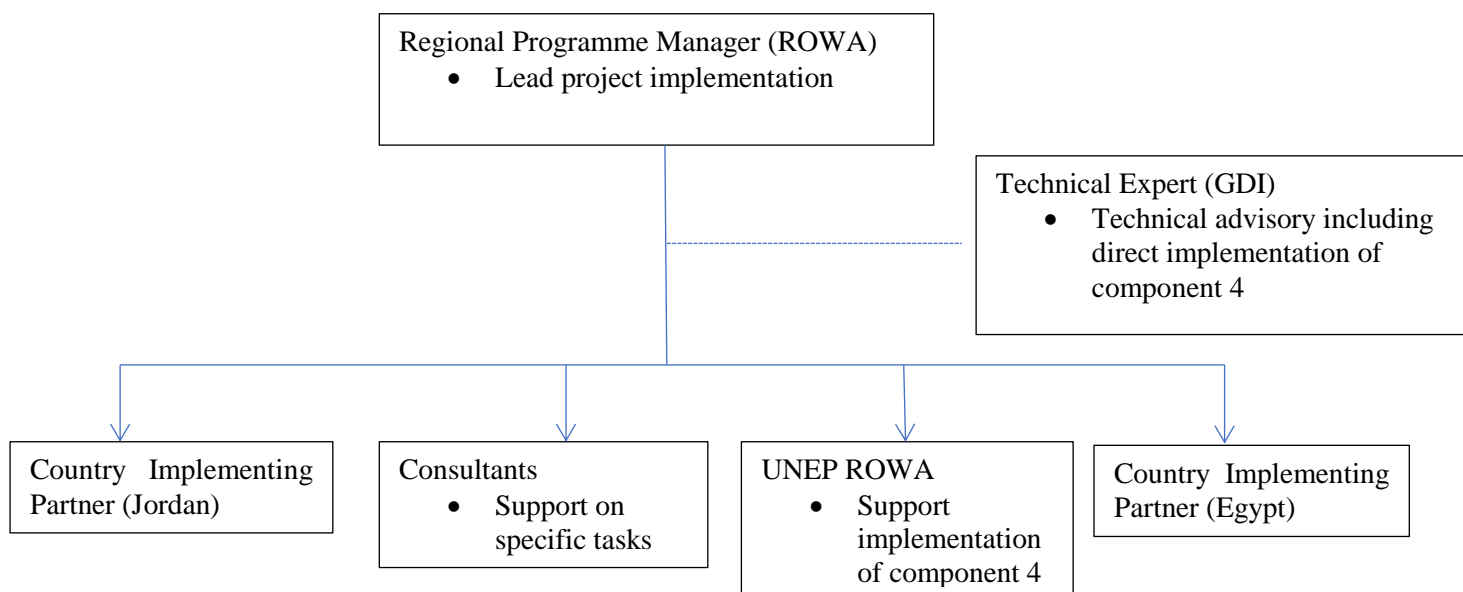
- (i) Work Program planning
- (ii) Preparation of procurement plans,
- (iii) Maintain records of all project-related documentation
- (iv) Preparation of progress reports and financial reports for the project;
- (v) Financial auditing of the project

Project related activities:

- (i) Travel to execute project,
- (ii) Preparation of terms of reference and procurement packages,
- (iii) Management of consultant activities

- (iv) Management of output deliverables;
- (v) Knowledge management (preparation of a web-site)
- (vi) Consultation with project stakeholders,
- (vii) Building partnerships and leverage resources

4.4 Project management and technical support



212. IUCN will appoint a Regional Program Manager, with the adequate level of seniority and international exposure, to be based in Amman, working out of IUCN ROWA. The Regional Program Manager will be responsible for ensuring the effective, efficient and timely implementation of project activities and for leading the implementation of agreed actions.
213. IUCN also will assign one or more part-time senior technical experts either at its headquarters or based out of its Outposted Global program in Nairobi, who will work closely with the Regional Program Manager on relevant project activities.
214. The two country implementing partners (HFDB and DRC) will work with IUCN to identify a suitable institutional focal point for the project in their respective entities, with main role of coordinating with IUCN the conduct of assessments, participatory planning processes and the provision of technical services within the mandate of the two the two country implementing partners.
215. Consultants may be recruited and assigned by IUCN ROWA for carrying out specific tasks foreseen in the project and according to needs.

216. IUCN ROWA will provide administrative, logistical and financial management support to the project.
217. The UNEP Regional Office for West Asia is the project partner for component four, Knowledge management to promote an enabling environment for regional scale-up of Sustainable Rangeland Management. UNEP-ROWA is IUCN-ROWA's partner in a number of regional environmental programs and is a member of the Regional Coordination Mechanism (RCM) with LAS/CAMRE. UNEP-ROWA hosts a global and regional knowledge base of regional mechanisms, policies, and networks to foster dialogue, capacity development, partnerships and promote SLM synergies with MEAs and SDGs.

4.5 Project Steering Committee

Regional and Global levels

218. The project will build on and fully develop the consultation mechanisms spearheaded during the PPG phase. During the project inception, the Project Steering Committee (PSC) will be constituted and the inception meeting will effectively be the first meeting of the PSC. All project co-financiers will by default be invited to take part in the PSC. PSC meetings will be held annually.
219. The current list of PSC members includes: IUCN, UNEP, HFDB, DRC-Egypt, RBG, and CEDARE, in addition to one representative from the focal Ministry in each Country. The PSC will be relatively small since the National Committee will be engaged more deeply in country-level guidance. The PSC reserves the option of inviting additional experts into the group as required. Country representatives from Jordan and Egypt will chair the PSC on a rotation basis.
220. The GEF Implementing Agency (UNEP) will be part of the project Steering Committee and will also contribute to ensuring that appropriate linkages and coordination is maintained with relevant programs and projects, in particular those listed in Sections [2.6](#) and [2.7](#) (Baseline and Linkages, respectively).
221. Regular PSC meetings and internal and existing external communication channels will ensure adequate coordination with other initiatives and with the broad range of partners, including global and regional stakeholders mentioned in [Section 2.5](#).
222. Representatives from HFDB and DRC-Egypt will be asked to provide brief reports to the Partners' meeting on country-level progress, lessons learned, etc.
223. The first Project Steering Committee (PSC) meeting will be convened during the project inception and it will focus on issues associated with GEF-funded elements of the broader SRM effort—including global as well as regional and country-level work. IUCN will report on both the results of GEF-funded work under global/regional components as well as its oversight work with respect to country-level outputs and activities.

National Advisory Committees

224. Country level technical staff from line ministries responsible for themes such as livestock, land use governance and environment, as well as representatives from relevant CSOs and CBOs at the country level and other partners, will meet and form the National Advisory Committees in Jordan and Egypt, respectively.

225. These Committees will be convened by IUCN working closely with HFDB in Jordan and DRC in Egypt, respectively. HFDB and DRC will act as secretariats to the respective National Advisory Committees for the technical work to be developed at the national level, while IUCN will act as a chair. Prior to each annual PSC meeting, the National Advisory Committees will have met and prepared annual progress reports and workplans for submission to PSC.
226. During project inception, all arrangements will be firmed up and finalized. A complete list of members for each of the Advisory Committees will be proposed by the respective national implementing partners and submitted for the approval of the PSC.

SECTION 5: STAKEHOLDER PARTICIPATION

227. During the preparation phase potential stakeholder's involvement in the project will be ensured at different levels. Key stakeholders who can contribute to project will be involved in one form or another in project preparation and will be directly and continuously involved in the project through a number of means, which will include their participation in activities. The project is grounded in a participatory approach that includes a detailed stakeholder engagement process at the outset to ensure inclusion of groups that could otherwise be marginalized. The participatory approach is one of the most significant components of the project in terms of shifting decision-making power from government extension agents to communities of land users.
228. Key stakeholders in this project are men and women rangeland users, local rangeland service providers, local government departments, line ministries at the national level, and Civil Society partners (pastoralists, agricultural institutions, environment institutions, and Badia research center). Rangeland users will be the primary beneficiaries of this project and will be closely involved in the preparation of the project, particularly at the inception of local project activities where they will participate in multi-stakeholder dialogue processes. Community rangeland institutions (in different forms according to national laws and opportunities) will be the focus of Participatory Rangeland Management Planning, with close support of local government extension agents. PRMP is designed to address inequity in community decision-making and explicitly ensures the engagement of women and other marginalized groups.
229. Local Civil Society Organizations will also be invited to participate at this stage and to contribute their experiences and approaches to the project methodology. The project preparation phase will include consultations at community as well as national levels to ensure awareness of and buy in to the project. Key technical agencies and scientific advisors will be brought on board from the outset to guide project development and implementation and to advise on the various technical components. In some countries, research institutes will be identified as executing partners or sub-contractors for important elements of the project (e.g. rangeland assessments, value chain development, validating good practices etc.). The project will also engage actors from both the environment and development sectors to strengthen the multi-sectoral approach of the project and foster dialogue for improved inter-sectoral collaboration.
230. The project will pay specific attention to the role of private sector actors in Components 3 and 4, including development of investment plans and convening a regional investor's forum. The aim will be to strengthen awareness on investment options and bankable investments and to raise awareness among other stakeholders of the role that can be played by private sector actors.

SECTION 6: MONITORING AND EVALUATION PLAN

231. The project will follow UNEP standard monitoring, reporting and evaluation processes and procedures. Substantive and financial project reporting requirements are summarized in Appendix 8. Reporting requirements and templates are an integral part of the UNEP legal instrument to be signed by the executing agency and UNEP.

232. The project M&E plan is consistent with the GEF Monitoring and Evaluation policy. The Project Results Framework presented in Appendix 4 includes SMART indicators for each expected outcome as well as mid-term and end-of-project targets. These indicators along with the key deliverables and benchmarks included in Appendix 6 will be the main tools for assessing project implementation progress and whether project results are being achieved. The means of verification and the costs associated with obtaining the information to track the indicators are summarized in Appendix 7. Other M&E related costs are also presented in the Costed M&E Plan and are fully integrated in the overall project budget.
233. The M&E plan will be reviewed and revised as necessary during the project inception workshop to ensure project stakeholders understand their roles and responsibilities vis-à-vis project monitoring and evaluation. Indicators and their means of verification may also be fine-tuned at the inception workshop. Day-to-day project monitoring is the responsibility of the project management team but other project partners will have responsibilities to collect specific information to track the indicators. It is the responsibility of the Project Manager to inform UNEP of any delays or difficulties faced during implementation so that the appropriate support or corrective measures can be adopted in a timely fashion.
234. The project Steering Committee will receive periodic reports on progress and will make recommendations to UNEP concerning the need to revise any aspects of the Results Framework or the M&E plan. Project oversight to ensure that the project meets UNEP and GEF policies and procedures is the responsibility to the Task Manager in UNEP-GEF. The Task Manager will also review the quality of draft project outputs, provide feedback to the project partners, and establish peer review procedures to ensure adequate quality of scientific and technical outputs and publications.
235. At the time of project approval 90% percent of baseline data is available. Baseline data gaps will be addressed during the first 1.5 years of project implementation. A plan for collecting the necessary baseline data is presented in Appendix 6. The main aspects for which additional information are needed are.
- Baseline and targets referring to Indicator #6, i.e. the exact benchmarks for policies & practices that the project is slated to influence will be confirmed upon during the project inception, and for which a couple of suggestions for validation are presented in the Results Framework Table in Appendix 4;
 - Core LDN indicators (Item B2 of Table 7) to be monitored at either at country-level for Jordan and Egypt respectively, or for the entire Arab or MENA Region (t.b.d), barring costs and possible partnerships to be developed for achieving this goal, likely with the LAS Initiative Climate Risk Nexus (see paragraph 80).
236. Project supervision will take an adaptive management approach. The Task Manager will develop a project supervision plan at the inception of the project which will be communicated to the project partners during the inception workshop. The emphasis of the Task Manager supervision will be on outcome monitoring but without neglecting project financial management and implementation monitoring. Progress vis-à-vis delivering the agreed project global environmental benefits will be assessed with the Steering Committee at agreed intervals. Project risks and assumptions will be regularly monitored both by project partners and UNEP. Risk assessment and rating is an integral part of the Project Implementation Review (PIR). The quality of project monitoring and evaluation will also be reviewed and rated as part of the PIR. Key financial parameters will be monitored quarterly to ensure cost-effective use of financial resources.

237. A mid-term management review or evaluation will take place **after year 2 of the project** as indicated in the project milestones. The review will include all parameters recommended by the GEF Evaluation Office for terminal evaluations and will verify information gathered through the GEF tracking tools, as relevant. The review will be carried out using a participatory approach whereby parties that may benefit or be affected by the project will be consulted. Such parties were identified during the stakeholder analysis (see [Section 2.5](#) of the project document). The project Steering Committee will participate in the mid-term review and develop a management response to the evaluation recommendations along with an implementation plan. It is the responsibility of the UNEP Task Manager to monitor whether the agreed recommendations are being implemented.
238. An independent terminal evaluation will take place at the end of project implementation. The Evaluation and Oversight Unit (EOU) of UNEP will manage the terminal evaluation process. A review of the quality of the evaluation report will be done by EOU and submitted along with the report to the GEF Evaluation Office not later than 6 months after the completion of the evaluation. The standard terms of reference for the terminal evaluation are included in UNEP's website and/or Intranet. These will be adjusted to the special needs of the project.
239. The GEF tracking tools are attached as Appendix 15. These will be updated at mid-term and at the end of the project and will be made available to the GEF Secretariat along with the project PIR report. As mentioned above the mid-term and terminal evaluation will verify the information of the tracking tool.

SECTION 7: PROJECT FINANCING AND BUDGET

7.1 Overall project budget

[Refer to [Appendix 1](#) for the detailed budget.]

7.2 Project co-financing

[Refer to [Appendix 2](#) for the detailed co-finance.]

7.3 Project cost-effectiveness

240. The project is cost-effective because it focuses on restoration of rangelands by helping rangeland managers to follow an evidence-based pathway towards restoration.
241. Because restoring rangelands is a lengthy process full scale restoration is not achievable within the lifecycle of any single project. The project will deliver tangible changes in rangelands management, which will contribute to the restoration process, and will provide measurable changes in vegetation cover in restoration sites that are initiated at least 2 years before the close of the project.
242. The restoration process will be delivered by this project rather than the end goal of full landscape restoration, which may require decades of engagement. The project will also contribute to establishing the conditions for mainstreaming SRM to ensure that the long-term goal of full restoration is more likely to be attained. This definition of restoration is consistent with the LDN Technical Guide of the UNCCD, the LDN Conceptual Framework of the UNCCD Science Policy Interface, and the IPBES Land Degradation and Restoration Assessment, all of which are still under development, but to which IUCN is a contributor.
243. For example, changes in biomass over a 3-4-year period may be measurable by project end, but these should be interpreted with caution, not least also because of the climatic variability that characterize the countries' climate. Yet, a key condition for establishing the basis for lasting results in rangeland management / restoration is to have users forego short-term gains in favor of a longer term, sustainable and local development. This will also require close cooperation among the various interested parties, as well as changes in behavior that relate to resource use – in particular, soil, water and livestock.
244. Hence, what the project will deliver at site level is actually to either start a process of change or support it in a concerted fashion together with partners and to develop conditions that will enable actions to be sustained beyond the project life. It will focus on practices and behaviors that, if left otherwise unchecked, would accelerate the land degradation process and possibly lead to irreversible desertification. The choice of sites will also allow the project to build on a baseline of previous interventions and investments, providing the longer-term support needed securing global benefits.
245. In addition, for achieving lasting changes, the project needs to bring about change in the drivers behind the land degradation process that affects rangelands. Therefore, the project will also develop, disseminate and implement solutions to securing pastoral governance and tenure without undermining the inherent, necessary complexity of customary arrangements.
246. **Alternatives to the project's strategy have been considered** – as well as their likely cost effectiveness. E.g. investing in either de-stocking of herds or in the sedenterisation of

Bedouin tribes, as ways of alleviating pressure on rangelands were considered as alternatives to the project strategy with respect to the cost-effectiveness argument.

247. De-stocking would e.g. imply paying compensation to livestock owners and having them commit to not increasing the size of their herds against a suitable payment. Evidence from similar attempts had shown that de-stocking interventions are difficult to implement as a long-term strategy – which HERD is by default. Rather, de-stocking works best as a temporary and localized measure in situations of need (e.g. disease affecting entire livestock populations or disaster caused by persistent drought and where other adaptation strategies fail⁵⁷). Forced de-stocking is not only very expensive, but also ineffective and impractical, if it is to be applied across large landscapes and as a long-term strategy.
248. As for sedenterisation of Bedouins as an alternative project strategy, evidence from Jordan discussed in Section 2 of this ProDoc shows that decreased of herd mobility coupled with the high opportunity cost of fodder subsidies are not only counter-productive vis-à-vis the goal of SRM, but also an indirect cause their degradation.⁵⁸
249. Hence, the proposed project strategy, which builds on participation, long-term vision, capacity building and policy change, is considered the most suited for achieving the project goals.
250. In a world of dwindling resources, rapid urbanization and technological development, but under stress from climate change, the governance of the global commons needs to be put into a pragmatic perspective. Historical evidence seems to indicate that traditional practices have in several cases kept patterns of livestock mobility and overall rangeland management within the boundaries of sustainability. Yet, cultural traditions may be breaking down, transforming or may have, in certain instances, actually contributed to land degradation. Regardless, pastoralist practices and the solutions that the project will promote need to be frame against a rapidly changing context.
251. The project will therefore work on measuring, monitoring, adapting and promoting dialogue among pastoralist groups, government and non-government stakeholders, the scientific community and funding agents.

⁵⁷ See e.g. Abebe et al. (2008).

⁵⁸ See e.g. sub-sections *Regional Context* and *Project context in Jordan*, under Section 2.1.

APPENDICES

- Appendix 1: Budget by project components and UNEP budget lines**
- Appendix 2: Co-financing by source and UNEP budget lines**
- Appendix 3: Incremental cost analysis**
- Appendix 4: Results Framework and Theory of Change Diagram**
- Appendix 5: Workplan and timetable**
- Appendix 6: Key deliverables and benchmarks**
- Appendix 7: Costed M&E plan**
- Appendix 8: Summary of reporting requirements and responsibilities**
- Appendix 9: Organizational flowchart chart (organogram)**
- Appendix 10: Project implementation arrangements**
- Appendix 11: Terms of References for Staff involved in the Project**
- Appendix 12: Co-financing commitment letters from project partners**
- Appendix 13: Endorsement letters of GEF National Focal Points**
- Appendix 14: Draft procurement plan**
- Appendix 15: Tracking Tools**
- Appendix 16: Social and Environmental Safeguards**
- Appendix 17: Maps**
- Appendix 18: Additional Context and Background**
- Appendix 19: Country Report – Jordan (separate file - 97 pages)**
- Appendix 20: Country Report – Egypt (separate file - 84 pages)**

Appendix 1: Budget by project components and UNEP budget lines

APPENDIX 1 - RECONCILIATION BETWEEN GEF ACTIVITY BASED BUDGET AND UNEP BUDGET LINE (GEF FUNDS ONLY US\$)														
Project title: Healthy Ecosystems for Rangeland Development (HERD): sustainable rangeland management strategies and practices														
Project number:			Project executing partner:			IUCN								
Project implementation period:			From:			To:								
UNEP Budget Lines		Descriptions	Expenditure by project component/activity (provide description)							Expenditure by calendar year				
			1	2	3	4	PMC	M&E	Total	Year 1*	Year 2*	Year 3*	Year 4 *	Total
10	PERSONNEL COMPONENT													
	1100	Project personnel												
	1101	Technical Advisor (IUCN-GDI)	43,477	7,432	-	51,420	-	-	102,329	25,583	25,582	25,582	25,582	102,329
	1103	Senior Programme Officer (IUCN-ROWA)	36,850	29,160	25,232	39,187	-	-	130,429	32,608	32,607	32,607	32,607	130,429
	1104	Communication Officer (IUCN-ROWA)	1,066	4,920	9,840	11,316	-	-	27,142	6,784	6,786	6,786	6,786	27,142
	1105	Programme Officer (IUCN-ROWA)	10,498	6,460	16,150	-	-	-	33,108	8,277	8,277	8,277	8,277	33,108
	1106	Project Manager (IUCN-ROWA)	-	-	-	-	110,116	-	110,116	27,529	27,529	27,529	27,529	110,116
	1199	Sub-total	91,891	47,972	51,222	101,923	110,116	-	403,124	100,781	100,781	100,781	100,781	403,124
	1200	Consultants												
		National Consultants												-
	1201	A study on Detailed studies of target landscapes, including drought monitoring, contour mapping, rangeland characteristics, livestock production data, socio-economic data, role of Gender in rangeland management and restoration	42,000	-	-	-	-	-	42,000	42,000	-	-	-	42,000
	1202	Desk review and consultative workshops to examine policies to achieve LDN (national rangelands strategy, implementation of HIMA, role of gender in rangeland management and range-based livelihoods) with recommendations on policy implementation, policy reform, policy contradictions etc.	42,000	-	-	-	-	-	42,000	42,000	-	-	-	42,000

UNEP Budget Lines	Descriptions	Expenditure by project component/activity (provide description)							Expenditure by calendar year				
		1	2	3	4	PMC	M&E	Total	Year 1*	Year 2*	Year 3*	Year 4 *	Total
1203	Economic valuation study and mapping of restoration opportunities combined with local and national consultative workshops (possibly conducted towards the end of the project when data on implementation methods and costs are available)	40,000	-	-	-	-	-	40,000	-	-	-	40,000	40,000
1204	Consultancy-led study and consultation with local stakeholders with recommendations for local agreements developed under Output 2.2.3. (study per country)	-	44,000	-	-	-	-	44,000	-	44,000	-	-	44,000
1205	Five baseline studies and stakeholder consultations for target initiatives (e.g. rangeland health, state of pastoral rights, existence of good practices, key actors etc.)	-	-	-	50,000	-	-	50,000	-	50,000	-	-	50,000
	International Consultant							-					
1206	Public communications on SRM, including news articles and radio broadcasts	-	-	30,000	-	-	-	30,000	-	-	15,000	15,000	30,000
1207	Compilation and publication of validated good practices in the restoration and protection of communal rangelands in the Arab region and globally.	-	-	-	20,000	-	-	20,000	-	-	20,000	-	20,000
1208	Review of regional and global policies in support of SRM (especially LDN), their value-addition to national policies, and opportunities for leveraging further funds for regional SRM initiatives	-	-	-	15,000	-	-	15,000	15,000	-	-	-	15,000
1209	Publication of a LAS regional rangeland situation analysis, including an overview of the state of rangeland health and estimated cost benefit of restoration and protection	-	-	-	15,000	-	-	15,000	-	-	15,000	-	15,000
1299	Sub-total	124,000	44,000	30,000	100,000	-	-	298,000	99,000	94,000	50,000	55,000	298,000
1300	Administrative Support												
1301	Admin Support	-	-	-	-	30,501	-	30,501	7,626	7,625	7,625	7,625	30,501
1302	Finance Officer	-	-	-	-	26,810	-	26,810	6,704	6,702	6,702	6,702	26,810
1303		-	-	-	-	-	-	-	-	-	-	-	-
1399	Sub-total	-	-	-	-	57,311	-	57,311	14,330	14,327	14,327	14,327	57,311

UNEP Budget Lines		Descriptions	Expenditure by project component/activity (provide description)							Expenditure by calendar year				
			1	2	3	4	PMC	M&E	Total	Year 1*	Year 2*	Year 3*	Year 4 *	Total
	1600	Travel on official business												
	1601	International Travel	18,400	-	-	35,000	-	-	53,400	26,700	8,900	8,900	8,900	53,400
	1602	Regional Travel	-	-	-	8,600	-	-	8,600	4,300	2,150	2,150	-	8,600
	1603	Local Travel	6,000	16,000	-	-	-	-	22,000	5,500	5,500	5,500	5,500	22,000
									-					-
	1699	Sub-total	24,400	16,000	-	43,600	-	-	84,000	36,500	16,550	16,550	14,400	84,000
1999	Component total			240,291	107,972	81,222	245,523	167,427	-	842,435	250,611	225,658	181,658	184,508
20	SUB-CONTRACT COMPONENT													
	2100	Sub-contracts (MOUs/LOAs for cooperating agencies)												
	2101								-					-
	2102								-					-
	2103								-					-
	2199	Sub-total	-	-	-	-	0	0	-	-	-	-	-	-
	2200	Sub-contracts (MOUs/LOAs for supporting organizations)												
	2201	Grants to National Partners for implementation of PRAGA methodology	200,000	-	-	-	-	-	200,000	100,000	100,000	-	-	200,000
	2202	Grants to national partners to create a database where data on LD can be stored.	20,000	-	-	-	-	-	20,000	10,000	10,000	-	-	20,000
	2203	Grants to partners for implementing restoration actions identified through PRMPs and approved by the steering committee	-	-	500,000	-	-	-	500,000	-	250,000	250,000	-	500,000
	2204	Grants to partners to implement supporting activities identified through the PRMPs and approved by the steering committee	-	-	300,000	-	-	-	300,000	-	-	150,000	150,000	300,000
	2205	Small grants to 5 partners in global/regional scale up	-	-	-	20,000	-	-	20,000	5,000	5,000	5,000	5,000	20,000
	2299	Sub-total	220,000	-	800,000	20,000	-	-	1,040,000	115,000	365,000	405,000	155,000	1,040,000
2999	Component total		220,000	-	800,000	20,000	-	-	1,040,000	115,000	365,000	405,000	155,000	1,040,000
30	TRAINING COMPONENT													

UNEP Budget Lines	Descriptions	Expenditure by project component/activity (provide description)							Expenditure by calendar year				
		1	2	3	4	PMC	M&E	Total	Year 1*	Year 2*	Year 3*	Year 4 *	Total
3200	Group training												
3201	Training on Implementation of PRAGA	93,885	-	-	-	-	-	93,885	93,885	-	-	-	93,885
3202	Training on PRMP	-	67,638	-	-	-	-	67,638	67,638	-	-	-	67,638
3203	Training on SRM	-	84,798	-	-	-	-	84,798	-	84,798	-	-	84,798
3204	Annual participatory monitoring of PRMPs with local committees	-	80,466	-	-	-	-	80,466	-	26,822	26,822	26,822	80,466
3205	Local Stakeholder Consultations	-	17,876	-	-	-	-	17,876	-	17,876	-	-	17,876
3206	Training of community beneficiaries in rangeland restoration techniques, natural regeneration, herd management strategies and related practices	-	-	108,608	-	-	-	108,608	-	108,608	-	-	108,608
3207	Training on remote sensing, GIS, drought and land degradation modeling and mapping methods	-	60,000	-	-	-	-	60,000	60,000	-	-	-	60,000
3207	Exchange visits to established rangeland Hima sites in Jordan	-	-	62,480	-	-	-	62,480	-	-	62,480	-	62,480
3299	Sub-total	93,885	310,778	171,088	-	-	-	575,751	221,523	238,104	89,302	26,822	575,751
3300	Meetings/Conferences												
3301	National Workshops	41,705	-	-	-	-	-	41,705	41,705	-	-	-	41,705
3302	Steering Committee meetings	36,000	-	-	-	-	-	36,000	9,000	9,000	9,000	9,000	36,000
3303	Inception Meeting	52,090	-	-	-	-	-	52,090	52,090	-	-	-	52,090
3304	Stakeholder analysis and baseline needs assessment	-	43,100	-	-	-	-	43,100	43,100	-	-	-	43,100
3305	Multistakeholder dialogue to draft local natural resource management agreements	-	33,986	-	-	-	-	33,986	-	33,986	-	-	33,986
3306	Government dialogue to pursue adoption of local agreements	-	12,000	-	-	-	-	12,000	-	-	12,000	-	12,000
3307	Annual meetings of the Arab Regional Pastoral Network	-	-	-	94,312	-	-	94,312	23,578	23,578	23,578	23,578	94,312
3308	Consultations to agree on the Conceptual Framework for an expanded global HERD initiative	-	-	-	31,200	-	-	31,200	-	-	31,200	-	31,200
3309	Regional investment forum for SRM/LDN	-	-	-	68,574	-	-	68,574	-	68,574	-	-	68,574
3310	workshops for collaborative proposal	-	-	-	36,974	-	-	36,974	-	-	18,487	18,487	36,974

UNEP Budget Lines		Descriptions	Expenditure by project component/activity (provide description)							Expenditure by calendar year				
			1	2	3	4	PMC	M&E	Total	Year 1*	Year 2*	Year 3*	Year 4 *	Total
		design and fund raising strategy												
	3311	Regional policy forum on the challenges and opportunities to SRM, with support for regional decisions in favor of SRM/LDN	-	-	-	70,374	-	-	70,374	-	-	70,374	-	70,374
	3312	Regional/global inception meeting for component four	-	-	-	37,574	-	-	37,574	-	37,574	-	-	37,574
	3313	Regional/global steering committee meetings	-	-	-	98,752	-	-	98,752	24,688	24,688	24,688	24,688	98,752
	3399	Sub-total	129,795	89,086	-	437,760	-	-	656,641	194,161	197,400	189,327	75,753	656,641
3999	Component total		223,680	399,864	171,088	437,760	-	-	1,232,392	415,684	435,504	278,629	102,575	1,232,392
40	EQUIPMENT AND PREMISES COMPONENT													
	4200	Non-expendable equipment												
	4201	Computers and printers	10,000	-	-	-	-	-	10,000	10,000	-	-	-	10,000
	4202	GPS and survey equipment	-	5,358	-	-	-	-	5,358	5,358	-	-	-	5,358
	4203	Cameras	-	-	-	5,094	-	-	5,094	5,094	-	-	-	5,094
	4299	Sub-total	10,000	5,358	-	5,094	-	-	20,452	20,452	-	-	-	20,452
4999	Component total		10,000	5,358	-	5,094	-	-	20,452	20,452	-	-	-	20,452
50	MISCELLANEOUS COMPONENT													
	5200	Reporting costs												
	5201	Publication	49,843	-	-	47,423	-	-	97,266	24,316	24,317	24,317	24,316	97,266
	5202	Printing	-	15,000	5,000	5,000	-	-	25,000	6,250	6,250	6,250	6,250	25,000
	5203	Translation	5,000	9,000	3,000	15,000	-	-	32,000	8,000	8,000	8,000	8,000	32,000
	5304	Audit	10,000	7,500	5,000	7,500	-	-	30,000	7,500	7,500	7,500	7,500	30,000
	5299	Sub-total	64,843	31,500	13,000	74,923	-	-	184,266	46,066	46,067	46,067	46,066	184,266
	5300	Sundry												
	5301	Stationary	3,000	6,500	2,000	3,000	-	-	14,500	3,625	3,625	3,625	3,625	14,500
	5302	Commucation	14,227	3,000	2,000	-	-	-	19,227	4,806	4,807	4,807	4,807	19,227
	5399	Sub-total	17,227	9,500	4,000	3,000	-	-	33,727	8,431	8,432	8,432	8,432	33,727

UNEP Budget Lines		Descriptions	Expenditure by project component/activity (provide description)							Expenditure by calendar year				
			1	2	3	4	PMC	M&E	Total	Year 1*	Year 2*	Year 3*	Year 4 *	Total
	5500	Evaluation												
	5501	Mid Term Evaluation (UNEP)	-	-	-	-	-	35,000	35,000	-	35,000	-	-	35,000
	5502	Mid Term Evaluation (IUCN Travel and inhouse consultancy)	-	-	-	-	-	36,000	36,000	-	36,000	-	-	36,000
	5503	Final Evaluation (UNEP)	-	-	-	-	-	60,000	60,000	-	-	-	60,000	60,000
	5504	Final Evaluation (IUCN Travel and inhouse consultancy)	-	-	-	-	-	31,710	31,710	-	-	-	31,710	31,710
	5599	Sub-total	-	-	-	-	-	162,710	162,710	-	71,000	-	91,710	162,710
5999	Component total		82,070	41,000	17,000	77,923	-	162,710	380,703	54,497	125,499	54,499	146,208	380,703
99	GRAND TOTAL		776,041	554,194	1,069,310	786,300	167,427	162,710	3,515,982	856,244	1,151,661	919,786	588,291	3,515,982

Appendix 2: Co-financing by source and UNEP budget lines

Table 11. Summary of contributions of Project Co-financing to Project Components (\$ millions)

Co-financier	Components*	Comp. 1	Comp 2	Comp 3	Comp 4	TOTAL	Period mentioned
IUCN ROWA & Global	4				0.300	0.300	2016-2021
Ministry of Environment, Jordan	1, 3	1.000		1.000		2.000	2017-2019
HFDJB	1, 2, 3	0.829	0.829	0.829	0.513	3.000	2016-2021
DRC, Egypt	1, 2, 3, 4	1.000	1.000	3.527	1.000	6.527	2017-2021
GIZ	1, 2, 3	0.020	0.020	0.060	0.000	0.100	2016-2018
CEDARE	1,3,4	0.100		0.100	0.100	0.300	2016-2019

* Details by budget line are not possible to provide.

Appendix 3: Incremental cost analysis

The incremental costs and benefits of the proposed project are summarized in the following incremental cost matrix. The incremental cost of the project, USD15.7 million, is required to achieve the project's global environmental benefits. Of this amount USD\$3.516 (representing 22.3% of the total) is being requested from GEF. The remaining amount of USD\$12.227 million (77.6%) of the total cost will come from the Governments of Jordan and Egypt and other national and international donors. The figure includes both in-kind and cash contributions.

Table 12. Incremental Cost Matrix

Baseline Scenario (Business As Usual)	GEF Incremental Contribution (what the GEF project will contribute)	Key Outcomes expected with the Alternative Scenario (BAU+GEF Increment)
Component 1.	<i>\$3.765 million</i>	<i>\$24.075 million</i>
Component 2.	<i>\$2.431 million</i>	<i>\$14.825 million</i>
Component 3.	<i>\$6.640 million</i>	<i>\$23.117 million</i>
Component 4.	<i>\$2.439 million</i>	<i>\$11.965 million</i>
Project Management	<i>\$0.167 million</i>	<i>\$0.167 million</i>
TOTAL	<i>\$15.443 million</i>	<i>\$74.150 million</i>

Refer also to Table 10 in [Section 3.7](#) for the complete **Incremental Cost Reasoning** and detailed analysis.

Appendix 4: Results Framework and Theory of Change Diagram

Outcome Level Indicators	Baseline	Targets and Monitoring Milestones	Means of Verification	Assumptions & Risks
Project Objective: To Strengthen restoration and sustainable management of pastoral rangelands for the provision of ecosystem services and protection of biodiversity in Egypt and Jordan and catalyzing scale up regionally and globally.				
Outcome 1.1: Rangeland monitoring systems institutionalized nationally and regionally based on commonly agreed scale-dependent indicators appropriate for different end-user groups				
# of institutional partners supporting rangeland monitoring system # of institutional arrangements for rangeland monitoring	Up to date data on land degradation assessment using participatory approaches not available. Project partners do not follow an up to date and standardized monitoring approach Rangeland monitoring systems are not institutionalized or systematically applied in the participating countries	Results by project end: - PRAGA methodology adapted and conducted by national partners in at least four landscapes; 3 in Jordan and 1 in Egypt National partners report acceptance of the methodology by project review / evaluation.	Project Progress Reports, Project Maps and Tracking Tools Validation by the Mid-term Review and Final Evaluation	<u>Assumptions:</u> Governments are open to support policy changes that favor SRM, if an underlying analysis and technical recommendations are sufficiently convincing. <u>Risks:</u> Monitoring systems and platforms are not fully adapted to the local needs and leads to poor ownership of tools promoted by the project. Land tenure is vital to this work, but the subject is always sensitive. The project uses a participatory approach to manage the risks of tension, but should also monitor underlying

Outcome Level Indicators	Baseline	Targets and Monitoring Milestones	Means of Verification	Assumptions & Risks
Project Objective: To Strengthen restoration and sustainable management of pastoral rangelands for the provision of ecosystem services and protection of biodiversity in Egypt and Jordan and catalyzing scale up regionally and globally.				
				political challenges that could lead to local tensions
<u>Outputs</u>				
1.1.1 Rangeland landscape assessments conducted at local, and national levels using agreed biophysical and socio-economic indicators and participatory approaches where applicable				
1.1.2 Development of Prototype National platforms for information sharing and exchange, including data on land degradation and good practices in Sustainable Rangelands				
Outcome 1.2: Key project stakeholders reach consensus over identification and prioritization of good practices and effective policies in sustainable rangeland management and rangeland rehabilitation				
# good practices and SRM policies identified and approved by project stakeholders # of good practices that explicitly address the roles and responsibilities of women land users	Lack of consensus over good practices in SRM amongst stakeholders Proposed good practices in SRM have been identified in Jordan and Egypt but they are not widely adopted by project partners. Identified good practices generally do not pay explicit attention to the role of women resource managers Jordan has adopted a policy supporting improved community-based SRM but the policy is not yet widely implemented	At least one specific SRM practice (e.g. controlled grazing or reseeded) approved for implementation in each site with clear guidance over the role of women land managers Community based rangelands management is implemented in all project landscapes (192,621 ha in Jordan and 332,942 ha in Egypt) Dialogue for improved policy for community rangeland management under way in Egypt	Project Reports, Review, Final Evaluation Progress Mid-term Evaluation	<u>Assumptions:</u> Governments are open to support policy changes that favor SRM, if an underlying analysis and technical recommendations are sufficiently convincing. <u>Risks:</u> Monitoring systems and platforms are not fully adapted to the local needs and leads to poor ownership of tools promoted by the project. Land tenure is vital to this

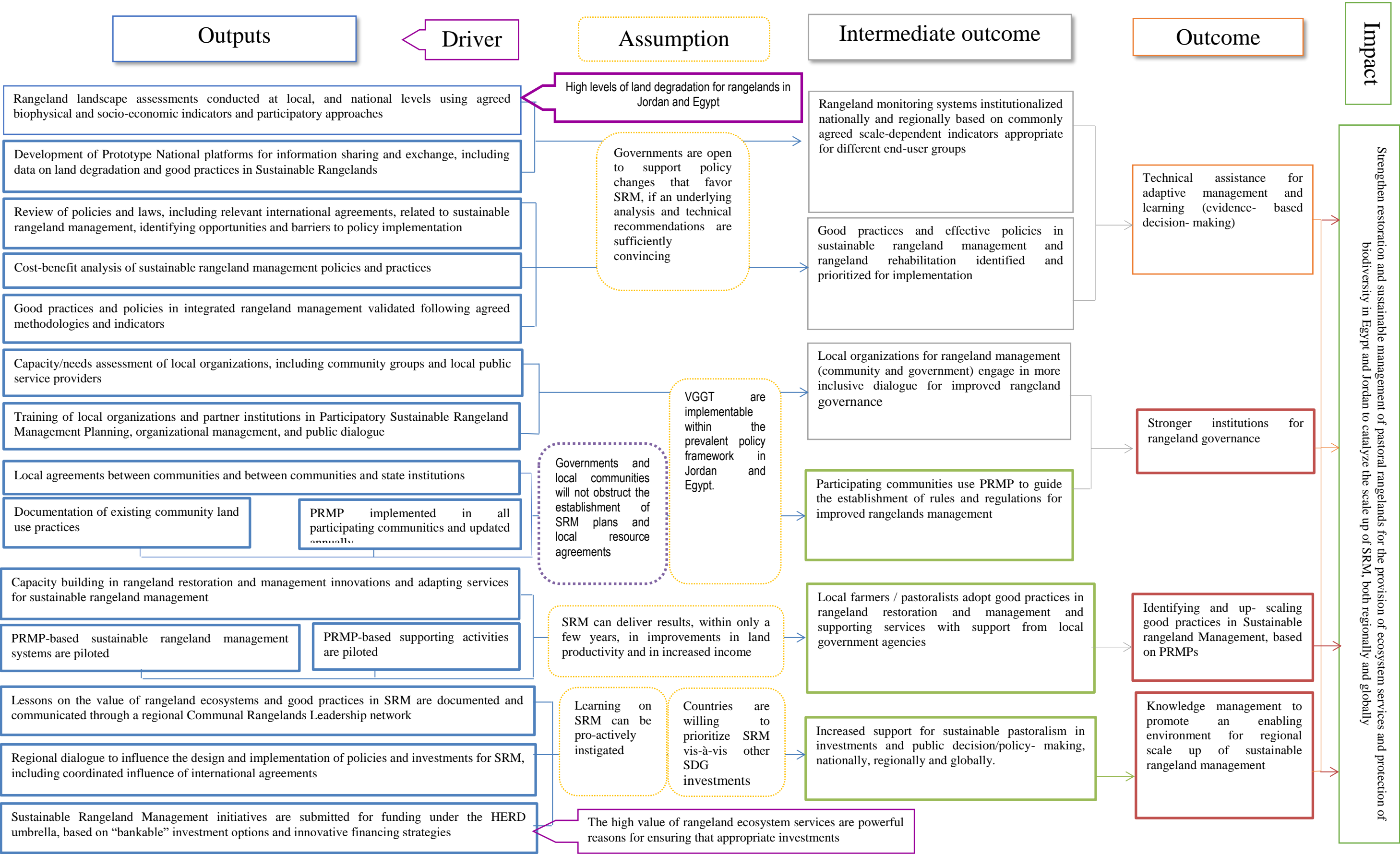
Outcome Level Indicators	Baseline	Targets and Monitoring Milestones	Means of Verification	Assumptions & Risks
Project Objective: To Strengthen restoration and sustainable management of pastoral rangelands for the provision of ecosystem services and protection of biodiversity in Egypt and Jordan and catalyzing scale up regionally and globally.				
				work, but the subject is always sensitive. The project uses a participatory approach to manage the risks of tension, but should also monitor underlying political challenges that could lead to local tensions
<u>Outputs</u>				
1.1.1 Rangeland landscape assessments conducted at local, and national levels using agreed biophysical and socio-economic indicators and participatory approaches where applicable				
1.1.2 Development of Prototype National platforms for information sharing and exchange, including data on land degradation and good practices in Sustainable Rangelands				
Outcome 2.1: Local organizations for rangeland management (community and government) engage in more inclusive dialogue for improved rangeland governance covering approximately 500,000 hectares				
# of a) Rangeland User Associations or Hima Communities and b) Local government entities at governorate and/or district levels that participate in SRM planning # of women members of participating organisations	SRM management practices prevail only in the pilot SRM site in Jordan, Bani Hashem: a) 1 Rangeland User Associations b) 1 Hima Community c) 2 Local government entities at governorate and/or district levels 1 site in Egypt has a nascent community association that is willing to engage in SRM Women are widely excluded from rangeland management	6 Hima Communities and 4 Rangeland User Associations participate in SRM planning Women participate in all community based SRM planning, either through their membership of Hima Communities and rangeland User associations, or through membership of women's organisations 1 local government partner in Egypt and 3 in Jordan participate in SRM planning	Project Progress Reports, registry of engaged CBOs and local government engaged in the project	<u>Assumptions:</u> VGGT are implementable within the prevalent policy framework in Jordan and Egypt. <u>Risks:</u> Enforcement of SRM based traditional systems is not sufficiently strong to ensure the regeneration of rangelands. Additional

Outcome Level Indicators	Baseline	Targets and Monitoring Milestones	Means of Verification	Assumptions & Risks
Project Objective: To Strengthen restoration and sustainable management of pastoral rangelands for the provision of ecosystem services and protection of biodiversity in Egypt and Jordan and catalyzing scale up regionally and globally.				
	organisations, although women's groups exist in Jordan			measures to be taken, as required.
<u>Outputs</u>				
1.2.1 Review of policies and laws, including relevant international agreements, related to sustainable rangeland management, identifying opportunities and barriers to policy implementation 1.2.2 Cost-benefit analysis of sustainable rangeland management policies and practices using economic methodologies 1.2.3 Good practices and policies in integrated rangeland management validated following agreed methodologies and indicators				
Outcome 2.2: Rules and regulations for improved rangelands management are established (in line with the Voluntary Guidelines on Responsible Governance of Tenure) based on PRMPs in participating communities				
# of local SRM agreements developed within communities and between communities and state institutions, based on PRMPs and in line with VGGT [E.g. Hima agreements, local conventions, bylaws etc.]	1 (in Bani Hashem site in Jordan)	At least 5 SRM agreements developed across both countries	Project Progress Reports	<u>Assumptions:</u> VGGT are implementable within the prevalent policy framework in Jordan and Egypt. Governments and local communities will not obstruct the establishment of SRM plans and local resource agreements. <u>Risks:</u> Enforcement of SRM

Outcome Level Indicators	Baseline	Targets and Monitoring Milestones	Means of Verification	Assumptions & Risks
Project Objective: To Strengthen restoration and sustainable management of pastoral rangelands for the provision of ecosystem services and protection of biodiversity in Egypt and Jordan and catalyzing scale up regionally and globally.				
				based traditional systems is not sufficiently strong to ensure the regeneration of rangelands. Additional measures to be taken, as required.
<u>Outputs</u>				
<p>2.2.1 PRMP implemented in all participating communities and updated annually</p> <p>2.2.2 Documentation of existing community land use practices (rules and regulations over rangeland resource management: pasture, water, trees, wildlife, livestock corridors, etc.)</p> <p>2.2.3 Local agreements between communities and between communities and state institutions (Hima agreements, local conventions, bylaws etc.) developed according to national legal opportunities</p>				
Outcome 3.1: Local farmers / pastoralists adopt good practices in rangeland restoration and management and supporting services with support from local government agencies				
# communities with improved income from sustainably managed rangelands obtained by local communities as a result of implementing SRM practices	0	At least 3 communities across both countries, report increased income (livestock and non-livestock) or production (i.e. subsistence) as a result of rangeland rehabilitation	Specialized study with validation by the Mid-term Review and Final Evaluation	<u>Assumptions:</u> SRM can deliver results, within only a few years, in improvements in land productivity and in increased income thereof. <u>Risks:</u> The establishment and recognition of community groups and local SRM plans is more complex
# of women participating in income generating activities related to SRM		At least one income generating activity targeting women rangeland users is implemented in each project site		
# new SRM practices implemented by communities of rangeland managers	1 in Bani Hashem 1 in Mersa Matrouh	At least 3 SRM practices adopted across both countries New SRM practices adopted in at least 10 project sites across both countries	Project evaluation and progress reports	

Outcome Level Indicators	Baseline	Targets and Monitoring Milestones	Means of Verification	Assumptions & Risks
Project Objective: To Strengthen restoration and sustainable management of pastoral rangelands for the provision of ecosystem services and protection of biodiversity in Egypt and Jordan and catalyzing scale up regionally and globally.				
				than initially assumed
<u>Outputs</u>				
3.1.1 Training and awareness raising in rangeland restoration and management innovations and adapting services for sustainable rangeland management				
3.1.2 PRMP based sustainable rangeland management systems are piloted				
3.1.3 <i>PRMP-based supporting activities are piloted.</i>				
Outcome 4.1: Increased support for sustainable pastoralism in investments and public decision/policy- making, nationally, regionally and globally				
# new investments under development in the region or globally that draw on project lessons and partnerships # regional and national policy dialogues initiated or enhanced through project actions	0	5 major investments in SRM under development within LAS and other participating countries 5 policy dialogues towards community based SRM are influenced by project actions	Meeting reports Agreements reached at dialogue meetings.	<u>Assumptions:</u> Learning on SRM can be pro-actively instigated through networking and communication. <u>Countries are willing to prioritize SRM vis-à-vis other SDG investments</u> <u>Risks:</u> Competition for space and time with national governments in a congested global policy arena
<u>Outputs</u>				

Outcome Level Indicators	Baseline	Targets and Monitoring Milestones	Means of Verification	Assumptions & Risks
Project Objective: To Strengthen restoration and sustainable management of pastoral rangelands for the provision of ecosystem services and protection of biodiversity in Egypt and Jordan and catalyzing scale up regionally and globally.				
<p>4.1.1 Lessons on the value of rangeland ecosystems and good practices in SRM are documented and communicated through a regional Communal Rangelands Leadership network (of scientists, pastoralists and Civil Society Organizations for South-South learning and cooperation)</p> <p>4.1.2 Regional dialogue to influence the design and implementation of policies and investments for SRM, including coordinated influence of international agreements</p> <p>4.1.3 Sustainable Rangeland Management initiatives are submitted (regionally and outside the region) for funding under the HERD umbrella, based on “bankable” investment options and innovative financing strategies</p>				



Appendix 5: Workplan and timetable

Outcomes	Outputs	Activities	Year 1				Year 2				Year 3				Year 4			
			Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q1	Q2	Q3	Q4
Outcome 1.1 Rangeland monitoring systems institutionalized nationally and regionally based on commonly agreed scale-dependent indicators appropriate for different end-user groups	Output 1.1.1 Rangeland landscape assessments conducted at local, and national levels using agreed biophysical and socio-economic indicators and participatory approaches where applicable	Activity 1: Implementation of the PRAGA Methodology																
		Activity 2: Detailed studies of target landscapes, including drought monitoring, contour mapping, rangeland characteristics, livestock production data, socio-economic data, role of Gender in rangeland management and restoration.																
	Output 1.1.2 Development of Prototype National platforms for information sharing and exchange, including data on land degradation and good practices in Sustainable Rangelands	Activity 3: National inception meetings																
		Activity 4: Annual Steering Committee Meetings																
		Activity 5: Support to national partners to establish a knowledge management portal and information database for target landscapes																

Outcomes	Outputs	Activities	Year 1				Year 2				Year 3				Year 4			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Outcome 1.2: Good practices and effective policies in sustainable rangeland management and rangeland rehabilitation identified and prioritized for implementation	Output 1.2.1 Review of policies and laws, including relevant international agreements, related to sustainable rangeland management, identifying opportunities and barriers to policy implementation	Activity 6: Desk review and consultative workshops to examine policies to achieve LDN (national rangelands strategy, implementation of HIMA, role of gender in rangeland management and range-based livelihoods) with recommendations on policy implementation, policy reform, policy contradictions and synergies with any other policies, etc.																
	Output 1.2.2 Cost-benefit analysis of sustainable rangeland management policies and practices using economic methodologies	Activity 7: Economic valuation study and mapping of restoration opportunities combined with local and national consultative workshops (possibly conducted towards the end of the project when data on implementation methods and costs are available)																
	Output 1.2.3 Good practices and policies in integrated rangeland management validated following agreed methodologies and indicators	Activity 8: Development of project monitoring strategy with agreement on indicators for evaluation of good practices																
		Activity 9: Midterm and final evaluation of project actions drawing on evidence from rangeland landscape assessments (Output 1.1.1) and economic valuations (Output 1.2.2)																
		Activity 10: Publication of project lessons in English and Arabic																
Periodic Activities		Annual Audit																

Outcomes	Outputs	Activities	Year 1				Year 2				Year 3				Year 4			
			Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4
Outcome 2.1: Local organizations for rangeland management (community and government) engage in more inclusive dialogue for improved rangeland governance covering 100,000 hectares	Output 2.1.1 Capacity/needs assessment of local organizations, including community groups and local public service providers	Activity 11: Detailed stakeholder analysis and baseline needs assessment (against key governance indicators) with strong emphasis on the capacities and needs of women and any social inclusion groups (Vulnerable groups)																
	Output 2.1.2 Stronger organizational capacities through appropriate training, including training of partner institutions in Participatory Sustainable Rangeland Management Planning (PRMP)	Activity 12: Training of local partners in Sustainable Rangelands Management etc. (Pastoral Learning Forum methodology)																
		Activity 13: Training on remote sensing, GIS, drought and land degradation modeling and mapping methods																
		Activity 14: Publication of brochure on SRM in Arabic and distribution to all partners and communities																
Outcome 2.2: Participating communities use PRMP to guide the establishment of rules and regulations	Output 2.2.1 PRMP implemented in all participating communities and updated annually	Activity 15: Training of trainers in PRMP in each country																
		Activity 16: Publication of PRMP guidelines																
		Activity 17: Implementation of PRMP methodology by trained local partners																
		Activity 18: Annual participatory monitoring of PRMPs with local committees																

Outcomes	Outputs	Activities	Year 1				Year 2				Year 3				Year 4			
			Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q1	Q2	Q3	Q4
for improved rangelands management (in line with the Voluntary Guidelines on Responsible Governance of Tenure)	Output 2.2.2 Documentation of existing community land use practices (rules and regulations over rangeland resource management: pasture, water, trees, wildlife, livestock corridors, etc.)	Activity 19: Consultancy-led study and consultation with local stakeholders with recommendations for local agreements developed under Output 2.2.3. (study per country)																
	Output 2.2.3 Local agreements between communities and between communities and state institutions (Hima agreements, local conventions, bylaws etc.) developed according to national legal opportunities	Activity 20: Multi-stakeholder dialogue to draft local natural resource management agreements.																
		Activity 21: Participation in government dialogue to pursue adoption of local agreements (where relevant)																
Outcome 3.1: Local farmers / pastoralists adopt good	Output 3.1.1 Training and awareness raising in rangeland	Activity 22: Technical briefs published on community based rangelands management in local language targeting local and national level public servants																

Outcomes	Outputs	Activities	Year 1				Year 2				Year 3				Year 4			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
practices in rangeland restoration and management and supporting services with support from local government agencies	restoration and management innovations and adapting services for sustainable rangeland management	Activity 23 Training of community beneficiaries in rangeland restoration techniques, natural regeneration, herd management strategies and related practices																
		Activity 24: Exchange visits to established rangeland Hima sites in Jordan/Egypt																
		Activity 25: Public communications on SRM, including news articles and radio broadcasts																
	Output 3.1.2 PRMP-based SRM systems are piloted	Activity 26: Grants to partners for implementing restoration actions identified through PRMPs and approved by the steering committee																
	Output 3.1.3 Indicative supporting activities	Activity 27: Grants to partners to implement supporting activities identified through the PRMPs and approved by the steering committee																
Outcome 4.1: Increased support for sustainable pastoralism in investments and public decision/policy-making, nationally,	Output 4.1.1 Lessons on the value of rangeland ecosystems and good practices in SRM are documented and communicated through a regional Communal	Activity 28: Compilation and publication of validated good practices in the restoration and protection of communal rangelands in the Arab region and globally.																
		Activity 29: Presentation of experiences at academic and policy conferences and events regionally and globally and publication in peer reviewed journals																
		Activity 30: Annual meetings of the Arab Regional Pastoral Network (3 meetings)																

Outcomes	Outputs	Activities	Year 1				Year 2				Year 3				Year 4			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
regionally and globally	Rangelands Leadership network (of scientists, pastoralists and Civil Society Organizations for South-South learning and cooperation)	Activity 31: e-discussions on community rangelands management leading to the establishment of a network of resource people for championing Hima globally																
		Activity 32: Consultations to agree on the Conceptual Framework for an expanded global HERD initiative (Theory of Change, regional situation analysis etc.)																
	Output 4.1.2 Regional dialogue to influence the design and implementation of policies and investments for SRM, including coordinated influence of international agreements	Activity 33: One regional policy forum on the challenges and opportunities to SRM, with support for regional decisions in favor of SRM/LDN (target 50 mid-level policy makers from the LAS region and beyond)																
		Activity 34: Review of regional and global policies in support of SRM (especially LDN), their value-addition to national policies, and opportunities for leveraging further funds for regional SRM initiatives																
		Activity 35: Publication of a LAS regional rangeland situation analysis, including an overview of the state of rangeland health and estimated cost benefit of restoration and protection																
		Activity 36: Convening of regional investment forum for SRM/LDN																
	Output 4.1.3 Sustainable	Activity 37: Regional/global inception meeting for component four																

Outcomes	Outputs	Activities	Year 1				Year 2				Year 3				Year 4			
			Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q1	Q2	Q3	Q4
	Rangeland Management initiatives are submitted (regionally and outside the region) for funding under the HERD umbrella, based on “bankable” investment options and innovative financing strategies	Activity 38: Five baseline studies and stakeholder consultations for target initiatives (e.g. rangeland health, state of pastoral rights, existence of good practices, key actors etc.)																
		Activity 39: Five workshops for collaborative proposal design and fund raising strategy																
		Activity 40: Regional/global annual steering committee meetings																

Appendix 6: Key deliverables and benchmarks

Table 13. Key deliverables for Egypt, Jordan and Regionally

Activities	Deliverables	Benchmarks
COMPONENT 1		
Outcome 1.1: Rangeland monitoring systems institutionalized nationally and regionally.		
Output 1.1.1 Rangeland landscape assessments conducted at local, and national levels using agreed biophysical and socio-economic indicators and participatory approaches where applicable		
Activity 1: Implementation of the PRAGA Methodology	Rangeland assessment report per target landscape.	Rangeland assessment conducted per selected target site and the assessment reports made available on the website
Activity 2: Detailed studies of target landscapes, including drought monitoring, contour mapping, rangeland characteristics, livestock production data, socio-economic data, role of Gender in rangeland management and restoration	Two studies on target landscapes.	Studies on target landscapes made available on the website
Output 1.1.2 Development of Prototype National platforms for information sharing and exchange, including data on land degradation and good practices in Sustainable Rangelands		
Activity 3: National inception meetings	National Inception meeting report shared with stakeholders	National inception meetings held at the country level and the project introduced to the stakeholders.
Activity 4: Annual Steering Committee Meetings	Minutes of the steering committee meetings	Minutes of annual steering committee meeting documented and shared with all stakeholders.
Activity 5: Support to national partners to establish a knowledge management portal and information database for target landscapes	A national knowledge management portal and information portal up and running with frequent information update.	A knowledge management portal established and accessible to all relevant stakeholders.
Outcome 1.2 Good practices and effective policies in sustainable rangeland management and rangeland rehabilitation identified and prioritized for implementation		
Output 1.2.1 Review of policies and laws, including relevant international agreements, related to sustainable rangeland management, identifying opportunities and barriers policy implementation		

Activities	Deliverables	Benchmarks
Activity 6: Desk review and consultative workshops to examine policies to achieve LDN (national rangelands strategy, implementation of HIMA, role of gender in rangeland management and range-based livelihoods) with recommendations on policy implementation, policy reform, policy contradictions etc.	Publication of recommendations on LDN policy implementation, policy reforms and policy contradictions.	A publication of recommendations on LDN policy implementation, policy reforms and policy contradictions made available to national partners and on the internet..
Output 1.2.2 Cost-benefit analysis of sustainable rangeland management policies and practices using economic methodologies		
Activity 7: Economic valuation study and mapping of restoration opportunities combined with local and national consultative workshops (possibly conducted towards the end of the project when data on implementation methods and costs are available)	Publication of a study on economic valuation of restoration opportunities.	Economic valuation studies at the country level complete and available on the internet.
Output 1.2.3 Good practices and policies in integrated rangeland management validated following agreed methodologies and indicators		
Activity 8: Development of project monitoring strategy with agreement on indicators for evaluation of good practices	A project monitoring strategy with indicators for evaluation of good practices in place.	A project monitoring strategy complete and available online.
Activity 9: Midterm and final evaluation of project actions drawing on evidence from rangeland landscape assessments (Output 1.1.1) and economic valuations (Output 1.2.2)	Mid-term and final evaluation reports	Mid term and final evaluation reports available online and shared with all the relevant stakeholders.
Activity 10: Publication of project lessons in English and Arabic	Publication on project lessons in English and Arabic	The publication of project lessons shared with stakeholders and available online.
COMPONENT 2		
Outcome 2.1: Local organizations for rangeland management (community and government) engage in more inclusive dialogue for improved rangeland governance covering 100,000 hectares		
Output 2.1.1 Capacity/needs assessment of local organizations, including community groups and local public service providers		
Activity 1: Detailed stakeholder analysis and baseline needs assessment (against key governance indicators) with strong emphasis on the capacities and needs of women and other marginalized groups.	Workshop reports on stakeholder analysis. Report on baseline needs assessment.	Report on stakeholder analysis and baseline needs assessment available shared with relevant stakeholders and available online.
Output 2.1.2 Stronger organizational capacities through appropriate training, including training of partner institutions in Participatory Sustainable Rangeland Management Planning (PRMP)		

Activities	Deliverables	Benchmarks
Activity 2: Training of local partners in Sustainable Rangelands Management etc. (Pastoral Learning Forum methodology)	Training module on SRM. Workshop report.	The capacity of local partners on SRM enhanced.
Activity 3: Training on remote sensing, GIS, drought and land degradation modeling and mapping methods	Training module on GIS, drought and land degradation modelling and mapping methods. Workshop report.	The capacity of local partners on GIS, drought and land degradation modelling and mapping enhance. A report on the training shared with relevant stakeholders and available online.
Activity 4: Publication of brochure on SRM in Arabic and distribution to all partners and communities	Brochure on SRM distributed to partners ad communities	Brochure on SRM shared with relevant stakeholders and available online.
Outcome 2.2: Participating communities use PRMP to guide the establishment of rules and regulations for improved rangelands management (in line with the Voluntary Guidelines on Responsible Governance of Tenure)		
Output 2.2.1 PRMP implemented in all participating communities and updated annually		
Activity 5: Training of trainers in PRMP in each country	Training module on PRMP Workshop report.	Enhanced capacity of local partners on PRMP. The training report shared with relevant stakeholders and available online.
Activity 6: Publication of PRMP guidelines	Publication on PRMP guidelines.	A publication on PRMP guidelines published and available online
Activity 7: Implementation of PRMP methodology by trained local partners	PRMP methodology implemented.	Capacity of local partners to deliver the PRMP methodology enhanced.
Activity 8: Annual participatory monitoring of PRMPs with local committees	Two PRMP monitoring reports.	Monitoring reports of PRMP shared with relevant stakeholders and available online.
Output 2.2.2 Documentation of existing community land use practices (rules and regulations over rangeland resource management: pasture, water, trees, wildlife, livestock corridors, etc.)		
Activity 9: Consultancy-led study and consultation with local stakeholders with recommendations for local agreements developed under Output 2.2.3. (study per country)	Two studies on local agreements published	Studies on local agreements published , shared with relevant stakeholders and available online.
Output 2.2.3 Local agreements between communities and between communities and state institutions (Hima agreements, local conventions, bylaws etc.) developed according to national legal opportunities		
Activity 11: Multi-stakeholder dialogue to draft local natural resource management agreements.	Workshop report on natural resource management agreements.	Workshop report and documentation of the natural resource management agreements shared with relevant stakeholders and available online.

Activities	Deliverables	Benchmarks
Activity 12: Participation in government dialogue to pursue adoption of local agreements (where relevant)	Report on recommendations from government dialogue on adoption of local agreements.	Report on recommendations from government dialogue on the adoption of local agreements available online.
Outcome 3.1: Local farmers / pastoralists adopt good practices in rangeland restoration and management and supporting services with support from local government agencies		
Output 3.1.1 Training and awareness raising in rangeland restoration and management innovations and adapting services for sustainable rangeland management		
Activity 1: Technical briefs published on community based rangelands management in local language targeting local and national level public servants	Published technical briefs on community based rangeland management	Technical briefs on community based rangeland management available online.
Activity 2: Training of community beneficiaries in rangeland restoration techniques, natural regeneration, herd management strategies and related practices	Training manual on rangeland restoration techniques, natural regeneration, herd management and related practices. Workshop reports.	Enhanced capacity of community beneficiaries on rangeland restoration techniques, natural regeneration, herd management strategies and related practices.
Activity 3: Exchange visits to established rangeland Hima sites in Jordan	Report from the exchange visit on lessons learnt by participants.	Report on exchange visits available online.
Activity 4: Public communications on SRM, including news articles and radio broadcasts	News articles from the public communications. Audio excerpts from radio broadcasts	Publication on SRM available online.
Output 3.1.2 PRMP-based SRM systems are piloted		
Activity 5: Grants to partners for implementing restoration actions identified through PRMPs and approved by the steering committee	Grant agreements with partners. Restoration actions to be implemented agreed on and documented.	Agreements with national partners issued. Documentation on restoration actions implemented by partners available online.
Output 3.1.3 Indicative supporting activities		
Activity 6: Grants to partners to implement supporting activities identified through the PRMPs and approved by the steering committee	Grant agreements with partners. Supporting activities to be implemented agreed on and documented.	Agreements with national partners issued. Documentation on restoration actions implemented by partners available online.
COMPONENT 4		
Outcome 4.1: Increased support for sustainable pastoralism in investments and public decision/policy-making, nationally, regionally and globally		
Output 4.1.1 Lessons on the value of rangeland ecosystems and good practices in SRM are documented and communicated through a regional Communal Rangelands Leadership network of scientists, pastoralists and Civil Society Organizations for South-South learning and cooperation)		

Activities	Deliverables	Benchmarks
Activity 1: Compilation and publication of validated good practices in the restoration and protection of communal rangelands in the Arab region and globally.	Publication on validated good practices in the restoration and protection of communal rangelands in the Arab region and globally	A publication on validated good practices in the restoration and protection of communal rangelands in the Arab region and globally published and available online.
Activity 2: Presentation of experiences at academic and policy conferences and events regionally and globally and publication in peer reviewed journals	Publication of experiences in a peer reviewed journal. Reports from the academic and policy conferences.	Presentation of experiences at academic and policy conferences. . A publication on experiences published in a peer reviewed journal and available online.
Activity 3: Annual meetings of the Arab Regional Pastoral Network (3 meetings)	Minutes from the meetings and way forward.	Documentation of minutes from the annual Arab regional pastoral meetings and the minutes available online.
Activity 4: e-discussions on community rangelands management leading to the establishment of a network of resource people for championing Hima globally	Minutes from e discussions. A network of resource people for championing Hima established and running.	Minutes from the e discussions available online.
Activity 5: Consultations to agree on the Conceptual Framework for an expanded global HERD initiative (Theory of Change, regional situation analysis etc.)	Minutes from consultations and way forward.	Minutes from the consultations available online.
Activity 6: Midterm and final evaluations of global/regional component	Mid-term and final evaluation reports	Midterm and final evaluation reports available online.
Output 4.1.2 Regional dialogue to influence the design and implementation of policies and investments for SRM, including coordinated influence of international agreements		
Activity 7: One regional policy forum on the challenges and opportunities to SRM, with support for regional decisions in favor of SRM/LDN (target 50 mid-level policy makers from the LAS region and beyond)	Minutes from the regional policy forum on the challenges and opportunities to SRM.	Minutes from the regional policy forum on the challenges and opportunities to SRM available online.
Activity 8: Review of regional and global policies in support of SRM (especially LDN), their value-addition to national policies, and opportunities for leveraging further funds for regional SRM initiatives	Publication on regional and global policies in support of SRM.	A publication on regional and global policies in support of SRM available online
Activity 9: Publication of a LAS regional rangeland situation analysis, including an overview of the state of rangeland health and estimated cost benefit of restoration and protection	LAS regional rangeland situation analysis published.	The League of Arab States regional rangeland situation analysis published and available online.

Activities	Deliverables	Benchmarks
Activity 10: Convening of regional investment forum for SRM/LDN	Report on the recommendations from the regional investment forum.	Report on the recommendations from the regional investment forum shared with key stakeholders and available online.
Output 4.1.3 Sustainable Rangeland Management initiatives are submitted (regionally and outside the region) for funding under the HERD umbrella, based on “bankable” investment options and innovative financing strategies		
Activity 11: Regional/global inception meeting for component four	Minutes from the regional / global inception meeting.	Minutes from the regional / global inception meeting shared with relevant stakeholders. .
Activity 12: Five baseline studies and stakeholder consultations for target initiatives (e.g. rangeland health, state of pastoral rights, existence of good practices, key actors etc.)	5 baseline studies for the target initiatives.	5 baseline studies for the target initiatives available online.
Activity 13: Five workshops for collaborative proposal design and fund raising strategy	Proposals developed and submitted to potential donors.	Proposals developed and submitted to potential donors.
Activity 14: Regional/global steering committee meetings x3	Minutes of the steering committee meetings.	Minutes of the steering committee meetings shared with key stakeholders. .

Appendix 7: Costed M&E plan

The monitoring and evaluation process is expected to be a key component of each outcome area, within the project, based on a three-year implementation plan. Monitoring and Evaluation (M&E) will be conducted utilizing the results-based management approach. The Results Framework provides performance and impact indicators for project implementation along with corresponding means of verification. M&E will be an on-going process and is based on the following strategic directions:

- An effective coordinating mechanism with roles and responsibilities clearly defined and under the aegis of IUCN, which has lead responsibility for overall project execution.
- The monitoring and evaluation process is participatory, consultative and aimed at ensuring delivery of project outputs and achievement of associated defined targets. Evaluation will be based on the status of implementation, through identification of gaps, and the measurement of impacts and level of success in the application of best practices.

The M&E plan includes an inception workshop and report, project implementation reviews, quarterly and annual review reports, and mid-term and final evaluations. The following sections outline the principal components of the M&E plan and M&E activities. The M&E plan for the project will be presented and finalized in an Inception report following a collective fine-tuning of indicators, means of verification, and the full definition of implementation arrangements related to executing partners and project staff.

The indicative Monitoring and Evaluation Work Plan is provided in Table 14 below.

Table 14. Indicative Monitoring and Evaluation Work Plan

Type of M&E Activity	Responsible Parties	Time Frame	Costing
Project Inception Workshop and Report	<ul style="list-style-type: none"> • Program Manager • Project Coordinator • PMU 	Within first two months of Project start up	Total: \$30,000
Measurement of Means of Verification of Project results (outcome indicators and GEF tracking tools, including baseline data)	<ul style="list-style-type: none"> • Program Manager will oversee the hiring of specific studies and institutions/ agencies, and delegate responsibilities to relevant executing partners and /or Project Technical Committee members • Project Steering Committee • Project Coordinator 	Start, mid and end of Project (during evaluation cycle); and annually.	Total: \$25,000
Measurement of Means of Verification for Project Progress (progress and performance indicators)	<ul style="list-style-type: none"> • Oversight by Technical Advisor • Program Manager • 	Annually prior to ARR/PIR and as defined in annual work plans	Total: \$20,000
Annual Risk Review (ARR) and Project Implementation Report (PIR)	<ul style="list-style-type: none"> • Program Manager • Project Coordinator • PSC 	Annually	None
Periodic Status/Progress Reports to UNEP	<ul style="list-style-type: none"> • Program Manager 	Semi-annual/Quarterly	None
Project Steering Committee (PSC) meetings	<ul style="list-style-type: none"> • Program Manager • Technical Advisor • PSC members • UNEP (annually) 	Annually	Total: \$45,000

Type of M&E Activity	Responsible Parties	Time Frame	Costing
Reports of PSC meetings	<ul style="list-style-type: none"> Program Manager 	Semi-annually	None
Mid-term Review/ Evaluation	<ul style="list-style-type: none"> Program Manager Technical Advisor PSC UNEP Task Manager National and External Consultants 	At the mid-point of Project implementation	Total: \$78,500
Terminal Evaluation	<ul style="list-style-type: none"> UNEP Evaluation Office Program Manager PSC UNEP Task Manager 	At least 3 months before the end of Project implementation	Total: \$84,210
Audits	<ul style="list-style-type: none"> Appointed external auditors IUCN finance officers Program Manager 	Annually	Total: \$30,000
Project Final Report	<ul style="list-style-type: none"> Program Manager Technical Advisor PSC 	Within 2 months of Project completion	None
Co-Financing Report	<ul style="list-style-type: none"> Program Manager National committees. Finance officer PSC 	Within 1 month of PIR reporting period	None
Field Visits	<ul style="list-style-type: none"> National Project Assistant Program Manager Executing partners 	As appropriate	Total: \$20,000
Publications of Lessons Learned and other Project Documents	<ul style="list-style-type: none"> Program Manager Technical Advisor 	Annually, part of semi-annual reports and Project Final Report	Total: \$20,000
Total M&E Plan Cost			\$352,710

The key indicators according to which M&E will take place are presented in the results framework (Appendix 4).

A Project Inception Workshop (IW) will be held within the first three (3) months of start-up with the implementing and executing agencies and key project partners. This will be closely followed by National Inception Meetings to finalize roles and responsibilities and partnership agreements. A fundamental objective of this IW will be to help the project implementation partners to renew and elaborate commitment to the project goal and objectives, as well as to finalize preparation of the first annual work plan on the basis of the results framework. This will include reviewing the results framework (indicators, means of verification, and assumptions), adding additional detail as needed, and on the basis of this exercise, drafting the Annual Work Plan (AWP) with more precise and measurable performance indicators, and in a manner consistent with the expected Project outcomes.

Day-to-day monitoring of implementation progress will be the responsibility of the executing partners, led by the IUCN Program Manager and supported by the responsible staff member in each national partner, based on the project's AWP and its indicators. National partners will inform the Lead Executing Partner (IUCN) of any delays or difficulties faced during implementation so that the appropriate support or corrective measures can be adopted in a timely and remedial fashion. Progress and performance/impact indicators and development of specific targets for the first-year

implementation progress indicators together with their means of verification, will be refined in dialogue between the representative of IUCN and the national partner. These will be used to assess whether implementation is proceeding at the intended rate and in the right direction and will form part of the AWP. Targets and indicators for subsequent years will be defined annually as part of the internal evaluation and planning processes undertaken by the Lead Executing Agency.

Periodic monitoring of implementation progress will be undertaken by the Program Manager who will develop a monitoring tool to track activities and outputs. A Theory of Change will also be elaborated to track the link between outputs, outcomes and long term impacts. This is particularly important for actions that will not achieve an impact during the project implementation period but which will be influenced in the longer term. The Program Manager will conduct yearly field visits to assess the impact of implementation on the ground, particularly with regard to the tangible interventions and will report to the PSC.

Annual monitoring will occur through the PSC Reviews. The Project will be subject to reviews by the PSC at least once every year. The first such meeting will be held within the first twelve (12) months of the start of full implementation. National Partners will prepare an Annual Project Report (APR) and submit it to PSC at least two weeks prior to the review, for the review and comments of the Steering Committee.

A Terminal Review will be held in the last six months of the project and will inform the Terminal Report that will be submitted by the Program Manager to the PSC. It shall be prepared in draft at least two months in advance of the PSC Review meeting. The terminal review will consider the implementation of the Project as a whole, paying particular attention to whether the Project had achieved its stated goals and objectives and contributed to the broader objectives of the responsible Ministry and wider national development objectives. It will act as a vehicle through which lessons learned and any actions that are still necessary can be captured for further replication at the community, national and regional level, particularly in relation to sustainability of the outcomes from Project interventions.

The Regional Program Manager, with support from National Partners, will be responsible for the preparation and submission of the following reports that will form part of the monitoring process. An Inception Report (IR), which will be prepared immediately following the launching of the Project. It will include a detailed First Year/AWP divided in quarterly timeframes detailing the activities and progress indicators that will guide implementation during the first year of the project. An Annual Project report (APR) will be prepared on an annual basis prior to the PSC Review, to reflect progress achieved in meeting the AWP.

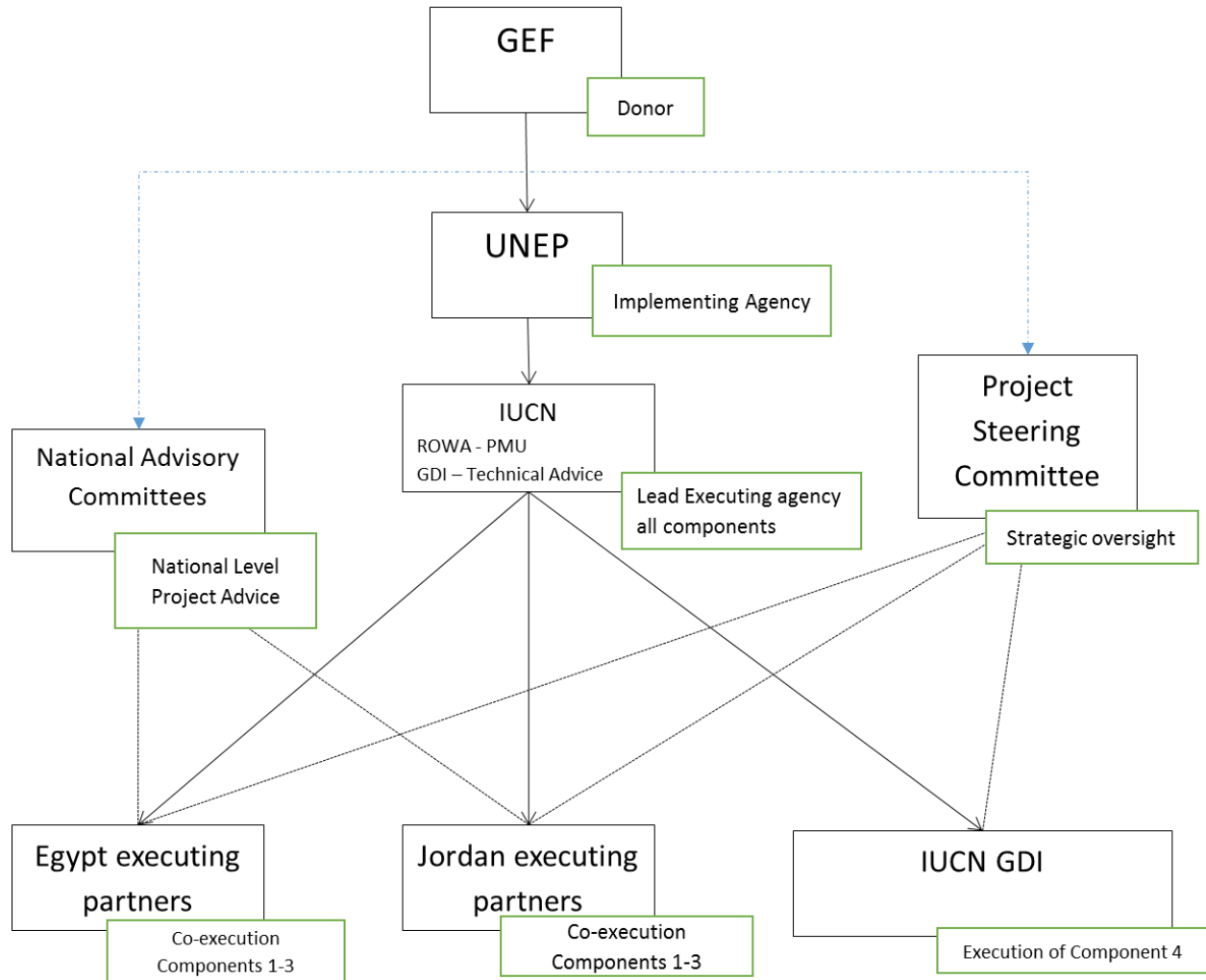
A Periodic Implementation Review (PIR) Report emanating from the process of Project implementation review is the main vehicle for extracting lessons learned. The PIR can be prepared any time during the year and ideally prior to the PSC review. Quarterly Progress Reports outlining main updates in project progress will be provided to the PSC by the Program Manager. Progress made shall be monitored based on the Enhanced Results Based Management Platform and the risk log will be regularly updated based on the initial risk analysis included in the Inception Report.

The Results Framework is provided at Appendix 4. The mid-term targets for these indicators will be established and confirmed during the Inception Workshop.

Appendix 8: Summary of reporting requirements and responsibilities

Reporting Requirements	Due Date	Responsibility of
Procurement plan (goods and services)	2 weeks before project inception meeting	Project Manager Project Coordinator
Inception Report	1 month after project inception meeting	Project Manager Project Coordinator
Expenditure report accompanied by explanatory notes	Quarterly on or before 30 April, 31 July, 31 October, 31 January	Project Manager Project Coordinator
Cash advance request and details of anticipated disbursements	Quarterly or when required	Project Manager Project Coordinator
Progress report	Half-yearly on or before 31 January	Project Manager Project Coordinator
Audited report for expenditures for year ending 31 December	Yearly on or before 30 June	Project Executing Agency
Inventory of non-expendable equipment	Yearly on or before 31 January	Project Manager and Project Coordinator
Co-financing report	Yearly on or before 31 July	Project Manager and Project Coordinator
Project Implementation Review (PIR) report	Yearly on or before 31 August	Project Manager and Project Coordinator, UNEP-GEF Task Manager (TM)
Minutes of Steering Committee meetings	Yearly (or as relevant)	Project Manager Project Coordinator
Final Report	3 months after project completion date	Project Coordinator
Final inventory of non-expendable equipment		Project Coordinator
Equipment transfer letter		Project Manager and Project Coordinator
Final expenditure statement	4 months after project completion date	Project Manager Project Coordinator
Mid-term Review of Mid-term Evaluation	Midway through project	TM, Project Coordinator
Final audited report for expenditures of project	6 months after project completion date	Project Executing Agency (WRI)
Independent Terminal Evaluation Report	6 months after project completion date	Evaluation and Oversight Unit (EOU)

Appendix 9: Organizational flowchart chart (organogram)



Appendix 10: Project Implementation Arrangements

DIVISION OF RESPONSIBILITIES

Project Steering Committee (PSC)

The project steering committee will provide overall guidance and strategic direction and oversight to project management and will approve all final outputs and deliverables of the project. The PSC will be multi-disciplinary and multi-sectoral in fields related to sustainable rangeland management, land degradation neutrality, desertification and sustainable land use planning. The PSC will include representatives of the partner national institutions in Jordan and Egypt, government agencies related to rangeland management, UNEP representatives and IUCN representatives from Jordan and Egypt. Its main responsibilities will include:

- Act as the project advisory board.
- Review annual project workplans and budget.
- Monitor project progress and delivery.
- Link the project with strategic opportunities national, regionally and globally.

The PSC will be constituted during the project inception meeting. It is anticipated to have between eight and ten members. The inception meeting will be the 1st meeting of the steering committee. The PSC will meet annually thereafter.

IUCN Regional Office for West Asia (ROWA)

IUCN ROWA will be in charge of project management, coordinating activities within Jordan and Egypt and managing agreements with the national partners. Its main responsibilities include:

- Manage project execution at the national level in Jordan and Egypt and ensure its executed according to the agreed workplan, budget and reporting tasks.
- Organize the steering committee meetings and act as the Secretariat of the steering committee.
- Developing overall workplan and budget and follow up on them.
- Close supervision of national partners in Jordan and Egypt to ensure implementation agreements are followed and reporting is done in a timely manner.
- Recruitment and management of national consultants.
- Conduct national level trainings, participatory planning, stakeholder engagement and other activities in the project.
- Compilation and submission of progress, financial and audit reports.

IUCN Global Drylands Initiative

IUCN's global drylands initiative is responsible for the overall technical leadership of the project and ensuring cross-country information sharing and learning. Its main duties include:

- Provide technical support for execution of the project.
- Managing the global/regional component of the project.
- Review national reports.
- Review national publications to ensure technical quality.
- Provide guidance in the development of the national partner terms of references for project implementation.

National Advisory Committees

This will be a national level team of technical experts from the relevant government ministries and partner institutions whose main role will be providing technical and supervisory advice to the national partners. Its main responsibilities will include:

- Guide project execution at the national level.
- Provide technical advice for project implementation at national level.
- Oversee project implementation at the national level.
- Ensure project is in line with country level policies.

INTERNAL STRUCTURE

The **Project Management Unit (PMU)** will consist of a Program Manager from IUCN ROWA, administrative assistant and finance officer and locally recruited staff in the country. The PMU roles will be to implement project outputs, monitoring and reporting, liaison with project partners, will act as the Secretariat to the Steering Committee, ensure project execution and all technical aspects of project implementation. The PMC will be in charge of ensuring the project is implemented according to the workplan and budget agreed on and reporting to the donor is done on a timely basis.

EXTERNAL STRUCTURE

The PSC is in charge of the overall project oversight and guidance. It will meet on an annual basis to discuss the project workplan, budget, progress and outputs. Participation in PSC meetings will be possible via annual meetings which will be agreed on in advance. They will also be possible via a video link or skype and decisions and consultations might also take place in email exchange form.

The national committees are in charge of national level project guidance and partnership management. They will meet on an annual basis to discuss project progress in relation to agreed workplans and budgets.

OVERSIGHT MECHANISM

The main oversight body for the project is its Steering Committee, comprised of the Implementing Agency, the Executing Agency, the national implementing partners and government representatives. Further monitoring and evaluation procedures of the project, including regular reporting duties, are detailed in Annex 6. The Executing Agency can undertake field visits at any stage and is tasked to support the mid-term review and terminal evaluation and audit of the project.

Appendix 11: Terms of References for Staff involved in the Project

Terms of Reference Project Manager (full time)

The Project Manager (PM) has the responsibility to ensure the effective and efficient day to day implementation of the project. The PM will ensure the functioning of the project from beginning to the end including project inception activities, annual and quarterly planning and reporting, and implementation of project activities, project reviews and project closure.

Specific responsibilities

- Prepare and update project annual and quarterly work plans, and submits these to the UNEP for agreement and approval.
- Prepare and participate in quarterly work planning and progress reporting meetings with the steering committee.
- Draft TORs for key inputs (i.e. personnel, sub-contracts, training, and procurement) and submit these to the UNEP for clearance and approval, and administer the mobilization of such inputs.
- Provide technical advice to project beneficiaries, review technical reports and monitor technical activities carried out by responsible parties.
- Ensure that all agreements with implementing agencies are prepared, negotiated and agreed upon.
- With respect to co-implementing partners and external project implementing agencies/ subcontractors
- ensure that these agencies mobilize and deliver the outputs in accordance with their letters of agreement or contracts, and
- provide overall supervision and/or coordination of their work to ensure the production of the expected outputs.
- Assumes direct responsibility for managing the project budget by ensuring that project funds are disbursed properly;
- expenditure is in accordance with the project document and project work plans;
- Accounting records and supporting documents are properly kept and financial reports are prepared;
- financial operations are transparent and financial procedures/regulations are properly applied; and
- Supervises PMU staff and local or international short-term consultants working for the project.
- Prepares project progress reports and the project final report and organises Project Steering Committee meetings,
- review meetings and evaluation missions, in coordination with UNEP
- Ensure the timely submission of work plans, reports, outputs and other deliverables to UNEP and GEF for review and evaluation, as appropriate
- Regularly report to and keep the UNEP and GEF up-to-date on project progress and implementation issues.

Qualifications;

- University degree (preferably post-graduate degree) with knowledge in Dry land and environmental sciences, natural resource management or related fields;
- At least 5 years of extensive experience in project management, planning and implementation, familiarity with donor funded development projects is an asset;
- Strong analytical skills, oral and written communication and team building skills;
- Substantial experience in leading teams of national and international experts;
- Excellent working level of English language in both writing and speaking.

Terms of Reference Technical Advisor

With support of SPIU Coordinator the Project manager, the Technical Advisor will conduct all necessary advisory activities to smoothly implement the HERD project and will provide guidance on the day-to-day implementation of the Project activities and on parallel co-financing initiatives. In particular the Technical Advisor will:

Project implementation:

- Provide technical expertise and strategic guidance to all project components, assuming quality control of interventions, and support the Project Manager in the coordination of the implementation of planned activities under the HERD projects as stipulated in the project document/work plan;
- Provide technical support in adaptive management and learning (evidence-based decision-making);
- Provide technical support in rangeland governance.

- Provide technical support in Sustainable Rangeland Management, based on Rangeland Management Planning
- Provide technical support in Knowledge management to promote an enabling environment for regional scale-up of Sustainable Rangeland Management
- Coordinate the work of all consultants and sub-contractors, ensuring the timely delivery of expected outputs, and effective synergy among the various sub-contracted activities;
- Ensure that technical contracts meet the highest standards; provide input into development of Terms of Reference for sub-contracts, assist with selection process, recommend best approaches, provide technical peer function to sub-contractors; provide training and backstopping where necessary.

Project management and monitoring:

- Provide hands-on support to the HERD project staff and other government counterparts in the areas of project management and planning, management of site activities, impact assessment, monitoring and final evaluation of the project;
- Assist the PM in the preparation and revision of Annual Work Plans;
- Assist the PM in monitoring the technical quality of project M&E systems (including indicators and targets);
- Assist the PM in adjusting the project Results Framework, as required and in line with corporate requirements;
- Coordinate preparation of the periodic Status Report when called for by UNEP/GEF;
- Assist the PM in the preparation of the Combined Project Implementation Review/Annual Project Report inception report, technical reports, quarterly financial reports for submission to UNEP, the GEF, other donors and Government Departments, as required;
- Assist and supervise the project phasing out required activities such as project final evaluation, completion report as required.

Terms of Reference Senior Programme Officer

- The principle roles of the Senior Programme Officer are to lead the development of the HERD in the region and ensure smooth delivery of HERD project,
- The SPO is responsible for delivery of HERD projects activities in accordance with both donor and UNEP/IUCN requirements and for maintaining consistency .
- The SPO will provide input to the project planning and strategic development.
- The SPO will represent the project with national and regional partners, including leading on partnership building.

Representation:

- Build a positive working relationship between the regional team to ensure smooth project development and implementation of collaborative activities;
- Build positive working relationships with key intergovernmental partners in the West Asia region.
- Develop and maintain working relationships with government partners, particularly those involved in drylands work (UNCCD focal points and GGWI focal points), and assist to build more productive partnerships with these institutions;
- Maintain a strong network of contacts in bilateral and multilateral institutions to facilitate development and implementation of HERD project activities;
- Represent the project in internal and external meetings, particularly in relevant regional and global events;
- Use opportunities at internal and public events to identify strategic partnerships and initiatives;
- Manage all project data and documents, in soft and hard copy as appropriate, ensuring they are suitably accessible by other project staff;
- Prepare project technical reports according to the agreed formats and deadlines and UNEP/GEF standards;

Project implementation:

- Implement project activities, in agreement with the project manager, according to both IUCN and donor requirements and standards, and to the satisfaction of project partners;
- Organise and facilitate project related workshops, training events and other public fora;
- Organise and lead policy dialogue and advocacy events
- Provide training to project partners to improve their capacity to deliver on project activities and objectives;
- Capture and document lessons from project activities and write, or co-author, agreed project publications and communication material;

- Communicate projects and project activities, in coordination with UNEP/ IUCN communication focal points and experts, to maintain public visibility of the programme;
- Implement all project-based activities and report on outcomes and impacts of project delivery;
- Effectively document and communicate project lessons

Terms of Reference Communication Officer

- Assist to ensure compliance of activities with project communication strategy by following donor and UNEP/IUCN guidelines
- Develop key promotional messages in consultation with the project team
- Participate in developing and evaluating feasibility, efficiency and quality of Information Education and Communication (IEC) materials
- Assist in coordinating communication activities and events of the project and partners
- Assist in conducting awareness raising campaigns, events, information dissemination workshops, etc. for target groups
- Undertake sporadic field visits to monitor project implementation and liaise closely with target groups
- Participate in partners visits for showcasing project progress and achievements
- Take lead in dissemination of communication materials to relevant stakeholders
- Draft case studies and relevant project documents and suggest recommendations on varied issues (as and when required)
- Maintain documentation management system (hard copy and on network).
- The officer may be required to perform duties that are beyond the scope of the job description in mutual discussion and agreement with the supervisor.

Knowledge, Skills and Experience:

- The individual must conform to the following qualifications:
- At least a Bachelor's degree in Social Science/Mass communication
- At least 3 years of professional work experience in designing and executing communication activities, preferably in development programmes
- Ability to work in a team and to sometimes tight deadlines in a dynamic and fast-paced work environment
- Very good mastering of English and Bangla (both verbal and written)
- Knowledge of and experience with media production, communication, and dissemination techniques and methods. This includes alternative ways to inform and entertain via written, oral, and visual media. Experience with communication/ creative agencies/ vendors will be added advantage
- Ability to communicate with people outside the project, representing the project to the public, government, and other external sources. This information can be exchanged in person, in writing, or by telephone or e-mail
- Ability to create new ideas, relationships, systems, or products, including creative contributions
- Proficient in use of computer applications related to the tasks
- Experience of working with local NGOs, INGOs and government bodies would be an advantage

Terms of Reference Programme Officer

As a general support the Programme Officer will:

- Support the HERD PM in implementing the project activities and organise other assessment and training sessions as requested.
- Ensure that HERD projects activities are implemented in a timely and effective manner and successfully achieve the set objectives and results.
- Communicate the results of the HERD project to relevant regional partners, Conventions, IUCN members and stakeholders, through the website or the preparation of specific information documents.
- Report on project activities on a regular basis, or as required by UNEP/IUCN or the GEF.
- Develop and support regional initiatives and projects for the conservation of Dry land biodiversity and the implementation of the work plan related to HERD project.
- Undertake other tasks/emerging issues at the request of the HERD Project manager.
- More specifically, within the frame of the existing activities, the following task are considered:

- Contribute to the development of the Project Healthy Ecosystems for Rangeland Development (HERD): sustainable rangeland management strategies and practices to build on existing capacities. Particularly, Provide technical support in adaptive management and learning (evidence-based decision-making);
- Provide technical support in rangeland governance.
- Provide technical support in Sustainable Rangeland Management, based on Rangeland Management Planning
- Provide technical support in Knowledge management to promote an enabling environment for regional scale-up of Sustainable Rangeland Management
- Support, on request, the DLP to prepare the necessary documentation required for the DLI.

Appendix 12: Co-financing commitment letters from project partners

Letter 1) The Hashemite Fund for Development of Jordan Badia (HFDJB)



To Mr. Fadi Sharideh
Director
IUCN Representation, Regional Office for West Asia (ROWA)
Amman, Jordan

Letter of co-financing commitment with respect to the UNEP-GEF Project HERD, developed in partnership with IUCN ROWA

"GEF ID 9407: Healthy Ecosystems for Rangeland Development (HERD): sustainable rangeland management strategies and practices in Jordan and Egypt"

Dear Sir,

[Amman, Jan, 10th, 2017]

This letter serves to confirm that The Hashemite Fund for Development of Jordan Badia (HFDJB) will contribute with co-financing of the above-mentioned project for the period 2016-2021 and with a total amount of 3,000,000 USD, of which 1,900,000 USD is in-cash co-financing, managed by Hashemite Fund for the Badia Development, and 1,100,000 USD represents an in-kind contribution.

More specifically, the co-financing provided will contribute to the achievement of project results with respect to the following elements, which are very much aligned with the project's components 1, 2 and 3, more specifically by focusing our contribution to the following set of national-level expected results:

1. Evidence-based decision making, including by contributing to the improved assessments and monitoring of rangeland ecosystem resilience is used to inform decision making by rangeland managers and government planners.
2. Effective institutions for rangeland management, by focusing on participatory action planning and resource management through local rangeland user groups supported by local services.
3. Identifying and up-scaling good practices in Sustainable Rangeland Management, which implies supporting the operationalization of site-level activities.

Half of the in-cash co-financing represents expenditure (equivalent to 950,000 USD), including with staff time, and investments that are already foreseen in the framework of our programme of activities, and which are planned and budget for during the project implementation period, using funds received by the Badia Fund from its sources of funding.

The other half represents an alignment of our activities to the outputs of the HERD, and funds that can be therefore considered leveraged by the project (also equivalent to 950,000 USD).

With respect to the remainder of the co-financing amount, the Badia Fund will avail to Project HERD access to vehicles and office space to support activities, the use value of which has been estimated at 1,100,000 USD for the duration of the project and considered as in-kind co-financing.

With the expectation of the successful approval of the project, please accept the assurance of our highest consideration.

Yours,


Dr. Raed AL-Tabini
General Director

Letter 2) GIZ - German International Cooperation Agency (2 pages)

1

To the IUCN Representation
 Att. Mr. Fadi Shraideh, Director
 Regional Office for West Asia (IUCN-ROWA)
 Amman, Jordan

**Letter of contribution statement with respect to the
 UNEP-GEF Project HERD, developed in partnership with IUCN-ROWA**

*"GEF ID 9407: Healthy Ecosystems for Rangeland Development (HERD):
 sustainable rangeland management strategies and practices in Jordan and Egypt"*

This letter serves to inform that the *Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH* through its project "*Sustainable Use of Ecosystem Services in Jordan*" (EKF-ESS) contributes to the above-mentioned project with an estimated total amount of up to 100.000 US\$ within the period 2016-2018. EKF-ESS is thematically aligned to the HERD project regarding the overall improvement of the rangeland governance and management of the rangeland ecosystem and its ecosystem services in Jordan.

The contribution herein provided will support the achievement of several key results under the HERD project with respect to its four components, covering decision-making systems, land-use governance, on the ground practices and knowledge management. GIZ's contribution will mostly focus on Capacity Development (CD) measures like trainings and workshops, related to the introduction of the PES (Payment for Ecosystem Services) policy tool to Jordan – as indicated in the EKF-ESS commission document and implementation agreement with the Ministry of Environment of Jordan.

The EKF-ESS project aims at an increase of the capacity of environmental institutions in Jordan in development and enforcement of the national biodiversity policies and strategies to mainstream the assessment and valuation of ecosystem services in decision making processes. Achieving such a goal will contribute to strengthen the establishment of a proper national ecosystem-based information system. The collaboration with the project HERD will create conditions for scaling up this work from the rangeland management's perspective, involving government agencies, NGOs and the private sector.

The above mentioned budget, allocated for activities related to CD measures, PES legal assessment, introduction and implementation as well as the creation of a national information system on biodiversity and ecosystem services, will be managed by GIZ and represents expenditure foreseen under the mentioned *Sustainable Use of Ecosystem Services in Jordan* project, including staff time, involvement of trainers, venue expenditures etc.

2

The funds that are herein allocated for activities closely related to the HERD project, being understood by IUCN-ROWA as a co-financing contribution, will remain managed by GIZ, as per current agreements with the project funder.

No legal obligation or responsibility for GIZ EKF-ESS can be derived from this letter of information.

Please accept the assurance of our best regards,

Amman,


Dr. Michaela Baur
GIZ, Country Director


Axel Ulmer
GIZ, Head of Environment & Climate Portfolio

Letter 3) Centre for Environment and Development for the Arab Region and Europe – CEDARE

٢٠٠٥ عام صاحب السمو الشيخ زايد بن سلطان آل نهيان .. رمز العطاء .. حبيب البيئة

مركز البيئة والتنمية للإقليم العربي وأوروبا

Centre for Environment and Development for the Arab Region and Europe

To the IUCN Representation
Att. Mr. Fadi Sharideh, Director
Regional Office for West Asia (ROWA)
Amman, Jordan

**Letter of co-financing commitment with respect to
the UNEP-GEF Project HERD, developed in partnership with IUCN ROWA**

*"GEF ID 9407: Healthy Ecosystems for Rangeland Development (HERD): sustainable rangeland
management strategies and practices in Jordan and Egypt"*

Cairo, Egypt 22/3/2017

This letter serves to confirm that Centre for Environment and Development for the Arab Region & Europe (CEDARE) will contribute with co-financing of the above-mentioned project for the period 2016-2019 and for a total amount of 300,000 USD.

More specifically, the co-financing provided will contribute to the achievement of project results with respect to the following elements, which are very much aligned with the project Components (1,3, and 4):-

- Technical assistance for adaptive management and learning
- Identifying and up- scaling good practices in Sustainable Rangeland Management.
- Knowledge management to promote an enabling environment for regional scale up of sustainable rangeland management

The relative activities include:

- Support Earth Observation (EO) capacities, modelling and data exploitation.
- Provide the interface for the engagement of the complete ecosystem of EO stakeholders.
- Promote the uptake of EO services, relevant to climate change and improved food security.
- Water resources development
- Awareness raising of local communities and rangeland management.

The funds that are herein made available to the project as co-financing will remain managed by CEDARE and serves therefore as in-cash, partner-managed co-financing, given that the expenditure and investments foreseen will be current. We expect to participate actively in the Project Steering Committee and work concertedly with the project team to align our activities for maximum synergy.

With the expectation of the successful approval of the project, please accept the assurance of our best regards.



[Handwritten signature]

Nadia Makram Ebeid

Nadia Makram Ebeid

Executive Director

Letter 4) Desert Research Centre (DRC), Egypt

Ministry of Agriculture and Land Reclamation

Desert Research Center

وزارة الزراعة واستصلاح الأراضي
مركز بحوث الصحراء
رئيس المركز

To the IUCN Representation
Att. Mr. Fadi Sharideh, Director
Regional Office for West Asia (ROWA)
Amman, Jordan

**Letter of co-financing commitment with respect to
The UNEP-GEF Project HERD, developed in partnership with IUCN ROWA**

"GEF ID 9407: Healthy Ecosystems for Rangeland Development (HERD): sustainable rangeland management strategies and practices in Jordan and Egypt"

Cairo, Egypt 22-3-2017

This letter serves to confirm that the Desert Research Centre (DRC) will contribute with in-kind co-financing of above mentioned project for period 2017-2021 and for a total amount of 6.1 million Euros.

More specifically, the co-financing provided will contribute to the achievement of project results with respect to the following elements, which are very much aligned with the component:

- Technical assistance for adaptive management and learning.
- Up scaling good practices in SRM.

The relative activities include:

- Water resources management to provide water for agriculture improvement and animal and domestic uses.
- Revegetation of the landscape to combat desertification and climate change adaption and mitigation.
- Animal husbandry (sheep, goats and camels).

This amount represents expenditure including with staff time, and investments that are foreseen in the framework of our programme of activities, already identified and planned, and which will be financed during the project implementation period through the Central State Budget allocated to our institution on a regular basis in addition to the assistance of our different partners, among them:

- 1- European Union, Joint Rural Development Programme.
- 2- CIHEAM Bari.
- 3- Italian Development Cooperation.
- 4- Arab Centre for the Studies of Arid Zones and Dry Land (ACSAD).

Additionally, the DRC will avail to Project HERD access to training facilities, heavy equipment, nurseries, equipped laboratories, skilled staff, Sub-Regional Supporting Centres. This will be considered as in-kind co-financing.

With the expectation of the successful approval of the project, please accept the assurance of our best regards.

Dr Mohamed Yahia Draz

M. Y. Draz
Project coordinator

Dr Abdala K. Zaghloul

A. Zaghloul
Vice president

Dr Naim Moslehy

Naim
President of DRC



١ شارع متحف المطرية - القاهرة - جمهورية مصر العربية ت: ٢٦٣٣٢٨٤٦ / ٢٦٣٧٤٨٠٠ فاكس: ٢٦٣٧٨٥٨ (+٢٠٢) ص.ب: ١١٧٥٣ المطرية

1 Mathaf El Matariya St. P.O.B. 11753 Matariya - Cairo, Egypt. Phone: (+202) 26332846 - 26374800 Fax: (+202) 26357858

Web: drc.gov.eg

Email: drc_office@yahoo.com

info@drc.gov.eg



Ref.: 3/3/978

Date: 1/2/2017

Mr. Director of the International Union for Conservation of Nature / Regional Office for West Asia

Subject: Contribution in Financing the Regional Project "Healthy Environmental Systems for Rangelands Development"

Greetings,

In reference to the interest of the Ministry in the regional project “Healthy Environmental Systems for Developing Rangelands: Sustainable Management of Rangelands to Conserve Biodiversity and Mitigate Climate Change” funded by the Global Environment Facility (GEF) and managed by the United Nations Environment Programme (UNEP) and implemented by the International Union for Conservation of Nature (IUCN), and given that the project includes numerous activities that are similar and complementary to the projects and activities implemented by the Ministry through the Environmental Compensations Programme (Project of Rehabilitation of the Wildlife Environmental Systems in the Jordanian Desert Badia) as shown in the future action plan of the programme for the years 2017-2019 attached herewith.

Hence, this letter is to explain that the Ministry, among the activities listed within the social action plan which the Environmental Compensations Programme implements including the rehabilitation of rangelands and vegetation cover, soil protection and water harvesting, contributes more than two million US Dollars, whereby the contribution of the government of the Hashemite Kingdom of Jordan represented by the Ministry of Environment to the accomplishment of the objectives of the above mentioned project is Two Million US Dollars, taking into consideration, that the mentioned sums will remain within the Ministry's budget and the environmental compensations account in the Central Bank of Jordan, and shall be disbursed exclusively by the Ministry and the Program for the activities for which they were previously allocated in the Programme (Project of Rehabilitation of the Wildlife Environmental Systems in the Jordanian Desert Badia) and in accordance with the agreements to be signed with the entities implementing the projects of the action plan of the Environmental Compensations Programme.

We hope that final approval will be obtained and success in implementing the project will be achieved.

Please accept expressions of my deepest respect...

**/Minister of Environment
Dr. Yassin Khavyat**

Eng. Ahmad Qatarneh
Secretary General

مركز عبادة للترجمة
Ubada Center for Translation
رقم الترخيص ١٤٥٤٤٧
Licence No. 07856 - 14
Telefax 5869785



وَاللَّهُ الشَّامِتُ

٩٧٨ / ٢ / ٢

التاريخ

الموافق ٢٠١٥/١٢/١٠

المكتب الإقليمي لمنطقة غرب آسيا

تَحِيَّةٌ طَيِّبَةٌ وَبَعْدُ،

وَتَفَضَّلُوا بِقَبُولِ فَائِقِ الْإِحْتِرَامِ،،

وزير البيئة

د. ياسين الخطاط

المهندس أحمد القطار
الأمين العام

المملكة الأردنية الهاشمية

تلف: ١١٦٦ ١١٦٦ ١١٦٦ فاكس: ١١٦٦ ١١٦٦ ١١٦٦ ص.ب: ١٤٨ عمان ١١٦٦١١٦٦٦ البريد الإلكتروني: www.moenv.gov.jo

Letter 6) IUCN

IUCN
Regional Office for West Asia
Hasan Baker Al Azazi St. #20
Swellyeh - Amman - Jordan
Tel. +962 6 554 6912 /3/4
Fax. +962 6 554 6915
westasia@iucn.org
www.iucn.org/westasia

24th April, 2017
Ref: IUCN/02/AD/047/017

Amman, Jordan

Subject: Letter of co-financing commitment with respect to the UNEP-GEF Project HERD: "GEF ID 9407: Healthy Ecosystems for Rangeland Development (HERD): sustainable rangeland management strategies and practices in Jordan and Egypt".

This letter is to confirm that IUCN ROWA will contribute with co-financing of the above - mentioned project for the period 2016 - 2019, with total amount of 300,000 USD.

More specifically, the co-financing provided will contribute to the achievement of project results with respect to the following elements, which are very much aligned with the project following Components:

- **Component 1: Technical assistance for adaptive management and learning (evidence-based decision**
- **Component 2: Stronger institutions for rangeland governance**
- **Component 4: Knowledge management to promote an enabling environment for regional scale-up of Sustainable Rangeland Management**

The relative IUCN ROWA projects/activities include:

- **Strengthening the communal management of rangeland around the Ostorankuh protected area to improve the resilience of the community and the nature:**
 - Baseline assessment conducted in partnership with CSOs and other stakeholders.
 - Organizational capacity assessment of CSOs.
 - Training of primary CSO and government partners in sustainable rangelands.
 - Management and Community Drought Management Planning.
- **The MENA Region Initiative as a Model of NEXUS Approach and Renewable Energy Technologies (MINARET):**
 - Communication and networking at local and regional levels.
 - Establish regional learning online platform for policy dialogue involving the main project partners and beneficiaries to discuss project outcomes and debate issues concerning sustainable development in the MENA region.



IUCN
Regional Office for West Asia
Hasan Baker Al Azazi St. #20
Sweifiyeh - Amman - Jordan
Tel. +962 6 554 6912 /3/4
Fax. +962 6 554 6915
westasia@iucn.org
www.iucn.org/westasia

More specifically, the co-financing provided will help to achieve the project expectations which are very much aligned with IUCN ROWA projects, the funds that are herein made available to the project as co-financing will remain managed by IUCN ROWA, therefore as in-cash partner-managed co-financing, given to the expenditure and investments foreseen will be current. IUCN ROWA expects to participate actively in this project and work concertedly with the project team to align our activities for maximum synergy.

With the expectation of the successful approval of the project, please accept our appreciation for all your support and cooperation.

Best regards,

A handwritten signature in blue ink, appearing to read 'Fadi Shraideh', written over a faint circular stamp.

Fadi Shraideh,

Regional Director



Appendix 13: Endorsement letters of GEF National Focal Points

Arab Republic of Egypt
Cabinet of Ministers
Ministry of State for Environmental Affairs
Egyptian Environmental Affairs Agency

جمهورية مصر العربية
رئاسة مجلس الوزراء
وزارة الدولة لشئون البيئة
جهاز شئون البيئة
October, 2015

To : Brennan VanDyke
Director, UNEP/GEF Coordination

Subject: Endorsement for Healthy Ecosystems for Rangeland Development (HERD) project

In my capacity as GEF Operational Focal Point for Egypt, I confirm that the above project proposal (a) is in accordance with my government's national priorities and our commitment to the relevant global environmental convention focal points.

I am pleased to endorse the preparation of the above project proposal with the support of the GEF Agency(ies) listed below. If approved, the proposal will be prepared and implemented by UNEP and IUCN office in Amman in close collaboration with the Deseret Research Center, as the Executing Agency. I request the GEF Agency(ies) to provide a copy of the project document before it is submitted to the GEF Secretariat for CEO endorsement.

The total financing from GEFTF being requested for this project is US\$ 1,500,000 inclusive of project preparation grant (PPG), if any, and Agency fees for project cycle management services associated with the total GEF grant. The financing requested for Egypt detailed in the table below:

Source of Funds	GEF Agency	Focal Area	Amount (in US \$)			
			Project preparation	Project	Fee	Total
GEFTF	UNEP	LD	50,000	1,319,864	130,136	1,500,000
Total GEF Resources			50,000	1,319,864	130,136	1,500,000

[WHERE THE SOURCE OF FUNDING IS GEF TRUST FUND ONLY (I.E. EXCLUDING LDCF AND/OR SCCF) AND THE FOCAL AREA FALLS UNDER THE STAR MODEL, INCLUDE THE FOLLOWING:]

I consent to the utilization Egypt's allocations in GEF-6 as defined in the System for Transparent Allocation of Resources (STAR).

Sincerely,

Ahmed A. Elseoud
Eng. Ahmed Abou ELseoud
GEF Operational Focal Point

Copy to: UNCCD Focal Point

4/10/2015

٢٠ طريق حلوان الزراعى - خلف فندق سوفيتل المعادى - القاهرة الرقم البريدى ١١٧٢٨ ت ٢٥٢٥٦٤٥٢ فاكس : ٢٥٢٥٦٤٩٠

30.Misr Helwan El - Zyrae Rd., Maadi - Cairo.

P.O. 11728

Tel. : 25256452 - Fax : 25256490

hkb



MINISTRY OF PLANNING AND INTERNATIONAL COOPERATION

Ref. No... **12/3/3/6056** ...Date ... **30/06/2015** ...

Ms. Brennan VanDyke,
UNEP-GEF Executive Coordinator and Director
United Nations Environment Programme
P.O.Box 30552 Nairobi, Kenya
Email: Brennan.VanDyke@unep.org
Fax: +254 20 762 4041-42

Subject: Endorsement for Healthy Ecosystems for Rangeland Development (HERD) Project

In my capacity as GEF Operational Focal Point for Jordan, I confirm that the above project proposal (a) is in accordance with my government's national priorities, revised National Action Plan to Combat desertification 2015 and the commitments made by the government under the relevant global environmental conventions; and (b) was discussed with relevant stakeholders, including the global environmental convention focal points

Accordingly, I am pleased to endorse the preparation of the above project proposal with the support of the GEF Agency listed below. If approved, the proposal will be prepared and implemented by IUCN Office in Amman in close collaboration with the Ministry of Environment, as the Executing Agency. I request the GEF Agency (UNEP) to provide a copy of the project document before it is submitted to the GEF Secretariat for CEO endorsement.

The total financing (from GEFTF, LDCF, or SCCF) being requested for this project is **US\$ 1,500,000**, inclusive of project preparation grant (PPG), if any, and Agency fees for project cycle management services associated with the total GEF grant. The financing requested for Jordan is detailed in the table below.

Source of Funds	GEF Agency	Focal Area	Amount (in US\$)			
			Project Preparation	Project	Fee	Total
GEFTF	UNEP	LD	50,000	1,319,864	130,136	1,500,000
Total GEF Resources			50,000	1,319,864	130,136	1,500,000

I consent to the utilization of Jordan's allocations in GEF-6 as defined in the System for Transparent Allocation of Resources (STAR).

Sincerely,

Saleh Al-Kharabsheh
Secretary General
GEF OFP
Ministry of Planning and
International Cooperation

cc\Convention Focal Point for UNFCCC

Appendix 14: Draft procurement plan

UNEP Budget Line		List of Goods and Services required	Budget (\$)	Year [Note 1]	Brief description of anticipated procurement process [Note 2]
1200	Consultants				
1201	National Consultants	Two consultants (one Egypt, one Jordan) to conduct detailed studies of target landscapes,	42,000	Year 1, quarter 2	TORs will be developed for the consultancy. Advertisement will be done through national platforms. 10 candidates will be shortlisted from the long list of applicants. From this, the three best will be taken through another round of interviews where one candidate will be selected.
1202		Two consultants (one Egypt, one Jordan) to conduct a desk review and consultative workshops to examine policies to achieve LDN.	42,000	Year 1, quarter 4	TORs will be developed for the international consultancy. Advertisement will be done through national platforms. 10 candidates will be shortlisted from the long list of applicants. From this, the three best will be taken through another round of interviews where one candidate will be selected.
1203		Two consultants to conduct an economic valuation study and mapping of restoration opportunities combined with local and national consultative workshops in Egypt and Jordan	40,000	Year 3, quarter 3	TORs will be developed for the consultancy. Advertisement will be done through national platforms. 10 candidates will be shortlisted from the long list of applicants. From this, the three best will be taken through another round of interviews where one candidate will be selected.
1204		Two consultants to conduct a study on local agreements on and use systems in Egypt and Jordan.	44,000	Year 2, quarter 4	TORs will be developed for the consultancy. Advertisement will be done through national platforms. 10 candidates will be shortlisted from the long list of applicants. From this, the three best will be taken through another round of interviews where one candidate will be selected.
1205	International Consultants	Public communication and media analysis on SRM and rangeland ecosystem services	30,000	Year 2, First Quarter	TORs will be developed for the consultancy. Advertisement will be done through national platforms. 10 candidates will be shortlisted from the long list of applicants. From this, the three best will be taken through another round of interviews where one candidate will be selected.

UNEP Budget Line		List of Goods and Services required	Budget (\$)	Year [Note 1]	Brief description of anticipated procurement process [Note 2]
1206		One consultant to compile and publish validated good practices in the restoration and protection of communal rangelands in the Arab region and globally.	20,000	Year 1, quarter 4 to year 3, quarter 1	TORs will be developed for the consultancy. Advertisement will be done through international platforms and IUCN networks. 10 candidates will be shortlisted from the long list of applicants. From this, the three best will be taken through another round of interviews where one candidate will be selected.
1207		One consultant to review the regional and global policies in support of SRM (especially LDN), their value-addition to national policies, and opportunities for leveraging further funds for regional SRM initiatives	15,000	Year 1, quarter 4.	TORs will be developed for the consultancy. Advertisement will be done through international platforms and IUCN networks. 10 candidates will be shortlisted from the long list of applicants. From this, the three best will be taken through another round of interviews where one candidate will be selected.
1208		One consultant to conduct a regional situation analysis of the LAS rangelands including an overview of the state of rangeland health and estimated cost benefit of restoration and protection	15,000	Year 2, quarter 2	TORs will be developed for the consultancy. Advertisement will be done through the LAR regional platforms. 10 candidates will be shortlisted from the long list of applicants. From this, the three best will be taken through another round of interviews where one candidate will be selected.
1209		One consultant to conduct five baseline studies and stakeholder consultations for target initiatives (e.g. rangeland health, state of pastoral rights, existence of good practices, key actors etc.)	50,000	Year 2	TORs will be developed for the consultancy. Advertisement will be done through international platforms and IUCN networks. 10 candidates will be shortlisted from the long list of applicants. From this, the three best will be taken through another round of interviews where one candidate will be selected.
2200	Sub-contracts (MOUs/LOAs for supporting organizations)				
2201	Grants to national partners	Implementation of PRAGA methodology	200,000	Year 1, quarter 2 and 3	National partners identified in the project document will be issued with an implementing partner agreement.

UNEP Budget Line		List of Goods and Services required	Budget (\$)	Year [Note 1]	Brief description of anticipated procurement process [Note 2]
2202	Grants to national partners	Create a database where data on LD can be stored.	20,000	Year 1, quarter 4 and year 2, quarter 1	One national partner per country identified in the project document will be issued with an implementing partner agreement
2203	Grants to national partners	Implementation and restoration of actions identified through PRMPs and approved by the steering committee	500,000	Year 1, quarter 3 and 4	National partners identified in the project document will be issued with an implementing partner agreement
2204	Grants to national partners	Implementation of supporting activities identified through the PRMPs and approved by the steering committee	300,000	Year 1, quarter 3 and 4	National partners identified in the project document will be issued with an implementing partner agreement
2205	Small grants to 5 partners in global/regional scale up	Rapid national scoping of rangeland restoration opportunities and stakeholders.	20,000	During years 1, 2 and 3	National partners to be identified through networks and dialogue under the project implementation.
4200	Non-expendable equipment				
4201	Equipment for country offices and the coordination unit	Laptops and IT/communications hardware	20,452		Prepare purchase requisition. Depending on the amount, if its more than 2500, three quotations are requested and competitive bidding done. An LPO is then raised and equipment is supplied.
4202					
	GRAND TOTAL		1,358,452		

Note 1 - Year when goods/services will be procured.

Note 2 - Based on IUCN's procurement procedures, and in compliance with UNEP rules and procedures, this column briefly explains how the service provider/consultant/vendor will be selected.

Appendix 15: Tracking Tools

Completed in Excel as separate files:

Appendix 16: Social and Environmental Safeguards

UNEP/GEF ENVIRONMENTAL AND SOCIAL SAFEGUARDS CHECKLIST

Project Title:	Healthy Ecosystems for Rangeland Development (HERD): sustainable rangeland management strategies and practices		
GEF project ID and UNEP ID/IMIS Number		Version of checklist	
Project status (preparation, implementation, MTE/MTR, TE)	Preparation	Date of this version:	
Checklist prepared by (Name, Title, and Institution)	The International Union for Conservation of Nature - IUCN		

In completing the checklist both short- and long-term impact shall be considered.

Section A: Project location

If negative impact is identified or anticipated the Comment/Explanation field needs to include: Project stage for addressing the issue; Responsibility for addressing the issue; Budget implications, and other comments.

	Yes/No/N.A.	Comment/explanation
- Is the project area in or close to -		
- densely populated area	No	
- cultural heritage site		
- protected area		
- wetland		
- mangrove		
- estuarine		
- buffer zone of protected area		
- special area for protection of biodiversity		
- Will project require temporary or permanent support facilities?	No	
<i>If the project is anticipated to impact any of the above areas an Environmental Survey will be needed to determine if the project is in conflict with the protection of the area or if it will cause significant disturbance to the area.</i>		

Section B: Environmental impacts

If negative impact is identified or anticipated the Comment/Explanation field needs to include: Project stage for addressing the issue; Responsibility for addressing the issue; Budget implications, and other comments.

	<i>Yes/No/N.A.</i>	<i>Comment/explanation</i>
- Are ecosystems related to project fragile or degraded?	Yes	They are mostly degraded ecosystems.
- Will project cause any loss of precious ecology, ecological, and economic functions due to construction of infrastructure?	No	
- Will project cause impairment of ecological opportunities?	No	
- Will project cause increase in peak and flood flows? (including from temporary or permanent waste waters)	NA	
- Will project cause air, soil or water pollution?	No	
- Will project cause soil erosion and siltation?	No	
- Will project cause increased waste production?	NA	
- Will project cause Hazardous Waste production?	NA	
- Will project cause threat to local ecosystems due to invasive species?	No	
- Will project cause Greenhouse Gas Emissions?	NA	
- Other environmental issues, e.g. noise and traffic	NA	
<i>Only if it can be carefully justified that any negative impact from the project can be avoided or mitigated satisfactorily both in the short and long-term, can the project go ahead.</i>		

Section C: Social impacts

If negative impact is identified or anticipated the Comment/Explanation field needs to include: Project stage for addressing the issue; Responsibility for addressing the issue; Budget implications, and other comments.

	<i>Yes/No/N.A.</i>	<i>Comment/explanation</i>
- Does the project respect internationally proclaimed human rights including dignity, cultural property and uniqueness and rights of indigenous people?	NA	
- Are property rights on resources such as land tenure recognized by the existing laws in affected countries?	Yes	
- Will the project cause social problems and conflicts related to land tenure and access to resources?	No	
- Does the project incorporate measures to allow affected stakeholders' information and consultation?	Yes	The project follows a participatory approach, which is based on a thorough stakeholder analysis. Through the consultations and participation stakeholders will be fully informed of the project and will take a lead role in defining specific actions
- Will the project affect the state of the targeted country's (-ies') institutional context?	No	
- Will the project cause change to beneficial uses of land or resources? (incl. loss of downstream beneficial uses (water supply or fisheries)?	No	The project will however adopt a precautionary principle to ensure that any negative impacts that might arise downstream or

	Yes/No/N.A.	Comment/explanation
		upstream are avoided.
- Will the project cause technology or land use modification that may change present social and economic activities?	No	
- Will the project cause dislocation or involuntary resettlement of people?	No	
- Will the project cause uncontrolled in-migration (short- and long-term) with opening of roads to areas and possible overloading of social infrastructure?	No	
- Will the project cause increased local or regional unemployment?	No	
- Does the project include measures to avoid forced or child labour?	NA	
- Does the project include measures to ensure a safe and healthy working environment for workers employed as part of the project?	NA	
- Will the project cause impairment of recreational opportunities?	No	
- Will the project cause impairment of indigenous people's livelihoods or belief systems?	No	
- Will the project cause disproportionate impact to women or other disadvantaged or vulnerable groups?	No	
- Will the project involve and or be complicit in the alteration, damage or removal of any critical cultural heritage?	No	
- Does the project include measures to avoid corruption?	NA	
<i>Only if it can be carefully justified that any negative impact from the project can be avoided or mitigated satisfactorily both in the short and long-term, can the project go ahead.</i>		

Section D: Other considerations

If negative impact is identified or anticipated the Comment/Explanation field needs to include: Project stage for addressing the issue; Responsibility for addressing the issue; Budget implications, and other comments.

	Yes/No/N.A.	Comment/explanation
- Does national regulation in affected country (-ies) require EIA and/or ESIA for this type of activity?	No	
- Is there national capacity to ensure a sound implementation of EIA and/or SIA requirements present in affected country (-ies)?	NA	
- Is the project addressing issues, which are already addressed by other alternative approaches and projects?	Yes	The project is explicitly designed to build on and scale up experiences in restoring Hima in Jordan, implemented by IUCN and its partners.
- Will the project components generate or contribute to cumulative or long-term environmental or social impacts?	Yes	Positive impacts in SRM. The project will also adopt a pre cautionary principle to ensure negative environmental impacts are avoided in case they arise.
- Is it possible to isolate the impact from this project to monitor E&S impact?	No.	

Appendix 17: Maps

[Refer to separate file]

Overview of Content

Map 1. The world's rangelands according to the Society for Range Management

Map 2. The world's drylands according to the 2005 MEA

Map 3. Rainfall distribution over Jordan

Map 4. Rainfall distribution over Egypt

Appendix 18: Additional Context and Background

Overview of Content

[Next pages:]

- 1) The HERD Concept and Hima
- 2) The economics of rangeland degradation in Jordan and Egypt
- 3) Baseline Finance Details

[Separate files:]

Appendix 19: Country Report – Jordan (separate file - 97 pages)

- I. Introduction*
- II. National Policies Frameworks*
- III. Relevant graphs, Tables and Statistics*
- IV. Project Sites in Jordan*
- V. PPG Report – Final Report for Jordan*

Appendix 20: Country Report – Egypt (separate file - 84 pages)

- I. Introduction*
- II. National Policies Frameworks*
- III. Relevant graphs, Tables and Statistics*
- IV. Project Sites in Egypt*
- V. PPG Report 2 – Final Country Report for Egypt*

Additional Context and Background

1) The HERD Concept and Hima

HERD stands for Healthy Ecosystems for Rangeland Development. Rangeland health is linked to the persistence of ecosystem function and, in general terms, healthy rangelands are those where their ecosystem services continue to produce the optimal range of benefits to society. However, it is recognized that different parties may value ecosystem services differently and the optimal use of rangelands is something that needs ongoing negotiation. For this reason, governance is at the heart of this initiative.

HERD was conceived as a global initiative through the World Initiative for Sustainable Pastoralism (WISP), which was funded by GEF from 2005 to 2009. This IUCN and UNEP project is intended to be first of a program of interventions (or projects) that revolve around the concept of HERD. Other follow-on ‘HERD projects and initiatives’ are yet to be developed and funded and will benefit from the framework of principles and good practices that will be established by this project.

Besides having a different geographical focus than the current one, other HERD projects may also address rangelands issues from a different angle: e.g. from a climate change adaptation and/or mitigation entry point, from a protected areas’ perspective, or by addressing the issue of equitable access to funding mechanisms for pastoral livelihoods that adhere to HERD. The current GEF project is expected to provide leverage to follow-on and related HERD initiatives still being developed.

In addition to focusing on rangeland issues in Jordan and Egypt, the current project will also help bring the HERD Concept to scale with the aim facilitating solutions that may apply to other rangelands located in dryland areas. Other focus countries or regions that could benefit from an expanded HERD program could include e.g. other MENA countries, countries in East Africa, in the Horn of Africa and in Western Africa, where pastoral societies are relevant and numerous. It could equally include regions such as the Pampas, the Chacos and Northeast Brazil in South America, or the Central Asian Steppes, to name a few. In order to achieve the envisaged leverage and the global scale, the current project has both a country-level entry point, with Jordan and Egypt as beneficiary countries, and a regional / global entry point.

In MENA countries, where both forests and arable lands are scarce, rangelands have an important role to play in food productions and local livelihoods. Managing rangelands sustainably is therefore about striking an optimal balance between food production, both in rangelands and other areas, and the protection of intertwined ecosystem services that sustains both.

On the one hand, new scientific evidence on the management of rangelands has not yet effectively pervaded the development mainstream. On the other, due to the history of pastoralism in the MENA region, combined with the comparative capacity of its countries as emerging economies, the region could play a significant role in championing the “new paradigm” in sustainable pastoralist development.

Box 6. The Hima approach as an entry point for Sustainable Rangeland Management

Al-Hima is considered the most widespread and longstanding indigenous / traditional 'conservation institution' in the Middle East. Hima is defined as: 'a traditional system of resource tenure' that has been purportedly practiced for more than 1400 years in the Arabian Peninsula. It predates Islam and Hima is thought to have been utilitarianly strengthened by the introduction of Islam in the Arabian Peninsula. In Islamic law, **Hima means a natural area that is set aside** permanently or seasonally for the public good, which may not be privately owned.



The Arabic word "Hima" literally means "a protected place" or "protected area." In pre-Islamic times, access to a 'hima place' was declared forbidden and this was enforced by the individual or group who owned or controlled it. Later its meaning evolved to signify a rangeland reserve, a piece of land set aside seasonally to allow regeneration. Under this project, Hima is considered is a useful approach to SRM, but not the only one.

For local pastoral communities, Hima became with time a "way of life" that was passed on from generation to generation and was thereafter practiced spontaneously and almost unconsciously. Historically, Hima allowed the nomadic pastoralist groups in the region to survive for centuries and cater for the land, even though they remained deprived from the comforts of modern life and technology.

History. For more than fourteen hundred years, communities that adhere to Hima as a set of rules for land use governance have helped conserve natural resources and biodiversity in the Arabian Peninsula and adjacent areas. Himas have secured the sustainable use of renewable natural resources by and for the people living adjacent to them. Thus, Hima has been one of the most successful institutions integrating nature conservation with human well-being.

As a 'protected area', an 'easement' or a 'land set-aside', which takes different forms and strengths of hima practices in different countries, a Hima site may be established for any purpose that pertains to the common good, so it could be managed for either conservation of biodiversity or sustainable use of natural resources.

Governance. In practice, traditional Himas have achieved both aims. In contrast with governmental Himas, traditional Himas were governed according to customary management practices. Most of the rangeland under Hima were managed by and for a particular village, clan or tribe. Local communities, whether tribal or not, governed land use through consensus rather than prescribed legislative or institutional control. They had well-established hierarchal governance systems led by local leaders (e.g. Sheikhs), which ensured representation of kin-groups through commissions, committees and councils.

With respect to rangeland management, MENA countries abound with examples of how the Hima, as an institution, or Himas as a conservation oriented land-use, have ensured the proper management of rangelands, to the extent that different stakeholder groups generally abide by well-defined duties and responsibilities for conserving rainwater runoff and managing grazing to avoid land degradation, etc.

This paradigm is built on new understanding of dryland climate, in particular its extreme variability and uncertainty, and new insights into rangeland ecology, including the interdependence between grasses and grazers in many grassland ecological communities.

This new understanding will be consolidated by the project through the strengthening of the **HERD Concept**, which builds on the many good practices that have been identified through WISP and others. This includes principles that have been developed through close examination of pastoral contexts worldwide and which underline the common rationale behind pastoralism as well as common foundations on which sustainable pastoralism can be built. An important common practice is support for **effective governance for Sustainable Rangeland Management (SRM)**, including governance of the commons. HERD is envisaged ultimately as a framework of common principles that enable rangeland restoration and sustainable management, enhancing land productivity, while also promoting people's resilience in the face of climatic variability.

2) *The economics of rangeland degradation in Jordan and Egypt*

It is estimated that livestock ownership supports and sustains the livelihoods of some 1 billion poor people worldwide, providing them with a steady stream of food and income.⁵⁹ Most importantly, for the context of this project, rearing livestock is often the only livelihood option available to the landless, as they allow the exploitation of common property resources for private gain, as well as to people living in marginal lands with limited possibility of cultivating arable land. Quoting FAO's dedicated page on Livestock and Environment:

*"Growing populations, rising affluence and urbanization are translating into increased demand for livestock products, particularly in developing countries. Global demand is projected to increase by 70 percent to feed a population estimated to reach 9.6 billion by 2050. Much of the growth in demand is being supplied through rapidly expanding modern forms of intensive livestock production, but traditional systems continue to exist in parallel."*⁶⁰

Globally, land degradation affects almost 30% of the world's land surface and generates costs estimated at around \$300 billion.⁶¹ By adding this figure to the global costs of deforestation, the sum reaches almost 3.4 trillion USD, which represented 7.5 % of the global GDP in 2008.⁶² These costs differ according to land cover type and land use. In order to be specific about the economics of rangeland degradation, it is important to understand the degradation process and what it would take to reverse it.

Land degradation in drylands is particularly severe, as it results in the decline in soil fertility and biomass. In areas under crop cultivation, salinization due to excessive use of irrigation is an issue. In rangelands, overgrazing is a key factor. In addition, rangelands are being lost in terms of quantity, mainly due to land conversion to croplands and other uses.⁶³ In general, land degradation also results in biodiversity loss through declines in species' variety, habitat shrinking and an overall decreased biomass availability.

In the case of rangelands, all of these bio-physical processes have an implication for the productivity of pastoral systems and result in loss of assets for land users, regardless of whether these systems are part of the monetary economy or not. Hence, this can also be translated into costs.

Yet, measuring the costs of land degradation is not simple, mainly because of the tendency to under-estimate the value of the ecosystem services that sustainably managed lands provide. And although some these services are recognized as important for economic activities that depend on the land, many of them do not have an immediate market value.

For example, soil retention, micro-nutrient availability and reduced surface runoff are all very important for agro-pastoral activities, but for various reasons the declining trends in these parameters are not reflected in standard cost-benefit analysis through direct correspondence. It is also especially difficult to input into such calculations the opportunity cost of not restoring the land. Hence, the costs of losing these ecosystem services, although tangible and measurable in terms of land productivity (or livestock productivity for that matter), are actually difficult to estimate. Furthermore, assessing the trends for some of the key indicators of land degradation for specific sites can be quite costly.

⁵⁹ FAO's role in livestock and the environment (www.fao.org/livestock-environment/en/), retrieved on 18 Dec 2016.

⁶⁰ *Ibid.*

⁶¹ Nkonya et al.(ed.), 2015

⁶² Davies et al., 2015

⁶³ Nkonya et al (ed.), 2016

Also, land degradation has a disproportionate negative impact on the livelihoods of the poor, forcing millions of people to move from the degraded regions.⁶⁴ Poor people may choose to migrate because they can hardly afford the costs of restoring land, or because they have precarious tenure over this land. Regardless, land degradation and its consequences incurs costs to society (e.g. migration overburdens social support services), besides causing immediate financial loss to those whose lands face a degradation process. Land degradation is therefore closely connected to poverty and it feeds back into the process of social destitution.

Land degradation also affects national economies, to the extent that rural poverty and food insecurity slows down the development of countries. More than 50% of the costs of land degradation is caused by losses in regulating and supporting ecosystem services, such as carbon sequestration, or through disruptions in the water cycle at the level of landscapes. All of this affects the global community that ultimately bears a large portion of the costs of land degradation. Locally, the share of land degradation costs may be much smaller, but likely high enough for the rural poor to trigger migration. As the world is expected to become a more populous place, and as the value of land is expected to increase, land degradation and its costs will increase, unless action against it is undertaken.

On the plus side, a recent study titled *‘Economics of land degradation and improvement - A global assessment for sustainable development’* (Nkonya et al. (ed.), 2016) had shown that it pays off to both invest in restoring land and in avoiding its degradation through consistent and sustainable management. One conclusion from the study is that the returns from one dollar invested in action against land degradation can reach up to six dollars in return on investment over a 30-years period. This is thus justified in the study:

“The opportunity costs of taking action are main drivers that contribute to inaction in many countries. Strategies should be developed that give incentives to better manage lands and reward those who practice sustainable land management. The payment for ecosystem services (PES) mechanisms that saw large investments in carbon markets should be given a new impetus to address the loss of ecosystem services through land use/cover change (LUCC) which accounts for the largest cost of land degradation. Allowing land users to internalize some of the positive externalities created by sustainable land management through PES schemes may be key to achieving a “land degradation neutral” world.”⁶⁵

A specific chapter under the mentioned study, which focuses on global estimates of the impacts of grassland degradation on livestock productivity, calculates average costs estimates for lands under pastoral systems. For example, the annual average cost of decreased milk and meat productivity due to the loss of 1 ton of grazing biomass would be \$214 at the global level, but \$304 in the Near East and North Africa region, even though only grazing biomass was considered in the costing model – and not other sources of dry matter consumption, which are commonly used as supplementary feed in these countries.⁶⁶ Globally, this could amount to \$7 billion every year.⁶⁷

Although the above cost represents only a limited fraction of the overall cost of land degradation, three aspects are relevant for the HERD project with respect to the question of whether it would make economic sense to restore rangelands:

⁶⁴ One provides evidence: “About 42% of the poor around the world depend on degraded and marginal areas for their livelihood, compared with 32% of the moderately poor and 15% of the non-poor.” - Von Braun, J., et al. (2013).

⁶⁵ Nkonya, Ephraim, (ed.); Mirzabaev, Alisher, ed.; and von Braun, Joachim, ed. 2016. Economics of land degradation and improvement- A global assessment for sustainable development. Cham, Switzerland: Springer International Publishing.

⁶⁶ Kwon et al (2016) In Nkonya et al. (ed.), 2016: Chapter 8. Global Estimates of the Impacts of Grassland Degradation on Livestock Productivity from 2001 to 2011.

⁶⁷ Nkonya et al. (ed.), 2016.

- (1) For the individual livestock owner, say in Jordan and Egypt, the costs land degradation in their grazing grounds are very high, if they are to absorb these costs in full, including because pastoral systems are comparatively less productive in Near East and North Africa than in other regions;
- (2) The cost of supplementary feed is also very high, and even if it is subsidized (i.e. the costs are spread across the entire society), which begs the question of whether the subsidy would not be better invested in restoring the rangelands, so they can provide a more constant flow of grazing biomass; and
- (3) Since grazing grounds are often communal areas, it makes sense to share the costs of restoring the ranges through a common effort.

The analysis of benefits from rangeland restoration are in fact instructive. An example come from the Zarqa River Basin in Jordan, where IUCN, in partnership with GIZ, has been working on a PES project with focus on the application of Hima, as a land use governance system, to restore rangelands since 2010. The results point out to a benefit-cost ratio of 1.7 (at a discount rate of 8% and over a 25-year horizon), if pastoral communities in the Zarqa River Basin would have to bear the management costs of implementing the restoration scheme. In turn, benefit-cost ratio to both the Jordanian society and the global society would reach 18.3 – making the investment very worthwhile. The break-down is show in Annex Table 2 :

Annex Table 2. Making the economic case for rangeland restoration in Jordan through evidence

Present value benefits and costs associated with large-scale Hima restoration over a 25-year time horizon		r = 8%
Present value benefits of large-scale Hima restoration in million JOD		
Welfare economic value of natural forage		14.2
- Of which the present value benefit of avoided forage purchase is		11.2
Present value of additional groundwater infiltration		132.7
Present value benefit of avoided reservoir sedimentation		5.3
Present value benefits to the Jordanian society and to the global society (*)		152.2
Present value costs of large-scale Hima restoration to the Jordanian society in million JOD		
Present value implementation costs		0.8
Present value management costs (upper bound)		7.5
Total present value costs		8.3
Net present value of large-scale Hima restoration in million JOD		
To pastoral communities in the Zarqa River Basin if they bear the management costs		6.7
Benefit cost ratio		1.7
To the Jordanian society and the global society		143.9
Benefit cost ratio		18.3

Note: Carbon sequestration not considered. Source: Westerberg & Myint, 2014, adapted.

If it pays off to restore rangelands, the matter would then be: (i) **how to avert investment risks**, and (ii) **how to distribute the costs, benefits and responsibilities** among the global community, national governments and individual land users and managers. More importantly, the restoration of rangeland is done through consistent management – sustainable management. And management of rangelands can also be highly effective approach to preventing degradation.

Rehabilitating rangelands and stopping their further degradation could potentially lead to win-win outcomes in terms of social and environmental benefits, especially in a long-term horizon. There is evidence, not just from Zarqua Basin, but also from several other parts of the world, that the cost of actions against land degradation being much lower than the cost of inaction.⁶⁸

⁶⁸ See e.g. Nkonya et al. (ed.), 2016.

Furthermore, in a scale of six years (time frame of this project), every dollar invested in land rehabilitation is expected return at least two dollars as a global average. Yet, the benefits from consistent investment into sustainable land management would exceed the costs multiple times during a 30-year horizon and under ideal investment conditions.⁶⁹ Unfortunately, pastoral people are forced to act with a shorter-term horizon in mind, due to the poverty and lack of resources, which is currently contributing to the degradation of the rangelands.

In Jordan, the economics of rangeland degradation and land tenure pose particular challenges, in spite of the Zarqua Basin example. At present, the rangelands of Jordan cannot provide animal feed for more than 3 month during the good rainy seasons, and less than one month or none during the drought years. In addition, vast rangeland areas (about 1 million ha), known as claimed tribal lands, have been allocated to private owners without proper plans for their restoration, development and management. This facilitated promotion of real-estate business in the rangeland areas and use of large areas for non-agricultural purposes. Furthermore, the issue of feed subsidies poses an added challenge. Addressing the issue with sound economic analysis is needed.

In Egypt, the concept of rangelands, their actual extent within the country and the interplay with crop production systems, which are historically and presently most successful around the Nile Valley, are still to take hold within government and among the national scientific community. The authorities in the Governorate of Matrouh are however interested in exploring the challenge and potential benefits of SRM; they are willing to help local herders with it, including through public investment under the HERD Project.

⁶⁹ *Ibid.*

3) Baseline Finance Details

Annex Table 3. Full list of Baseline Finance Interventions and relevance rationale

Country / Scope	Title of the Intervention (project, program initiative)	Duration from / to (years)	Responsible institution	Funding source	Total estimated amount of intervention in millions of USD	Amount considered for baseline calculus - Millions of USD	Objective, key focus, relevant description	Relevance to HERD project Objective	Relevance to HERD Components	Link
Jordan	WB Project MSME Development Project for Inclusive Growth, Jordan	2013 to 2020	Hashemite Kingdom of Jordan, Central Government	IBRD/IDA	70.0	3.5	The project development objective of the Micro, Small, and Medium Enterprise (MSME) Development For Inclusive Growth Project for Jordan is to contribute to the improvement of access to finance for micro, small and medium enterprises in the Hashemite Kingdom of Jordan. This objective will remain the same under the additional financing (AF).	Marginal, only to the extent that it provides credit to land users, but seems unlikely. Considering a 10% relevance, to the extent that it creates jobs in cities and reduces pastoral pressure.	2, 3	1
Jordan	WB Water Sector Reform DPL, Jordan	pipeline	Ministry of Planning and International Cooperation (MOPIC)	multiple	250.0	25.0	The objective of the proposed operation is to improve the financial viability of and increase efficiency gains in the energy and water sectors. The project will facilitate local access to water resources, including with the necessary environmental safeguards. Indirectly, it could contribute to reducing pastoral pressure on drylands. The project will facilitate local access to water resources, including with the necessary environmental safeguards. Indirectly, it could contribute to reducing possibly pastoral pressure on drylands.	The program is large, it is in the pipeline and it deals with IWRM across the country more broadly. This has relevance for the subject matter of the HERD project, but more peripherally. An indicative amount of \$25M was considered.	1, 3	2
Global	FAO Led Pastoralist Knowledge Hub - network initiative, Global	On-going since April 2015	FAO and partners	Likely \$300K per year	1.8	1.8	The Pastoralist Knowledge Hub – launched in April 2015 by FAO, the European Union, Germany and other partners – enables mobile livestock keepers to connect, to meet and discuss issues like agricultural innovations or land regulations and find shared solutions to common challenges. The hub brings together partner institutions including the African Union, the European Union, the International Fund for Agricultural Development, the International Union for Conservation of Nature, the United Nations Environment Program, the World Bank and non-governmental organizations as well as pastoralist civil society groups.	Highly relevant for the objective of HERD. Synergies and collaboration are being developed at the global level.	1, 2	3
Global	IUCN The World Initiative for Sustainable Pastoralism (WISP), Global	On-going since 2004	IUCN	Likely \$100K per year	0.6	0.6	The WISP is a network initiative spearheaded by IUCN and with a very prolific production of publications, workshops, events and other ramifications and results. Initially, it received GEF funding through UNDP, but only the post-GEF finance, funded by other partners, is considered as baseline for HERD Project. IUCN has been maintaining the initiative lively since then. Project HERD will integrate its workplans with those of the WISP.	Highly relevant for the objective of HERD. An amount of \$600K is considered as baseline finance.	1, 3	4

Country / Scope	Title of the Intervention (project, program initiative)	Duration from / to (years)	Responsible institution	Funding source	Total estimated amount of intervention in millions of USD	Amount considered for baseline calculus - Millions of USD	Objective, key focus, relevant description	Relevance to HERD project Objective	Relevance to HERD Components	Link
Regional	WANA Institute's Program of Work, Regional	The II Forum was in Oct 2016; other projects ongoing.	WANA Institute (Jordan based NGO with regional outreach)	Various	0.15	0.15	This includes the organization of the HIMA Forum, plus other events, projects and initiatives. WANA Institute stands for 'The West Asia - North Africa (WANA) Institute. It is a non-profit policy think tank based in Amman, Jordan. It has been responsible for organizing the second HIMA Forum and it is expected to organize the third in the next few years, tailored to promote advocacy and discuss the importance of HIMA and other rangeland management systems in the WANA countries. This includes issues of sustainability, gender, social inclusion etc. The HIMA Forum focuses on integrating Islamic and community-driven natural resource management systems for environmental sustainability, conflict resolution and resilience.	Relevant for the HERD project. Amounts are indicative.	1, 4	5
Jordan	RBG CBRR: Community-based Rangeland Rehabilitation Program of the Royal Botanic Garden (RBG) / Royal Society for Conservation of Nature (RSCN) - Jordan	Ongoing	RBG / RSCN, Jordan	Government, Danida, among others	3.0	0.6	The CBRR is funded by Danida and includes site level work on rangeland rehabilitation, community engagement, biomass surveys, analysis of grazing behavior, forage resources and studies on flock management and health, in addition to economic studies and the promotion of local knowledge. The project is very much aligned with HERD objectives. The RBG program includes initiatives related to HERD, among them the Habitat Re-creation, the National Herbarium of Jordan and the Native Plant Conservation Strategy.	Highly and directly relevant. Donor funding for the CBRR reached its end in 2016, but other activities remain and are relevant for HERD. An indicative baseline amount of \$500K was considered in the baseline finance.	1, 2, 3	6
Jordan	Program of Work of the Hashemite Fund for Development of the Jordan Badia (HFDJB), including the Badia Restoration Program (BRP), Jordan	Ongoing	HFDJB - Hashemite Fund for Development of the Jordan Baadia	Government of Jordan	1.0	1.0	The Program is working to both direct and indirect involvement in development activities taking place in the Badia. It maintains a corps of research experts and networks with government, local NGOs, donors and community based organizations, permitting it to implement a suite of projects relevant for Badia development. The BRP is being implemented in the Northern Badia, where the great majority of Bedouins live by investing in water harvesting, improvement of vegetation cover and productivity, socio-economic activities and M&E. The BRP is targeting 2000 to 2300 Bedouin households and about 30 to 40 percent of the country's livestock population.	Highly and directly relevant; the same amount as in the co-financing letter has been considered – Provided co-financing to the project and confirmed its baseline at the amount of \$0.95M.	1, 2, 3	7

Country / Scope	Title of the Intervention (project, program initiative)	Duration from / to (years)	Responsible institution	Funding source	Total estimated amount of intervention in millions of USD	Amount considered for baseline calculus - Millions of USD	Objective, key focus, relevant description	Relevance to HERD project Objective	Relevance to HERD Components	Link
Global	ICARDA's Projects	2015-ongoing	ICARDA and partners	USAID among others	6.0	6.0	ICARDA is the International Center for Agricultural Research in the Dry Areas. It is a CGIAR institutions with focus on drylands. Featured and recent projects include those that focus on sustainable cropping systems, research and drylands restoration. ICARDA's work in the severely food-and water-stressed MENA countries makes their work relevant to the HERD agenda and objective, to the extent that decades of research and the knowledge that the organization has generated on drought management, agricultural productivity and integrated natural resource management could be synergetic to that of the HERD Project. Research and training activities cover the non-tropical dry areas globally, using West Asia, North Africa, Central Asia and the Caucasus as research platforms to develop, test, and scale-out new innovations and policy options.	Research, practices, governance and platforms - relevant baseline finance assessed at \$1 per year	1, 2, 4	8
Egypt	Egypt Network for Integrated Development (ENID) - Multi-donor	2012-2016	UNDP and Government of Egypt	Italy UNDP	5.0	1.5	The Egypt Network for Integrated Development (ENID): he project is a joint cooperation between the United Nations Development Program (UNDP) and the Egyptian Ministry of International Cooperation established in 2012 to promote an integrated development approach in Upper Egypt. It aims to develop a replicable approach to local economic development and address rural-urban disparities in poverty and economic opportunity. Its primary objective is to enhance the well-being of the people of Upper Egypt, by implementing an integrated approach in income generation, food security, improved basic services combined with activities in knowledge management and networking for local economic development. Financiers: Government of Italy, Government of Egypt (OUDA), Rockefeller Brothers Fund, Sawiris Foundation for Social Development, Swedish International Development Cooperation Agency (SIDA), UK Department for International Development (DFID), UN Women, The United Nations Development Program (UNDP).	Relevant to HERD Project to the extent that it deals with local development. The program is finishing in 2016. An indicative amount of \$1.5M was considered as baseline.	1, 2, 3	9

Country / Scope	Title of the Intervention (project, program initiative)	Duration from / to (years)	Responsible institution	Funding source	Total estimated amount of intervention in millions of USD	Amount considered for baseline calculus - Millions of USD	Objective, key focus, relevant description	Relevance to HERD project Objective	Relevance to HERD Components	Link
Egypt	UNDP Mine Clearing and Agricultural Development, Matroah, Phases I and II	2012-2017	UNDP and Government of Egypt	EU, UNDP	6.7	1.3	Mines and unexploded ordnance (UXO) along the Mediterranean coast in Matrouh Governorate, have denied access to an area close to 22% of the national territory that has many natural resources, including estimated reserves of 1.8 billion barrels of oil and 8.5 trillion cubic feet of natural gas as well as about 3.5 million acres good for grazing and agriculture. The scarcity of inhabitants in this region, which has a pleasant and moderate climate all year around, is largely due to the negative impact of ERWs of WWII. According to the Executive Secretariat for the Demining and Development of the NWC at the Ministry of International Cooperation, the ratio of landmine survivors to the total population of the region is 1:500, one of the highest in the world. In October 2014, the second phase of the project was launched with funding from the European Union of EUR 4.7 million (almost USD 6.7 million). UNDP also contributed to the new phase with USD 290,000. The second phase of the project will work to clear 706 square kilometers of land in the NWC with new mine clearance equipment.	Relevant to HERD Project to the extent that it opens up access to rangelands and make them safe. The program is finishing in 2016. An indicative amount of \$1.3M was considered as baseline.	1, 2, 3	10
Regional	Joint EU Rural Development Program (ENPARD approach) - Egypt, Algeria, Jordan	2011-ongoing	Centre International de Hautes Etudes Agronomiques Méditerranéennes - Institut Agronomique Méditerranéen de Montpellier (CIHEAM-IAMM)	EU	35.2	10.56	The objectives are:1) Increase sustainable agricultural production through a more effective management of water resources and the adoption of GAP. 2) Increase rural livelihoods through promotion of income generating activities.	Relevant for HERD project, to the extent that it deals with policies and with a research / evidence-based approach. Amounts are indicative.	2, 4	11
Egypt	WB Regional Coordination for Improved Water Resources Mgt. & Capacity	2012-2017	Regional Coordination for Improved Water Resources Mgt. & Capacity	WB	1.05	0.21	IWRM - The development objective of the Second Phase of the Multi-country Regional Coordination on Improved Water Resources Management and Capacity Building Program (APL 2) Project for Egypt is to improve water resources and agricultural management and planning within and across beneficiary countries based on quantitative and spatial-based decision making tools.	The program deals with IWRM and this has relevance for the subject matter of the HERD project, but more peripherally. An amount of \$210K was considered as baseline finance.	1, 3	12

Country / Scope	Title of the Intervention (project, program initiative)	Duration from / to (years)	Responsible institution	Funding source	Total estimated amount of intervention in millions of USD	Amount considered for baseline calculus - Millions of USD	Objective, key focus, relevant description	Relevance to HERD project Objective	Relevance to HERD Components	Link
Egypt	WB EG-Enhanced Water Resources Management	2012-2016	EG-Enhanced Water Resources Management	WB	8.37	1.674	The Enhanced Water Resources Management Project for Egypt seeks a restructuring in this paper. The restructuring is to extend the grant closing date by 1.5 years to help the Government finalize the remaining works considering the start-up delay due to delay in recruitment of consultants and security problem in the country after Arab Spring unrest. The project objective will remain unchanged. The proposed changes will neither trigger any new safeguards policy nor change the safeguards category for the project.	The program also deals with IWRM and this has relevance for the subject matter of the HERD project, but more peripherally. An amount of \$1.7M was considered as baseline finance.	1, 3	13
Regional	Environmental programs of League of Arab States (LAS) and Centre for Environment and Development for the Arab Region and Europe – CEDARE	on-going	LAS and CEDARE	Various	12.0	3.6	Both LAS and CEDARE have programs of work and project relevant for the HERD project. These have been considered as baseline, although identifying them more precisely and developing synergies will need to be done during project inception. The Climate Nexus and CEDARE's early involvement in site level assessments in Egypt are opening up the way for this. Other regional bodies, including CSOs, also have programs of work, but it is difficult to assess relevance for several of them. We mention the following as a non-exhaustive short-list: Arab Center for the Studies of Arid Zones and Dry Lands (ACSAD), the WANA Institute, OXFAM, CARE International.	Relevant for the HERD project. Amounts are but indicative.	1, 2, 4	14
Egypt	Program of Work of the Desert Research Centre (DRC), Egypt	Ongoing	DRC, Egypt	Government of Egypt and other sources	7.0	7.0	As a parastatal linked to the Ministry of Agriculture and Land Reclamation, the DRCs has been mandated by the government to support the implementation of the UNCCD in Egypt. The Center functions mostly as a research entity, made up of experts and specialists on all aspects of managing drylands in Egypt. Responsible for other and on-going rangeland management projects through its program of work, which is fully considered as baseline finance for the HERD project. Other sources of funding besides government include: EU Joint Rural Program; CIHEAM Bari, Italian Development Cooperation, Arab Center for Studies of Arid Zones and Dry Land (ACSAD)	Highly and directly relevant. Amounts are indicative and consistent with the co-financing letter	1, 2, 3, 4	15

Country / Scope	Title of the Intervention (project, program initiative)	Duration from / to (years)	Responsible institution	Funding source	Total estimated amount of intervention in millions of USD	Amount considered for baseline calculus - Millions of USD	Objective, key focus, relevant description	Relevance to HERD project Objective	Relevance to HERD Components	Link
Jordan	Sustainable Use of Ecosystem Services in Jordan, GIZ and partners	2013-ongoing	GIZ	Government of Germany	6.0	1.8	The objective of the project is for biodiversity and ecosystem services to be increasingly taken into account in national policy-making, also in their importance for adapting to climate change. GIZ advises the Jordanian Ministry of the Environment at the national level. The pilot measures, which are controlled by the consultancy, focus on the mountainous region east of the Jordan between the Syrian border in the north of the country and Karak. The project strengthens the Ministry of the Environment to emphasize the importance of ecosystem services at the political level and to address them on a permanent basis. Relevant data is made available to the public through an information system. The aim is to take greater account of ecosystem services in the national biodiversity strategy and to highlight their high economic significance.	Highly and directly relevant, but because it is on-going since 2013, only 30% of the funding is considered as baseline finance	1, 2, 3	16

Links:

#	Reference link
1	http://projects.worldbank.org/P132314/msme-development-project-inclusive-growth?lang=en&tab=overview
2	http://projects.worldbank.org/P160236/?lang=en&tab=documents&subTab=projectDocuments
3	http://www.fao.org/pastoralist-knowledge-hub/en/
4	www.iucn.org/wisp
5	http://wanainstitute.org/en/event/integrating-islamic-and-community-driven-natural-resource-management-systems-environmental
6	http://royalbotanicgarden.org/page/community-based-rangeland-rehabilitation-info
7	www.badiafund.gov.jo/en
8	http://www.icarda.org/
9	http://www.eg.undp.org/content/egypt/en/home/operations/projects/climate-and-disaster-resilience/support-to-the-north-west-coast-development-plan-and-relevant-mi.html

#	Reference link
10	http://www.eg.undp.org/content/egypt/en/home/operations/projects/sustainable-development/ENID.html
11	http://www.enpardmed.org/home
12	http://projects.worldbank.org/P130801/regional-coordination-improved-water?lang=en&tab=overview
13	http://projects.worldbank.org/P118090/eg-enhanced-water-resources-management?lang=en&tab=financial
14	http://wanainstitute.org/en/event/integrating-islamic-and-community-driven-natural-resource-management-systems-environmental
15	www.drc.gov.eg/
16	https://www.giz.de/projektdaten/index.action?request_locale=en_EN#?region=2&countries=JO

4) *Project Bibliography*

- Abebe et al. (2008) Impact of a commercial destocking relief intervention in Moyale district, southern Ethiopia. *Disasters*. 2008 Jun;32(2):167-89.
- Allen-Diaz, B., 1996. Allen-Diaz, B., 1996. Rangelands in a changing climate: impacts, adaptations and mitigation. pp. 131-158. In: Watson, R.T., Zinyowera, M.C., Moss, R.H. (eds.), *Climate Change 1995. Impacts, Adaptations, and Mitigation of Climate Change: Scientific-Technical Analyses*. Published for the Intergovernmental Panel on Climate Change. Cambridge University Press, Cambridge, UK
- Asner et al, 2004 Asner, G. P., Elmore, A. J., Olander, L. P., Martin, R. E., & Harris, A. T. (2004). Grazing systems, ecosystem responses, and global change. *Annual Review of Environment and Resources*, 29,
- AU (African Union), 2010. AU (African Union), 2010. Policy Framework for Pastoralism in Africa: Securing, Protecting and Improving the Lives, Livelihoods and Rights of Pastoralist Communities.
- Bai et al., 2008. Bai, Z.G., Dent, D.L., Olsson, L. and Schaepman, M.E., 2008. Proxy global assessment of land degradation. *Soil Use and Management*, 24, 223–234
- BRP-NCDR (2011) The Badia Restoration Program and the National Center for Research and Development (BRP-NCRD) (2011): Securing Rights and Restoring Range Lands for Improved Livelihoods in the Badia of the Zarqa River Basin – Jordan. Baseline Study. IUCN, Amman.
- Davies et al., 2010 Davies, J., Niamir-Fuller, M., Kerven, C. and Bauer, K., 2010. Extensive Livestock Production in Transition: The Future of Sustainable Pastoralism. In: Steinfeld et al. (eds.), *Livestock in a Changing Landscape, Volume 1: Drivers, consequences and responses*. Island Press.
- Davies et al., 2012 Davies, J., Poulsen, L., Schulte-Herbruggen, B., Mackinnon, K., Crawhall, N., Henwood, W.D., Dudley, N., Smith, J. and Gudka, M., 2012. *Conserving Dryland Biodiversity*. IUCN, Nairobi. 84p.
- Davies et al., 2015 Davies J., Ogali C., Laban P. and Metternicht G., 2015. *HOMING IN ON THE RANGE: Enabling Investments for Sustainable Land Management*. Technical Brief 29/01/2015. Nairobi: IUCN and CEM. vi+23p
- Davis, J. 2012 Davies, J., 2012: Policies in support of pastoralism and biodiversity. *Pastoralism: Research, Policy and Practice* 2012.
- Devan & Kirkman, 2013 Devan Allen McGranahan and Kevin P. Kirkman: Multifunctional Rangeland in Southern Africa: Managing for Production, Conservation, and Resilience with Fire and Grazing. *Land* 2013, 2(2), 176-193;
- Esty et al., 2003 Esty, D.C., Levy, M.A., and Winston, A., 2003. Environmental Sustainability in the Arab World. In *The Arab World Competitiveness Report 2002-2003*, New York: Oxford University Press (2003).
- FAO, 2003 Food and Agriculture Organization (FAO), 2003. *World Agriculture: Towards 2015/2030, An FAO Perspective*. Edited by Jelle Bruinsma

- Friedel et al., 2000 Friedel M. H., Laycock W. A., and Bastin G. N., 2000. Assessing Rangeland Condition and Trend. In: Mannetje and Jones (Eds.). Field and Laboratory Methods for Grassland and Animal Production Research, Wallingford, UK, 227-262.
- Gaia, 2008. Gaia, 2008. Agrofuels and the myth of the marginal lands.
- Gallagher., 2008 Gallagher, E., 2008. The Gallagher Review of the independent effects of biofuels production. Renewable Fuels Agency, July 2008.
- Gerber et al. (ed.), 2010) Gerber et al. (2010). Livestock in Changing Landscape, Volume 2, Island Press.
- IUCN, 2011 IUCN, 2011. Supporting Sustainable Pastoral Livelihoods: A Global Perspective on Minimum Standards and Good Practices. Second Edition March 2012: published for review and consultation through global learning fora. Nairobi, Kenya: IUCN ESARO office.
- IUCN, 2011 “Securing Rights and Restoring Lands for Improved Livelihoods - Jordan - Zarqa River Basin”. Inception Report and Baseline Study for the EC funded project “Securing Rights and Restoring Lands for Improved Livelihoods”
- Le, Q.B. et al. 2014 Le, Q.B., Nkonya, E. and Mirzabaev, A., 2014. Biomass Productivity-Based Mapping of Global Land Degradation Hotspots. ZEF-Discussion Papers on Development Policy No. 193. Bonn, July 2014
- Lean et al. 1990 Lean, G., Hinrichsen, D. and Markham, A., 1990. Atlas of the Environment. Prentice Hall Press, New York, NY, 192 pp
- Losleben, 2003 Elizabeth Losleben (2003). The Bedouin of the Middle East. Lerner Publications. pp. 4-5. ISBN 978-0-8225-0663-8.
- Mannetje, 2002 Mannetje, L. T', 2002. Global Issues of Rangeland Management. Acta-Agraria, 2002-08i.
- McGahey et al., 2014 McGahey, D., Davies, J., Hagelberg, N., and Ouedraogo, R., 2014. Pastoralism and the Green Economy – a Natural Nexus? UNEP & IUCN, Nairobi. ix + 58p
- MEA, 2005 MEA, 2005. Ecosystems and Human Well-being: Desertification Synthesis. Millennium Ecosystem Assessment. World Resources Institute, Washington, DC.
- Ministry of Environment (Jordan), 2008 Ministry of Environment, Jordan (2008). Remediation and Restoration Projects Regarding the Terrestrial Ecosystems in Jordan. Roadmap - Overview and Phase I. Prepared for the UNCC by Envicon and GFA Consulting Group. pp. 36 and 38.
- MRG, 2007 MRG (Minority Rights Group International), World Directory of Minorities and Indigenous Peoples - Jordan, 2007, available at: <http://www.refworld.org/docid/4954ce4ec.html> [accessed 13 December 2016]
- Neely et al. 2009 Neely, C., Bunning, S. and Wilkes, A., 2009. Review of evidence on drylands pastoral systems and climate change: implications and opportunities for mitigation and adaptation. FAO Land and Water Discussion Paper, 38pp.

Niamir-Fuller, 1999	Niamir-Fuller, M., 1999. Managing Mobility in African Rangelands: the legitimization of transhumance. Intermediate Technology Publications. UK.
Nkonya et al. (ed.), 2016	Nkonya, Ephraim, (ed.); Mirzabaev, Alisher, ed.; and von Braun, Joachim, ed. 2016. Economics of land degradation and improvement- A global assessment for sustainable development. Cham, Switzerland: Springer International Publishing.
Ostrom, 1990	Ostrom, E. 1990. Governing the Commons: The Evolution of Institutions for Collective Action. New York: Cambridge University Press. 298p
Pratt, Greenway and Gwynne, 1966	Pratt, Greenway and Gwynne, 1966. A Classification of East African Rangeland, with an Appendix on Terminology. Journal of Applied Ecology 3(2):369 · November 1966
Ricklefs, 2010	Robert E. Ricklefs (2010). The Economy of Nature 6th Edition. W. H. Freeman and Company, New York.
Tennigkiet & Wilkes, 2008	Tennigkiet, T. and Wilkes, A., 2008. Carbon Finance in Rangelands: An assessment of potential in communal rangelands, WISP, IUCN, Nairobi.
UN, 2001	UN (United Nations), 2001. “Letter dated 20 March 2001 from the Permanent Representative of the United Arab Emirates to the United Nations addressed to the Secretary- General”. Fifty-fifth session of the United nations General Assembly, Agenda items 94 and 95.
UNEP, 2001	UNEP (United Nations Environment Programme), 2000. Global Environmental Outlook, 2000.
UNEP, 2010	UNEP (United Nations Environment Programme), 2010. State of Biodiversity in West Asia
UNEP, 2011	UNEP (United Nations Environment Programme), 2010. Environment Outlook for the Arab Region (EOAR). The First Comprehensive Policy-Relevant Environmental Assessment Report for the Arab Region Spring
Von Braun, J., et al. (2013)	Von Braun, J., et al. (2013): The economics of land degradation. ZEF Working Paper 109 ZEF
Watson, E. (2005)	Gender-Sensitive Natural Resource Management (NRM) Research-for-Development. DFID NRSP Programme Development Report PD123. Cambridge: Department of Geography, University of Cambridge.
Westerberg & Myint, 2014	Westerberg, V. and Myint, M., 2014. An Economic Valuation of a large-scale rangeland restoration project through the Hima system within the Zarqa River Basin in Jordan. IUCN, Nairobi.

