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Strategic Ecosystem Management of the Red Sea and Gulf of Aden Project

REVIEW OF LEGISLATION, STRATEGIES, POLICIES AND MANAGEMENT PLANS FOR FISHERIES SECTORS IN PERSGA COUNTRIES

DRAFT FINAL REPORT

April 2015

The Hashemite Kingdom of Jordan

Dr. Maroof Abdel-Karim Khalaf



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Abbreviations/Acronyms

Acronym	Title
ADA	Aqaba Diving Association
AMP	Aqaba Marine Park
ASEZA	Aqaba Special Economic Zone Authority
CBA	Culture-Based Aquaculture
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
EEZ	Exclusive economic zone
EIA	Environmental Impact Assessment
GEF	Global Environmental Facility
JREDS	Jordanian Royal Marine Conservation Society
MoSD	Ministry of Social Development
MSS	Marine Science Station
NBSAP	National Biodiversity Strategy and Action Plan
PERSGA	Programme for the Environment of the Red Sea and Gulf of Aden
SEM	Strategic Ecosystem Management

Glossary

Biological diversity "*means the variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems.*" Article 2 UN (1992) Convention on Biological Biodiversity with Annexes. Concluded at Rio de Janeiro on 5th June 1992. <http://www.cbd.int/doc/legal/cbd-un-en.pdf>. PERSGA MPAs protocol has the same definition.

Biological resources": *includes genetic resources, organisms or parts thereof, populations, or any other biotic component of ecosystems with actual or potential value for humanity*". Article 2.12: PERSGA (2005). The Protocol Concerning the Conservation of Biological diversity and the Establishment of a Network of Protected Areas the Red Sea and Gulf of Aden. PERSGA.

Catch shares (Quota and TURFs): "*Under quota-base catch shares, managers establish a fishery-wide catch limit and assign portions of the allowed catch or shares, to participants. Area-based catch shares, often called Territorial Use Rights for Fishing (TURFs), allocate secure and exclusive privileges to fish in specified areas*¹". See definition of TURFs below.

Co-management: "*a situation in which two or more social actors negotiate, define and guarantee amongst themselves a fair sharing of the management functions, entitlements and responsibilities for a given territory, area or set of natural re-source*". Borrini-Feyerabend, G., Farvar, M. T., Nguingiri, J. C. & Ndangang, V. A., (2000). Co-management of Natural Resources: Organising, Negotiating and Learning-by-Doing. GTZ and IUCN, Kasperek Verlag, Heidelberg (Germany). <http://learningforsustainability.net/pubs/cmnr.htm>.

Mariculture: Cultivation, management and harvesting of marine organisms in the sea, in specially constructed rearing facilities e.g. cages, pens and long-lines. For the purpose of FAO statistics, mariculture refers to cultivation of the end product in seawater even though earlier stages in the life cycle of the concerned aquatic organisms may be cultured in brackish water or freshwater or captured from the wild. FAO (2014). FAO Fisheries Glossary. [Http://www.fao.org/fi/glossary/default.asp](http://www.fao.org/fi/glossary/default.asp)

Protected area: "*A clearly defined geographical space, recognised, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values*". Dudley, N. (Editor) (2008). Guidelines for Applying Protected Area Management Categories. Gland, Switzerland: IUCN. x + 86pp. <http://data.iucn.org/dbtw-wpd/edocs/PAPS-016.pdf>. PERSGA MPAs protocol defines "*Protected area*": *means a geographically defined costal and marine areas that are designated or regulated and managed to achieve specific conservation objectives*".

Refugia: "*Spatially and geographically defined, marine or coastal areas in which specific management measures are applied to sustain important species [fisheries resources] during*

¹ http://catchshares.edf.org/sites/catchshares.edf.org/files/What_is_a_Catch_Share.pdf

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critical stages of their lifecycle, for their sustainable use.” SEAFDEC. 2006. Supplementary Guidelines on Co-management using Group User Rights, Fishery Statistics, Indicators and Fisheries Refugia, Southeast Asian Fisheries Development Center, Bangkok, Thailand. 84 pp. www.unepscs.org/SCS_Documents/startdown/484.html

Territorial Use Rights for Fisheries (TURFs): programs that allocate the right to harvest a secure area to an individual, group, or community².

² MEAM (2014). Marine Ecosystems and Management. International news and analysis on marine ecosystem-based management. Vol. 7, No. 3. Pp. 8. December 2013-January 2014. <http://depts.washington.edu/meam/MEAM34.pdf>

Contents

Disclaimer.....	Error! Bookmark not defined.
Author’s Acknowledgements.....	4
Abbreviations/Acronyms	4
Glossary	5
EXECUTIVE SUMMARY	9
1. BACKGROUND	15
2. METHOD	15
3. RESULTS	16
3.1 Legal framework.....	16
3.2 Policy framework.....	18
3.3 Co-management schemes.....	19
3.3.1 Operational co-management case study.....	20
3.3.2 Potential co-management case study	20
3.4 Stakeholder registration	20
3.4.1 Stakeholder example.....	22
4. DISCUSSION.....	23
5. RECOMMENDATIONS.....	23
5.1 PERSGA Co-ordination.....	24
5.2 Legal recognition of co-management.....	25
5.3 National Policy direction	25
5.4 Climate change.....	26
5.5 Other fisheries related management issues	26
APPENDIX I: CONSULTANT TERMS OF REFERENCE.....	29
7. Type of contract and payment This contract falls under short-term consultant category system of PERGSA. Payment will be on a lump sum and instalment basis as specified in the contract. Consultancy fees will be calculated on the basis of actual working days utilized by the consultant during the contract period.....	33
APPENDIX II: CONSULTANT ITINERARY.....	33
APPENDIX III: TEMPLATES.....	34
III.1 National level Acts.....	34
III.2 National level Policies	39

Disclaimer: This document is a draft, and provided for discussion and review. The document is not to be considered as final, and all information contained herein is subject to change upon further reviews in progress. Unless specified otherwise the opinions expressed in this document are entirely those of the author and should not be viewed as those of PERSGA or the World Bank.

III.4	Potential co-management practices.....	41
III.5	Stakeholder registration	41
APPENDIX IV:	BIBLIOGRAPHY/REFERENCES	68
APPENDIX V:	PROTECTED COASTAL AND MARINE SPECIES	69
APPENDIX VI:	PROPOSED PROTECTED COASTAL AND MARINE SPECIES	69
APPENDIX VII:	OPERATIONAL CO-MANAGEMENT SCHEMES.....	69
APPENDIX VIII:	POTENTIAL CO-MANAGEMENT SCHEMES.....	70
APPENDIX IX:	STAKE IN OPERATIONAL CO-MANAGEMENT SCHEME.....	70
APPENDIX X:	STAKE IN POTENTIAL CO-MANAGEMENT SCHEME.....	70
APPENDIX XI:	STAKEHOLDER PRINCIPAL LIVELIHOODS	71
APPENDIX XII:	STAKEHOLDER QUALITY OF LIFE	72

EXECUTIVE SUMMARY

This report, analyses legislation, policies, strategies and plans for fisheries that exist and are in force in Jordan. The report then uses this analysis to propose revisions to strengthen the use of the “code of conduct” and “ecosystem approach” to fisheries to deliver socially, economically and environmentally sustainable fisheries. A key possible tool in delivering the “code of conduct” and “the “ecosystem approach” is co-management.

There is little evidence of, or legal and policy support for co-management of fisheries in Jordan. This is unfortunate since both the “code of conduct” and “ecosystem approach” recommend a co-management approach. The need for, and the opportunities and constraints to, delivering fisheries co-management in Jordan is discussed below.

BACKGROUND AND METHOD

The following provides a review of legislative, strategy, policy and management opportunities and constraints to fisheries related **co-management**³ of coastal and marine **biological resources**⁴ in **Jordan** in coastal and marine **biodiversity**⁵ **protected areas**⁶, **fisheries refugia**⁷, outside these areas, and in an international context. The review is in the context of the Strategic Ecosystem Management of the Red Sea (SEM) Project which has a focus on coastal and marine protected areas.

³“a situation in which two or more social actors negotiate, define and guarantee amongst themselves a fair sharing of the management functions, entitlements and responsibilities for a given territory, area or set of natural re-source”. Borri-Feyerabend, G., Farvar, M. T., Nguingui, J. C. & Ndangang, V. A., (2000). Co-management of Natural Resources: Organising, Negotiating and Learning-by-Doing. GTZ and IUCN, Kasperek Verlag, Heidelberg (Germany). <http://learningforsustainability.net/pubs/cmnr.html>

⁴**Biological resources**: includes genetic resources, organisms or parts thereof, populations, or any other biotic component of ecosystems with actual or potential value for humanity”. Article 2.12: PERSGA (2005). The Protocol Concerning the Conservation of Biological diversity and the Establishment of a Network of Protected Areas the Red Sea and Gulf of Aden. PERSGA.

⁵“Biological diversity “means the variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems.” Article 2 UN (1992) Convention on Biological Biodiversity with Annexes. Concluded at Rio de Janeiro on 5th June 1992.

<http://www.cbd.int/doc/legal/cbd-un-en.pdf>. PERSGA MPAs protocol has the same definition.

⁶“A clearly defined geographical space, recognised, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values”. Dudley, N. (Editor) (2008). Guidelines for Applying Protected Area Management Categories. Gland, Switzerland: IUCN. x + 86pp. <http://data.iucn.org/dbtw-wpd/edocs/PAPS-016.pdf>. PERSGA MPAs protocol defines “Protected area”: means a geographically defined coastal and marine areas that are designated or regulated and managed to achieve specific conservation objectives”.

⁷“Spatially and geographically defined, marine or coastal areas in which specific management measures are applied to sustain important species [fisheries resources] during critical stages of their lifecycle, for their sustainable use.” SEAFDEC. 2006. Supplementary Guidelines on Co-management using Group User Rights, Fishery Statistics, Indicators and Fisheries Refugia, Southeast Asian Fisheries Development Center, Bangkok, Thailand. 84 pp. www.unepscs.org/SCS_Documents/startdown/484.html

Laws, policies, and management practices, in respect of the co-management of coastal and marine biological resources with a focus on fisheries, were reviewed. The review uses data collected using methods presented and agreed at a workshop held at the PERSGA headquarters in Jeddah held from 10th to 12th November 2014.

LEGAL REVIEW

The legal review indicates that there are two coastal and marine protected areas **primarily** declared for **biodiversity** protection within Jordan. They lie within the boundaries of Aqaba Marine Park (AMP).

The legal review also indicates that the AMP also has a legally recognised role as a fisheries refugia.

Fishing is not allowed in coastal and marine protected areas primarily designated for biodiversity conservation and is not allowed in coastal and marine areas primarily designated as fisheries refugia. Fishing by foreign nationals is not allowed in the exclusive economic zone of Jordan. Fishing by nationals of Jordan is not allowed outside the exclusive economic zone of Jordan because of security concerns and restrictions by neighbouring countries.

There is only one type of marine fishing license issued and this is for artisanal fishing. There is no restriction on the number or type of fishing licenses that can be issued to Jordanian nationals. The conditions on the license are those determined generally by other laws such as those prohibiting fishing in AMP, and the fishing of shark, collection of corals etc. outside the AMP in Jordanian waters. There are no restrictions on fishing by type or number of gear or by season and there is no quota on the number of any fish that can be caught.

Mariculture is not allowed in coastal and marine protected areas primarily designated for biodiversity conservation and is not allowed in coastal and marine areas primarily designated as fisheries refugia. Mariculture is allowed inland, and in the sea outside biodiversity protected areas and fisheries refugia, subject to a license to proceed following an Environmental Impact Assessment (EIA). However, there are no mariculture projects currently in operation and the ASEZA Commission Council has taken the decision not to allow mariculture.

There is no mangrove along the Jordanian coast and, therefore, there is no legislation concerning protection of mangroves

Key coastal and marine species protected throughout the coastal and marine areas of Jordan do not include dugong (sea-cows) since there are no dugongs in the Jordanian EEZ, and do not include whale since there are no whales in the Jordanian EEZ. All dolphin and turtles are protected in Jordanian waters. However, turtle egg collecting is not specifically protected since no turtle nesting occurs in Jordan. Humphead wrasse (*Cheilinus undulatus*) are not protected under Jordanian law. However, Jordan has ratified the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) and so should consider protection. All sharks are protected although whale sharks and manta ray are not explicitly specified. Corals are protected. Collecting ornamental colourful fish and snails in the marine

protected areas is not allowed. There is no legislation protecting mangrove in Jordan since Jordan has no mangrove.

The agency primarily responsible for managing coastal and marine biodiversity protected areas and also primarily responsible for marine fisheries is the Aqaba Special Economic Zone Authority (ASEZA) represented by Aqaba Marine Park (AMP). There is no agency responsible for mangrove since there is no mangrove. The agency responsible for social welfare and development is the Ministry of Social Development (MOSD). The agency responsible for international fisheries matters (foreign nationals fishing in EEZ and nationals fishing outside the EEZ of Jordan) is ASEZA.

There is no clear legal basis for co-management of fisheries resources in Jordan. There are no operational co-management schemes for coastal and marine biological resources in Jordan and no potential scheme that could be made operational. However, there is a strong will from various parties for a co-management agreement.

POLICY REVIEW

The policy review indicates that there are no policies to revise the legislation relating to coastal and marine protected areas **primarily** declared for **biodiversity** protection within Jordan or to create additional coastal and marine protected areas.

The policy review indicates that there are no clear policies, in Jordan, to legally recognise and designate additional coastal and marine areas **primarily** as fisheries refugia.

There are no policies proposed to revise the legislation to allow fishing in coastal and marine protected areas primarily designated for biodiversity conservation or as fisheries refugia. There are no policies proposed to change the regulations regarding fishing outside of protected areas or fisheries refugia. There are no policies proposed to change the legislation regarding artisanal fishing licensing so as to restrict the number of licensed users and the conditions of use so as to enable co-management of use. There are no policies proposed to change the legislation to prevent fishing by foreign nationals in the exclusive economic zone of Jordan. There are no policies proposed to introduce legislation regarding fishing by Jordanian nationals outside the exclusive economic zone of Jordan.

There are no policies proposed to allow mariculture in coastal and marine protected areas primarily designated for biodiversity conservation or as fisheries refugia. ASEZA Commission Council has taken the decision not to allow mariculture in the EEZ of Jordan.

There is no mangrove along the Jordanian coast and there are no policies related to mangrove introduction and use.

There are no policies proposed to change the legal status of species that are already protected in the coastal and marine areas of Jordan. There are no policies proposed to legally protect additional species although consideration should be given to a legal listing of shark species including whale sharks and ray species including manta rays and other species listed under CITES found in Jordanian waters since Jordan is a party to CITES.

There is no policy to change the agencies responsible for managing coastal and marine biodiversity protected areas, for managing fisheries, or for social development.

There is only limited policy guidance concerning the co-management of fisheries resources in Jordan. Meetings are held with fishermen societies and with other stakeholders from time to time to discuss issues related to fisheries and fishermen problems. However, there is no policy to seek changes in legislation to enable co-management.

CO-MANAGEMENT SCHEMES

There are no operational co-management schemes involving coastal and marine biological resources in Jordan at this time and no schemes identified as having potential to become co-management schemes. There is, however, an interest amongst stakeholders in introducing co-management schemes where relevant.

There is no case study for an operational or potential co-management scheme in the EEZ of Jordan.

STAKEHOLDER REGISTRATION

Of the 6 stakeholders interviewed none (0.00%) were female and 6 (100%) were male.

None (0.0%) of the interviewees was involved in one, or more, operational co-management schemes using coastal and marine biological resources.

Of the 6 stakeholders interviewed all were ready to participate in one, or more, potential co-management schemes using coastal and marine biological resources. However, none of the interviewees was able to identify a scheme that had potential to become a co-management scheme.

33.3 % of the 6 stakeholders interviewed identified national fishing as a significant livelihood and 0.0 % identified international fishing. One was involved in marine tourism and 3 in environmental management (one of these is the manager of the Aqaba Marine Park (AMP), one is the Director of the Marine Science Station (MSS) and one is a representative of the Jordanian Royal Marine Conservation Society (JRED)).

Significant livelihood concern expressed by the interviewees was their right to fish and recognition of their equitable role in the management along with other parties.

Key conclusions concerning quality of life are that the interviewees all had good access to services such as electricity, water, education and fuel. All had eaten marine animals within a week of the interviews and four had eaten marine animals in the last day. Their main concerns are the low catch, the limited fishing grounds, and the lack of financial support from the Government.

DISCUSSION AND RECOMMENDATIONS

Many of the coastal and marine biological resources, including those supporting fisheries, in the Gulf of Aqaba are under great pressure and their long-term conservation requires efficient management to minimise the impacts of human activities on them. It is suggested that co-management could contribute to more effective management since it should pass some of the responsibility for management to the user of the resources to be managed.

A key constraint to the introduction of co-management of coastal and marine biological resources in Jordan is the lack of a legal mechanism to restrict artisanal/traditional fisher licenses so as to control access to and opportunity for management of coastal and marine biological resources. Co-management is unlikely to be sustained if it is voluntary and particularly so if there is open access.

The introduction of a legal enabling framework for co-management is necessary to deliver compliance with international conventions to which Jordan is a party including the principles of the ecosystem approach and the code of conduct for responsible fisheries.

Key recommendations:

The review raises a number of issues and recommendations relating to the management of coastal and marine resources that are listed in the main report. The following summarises key recommendations:

- i. PERSGA should be requested take a lead role in facilitating the coordination between the countries of the region to deliver sustainable use of shared and trans-boundary biological resources, to minimize illegal, unreported and unregulated (IUU) fishing and to alleviate poverty where this can be achieved through the sustainable use of these biological resources.
- ii. Legislation should be provided to enable the restriction of artisanal/subsistence traditional fisher and other coastal and marine biological resource use licenses according to objective co-management criteria including traditional and sustainable use and the equitable sharing of benefits so as to enable co-management;

Once co-management is legally enabled government should establish a co-management plan for coastal and marine biological resources in Aqaba in which AMP might represent the lessor as the government body. Possible lessees could include the two fishers societies for fishing, divers associations for diving etc;

- iii. The next version of the 2015 Jordanian NBSAP should be updated to propose actions to deliver compliance with the Ecosystem Approach, United Nations Food and Agricultural Organization (FAO) Code of Conduct for Responsible Fisheries and the Aichi 2020 targets and recognising co-management of coastal and marine biological resources as a tool for delivering compliance;
- iv. Risks to food security, society, economy and environment from climate change need to be identified. Livelihood plans based on the sustainable use of coastal and marine biological resources for the benefit of present and future generations of the Jordanian people need to be developed accordingly. There is much risk in investing in a

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livelihood where the resource sustaining that livelihood may irreversibly deteriorate as a result of climate change;

- v. Other fisheries related management issues should be addressed (full list of recommendations in the main text).

Fisheries management plans and also biodiversity management plans developed for the Aqaba coastal and marine environment should reflect and support the delivery of any approved recommendations.

DRAFT

1. BACKGROUND

The following provides a review of legislative, strategy, policy and management opportunities and constraints to fisheries related **co-management**⁸ of coastal and marine **biological resources**⁹ in **Jordan** in coastal and marine **biodiversity**¹⁰ **protected areas**¹¹, **fisheries refugia**¹², outside these areas and in an international context. The review is in the context of the Strategic Ecosystem Management of the Red Sea (SEM) Project which has a focus on coastal and marine protected areas.

2. METHOD

Laws, policies, and management practices, in respect of the co-management of coastal and marine biological resources with a focus on fisheries, were reviewed. The review used data collected using methods presented and agreed at a workshop held at the PERSGA headquarters in Jeddah held from 10th to 12th November 2014. The methodology comprised interviews, site visits and the completion of a number of templates. The consultants' contract is provided at Appendix I. The consultants' itinerary is provided as Appendix II. The templates used are tabled as follows and are provided in Appendix III:

No	Template	Reason
1	National level Acts supporting co-management	Is there a legal chain of custody for co-management from National level Acts?
2	National level policies supporting co-	Are there clear national level policies designed to

⁸“a situation in which two or more social actors negotiate, define and guarantee amongst themselves a fair sharing of the management functions, entitlements and responsibilities for a given territory, area or set of natural re-source”. Borrini-Feyerabend, G., Farvar, M. T., Nguingui, J. C. & Ndangang, V. A., (2000). Co-management of Natural Resources: Organising, Negotiating and Learning-by-Doing. GTZ and IUCN, Kasperek Verlag, Heidelberg (Germany). <http://learningforsustainability.net/pubs/cmnr.html>

⁹**Biological resources**: includes genetic resources, organisms or parts thereof, populations, or any other biotic component of ecosystems with actual or potential value for humanity”. Article 2.12: PERSGA (2005). The Protocol Concerning the Conservation of Biological diversity and the Establishment of a Network of Protected Areas the Red Sea and Gulf of Aden. PERSGA.

¹⁰“Biological diversity” means the variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems.” Article 2 UN (1992) Convention on Biological Biodiversity with Annexes. Concluded at Rio de Janeiro on 5th June 1992.

<http://www.cbd.int/doc/legal/cbd-un-en.pdf>. PERSGA MPAs protocol has the same definition.

¹¹“A clearly defined geographical space, recognised, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values”. Dudley, N. (Editor) (2008). Guidelines for Applying Protected Area Management Categories. Gland, Switzerland: IUCN. x + 86pp. <http://data.iucn.org/dbtw-wpd/edocs/PAPS-016.pdf>. PERSGA MPAs protocol defines “Protected area”: means a geographically defined coastal and marine areas that are designated or regulated and managed to achieve specific conservation objectives”.

¹²“Spatially and geographically defined, marine or coastal areas in which specific management measures are applied to sustain important species [fisheries resources] during critical stages of their lifecycle, for their sustainable use.” SEAFDEC. 2006. Supplementary Guidelines on Co-management using Group User Rights, Fishery Statistics, Indicators and Fisheries Refugia, Southeast Asian Fisheries Development Center, Bangkok, Thailand. 84 pp. www.unepscs.org/SCS_Documents/startdown/484.html

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	management	support co-management practices particularly in recognition of the Ecosystem Approach and the Code of Conduct for Responsible Fisheries?
3	Register of co-management/other practices	Examples of operational co-management practices relating to use of coastal and marine biological resources.
4	Proposed co-management agreements	Examples of possible co-management agreements relating to use of coastal and marine biological resources.
5	Stakeholder registration	Registration of actual and possible co-management stakeholders relating to use of coastal and marine biological resources.

The list of documents consulted is provided at appendix IV.

Electronic copies of templates completed and referenced documents are provided, where available, on a CD-Rom available from the consultant and PERSGA.

3. RESULTS

3.1 Legal framework

Documents supporting the legal review are listed in Appendix IV and are provided digitally.

The legal review indicates that there is one coastal and marine protected area **primarily** declared for **biodiversity** protection within Jordan. This is the Aqaba Marine Park.

Protected area name	Yes/No/?	Law/regulation
Aqaba Marine Park	Yes	Law 22/2001

This review also indicates that Aqaba Marine Park has a secondary role as a fisheries refugia.

Refugia name*	Yes/No/?	Law/regulation
Aqaba Marine Park	Yes	Law 22/2001

*Refugia that are also protected areas are listed as refugia in this table and also as protected areas in the protected area table.

Fishing is not allowed in coastal and marine protected areas primarily designated for biodiversity conservation and is not allowed in coastal and marine areas primarily designated as fisheries refugia. Fishing by foreign nationals is not allowed in the exclusive economic zone of Jordan. Fishing by nationals of Jordan is not allowed outside the exclusive economic zone of Jordan because of security concerns and restrictions by neighbouring countries.

There is only one type of marine fishing license issued and this is for artisanal fishing. There is no restriction on the number or type of fishing licenses that can be issued to Jordanian nationals. The conditions on the license are those determined generally by other laws such as those prohibiting fishing in AMP, and the fishing of shark, collection of corals etc., outside the AMP in Jordanian waters. There are no restrictions on fishing by type or number of gear or by season and there is no quota on the number of any fish that can be caught.

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Fishing allowed?	Yes/No/?	Law/regulation
Coastal and marine Pas	No	Instructions No (g/5) for the year 2006 for organising fishing in Aqaba. Issued under paragraph (a) of article 55 of the interim Agriculture Law (44) for the year 2002.
Coastal and marine refugia	No	Instructions No (g/5) for the year 2006 for organising fishing in Aqaba. Issued under paragraph (a) of article 55 of the interim Agriculture Law (44) for the year 2002.
Outside PA's/refugia in EEZ	Yes	Unrestricted artisanal fishing by Jordanian nationals (Instructions No (g/5) for the year 2006 for organising fishing in Aqaba. Issued under paragraph (a) of article 55 of the interim Agriculture Law (44) for the year 2002.
Foreign nationals	No	Authority of Aqaba Special Economic Zone Authority, fishing grounds and fishery stocks are limited and it is only artisanal type.
Nationals outside EEZ	No	Security and neighbouring country considerations.

Mariculture is not allowed in coastal and marine protected areas primarily designated for biodiversity conservation and is not allowed in coastal and marine areas primarily designated as fisheries refugia. Mariculture is allowed inland, and in the sea outside biodiversity protected areas and fisheries refugia, subject to a license to proceed following an Environmental Impact Assessment (EIA). However, there are no mariculture projects currently in operation and the ASEZA Commission Council has taken the decision not to allow mariculture.

Mariculture allowed?	Yes/No/?	Law/regulation
Coastal and marine PAs	No	System for marine protection in Aqaba Special Economic Zone. Issued under articles (52) and (56) from Law of Aqaba Special Economic Zone no. (32) for the year 2000.
Coastal and marine refugia	No	System for marine protection in Aqaba Special Economic Zone. Issued under articles (52) and (56) from Law of Aqaba Special Economic Zone no. (32) for the year 2000.
Outside PA's/refugia in EEZ	No	ASEZA Commission Council Decision of ??????

Mangrove: There is no mangrove in Jordan and there are no regulations concerning mangrove in Jordan.

Mangrove use allowed?	Yes/No/?	Law/regulation
Coastal and marine PAs	-	Not applicable to Jordan
Coastal and marine refugia	-	Not applicable to Jordan
Outside PA's/refugia in EEZ	-	Not applicable to Jordan.

The coastal and marine species that are currently protected against exploitation **throughout** the coastal and marine areas of Jordan are listed in Appendix V. The table below indicates which of the following species/groups are (yes), or, are not (no) protected or if their protection status is unknown (?):

Species/group	Yes/No/?	Law/regulation reference including year
Dugong	-	There are no dugong in Jordanian waters.
Whales and dolphin (all)	Yes	Instructions No (g/5) for the year 2006 for organising fishing in Aqaba. Issued under paragraph (a) of article 55 of the interim Agriculture Law (44) for the year 2002.
Marine turtle	Yes	Instructions No (g/5) for the year 2006 for organising fishing in Aqaba. Issued under paragraph (a) of article 55 of the

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		interim Agriculture Law (44) for the year 2002.
Marine turtle eggs	No	No turtle nesting in Jordan,
Humphead wrasse ¹³	No	Not specified in any regulation but under CITES.
Shark (all)	Yes	Instructions No (g/5) for the year 2006 for organising fishing in Aqaba. Issued under paragraph (a) of article 55 of the interim Agriculture Law (44) for the year 2002.
Whale shark	Yes	Not explicit but Implied since all sharks are protected against exploitation.
Manta ray	No	Not specified in any legislation and rays are not generally protected.
Coral, ornamental fishes, snails	Yes	Instructions No (g/5) for the year 2006 for organising fishing in Aqaba. Issued under paragraph (a) of article 55 of the interim Agriculture Law (44) for the year 2002.
Mangrove	No	No mangrove in Jordan

The agency primarily responsible for managing coastal and marine biodiversity protected areas and also primarily responsible for marine fisheries is Aqaba Special Economic Zone Authority (ASEZA) represented by Aqaba Marine Park (AMP). There is no agency responsible for mangrove since there is no mangrove. The agency responsible for social welfare and development is Ministry of Social Development (MOSD). The agency responsible for international fisheries matters (foreign nationals fishing in EEZ and nationals fishing outside the EEZ of Jordan is ASEZA.

3.2 Policy framework

Documents supporting the policy review are listed in Appendix IV and are provided digitally.

The policy review indicates that there are no policies to revise the legislation relating to coastal and marine protected areas **primarily** declared for **biodiversity** protection within Jordan or to create additional coastal and marine protected areas.

Proposed protected area	Yes/No/?	Policy document name and year
None	No	None

The policy review indicates that there are no clear policies, in Jordan, to legally recognise and designate additional coastal and marine areas **primarily** as fisheries refugia.

Proposed refugia name*	Yes/No/?	Policy document name and year
None	No	None

*Refugia that are also protected areas are listed as refugia in this table and also as protected areas in the protected area table

There are no policies proposed to revise the legislation to allow fishing in coastal and marine protected areas primarily designated for biodiversity conservation or as fisheries refugia. There are no policies proposed to change the regulations regarding fishing outside of protected areas or fisheries refugia.

¹³ Cheilinus undulatus

There are no policies proposed to change the legislation regarding artisanal fishing licensing so as to restrict the number of licensed users and the conditions of use so as to enable co-management of use. There are no policies proposed to change the legislation to prevent fishing by foreign nationals in the exclusive economic zone of Jordan. There are no policies proposed to introduce legislation regarding fishing by Jordanian nationals outside the exclusive economic zone of Jordan.

There are no policies proposed to allow mariculture in coastal and marine protected areas primarily designated for biodiversity conservation or as fisheries refugia. ASEZA Commission Council has taken the decision not to allow mariculture in the EEZ of Jordan.

There is no mangrove along the Jordanian coast and there are no policies related to mangrove introduction and use

There are no policies proposed to change the legal status of species that are already protected in the coastal and marine areas of Jordan. There are no policies proposed to legally protect additional species although consideration should be given to a legal listing of shark species including whale sharks and ray species including manta rays and other species listed under CITES found in Jordanian waters since Jordan is a party to CITES.

There is no policy to change the agencies responsible for managing coastal and marine biodiversity protected areas, for managing fisheries, or for social development.

There is only limited policy guidance concerning the co-management of fisheries resources in Jordan. Meetings are held with fishermen societies and with other stakeholders from time to time to discuss issues related to fisheries and fishermen problems. However, there is no policy to seek changes in legislation to enable co-management.

3.3 Co-management schemes

There are no operational co-management schemes involving coastal and marine biological resources in Jordan at this time and no schemes identified as having potential to become co-management schemes. There is, however, an interest amongst stakeholders in introducing co-management schemes where relevant.

There is no case study for an operational or potential co-management scheme in the EEZ of Jordan.

3.3.1 Operational co-management case study

No operational co-management scheme relating to coastal and marine biological resources could be identified within the EEZ of Jordan at the time of this review.

3.3.2 Potential co-management case study

No potential co-management scheme involving coastal and marine biological resources in the EEZ of Jordan can be identified as a case study.

3.4 Stakeholder registration

Identification (registration) and objective participation of stakeholders in the management and use of coastal and marine biological resources is central to effective co-management and compliance with the FAO “Code of Conduct for responsible fisheries” and the CBD “Ecosystem Approach”. This review, therefore, included interviews with a number of key stakeholders concerning livelihoods and quality of life.

Of the 6 stakeholders interviewed none (0.00%) were female and 6 (100%) were male.

None (0.0%) of the interviewees was involved in one, or more, operational co-management schemes using coastal and marine biological resources. All expressed interest in participating in one, or more, potential co-management schemes using coastal and marine biological resources. However, none of the interviewees was able to identify a scheme with potential to become a co-management scheme.

The following table summarises the results from interviews of 6 stakeholders concerning significant livelihoods (see Appendix X).

33.3 % of the 6 stakeholders interviewed identified national fishing as a significant livelihood and 0.0 % identified international fishing. One was involved in marine tourism and 3 in environmental management (one of these is the manager of the Aqaba Marine Park (AMP), one is the Director of the Marine Science Station (MSS) and one is a representative of the Jordanian Royal Marine Conservation Society (JRED)).

Significant livelihoods	Number *	Percent
Fishing – National	2	33.3
Fishing – International	0	0
Mariculture	0	0
Mangrove	0	0
Marine tourism	1	16.7
Other (environmental management)	3	50
Total	6	100

** The number of livelihoods can exceed the number of stakeholders since stakeholders can have multiple significant livelihoods.

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Significant livelihood concerns expressed by the interviewees was their right to fish and recognition of their equitable role in the management along with other parties.

The following table summarises the results from interviews of 6 stakeholders concerning quality of life indicators (see Appendix XII).

Quality of life indicator	Indicator (brackets) – stakeholder numbers*		Median
	Maximum	Minimum	
Refrigerators (number)	(2) – 1 stakeholder	(1)- 5 stakeholders	1.5
Drinking water (days' supply)	(7) -6 stakeholders	(1) -0 stakeholders	5.5
Primary health (km to)	(>3) – 5 stakeholders	(<3)- 1 stakeholder	<1.5
Primary education (km to)	(>3)- 5 stakeholders	(<3) -1 stakeholder	<1.5
Main cooking fuel (oil – yes/no/?)	(No)- 6 stakeholders	(Yes)- 0 stakeholders	No
Main cooking fuel (gas – yes/no/?)	(Yes)- 6 stakeholders	(No)- 0 stakeholders	Yes
Main cooking fuel (wood – yes/no/?)	(No)- 6 stakeholders	(Yes)- 0 stakeholders	No
Main cooking fuel (charcoal – yes/no/?)	(No)- 6 stakeholders	(Yes)- 0 stakeholders	No
Cooking fuel (mangrove - yes/no/?)	(No)- 6 stakeholders	(Yes)- 0 stakeholders	No
Since ate marine animals (days)	(>1 day)-4 stakeholders	(<1)- 2 stakeholders	>1 day

* Sample size of 6 stakeholders

Key conclusions concerning quality of life are that the interviewees all had good access to services such as electricity, water, education and fuel. All had eaten marine animals within a week of the interviews and four had eaten marine animals in the last day. Their main concerns are the low catch, the limited fishing grounds, and the lack of financial support from the Government.

4. DISCUSSION

Many of the coastal and marine biological resources, including those supporting fisheries, in the Gulf of Aqaba are under great pressure and their long-term conservation requires efficient management to minimise the impacts of human activities on them. It is suggested that co-management could contribute to more effective management since it should pass some of the responsibility for management to the user of the resources to be managed.

A key constraint to the introduction of co-management of coastal and marine biological resources in Jordan is the lack of a legal mechanism to restrict artisanal/traditional fisher licenses so as to control access to and opportunity for management of coastal and marine biological resources. Co-management is unlikely to be sustained if it is voluntary and particularly so if there is open access.

The introduction of a legal enabling framework for co-management is necessary to deliver compliance with international conventions to which Jordan is a party including the principles of the ecosystem approach and the code of conduct for responsible fisheries.

This review proposes the following opportunities, constraints to, and recommendations for, enhancing the legal, policy and management framework for co-management for national fisheries and international fisheries.

Opportunities:

- There is a good opportunity for improving the review methodology since the Aqaba Marine Park manager is aware of the ongoing process, his involvement would help in transferring ideas and the importance of this work to higher authority in the Government;
- Presence of Aqaba Special Economic Zone Authority and involvement of AMP in implementing most of the legislation make this task easier than involvement of many parties;
- Most of the stakeholders in Aqaba are in favour of the establishment of a co-management plan;
- The review process is under the regional umbrella which gives the review process more credibility.

Constraints:

- Review process for legislations sometimes needs to involve politicians and needs much effort to convince them to amend some laws and regulations;
- Financial, educational level, rapid development;
- Limited awareness among fishing communities (e.g. marine conservation and protection);
- Lack of adequate communication;
- Limited fishing grounds;
- low fish catch;
- Long procedure

5. RECOMMENDATIONS

The review raises a number of issues and recommendations relating to the management of coastal and marine resources that are listed below. The following summarises key recommendations:

- i. PERSGA should be requested take a lead role in facilitating the coordination between the countries of the region to deliver sustainable use of shared and trans-boundary biological resources, to minimize illegal, unreported and unregulated (IUU) fishing and to alleviate poverty where this can be achieved through the sustainable use of these biological resources.
- ii. Legislation should be provided to enable the restriction of artisanal/subsistence traditional fisher and other coastal and marine biological resource use licenses according to objective co-management criteria including traditional and sustainable use and the equitable sharing of benefits so as to enable co-management;

Once co-management is legally enabled government should establish a co-management plan for coastal and marine biological resources in Aqaba in which AMP might represent the lessor as the government body. Possible lessees could include the two fishers societies for fishing, divers associations for diving etc;

- iii. The next version of the 2015 Jordanian NBSAP should be updated to propose actions to deliver compliance with the Ecosystem Approach, United Nations Food and Agricultural Organization (FAO) Code of Conduct for Responsible Fisheries and the Aichi 2020 targets and recognising co-management of coastal and marine biological resources as a tool for delivering compliance;
- iv. Risks to food security, society, economy and environment from climate change need to be identified. Livelihood plans based on the sustainable use of coastal and marine biological resources for the benefit of present and future generations of the Jordanian people need to be developed accordingly. There is much risk in investing in a livelihood where the resource sustaining that livelihood may irreversibly deteriorate as a result of climate change;
- v. Other fisheries related management issues should be addressed.

Fisheries management plans and also biodiversity management plans developed for the Aqaba coastal and marine environment should reflect and support the delivery of any approved recommendations.

5.1 PERSGA Co-ordination

Issue: Weak coordination mechanisms at the national, regional and international levels have resulted in unsustainable use of biological resources, including fisheries resources, shared between the countries that are party to the Jeddah Convention.

Recommendation: PERSGA should take a lead role in facilitating coordination between the countries of the region to deliver sustainable use of shared and trans-

boundary biological resources, recognizing and addressing the threats from climate change and to minimize the illegal, unreported and unregulated (IUU) fishing and to alleviate poverty where this can be achieved through the sustainable use of these biological resources.

Actions should include:

- i. agreement to and support for delivery of the Draft Memorandum of understanding concerning regional cooperation in management of fisheries and aquaculture in the Red Sea and Gulf of Aden taking note of the points below.
- ii. Generating the lists of species to be included in Annexes 1 and 2 of the 2005 Jeddah Convention Protocol Concerning the Conservation of Biological diversity and the Establishment of a Network of Protected Areas the Red Sea and Gulf of Aden.
- iii. Mobilizing resources *to provide* training workshops on stock assessments of major PERSGA region fish stocks, with a particular emphasis on pelagic species and species that migrate to spawn, and developing and delivering Regional Plans of Action for these stocks.
- iv. supporting the development of Jeddah Convention standards for fishing laws and regulations, a poverty index for coastal fisher communities, co-management systems, IUU, Vessel Monitoring Systems (VMS) and other monitoring, control and surveillance (MCS) systems.

5.2 Legal recognition of co-management

Issue: There is no legal mechanism to restrict the number of licenses to use coastal and marine biological resources to particular individuals or groups so as to give them a vested interest in responsible use of the coastal and marine biological resources that they are licensed to use. In addition there is no legal mechanism to require a contribution to management as a condition of that license. This may require approval by the Majlis since it will restrict use of national assets.

Recommendation: A committee, chaired by ASEZA/AMP with oversight by the Ministry of Environment should be set up to propose new and/or amended legislation to recognise the term “co-management”, to allow for the restriction of the number of licenses that can be issued so as to enable co-management and to set the conditions on which licensees should be selected including precautionary and evidence based carrying capacity criteria and the need to support responsible traditional, artisanal and subsistence use where it exists.

5.3 National Policy direction

Issue: The principal policy direction regarding the conservation of biodiversity is the National Biodiversity Strategy and Action Plan (NBSAP) which responds to the requirements of the International Convention on Biological Diversity (ICBD) to which Jordan is a signatory. Whilst the 2015 NBSAP does refer to the mandating of special conservation areas

to non-governmental organisations and even to community based organisations the principle of co-management, particularly in respect of coastal and marine biological resources remains to be specified.

Recommendations: The next version of the 2015 Jordanian NBSAP should be updated to propose actions to deliver compliance with the Ecosystem Approach, United Nations Food and Agricultural Organization (FAO) Code of Conduct for Responsible Fisheries and the Aichi 2020 targets and recognising co-management of coastal and marine biological resources as a tool for delivering compliance.

5.4 Climate change

Issue: Climate change include increases in seawater temperature which will cause corals to bleach, ocean acidification which makes it more difficult for coral, coralline and calcareous algae and certain plankton to lay down calcium carbonate skeletons. Whilst the pressures from climate change can be reduced by a reduction in other pressures the impact of climate change on ecosystem process is likely to be large.

Local actions to reduce the negative impact of climate change can only be effected in the context of effective global reduction of greenhouse gas emissions.

Risks to food security, society, economy and environment from climate change need to be identified. Livelihood plans based on the sustainable use of coastal and marine biological resources for the benefit of present and future generations of the Jordanian people need to be developed accordingly. There is much risk in investing in a livelihood where the resource sustaining that livelihood may irreversibly deteriorate as a result of climate change.

Recommendations: Investments in sustainable use of coastal and marine biological resources must recognise, consider and address the risks from the projected effects of climate change including the possibility that the goods and services provided by certain coastal and marine biological resources may deteriorate irrespective of local management efforts.

5.5 Other fisheries related management issues

Issue: The use of coastal and marine biological resources is neither precautionary nor evidence based. Whilst the Aqaba Marine Park acts as a biodiversity and fisheries refugia there is little management of resources outside of this area.

Recommendations:

- i. There should be research on key stocks as recommended in recommendation 5.1 above and making use of the experience of local users including fishers in precautionary and evidence based management planning.
- ii. Strategies for fisheries management plan should include Monitoring, Control and Surveillance (MCS) for the fish stocks. It is imperative to develop and build

monitoring and surveillance capabilities of the environmental institutions and departments in ASEZA, capabilities may include training of staff members and enumerators with the help of PERSGA.

- iii. Institutional and legal capacity building of the environmental and fisheries management agencies to bridge and strengthen coordination towards sustainable use of marine resources.
- iv. In view of the reports on the severe deterioration of the coral reefs of Eilat and their critical state of health, due to the effects of nutrients released from the fish farms and the eutrophication originating from the fish farms and their direct harmful effects on some coral's reproduction, and continued deterioration of the unique coral reefs and to the serious threat to their very existence, coastal and offshore fish farming should be totally avoided.

However, scientific research and closed system onshore experimental fish farming pilot projects should be initiated by scientific institutions and supported by governmental and private sector.

- v. Training of fishermen on the best methods of fish handling, storage, and marketing with the help of PERSGA.
- vi. Educating of fishermen and members of fishermen's' cooperatives on the meaning and benefits of the integrating fisheries in coastal areas management and the benefits from the coastal areas with the help of PERSGA.
- vii. Linking environmental management with the socioeconomic conditions of coastal communities is an essential requirement for sound management.
- viii. Fishermen need to be urged to abandon destructive fishing and replace it with more sustainable fishing practices such as the replacement of gill netting by longlines.
- ix. Fishing societies need to be encouraged to replace destructive fishing with more sustainable practices awareness programmes may be conducted with the help of PERSGA.
- x. Introduction and promotion of fishing methods that have a reduced physical impact on the environment.
- xi. Fish handling, and marketing: Training should include fishers and staff of fishers' cooperatives.
- xii. Prepare the list of organisms and fish species which should not be collected or fished in collaboration with the scientific community and should contain the season or months during which fishing is permitted.
- xiii. Prepare specific regulations to recognise the particular management needs of highly migratory species such as tuna and billfishes.

- xiv. Avoid aquaculture practices that may affect habitat conservation through occupation of sensitive areas, i.e., coral reef and inter-tidal areas, pollution by inputs and outputs from fish farms and genetic contamination by possible releases or escapes of farmed species or varieties.
- xv. Use fishing methods with new fishing techniques to fish in deep waters far from coral reef, encourage research to find new fishing grounds far from coral reef especially in deep waters with the help of mechanical winch and global positioning system (GPS).
- xvi. Closed season should be declared after carrying out extensive biological research such as fish life cycle, reproductive biology and only after at least one year of continuous monitoring programme for the fish stock and this should be indicated in the fishery management plan.
- xvii, There should be a ban on fixed fishing nets (Hawakir) in the whole of the Jordanian EEZ;

APPENDIX I: CONSULTANT TERMS OF REFERENCE

NATIONAL CONSULTANTS FOR REVIEWING LEGISLATIONS, STRATEGIES, POLICIES AND MANAGEMENT PLANS FOR FISHERIES SECTOR IN DJIBOUTI, JORDAN, SUDAN, AND YEMEN Under the Project Strategic Ecosystem Management of the Red Sea and Gulf of Aden

1- Background:

The announced consultancy services are needed for execution of the Project Strategic Ecosystem Management of the Red Sea and Gulf of Aden referred to hereafter as the Project or “SEM”. The Project is GEF financed, implemented by the World Bank and executed by PERSGA. The Project development objective is to improve management of marine resources in the Red Sea and Gulf of Aden in selected MPAs building on resource protection, incentive systems for communities and the harmonization of the knowledge base of marine resources between PERSGA member countries. This will be achieved through institutional Technical Assistance with onground activities through application of Ecosystem Based Management principles. The SEM Project contains four components, which are tailored to the most urgent country needs and preparedness at the local level. Two of these SEM components are localized in execution but open in knowledge sharing to all PERSGA countries. The two other components are an overarching harmonizing regional component and a management component. The four components are briefly described below. **Component 1: Strengthening the principles of marine managed areas through stakeholder driven MPA implementation** This component will select Marine Protected Areas as pilots to serve as Marine Managed Areas to include zonation and multiple uses consistent with local community needs and benefits using a participatory, community-based process. Activities within this component include the provision of training and demonstrations necessary to implement, use and update marine areas management plans in cooperation with national implementing agencies in the PERSGA network. This component also focuses on improving the capacity of member countries to share information and select the most appropriate marine protected/managed area models (MPAs/MMAs) based on current capacity and area(s) of comparative advantage and environmental features. It will also train community members in rights-based MPA co-management to be able to effectively review, update and implement marine protection and management plans, and transition to multiple use MMAs. Through this Component, PERSGA will strengthen its regional MPA network and also support member countries in bringing awareness of more holistic ecosystem based approaches whereby local communities could participate in balance resourcing exploitation with sustainability and help provide stronger stewardship of marine resources adjacent to them. PERSGA member countries will be invited to participate in training at pilot sites.

Component 2: Strengthening coastal communities using incentives approach to improve fisheries management and achieve other marine resource benefits This component will provide institutional and technical capacity needed for communities to use and protect living marine resources to increase net benefits derived from the resources in a sustainable manner. The capacity of community and user group will be built to understand trade-offs associated with development and the costs and benefits to the community, and to organize as user groups around these uses and their roles in rights-based co-management of fishery resource, in connection to their correlated roles identified under component 1. They will also be trained in the monitoring of the uses and their impacts on the resources, particularly on fisheries to support informed decisions by communities in co-management. Through a community-driven process, the selected coastal communities will receive support to identify and develop sub-projects for alternative livelihood initiatives to reduce

pressure on the resources and improve benefits to the community members. Onground activities will be developed by local communities and congruent with national priorities. Consultants or NGOs experienced in community driven fisheries and marine resource management will help facilitate community capacity building for LMR management engagement and development of sub projects. Potential subprojects could include, but are not limited to some mentioned during consultations: fish processing activities which involves the preparation of fish for direct consumption or for preservation; small scale aquaculture activities for production of pearl shells in Sudan; designation of hiking trails/ camping sites for eco-tourism within the National Parks- this is relevant to site selection in critical habitats; activity supporting recreational fishing/ snorkeling etc. for tourism purposes: through tent for gathering, jetty and boats; structure for visitor center built from natural materials; workshop for women group for producing and selling artisanal products - establish structure from natural materials; enabling tour guiding through licensing and training, potentially providing boats; training and certifying community members as rangers. **Component 3: Regional Environmental and Socioeconomic Monitoring Supporting Ecosystem Based Management (EBM) and Community Benefits** This component will build on ongoing monitoring activities and help in standardizing monitoring variables and approach between the participating countries, making data comparable and sharable through the strengthening of a regional network and database. It will support the expansion of monitoring to include socio-economic data, especially for fishery and MPA communities. Capacity building will also be strengthened through workshops and knowledge exchanges.

Specific sites selected by the countries will be monitored during the project, which will include MPAs and MMAs within the regional network and will be geared to enhance the capacity of PERSGA and member countries in concert with their communities. This presents an opportunity to leverage the latest knowledge and monitoring indicators in fisheries management to engage in supra-regional knowledge sharing on fisheries and marine resources monitoring. Monitoring of baseline data and other variables between MPAs and the pilot MMAs under components 1&2 will allow for comparison between the outcomes of the project intervention in the selected sites versus no intervention. This will provide a blue print for lessons learned from applying the EBM and co-management approach in the Red Sea and Gulf of Aden which can be scaled up to the entire regional MPA network. It will also provide an insight on environmental and socioeconomic impacts of neighbouring coastal activities

Component 4: Project Management This component will support the GEF project with technical, administration, procurement, financial management, project monitoring and evaluation and environmental and social impact monitoring. This includes cost of training of PERSGA and at the local project management level in the administrative, environmental and social aspects mentioned. The project will be executed by PERSGA, and will comply with GEF IW and World Bank reporting requirements (e.g. providing a GEF-IW webpage consistent with IW LEARN), provide IW Experience Notes, submit a GEF IW tracking tool at project start, provide for routine M&E processes, external Mid-Term and Terminal Evaluations, and project closure, provide lessons learned and other project information to IW-LEARN, and attend GEF IW Biennial Conferences.

2. Consultancy The present ToR is for a consultancy that will be carried out under component 2. This component will be implemented through the following activities:

- Build capacity in communities to understand the current uses and resource benefits, and how these are distributed within the community, including establishing baseline of status of the marine environment;

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- Build capacity of user groups including fisheries cooperatives in monitoring their resource uses and impacts; establish a community monitoring manual and follow up
- Support identification and planning of sustainable economic activities of marine resources and demonstrate small scale, low impact alternative livelihood sub-projects that are compliant with all environmental and social safeguards and upon which the community has reached consensus.
- Strengthen regional community participation through education and knowledge sharing through study tours, to share pilots on rights and responsibilities to improve community compliance and build ownership for resource protection and sustainability, as well as the implementation of monitoring, control and surveillance systems for fisheries co-management.

3. Tasks and Responsibilities of the Consultant In this context the national consultant will work with the SEM Project Coordination Unit “PCU” and in close collaboration with the relevant Component Coordinator, the National Coordinator, the International Consultant, the Regional Consultant, the National Fishery Management Authority and the Local Community in his / her respective country. The consultant will collaborate with the team to undertake an assessment study to “review legislations, strategies, policies and management plans for the fisheries sector to introduce and facilitate reforms required to adopt ecosystem based and co-management approaches to fishery management and aquaculture development” in his respective country, as part of the region-wide review undertaken by the SEM Project in PERSGA member states.

PERSGA has hired an international consultant to lead the review process in the region and provide technical assistance to the national consultant and team undertaking the review in each member state and is in the process of hiring regional consultant to support the International Consultant through cosupervision of the assessment studies, and providing technical advice on regional issues and harmonization. The National Consultant will, therefore, jointly work with the International Consultant and the Regional Consultant to conduct the review study in his / her respective country through achieving the following specific tasks:

- Compile information and data required for the review assessment of national/provincial legislations, strategies, policies and management for fisheries and aquaculture sector in order to identify gaps / barriers to implement ecosystem based approaches for fisheries management and development of aquaculture. This will be based on guidelines and questionnaires prepared by the international consultants. The review process should involve wide consultation with the stakeholders to identify gaps / barriers and suggest detailed and specific amendments addressing them including policies, articles, regulations, and management practices enabling multiple objectives, participatory and adaptive co-management approach; user group responsibilities, interaction with other sectors, adaptive systems, extended knowledge, incentives, mutual transparency, EAF EAA based fisheries monitoring, control and surveillance, etc.
- Develop a detailed National report on the assessment / review undertaken, based on the results of the questionnaires and the information collected.
- Communicate with the international and the regional consultants to provide expert advice on recommended amendments in national fishery laws, policies and management, together with options for mainstream them in the national/local marine fisheries and aquaculture sectors.
- Assist with provide technical backstopping for national/ local team to plan for including amendments and take on concrete proposals for revised laws/ policies/ management procedures,

and provision of technical assistance and advice during consultation meetings for planners, managers, user groups and other relevant stakeholders.

- The assessment/ review should include a maximum level of stakeholder participation and consultations to identify relevant existing information as well as the interests, priorities and responsibilities of different stakeholder groups or institutions. The national review process shall also be harmonized with other PERSGA member states. Therefore, the National Consultant is expected to participate in regional meetings to be held at PERSGA HQ or other member states, whereby assessment outcomes will be discussed with the International Consultants, the Regional Consultant and participants from other member states.

4. Key Outputs and Tentative Timing

Output 1: Inception report: Detailed work plan, methodology, timeline	2 weeks from contract
Output 2: Based on the questionnaires and guidelines provided by the International consultants, collect country data and information from the line ministries and departments; stakeholder consultation workshops; reviews of relevant documents, reports and other information sources.	2 months from contract
Output 3: Progress Reports	Every three months
Output 4: Draft national assessment report based on the results collected through the questionnaires and the guidelines mentioned above; including expert advice on gaps/shortcomings and recommended amendments regarding legislations, policies and management plans/ practices of marine fishery and aquaculture sectors	6 months from contract
Output 5: Assist with developing proposals of revised/ amended laws, strategies, policies and management practices and action plan for their realization in the country	8 months from contract
Output 6: Assist with developing the final National Consultancy Report compiling the assessment outputs and including recommendations for suggested legislative and policy amendments action plan in the country, which will be integrated in the final Regional Report	10 months from contract
Output 7: Follow up report on implementation of the country action plan and recommendation for future work	12 months from contract

5. Duty station and duration Duty station: Home based with in-situ field visits to the project site/ relevant national line ministries for information collection, stakeholder consultation and providing technical assistance in national meetings/workshops. The national consultant will also participate in regional consultation and coordination meetings. The consultancy will be completed over 12 months. Actual working days will be different in different countries. The consultant shall utilize adequate actual working days depending on the size and complexity of fishery regulations in his / her respective country.

6. Qualification, Skills and Experience The following qualifications and experience requirements must be met by the consultant:

- University degree in fisheries management, environmental science or any other relevant discipline. A post graduate qualification (MSc/ PhD) is preferable.

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- Background knowledge on approaches and tools for fisheries management; national evaluation of performance, progress and impacts; ecosystem approach to fisheries management; international and national legislations, framework policies, agreements and initiatives addressing living marine resources, and conservation/ management measures
- Experience in assessment/ evaluation of fisheries management and aquaculture development, including laws, strategies, policies and management measures and practices for fisheries and aquaculture sectors.
- Experience in similar consultancy works at the national level, and ability to produce outputs at international standards
- Familiarity/ knowledge with the status of fishery, issues and concerns in Red Sea and Gulf of Aden region;
- Fluency in English and Arabic; in the case of Djibouti and in French
- Highly self-motivated and able to work independently, as well as good interaction with regional/ national teams and counterparts.

7. Type of contract and payment This contract falls under short-term consultant category system of PERGSA. Payment will be on a lump sum and instalment basis as specified in the contract. Consultancy fees will be calculated on the basis of actual working days utilized by the consultant during the contract period.

APPENDIX II: CONSULTANT ITINERARY

Date	Location	Activity and key persons met
23-09-2014	Home	Reading the document
24-09-2014	Home	Reading the document
25-09-2014	Aqaba	Meeting with Aqaba Marine Park Manager
26-09-2014	Aqaba	Reading the document
27-09/15-10-2014	Aqaba	Collecting the materials related to the legislations
16-10/ 20-10-2014	Aqaba	Meeting with Walid Abdallah Lawyer in ASEZA
21-10/28-10-2014	Aqaba	Reading the documents concerning the legislations
29-10/08-11-2014	Aqaba	Meetings with AMP manger and preparation the national and consultant's reports and presentations to Jeddah workshop
09-11-2014/12-11-104	PERSGA/Jeddah	Travel and participation in the workshop
13-11-2014	Amman	Travel
14-11-2014	Aqaba	Travel

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15-11/25-12-2015	Aqaba	Reading the questionnaire trying to understand and Summarise them
26-12-2014/15-01-2015	Aqaba	Review the existing national acts
16-01/30-01/2015	Aqaba	Review the existing national policies
01-02/12-04-2015	Aqaba	Field work, make interviews and filling up the forms
13-04/25-04-2015	Aqaba	Reporting first, second draft and third final draft reports

APPENDIX III: TEMPLATES

III.1 National level Acts

PERSGA AND SEM PARTNERS LOGOS								
NATIONAL LEVEL ACTS QUESTIONNAIRE								
No	Question	Yes (Y), No (N), Unclear (?)						Details: Please provide an extract of any text justifying your selection of yes/no/unclear.
		NAT	INT	PRO	LOC	PVT	CUS	
1. GENERAL								
1.1	Name, age, sex and contact details of researcher	Dr. Maroof A. Khalaf, 59 years, Male, m.khalaf@ju.edu.jo						
1.2	Date completed	20-02-2015						
1.3	Country of survey	Jordan						
1.4	Name/details of legal document.							
2. OWNERSHIP OF BIOLOGICAL RESOURCES								
2.1	Is (marine) wildlife (as opposed to domesticated/cultivated marine species) defined in the legal instrument?	Yes					Agriculture Law no. 44 for the year 2002	
2.2	Is ownership of marine wildlife by the state specified in the legal instrument?						The Ministry is responsible for managing the wildlife (General Property for the country, and owned by the State Treasury)	

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2.3	Is ownership of the sea by the state specified in the legal instrument?							The Ministry is responsible for managing the wildlife (General Property for the country, and owned by the State Treasury)
2.4	Is ownership of the seabed by the state specified in the legal instrument?							General Property for the country, and owned by the State Treasury (Under the sovereignty by international law)
2.5	Is ownership of minerals at/ below the seabed by the state specified in the legal instrument?							For the public benefits
2.6	Is opportunity for co-management of biological resources for any non-state party specified in the legal instrument?							No
3. MANAGEMENT (authorisation includes designation of a regulatory body)								
3.1	Is there an agency given responsibility for managing marine wildlife in the legal instrument?							Aqaba Special Economic Zone Authority represented by Office of Environmental Affairs and through instructions issued by Ministry of Agriculture and through environmental protection system in the ASEZ for the years 2001 and 2006.
3.2	Is there an agency given responsibility for issuing fishing permits in the legal instrument?							Aqaba Marine Park Aqaba Marine Park System no 22 for the year 2001
3.3	Is there an agency given responsibility for issuing fishing vessel licenses in the legal instrument?							Jordan Maritime Commission (give permission to the body of vessel whether it meet the conditions required to pass or not), AMP issues license for fishing boat to fish after it pass from the Maritime Authority.
3.4	Is there an agency given responsibility for coastal zone management in the legal instrument?							ASEZA through systems and regulations. Mentioned in the Law of Coastal Police.

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3.5	Is there an agency given responsibility for only managing marine protected areas in the legal instrument?							ASEZA through systems and regulations represented by AMP.
3.6	Is there an agency given responsibility for only managing coastal protected areas in the legal instrument?							ASEZA through systems and regulations represented Office of Environmental Affairs, environmental protection system in the ASEZ for the years 2001 and 2006.
3.7	Is there an agency given responsibility for managing both coastal and marine together protected areas in the legal instrument?							ASEZA
3.8	Is there an agency given responsibility for marine pollution control in the legal instrument?							ASEZA, through Office of Environmental Affairs (environmental protection system in the ASEZ for the years 2001 and 2006.)
3.9	Is there an agency given responsibility for maritime safety/security in the legal instrument?							Maritime Authority (Law of Jordan Maritime Commission), Jordan Law of the Sea-Jordan Law of Sea Trade 12/year 72.
3.10	Is there an agency given responsibility for international fisheries (foreign nationals fishing in country)?							Power of ASEZA.
3.11	Is there an agency given responsibility for international fisheries (nationals fishing internationally)?							Not practiced in Jordan
3.12	Is there any Regional Fisheries Management Organisation (RFMO) arrangement, or equivalent, specified in the legal instrument?							No
4. PERMITS/LICENSES								
4.1	Is authorisation to fish marine wildlife required under the legal instrument?							Instruction to regulate Fishing in Aqaba (No 5/ج) for the year 2006. Instructions Numbers

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								(g/5 to g/15) for the Year 2006, Issued by the Minister of Agriculture Under the Agriculture Law No (44) for the Year 2002, Instructions No. (g / 5) for the Year 2006 for the Regulation of Fishing in Aqaba
4.2	Is authorisation to fish marine wildlife in certain areas required under the legal instrument?							Not practised in Aqaba. Instructions Numbers (g/5 to g/15) for the Year 2006, Issued by the Minister of Agriculture Under the Agriculture Law No (44) for the Year 2002, Instructions No. (g / 5) for the Year 2006 for the Regulation of Fishing in Aqaba
4.3	Is authorisation to fish marine wildlife at certain times required under the legal instrument?							Yes, but without details article 55 from Agriculture Law, but without specify season or fishing gears. Jordan ratified CITES Convention.
4.4	Is authorisation to fish certain species of marine wildlife required under the legal instrument?							Yes, but without details article 55 from Agriculture Law, but without specify season or fishing gears. Jordan ratified CITES Convention.
4.5	Is authorisation to harvest/use mangrove required under the legal instrument?							No mangrove in Jordan.
4.6	Is any marine wildlife explicitly protected under the legal instrument?							Yes corals, sea turtles, sharks, snails and ornamental fishes.
4.7	Are any marine areas legally assigned for mariculture under the legal instrument?							Not specified for mariculture. But for inland aquaculture yes. Instructions for permits and regulate fish farming (No 20 Year 2003)

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								issued in accordance with article 43 from Agriculture Law No. 44 Year 2002.
4.8	Are any marine areas legally assigned for mining under the legal instrument?							Not mentioned in the Legislations. But there is Law regulate the natural resources and amendment No 21 Year 1986
4.9	Are any coastal areas assigned for traditional/ community use under the legal instrument?							Not mentioned in the Legislations
4.10	Are any marine areas assigned for traditional/ community use under the legal instrument?							Not mentioned in the Legislations
4.11	Can foreign nationals be authorized to fish in the EEZ by the authorising authority?							Not mentioned in the Legislations (EEZ extends for 200 marine mile). I think this is not applicable to Jordan
4.12	Can nationals be authorised to fish internationally by the authorising authority?							No (article 8 from fishing regulation in Aqaba).
5. Other relevant laws								
5.1	Is there an Act for Strategic Environmental Assessment referred to?							Yes Law of Aqaba Special Economic Zone Authority, environmental protection system in the ASEZ for the years 2001 and 2006
5.2	Is there an Act for Environmental Impact Assessment referred to?							Yes Law of Aqaba Special Economic Zone Authority, environmental protection system in the ASEZ for the years 2001 and 2006
5.3	Is there a coastal zone management Act referred to?							No act but working on it.
5.4	Is there an Act for registering/regulating/ supervising fishery associations/cooperatives referred to?							There is a law for societies in general.

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5.5	Are there any marine species action plans referred to ¹⁴ ?							No
5.6	Are there any references to certified sustainable marine fisheries?							No
5.7	Is there any law concerning international fishing?							Not specified in any laws

III.2 National level Policies

PERSGA AND SEM PARTNERS LOGOS

NATIONAL LEVEL POLICIES SUPPORTING CO-MANAGEMENT

Please use this template to describe regional, national, provincial or local policies relating to fisheries co-management. Please provide a score, in the column provided, on a scale of 0-5, or 99 (where 0 suggests no support for a policy and 5 suggests significant support for a policy and 99 means don't know). Please provide and reference evidence, preferably digital, of the policy.

01	Name, age, sex and contact details of person completing the form	Dr. Maroof A. Khalaf, 59 years, Male, m.khalaf@ju.edu.jo
02	Name, designation and contact details of any interviewee.	Mr. Abdullah Abu-Awali Aqaba Marine Park, P.O.Box 2565 abawali@aseza.jo , abawali@yahoo.com
03	Date form completed	15-2-2015
04	Country(ies)/province(s)/district(s) covered (please fill a new form for each policy document/area.	Jordan/Aqaba
05	Key document(s) being reviewed	

06 ECOSYSTEM APPROACH (see Annex A)

No	Policy	Score (0-5)	Comment
01/12	Public participation	3	Stakeholders participation in workshops and meetings, but not necessary to take the suggestions into consideration.
02	Delegation of management	2	The decisions are usually centralized, participation,

¹⁴ For example is there a Shark Action Plan?

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			responsibility of stalk holders usually minimum
03	Transboundary effects	0	There are no transboundary effects because there are no transboundary management for migratory species.
04	Economic context	3	Coral reef is one of the most important ecosystem in the world. Tourism to coral reef areas are very important to economy of Aqaba.
05/10	Conservation/sustainable use/ sustainable development	3	Conservation and rehabilitation of coral reef is taking place in Aqaba.
06	Carrying capacity	0	No ideas, or studies on the carrying capacity of the coral reef.
07	Spatial and temporal factors	1	No studies and there is a lack of information on spatial and temporal scales and connectivity.
08	Long-term management	2	Sometimes considered
09	Adaptive management	2	rarely taken place
10	See above		
11	Evidence based (scientific, indigenous, local knowledge)	3	Relative information including scientific, indigenous and local knowledge is usually provided to the decision maker and whenever they ask for it.
12	See above		
07 CODE OF CONDUCT (See Annex B)			
01	User rights and responsibilities	2	Fish catch is limited, not exceeding 250 ton annually. Fishing are not taken in responsible manner.
02	Ecosystem based management/intergenerational equity	2	Fishery management donot maintain quality, diversity and availability of fish resources.
03	Conservation (sustainable use of fisheries)	2	Overfishing occur in Aqaba
04	Knowledge based including traditional knowledge	2	Decision related to fishery management is not based most of the time on scientific evidence or knowledge. Also., there is a lack of scientific information concerningfish spawning season
05	Precautionary approach	2	Sometimes there are precautionary approach for fishery management.
06	Environmentally safe fishing gear	1	No proper selective fishing gears taken place in Aqaba
07	Environmentally safe fish processing and distribution	1	Storage facility are lacking on the boats. May be because of the short distance from fishing grounds till the landing site the length of the coast is about 27 Km. Even though It is necessary to have storage facilities form some fishes (e.g. Scads, goat fishes....specially during summer
08	Habitat protection and rehabilitation	4	There are efforts and success in habitat protection, coral reef transplantation, rehabilitation projects are taken place in Aqaba.
09	Coastal zone management	3	Much efforts are paid to coastal zone management in Aqaba with poor management for the fishery resources

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10	Monitoring Control and surveillance - VMS	1	There is a large gap in this issue, but scattered initiatives are taken place in the year 2014-2015
11	Monitoring Control and surveillance – fishing data	1	There is a large gap in this issue, but scattered initiatives are taken place in the year 2014-2015
12	Transboundary cooperation	3	Transboundary cooperation donot take with ther neighbouring countries
13	Participation in laws and policies	2	
14	Trade	2	
15	Grievance redress mechanisms		Not applicable to Aqaba
16	Public participation	3	
17	Working and living conditions	3	
18	Artisanal and small-scale fisheries rights	3	
19	Aquaculture and EIA	0	There are intentions from ASEZA not to accept maricultur projects in the sea

III.3 Operational co-management practices

There are no operational co-management schemes in the coastal and marine environment of Jordan.

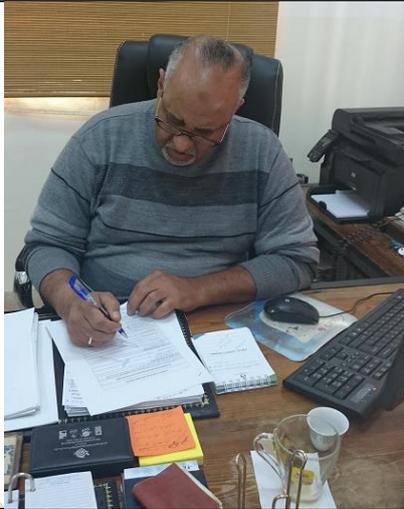
III.4 Potential co-management practices

There are no practices in the coastal and marine environment of Jordan that have the potential to become co-management schemes.

III.5 Stakeholder registration

PERSGA AND SEM PARTNERS LOGOS		
STAKEHOLDER REGISTRATION QUESTIONNAIRE		
To be completed by the interviewer for individual stakeholders. If the stakeholder interviewee is being interviewed in a group the response must be that of the specified stake holding interviewee. If possible interview the person at his/her place of residence or work.		
1.0 INTERVIEWER DETAILS		
1.1	Name, age, sex and contact details of the interviewer	Dr. Maroof A. Khalaf, 59 years, Male, m.khalaf@ju.edu.jo
1.2	Date form completed	10-02-2015
1.3	Any comments	m.khalaf@ju.edu.jo

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2.0 INTERVIEWEE DETAILS								
2.1	Location/address of interview (google map or gps).	Aqaba Marine Park, P.O.Box 2565 abawali@aseza.jo , abawali@yahoo.com						
2.2	Name	Abdullah Abu-Awali						
2.3	Age/date of birth	53 year, 1962						
2.4	Sex	Male						
2.5	Picture of interviewee							
2.6	Number and nature of dependents	8						
2.7	Place of birth and nationality	Aqaba-Jordanian						
2.8	Address of residence and contact details. Provide GPS co-ordinates for re-visit.	8 th residential area						
2.9	Period of residence at this residence (years) and % of time in the last year.	7 years 100%						
2.10	Identification card number and period of validity	9823071						
2.11	Affiliations (tribal etc)	Abu-Awali						
2.12	Please indicate, in order of significance, for a specified key livelihood the interviewees principal livelihood concerns – up to 6 (do not prompt!). Note: This will act as a baseline for determining	<table border="1"> <thead> <tr> <th colspan="2">Livelihood</th> </tr> </thead> <tbody> <tr> <td>1. Park management</td> <td>2. Environment conservation</td> </tr> <tr> <td>3. Public Awareness</td> <td>4. Legislation and enforcement</td> </tr> </tbody> </table>	Livelihood		1. Park management	2. Environment conservation	3. Public Awareness	4. Legislation and enforcement
Livelihood								
1. Park management	2. Environment conservation							
3. Public Awareness	4. Legislation and enforcement							

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	project impact.	5.	6.
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2.13. Livelihood employment: Please list, in order of importance the principal livelihoods over the last year (agriculturalist, carer, fisher, pastoralist, office-worker.....), an estimate of the percent of working time spent in this employment over the last year and then the number of years in this employment.

A	1. Park management	50%	
B	2. Environment conservation	10%	
C	3. Public Awareness	15%	
D	4. Legislation and enforcement	15%	

2.14. Livelihood employment: For each livelihood employment over the last year enter the letter from the first column in the answer to question 2.13 in the first column, the number for the type of employment from the list below in the second column and the estimated % of that employment in the third column: (1) Self-employed; (2) Government; (3) Commercial; (4) Unemployed; (5) Retired; (6) Other; (7) Do not know.

For example if the livelihood under 2.13 is (A) in the first row in the first column enter (A) in the first row in the first column in answer to question 2.14. If the employment of (A) in row 1 is self-employed then enter the number (1) in the second column of row 1. If the self-employment is 50% then enter 50% in the third column of row 1. Proceed to describe the same, or additional, employments from 2.13 in additional rows. The total for column 3 for each livelihood should be no more than 100%. Add rows as necessary.

A	2	50%	
B	2	10%	
C	2	15%	
D	2	15%	

2.15 **Coastal and marine** biological resources assets used in specified livelihood: Enter number(s) from list and estimated % and provide relevant comment – (1) Coral reef; (2) Mangrove, (3) Seagrass; (4) Algae; (5) Bony Reef fish (Pisces); (6) Bony Pelagic fish (Pisces); (7) Sharks and rays; (8) Crustaceans; (9) Echinoderms; (10) Molluscs; (11) Marine mammals; (12) Physical asset such as mooring; (13) Access to an area; (14) Other; (15) Don't know. If the livelihood is not coastal/marine related then leave the second column blank and describe in the fourth column.

For example if the livelihood under 2.13 is (A) in the first row in the first column enter (A) in the first row in the first column in answer to question 2.15. If one of the target assets is bony reef fish then enter the number 5 in the second column in the first row and if 50% of the catch is bony reef fish then enter 50% in the third column of row 1. Proceed to add rows for the same livelihood for different assets and then for different livelihoods for column 1 of each row entered in response to question 2.13. If possible provide a map of the principle area(s) of the respective livelihood/asset. Expand comments area and/or add rows as necessary.

A	1	50%	
B	3	20%	
C	6	10%	
D	5	10%	
E	12	10%	

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2. 16	Evidence of livelihoods: Please try to provide objective evidence of any significant livelihood (earlier licenses, witness statements etc.

3.0 CO-MANAGEMENT:

3.1. Is the person part of any co-management framework? If YES specify the name and nature of the framework(s) in the second column after entering the relevant livelihood letter A,B,C,D from Question 2.13 in the first column and go to question 3.3. If NO go to question 3.2.

A	Coral protection and management
B	Sea grass protection and management
C	Protection, management to increase the food resources
D	Protection, management to develop tourism industry
E	Coral reef protection, safety issues and boat management

3.2	If NO ask whether they see any need in respect of their livelihoods. Enter the response and GO TO QUESTION 4.	
-----	---	--

3.3. Is the person in the position of representing the lessor in respect of the co-management agreement for the livelihood A, B, C, D (as listed above)? Enter each relevant livelihood letter (A, B, C, D) and the comment in column 2. Add additional rows if required.

A	As above
B	As above
C	As above
D	As above
E	As above

3.4. Is the person in the position of representing the lessee in respect of the co-management agreement for the livelihood A, B, C, D (as listed above)? Enter each relevant livelihood letter (A, B, C, D) in column 1 and the comment in column 2. Add additional rows if required.

3.5. Estimate how many parties there are to the co-management agreement. Enter each relevant livelihood letter A, B, C, D (as listed above) and the comment in column 2. Add additional rows if required.

	Now there is no co-management agreement, but 8 to 10 parties are expected to join the future co-
--	--

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	management if established in the future

3.6 Identify any opportunities to the co-management agreement. Enter each relevant livelihood letter A, B, C, D (as listed above) and the comment in column 2. Add additional rows if required.

	There a strong well from the manager of Aqaba Marine Park for a co-management agreement and looking forward to establish the agreement.

3.7. Identify any constraints to the co-management agreement. Enter each relevant livelihood letter A, B, C, D (as listed above) and the comment in column 2. Add additional rows if required.

1.	Financial
2.	Rapid coastal development
3.	Administration changes
5	Existing regulations

4.0: QUALITY OF LIFE AT RESIDENCE

4.1	Hours of electricity per day?	24 hour
4.2	Refrigerator (number)?	2
4.3	Days secure supply of drinking water at residence.	Daily
4.4	Distance to primary health care facility (km)?	1 Km
4.5	Distance to midwife (km)?	10 Km
4.6	Distance to primary education (km)?	3 Km
4.7	Principal type of cooking fuel (oil, gas, wood, charcoal, other)	If wood/charcoal is mangrove note Gaz
4.8	Distance to secure source of principal cooking fuel (km)?	2 Km
4.9	Distance to phone (km)?	Not applicaple
4.10	Days since last ate marine animals and type.(marine fish etc)	One week Dr. Maroof A. Khalaf

5.0: SIGNATURES

5.1	Date, name and signature of interviewer	18-02-2015
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5.2	Date, name and signature/mark of stakeholder	10-02-2015 Abdullah Abu-Awali
5.3	Date, name, contact details and signature of witness if requested.	

PERSGA AND SEM PARTNERS LOGOS

STAKEHOLDER REGISTRATION QUESTIONNAIRE

To be completed by the interviewer for individual stakeholders. If the stakeholder interviewee is being interviewed in a group the response must be that of the specified stake holding interviewee. If possible interview the person at his/her place of residence or work.

1.0 INTERVIEWER DETAILS

1.1	Name, age, sex and contact details of the interviewer	Dr. Maroof A. Khalaf, 59 years, Male, m.khalaf@ju.edu.jo
1.2	Date form completed	10-04-2015
1.3	Any comments	

2.0 INTERVIEWEE DETAILS

2.1	Location/address of interview (google map or gps).	Near Aqaba Pharmacy Aqaba Fishermen Cooperation Society Center
2.2	Name	Ahmad Khalil Ismael Yasin President of Aqaba Fishermen Cooperation Society Center
2.3	Age/date of birth	69 year, 1/1/1946
2.4	Sex	Male

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2.5	Picture of interviewee		
2.6	Number and nature of dependents	10	
2.7	Place of birth and nationality	Aqaba/Jordanian	
2.8	Address of residence and contact details. Provide GPS co-ordinates for re-visit.	Al-Wehdat Al-Sharqia/Aqaba	
2.9	Period of residence at this residence (years) and % of time in the last year.	40 years	
2.10	Identification card number and period of validity	9461012655	
2.11	Affiliations (tribal etc)	Yasin	
2.12	Please indicate, in order of significance, for a specified key livelihood the interviewees principal livelihood concerns – up to 6 (do not prompt!). Note: This will act as a baseline for determining project impact.	Livelihood	
		1. Fishermen	2.
		3.	4.
		5.	6.
2.13. Livelihood employment: Please list, in order of importance the principal livelihoods over the last year (agriculturalist, carer, fisher, pastoralist, office-worker.....), an estimate of the percent of working time spent in this employment over the last year and then the number of years in this employment.			
A	Fisher	55 years	100%
B			
C			
D			

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2.14. Livelihood employment: For each livelihood employment over the last year enter the letter from the first column in the answer to question 2.13 in the first column, the number for the type of employment from the list below in the second column and the estimated % of that employment in the third column: (1) Self-employed; (2) Government; (3) Commercial; (4) Unemployed; (5) Retired; (6) Other; (7) Do not know.

For example if the livelihood under 2.13 is (A) in the first row in the first column enter (A) in the first row in the first column in answer to question 2.14. If the employment of (A) in row 1 is self- employed then enter the number (1) in the second column of row 1. If the self-employment is 50% then enter 50% in the third column of row 1. Proceed to describe the same, or additional, employments from 2.13 in additional rows. The total for column 3 for each livelihood should be no more than 100%. Add rows as necessary.

A	1	100%	

2.15 **Coastal and marine** biological resources assets used in specified livelihood: Enter number(s) from list and estimated % and provide relevant comment – (1) Coral reef; (2) Mangrove, (3) Seagrass; (4) Algae; (5) Bony Reef fish (Pisces); (6) Bony Pelagic fish (Pisces); (7) Sharks and rays; (8) Crustaceans; (9) Echinoderms; (10) Molluscs; (11) Marine mammals; (12) Physical asset such as mooring; (13) Access to an area; (14) Other; (15) Don't know. If the livelihood is not coastal/marine related then leave the second column blank and describe in the fourth column.

For example if the livelihood under 2.13 is (A) in the first row in the first column enter (A) in the first row in the first column in answer to question 2.15. If one of the target assets is bony reef fish then enter the number 5 in the second column in the first row and if 50% of the catch is bony reef fish then enter 50% in the third column of row 1. Proceed to add rows for the same livelihood for different assets and then for different livelihoods for column 1 of each row entered in response to question 2.13. If possible provide a map of the principle area(s) of the respective livelihood/asset. Expand comments area and/or add rows as necessary.

A	6	40%	
B	5	30%	
C	7	15%	
D	1	15%	

2. Evidence of livelihoods: Please try to provide objective evidence of any significant livelihood (earlier licenses, witness statements etc.

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3.0 CO-MANAGEMENT:

3.1. Is the person part of any co-management framework? If YES specify the name and nature of the

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framework(s) in the second column after entering the relevant livelihood letter A,B,C,D from Question 2.13 in the first column and go to question 3.3. If NO go to question 3.2.	
	No (Still Co-management agreement is not established yet). If established yes.
3.2	If NO ask whether they see any need in respect of their livelihoods. Enter the response and GO TO QUESTION 4.
	Yes I would like to be part of co-management agreement.
3.3. Is the person in the position of representing the lessor in respect of the co-management agreement for the livelihood A, B, C, D (as listed above)? Enter each relevant livelihood letter (A, B, C, D) and the comment in column 2. Add additional rows if required.	
3.4. Is the person in the position of representing the lessee in respect of the co-management agreement for the livelihood A, B, C, D (as listed above)? Enter each relevant livelihood letter (A, B, C, D) in column 1 and the comment in column 2. Add additional rows if required.	
3.5. Estimate how many parties there are to the co-management agreement. Enter each relevant livelihood letter A, B, C, D (as listed above) and the comment in column 2. Add additional rows if required.	
3.6 Identify any opportunities to the co-management agreement. Enter each relevant livelihood letter A, B, C, D (as listed above) and the comment in column 2. Add additional rows if required.	
	Yes I agree to establish the co-management agreement, if it is for the benefit of fishers

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3.7. Identify any constraints to the co-management agreement. Enter each relevant livelihood letter A, B, C, D (as listed above) and the comment in column 2. Add additional rows if required.	
	Differences in the opinions between various parties
	Who will choose the members of the agreement and on what bases
	Differing views in accordance with interest

4.0: QUALITY OF LIFE AT RESIDENCE

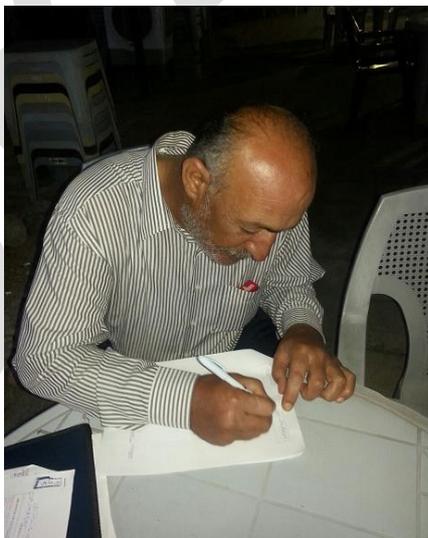
4.1	Hours of electricity per day?	24 hour
4.2	Refrigerator (number)?	1
4.3	Days secure supply of drinking water at residence.	Daily
4.4	Distance to primary health care facility (km)?	3Km
4.5	Distance to midwife (km)?	5Km
4.6	Distance to primary education (km)?	1 km
4.7	Principal type of cooking fuel (oil, gas, wood, charcoal, other)	If wood/charcoal is mangrove note Gas
4.8	Distance to secure source of principal cooking fuel (km)?	3 Km
4.9	Distance to phone (km)?	Not applicable (mobiles are available almost for all people)
4.10	Days since last ate marine animals and type.(marine fish etc)	2 days

5.0: SIGNATURES

5.1	Date, name and signature of interviewer	Dr. Maroof Khalaf
5.2	Date, name and signature/mark of stakeholder	10-04-2015
5.3	Date, name, contact details and signature of witness if requested.	

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PERSGA AND SEM PARTNERS LOGOS		
STAKEHOLDER REGISTRATION QUESTIONNAIRE		
To be completed by the interviewer for individual stakeholders. If the stakeholder interviewee is being interviewed in a group the response must be that of the specified stake holding interviewee. If possible interview the person at his/her place of residence or work.		
1.0 INTERVIEWER DETAILS		
1.1	Name, age, sex and contact details of the interviewer	Dr. Maroof A. Khalaf, 59 years, Male, m.khalaf@ju.edu.jo
1.2	Date form completed	12-04-2015
1.3	Any comments	
2.0 INTERVIEWEE DETAILS		
2.1	Location/address of interview (google map or gps).	Al-Shalalah, Aqaba/Jordan
2.2	Name	Naser Salah Khalil Al-Khudary
2.3	Age/date of birth	01-05-1965, 50 year
2.4	Sex	Male
2.5	Picture of interviewee	
2.6	Number and nature of dependents	7 members
2.7	Place of birth and nationality	Al-Jeishieh-Aqaba/Jordan
2.8	Address of residence and contact details. Provide GPS	Al-Shalalah/Aqaba

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(15) Don't know. If the livelihood is not coastal/marine related then leave the second column blank and describe in the fourth column.

For example if the livelihood under 2.13 is (A) in the first row in the first column enter (A) in the first row in the first column in answer to question 2.15. If one of the target assets is bony reef fish then enter the number 5 in the second column in the first row and if 50% of the catch is bony reef fish then enter 50% in the third column of row 1. Proceed to add rows for the same livelihood for different assets and then for different livelihoods for column 1 of each row entered in response to question 2.13. If possible provide a map of the principle area(s) of the respective livelihood/asset. Expand comments area and/or add rows as necessary.

A	1	70%	
B	5	10%	
C	6	10%	
D	7	10%	

2. Evidence of livelihoods: Please try to provide objective evidence of any significant livelihood (earlier licenses, witness statements etc.)

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3.0 CO-MANAGEMENT:

3.1. Is the person part of any co-management framework? If YES specify the name and nature of the framework(s) in the second column after entering the relevant livelihood letter A,B,C,D from Question 2.13 in the first column and go to question 3.3. If NO go to question 3.2.

	No (Still Co-management agreement is not established yet). If established yes. Fishermen Association

3.2 If NO ask whether they see any need in respect of their livelihoods. Enter the response and GO TO QUESTION 4.

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3.4. Is the person in the position of representing the lessee in respect of the co-management agreement for the livelihood A, B, C, D (as listed above)? Enter each relevant livelihood letter (A, B, C, D) in column 1 and the comment in column 2. Add additional rows if required.		
	No (Still Co-management agreement is not established yet). If established yes.. Representing fishermen Association (Thagr Al-Urdun Fishermen Cooperative Agricultural Society)	
3.5. Estimate how many parties there are to the co-management agreement. Enter each relevant livelihood letter A, B, C, D (as listed above) and the comment in column 2. Add additional rows if required.		
3.6 Identify any opportunities to the co-management agreement. Enter each relevant livelihood letter A, B, C, D (as listed above) and the comment in column 2. Add additional rows if required.		
	Yes We agree for the Co-Management agreement. Because it gives the fishers to participate in decisions related to fishery resources	
3.7. Identify any constraints to the co-management agreement. Enter each relevant livelihood letter A, B, C, D (as listed above) and the comment in column 2. Add additional rows if required.		
	Not taken seriously the fishers opinion	
4.0: QUALITY OF LIFE AT RESIDENCE		
4.1	Hours of electricity per day?	24 hour
4.2	Refrigerator (number)?	1
4.3	Days secure supply of drinking water at residence.	Daily
4.4	Distance to primary health care facility (km)?	2 Km
4.5	Distance to midwife (km)?	3 Km

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4.6	Distance to primary education (km)?	3 Km
4.7	Principal type of cooking fuel (oil, gas, wood, charcoal, other)	If wood/charcoal is mangrove note Gas
4.8	Distance to secure source of principal cooking fuel (km)?	2 Km
4.9	Distance to phone (km)?	Not applicaple (having mobile)
4.10	Days since last ate marine animals and type.(marine fish etc)	

5.0: SIGNATURES

5.1	Date, name and signature of interviewer	Dr. Maroof Khalaf
5.2	Date, name and signature/mark of stakeholder	10-04-2015
5.3	Date, name, contact details and signature of witness if requested.	

PERSGA AND SEM PARTNERS LOGOS

STAKEHOLDER REGISTRATION QUESTIONNAIRE

To be completed by the interviewer for individual stakeholders. If the stakeholder interviewee is being interviewed in a group the response must be that of the specified stake holding interviewee. If possible interview the person at his/her place of residence or work.

1.0 INTERVIEWER DETAILS

1.1	Name, age, sex and contact details of the interviewer	Dr. Maroof A. Khalaf, 59 years, Male, m.khalaf@ju.edu.jo
1.2	Date form completed	1-3-2015
1.3	Any comments	m.khalaf@ju.edu.jo

2.0 INTERVIEWEE DETAILS

2.1	Location/address of interview (google map or gps).	Aqaba south beach Diving Association (ADA)
2.2	Name	Abdullah Momany

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2.3	Age/date of birth	35 years. November 28, 1979	
2.4	Sex	Male	
2.5	Picture of interviewee		
2.6	Number and nature of dependents	Single	
2.7	Place of birth and nationality	Aqaba – Jordan	
2.8	Address of residence and contact details. Provide GPS co-ordinates for re-visit.	Third residence Area , Alahram Street – Building No. 14	
2.9	Period of residence at this residence (years) and % of time in the last year.	20 yrs, 75%	
2.10	Identification card number and period of validity	10706967	
2.11	Affiliations (tribal etc)	Al-Momani	
2.12	Please indicate, in order of significance, for a specified key livelihood the interviewees principal livelihood concerns – up to 6 (do not prompt!). Note: This will act as a baseline for determining project impact.	Livelihood	
		1. Marine environment protection	2. growing up diving industry in Aqaba
		3.	4.
		5.	6.
2.13. Livelihood employment: Please list, in order of importance the principal livelihoods over the last year (agriculturalist, carer, fisher, pastoralist, office-worker.....), an estimate of the percent of working time spent in this employment over the last year and then the number of years in this employment.			
A	Marine environment protection	50%	
B	growing up diving industry in Aqaba	50%	
C			
D			
2.14. Livelihood employment: For each livelihood employment over the last year enter the letter from the first			

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column in the answer to question 2.13 in the first column, the number for the type of employment from the list below in the second column and the estimated % of that employment in the third column: (1) Self-employed; (2) Government; (3) Commercial; (4) Unemployed; (5) Retired; (6) Other; (7) Do not know.

For example if the livelihood under 2.13 is (A) in the first row in the first column enter (A) in the first row in the first column in answer to question 2.14. If the employment of (A) in row 1 is self-employed then enter the number (1) in the second column of row 1. If the self-employment is 50% then enter 50% in the third column of row 1. Proceed to describe the same, or additional, employments from 2.13 in additional rows. The total for column 3 for each livelihood should be no more than 100%. Add rows as necessary.

A	6	50%	NGO's
B	6	50%	

2.15 Coastal and marine biological resources assets used in specified livelihood: Enter number(s) from list and estimated % and provide relevant comment – (1) Coral reef; (2) Mangrove, (3) Seagrass; (4) Algae; (5) Bony Reef fish (Pisces); (6) Bony Pelagic fish (Pisces); (7) Sharks and rays; (8) Crustaceans; (9) Echinoderms; (10) Molluscs; (11) Marine mammals; (12) Physical asset such as mooring; (13) Access to an area; (14) Other; (15) Don't know. If the livelihood is not coastal/marine related then leave the second column blank and describe in the fourth column.

For example if the livelihood under 2.13 is (A) in the first row in the first column enter (A) in the first row in the first column in answer to question 2.15. If one of the target assets is bony reef fish then enter the number 5 in the second column in the first row and if 50% of the catch is bony reef fish then enter 50% in the third column of row 1. Proceed to add rows for the same livelihood for different assets and then for different livelihoods for column 1 of each row entered in response to question 2.13. If possible provide a map of the principle area(s) of the respective livelihood/asset. Expand comments area and/or add rows as necessary.

A	1	50%	
B	1	50%	

2. Evidence of livelihoods: Please try to provide objective evidence of any significant livelihood (earlier licenses, witness statements etc.

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3.0 CO-MANAGEMENT:

3.1. Is the person part of any co-management framework? If YES specify the name and nature of the framework(s) in the second column after entering the relevant livelihood letter A,B,C,D from Question 2.13 in

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the first column and go to question 3.3. If NO go to question 3.2.	
A	Protection of coral reef through various activities in cooperation with Aqaba marine park (e.g. clean up dives, awareness programme)
B	Developing diving industry incorporation with AEZA by participating in the international dives show on various countries and hosting
3.2	If NO ask whether they see any need in respect of their livelihoods. Enter the response and GO TO QUESTION 4.
3.3. Is the person in the position of representing the lessor in respect of the co-management agreement for the livelihood A,B,C,D (as listed above)? Enter each relevant livelihood letter (A, B, C, D) and the comment in column 2. Add additional rows if required.	
3.4. Is the person in the position of representing the lessee in respect of the co-management agreement for the livelihood A, B, C, D (as listed above)? Enter each relevant livelihood letter (A, B, C, D) in column 1 and the comment in column 2. Add additional rows if required.	
A	As in Section 3.0 Co management 3.1
B	As in Section 3.0 Co management 3.1
3.5. Estimate how many parties there are to the co-management agreement. Enter each relevant livelihood letter A, B, C, D (as listed above) and the comment in column 2. Add additional rows if required.	
A	7
B	2 (1-ADA represented of 15 Dive centre's 2- Tourism Directorate)
3.6 Identify any opportunities to the co-management agreement. Enter each relevant livelihood letter A, B, C, D (as listed above) and the comment in column 2. Add additional rows if required.	
	I support Co management establishment between all stakeholder related to the environmental protection and sustainable use of the marine living resources
3.7. Identify any constraints to the co-management agreement. Enter each relevant livelihood letter A, B, C, D	

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(as listed above) and the comment in column 2. Add additional rows if required.	
	Financial, communication , Education Level , Administration changes , lack of effective regulations &
	Enforcement , Lack knowledge about co management

4.0: QUALITY OF LIFE AT RESIDENCE

4.1	Hours of electricity per day?	24
4.2	Refrigerator (number)?	1
4.3	Days secure supply of drinking water at residence.	Daily
4.4	Distance to primary health care facility(km)?	5 km
4.5	Distance to midwife(km)?	-
4.6	Distance to primary education(km)?	1 km
4.7	Principal type of cooking fuel (oil, gas, wood, charcoal, other)	If wood/charcoal is mangrove note Gas
4.8	Distance to secure source of principal cooking fuel(km)?	3 km
4.9	Distance to phone(km)?	-
4.10	Days since last ate marine animals and type.(marine fish etc)	2 days ago

5.0: SIGNATURES

5.1	Date, name and signature of interviewer	01-03-2015 Dr. marrof Khalf
5.2	Date, name and signature/mark of stakeholder	01-03-2015 Abdullah Momany
5.3	Date, name, contact details and signature of witness if requested.	

PERSGA AND SEM PARTNERS LOGOS

STAKEHOLDER REGISTRATION QUESTIONNAIRE

To be completed by the interviewer for individual stakeholders. If the stakeholder interviewee is being interviewed in a group the response must be that of the specified stake holding interviewee. If possible interview the person at his/her place of residence or work.

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1.0 INTERVIEWER DETAILS										
1.1	Name, age, sex and contact details of the interviewer	Dr. Maroof A. Khalaf, 59 years, Male, m.khalaf@ju.edu.jo								
1.2	Date form completed	24-02-2015								
1.3	Any comments									
2.0 INTERVIEWEE DETAILS										
2.1	Location/address of interview (google map or gps).	Royal Marine Conservation society (JERDS) 5 th area / Aqaba								
2.2	Name	Muhammad Salem Al –Tawaha								
2.3	Age/date of birth	33 years. March 7, 1981								
2.4	Sex	Male								
2.5	Picture of interviewee									
2.6	Number and nature of dependents	Single								
2.7	Place of birth and nationality	Irbid – Jordan								
2.8	Address of residence and contact details. Provide GPS co-ordinates for re-visit.	3 rd Resedential area/ captain Street								
2.9	Period of residence at this residence (years) and % of time in the last year.	3 yrs								
2.10	Identification card number and period of validity	9811029442								
2.11	Affiliations (tribal etc)	Al- Tawaha								
2.12	Please indicate, in order of significance, for a specified key livelihood the interviewees principal livelihood concerns – up to 6 (do not prompt!). Note: This will act as a baseline for determining project impact.	<table border="1"> <thead> <tr> <th colspan="2">Livelihood</th> </tr> </thead> <tbody> <tr> <td>1. Marine conservation</td> <td>2. public Awareness</td> </tr> <tr> <td>3. Monitoring access area</td> <td>4. sustainable Development</td> </tr> <tr> <td>5.</td> <td>6.</td> </tr> </tbody> </table>	Livelihood		1. Marine conservation	2. public Awareness	3. Monitoring access area	4. sustainable Development	5.	6.
Livelihood										
1. Marine conservation	2. public Awareness									
3. Monitoring access area	4. sustainable Development									
5.	6.									
2.13. Livelihood employment: Please list, in order of importance the principal livelihoods over the last year										

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(agriculturalist, carer, fisher, pastoralist, office-worker.....), an estimate of the percent of working time spent in this employment over the last year and then the number of years in this employment.			
A	Marine conservation	40%	
B	public Awareness	25%	
C	sustainable Development	25%	
D	Monitoring access area	10%	

2.14. Livelihood employment: For each livelihood employment over the last year enter the letter from the first column in the answer to question 2.13 in the first column, the number for the type of employment from the list below in the second column and the estimated % of that employment in the third column: (1) Self-employed; (2) Government; (3) Commercial; (4) Unemployed; (5) Retired; (6) Other; (7) Do not know.

For example if the livelihood under 2.13 is (A) in the first row in the first column enter (A) in the first row in the first column in answer to question 2.14. If the employment of (A) in row 1 is self-employed then enter the number (1) in the second column of row 1. If the self-employment is 50% then enter 50% in the third column of row 1. Proceed to describe the same, or additional, employments from 2.13 in additional rows. The total for column 3 for each livelihood should be no more than 100%. Add rows as necessary.

A	6	40%	NGO's
B	6	25%	
C	6	25%	
D	6	10%	

2.15 **Coastal and marine** biological resources assets used in specified livelihood: Enter number(s) from list and estimated % and provide relevant comment – (1) Coral reef; (2) Mangrove, (3) Seagrass; (4) Algae; (5) Bony Reef fish (Pisces); (6) Bony Pelagic fish (Pisces); (7) Sharks and rays; (8) Crustaceans; (9) Echinoderms; (10) Molluscs; (11) Marine mammals; (12) Physical asset such as mooring; (13) Access to an area; (14) Other; (15) Don't know. If the livelihood is not coastal/marine related then leave the second column blank and describe in the fourth column.

For example if the livelihood under 2.13 is (A) in the first row in the first column enter (A) in the first row in the first column in answer to question 2.15. If one of the target assets is bony reef fish then enter the number 5 in the second column in the first row and if 50% of the catch is bony reef fish then enter 50% in the third column of row 1. Proceed to add rows for the same livelihood for different assets and then for different livelihoods for column 1 of each row entered in response to question 2.13. If possible provide a map of the principle area(s) of the respective livelihood/asset. Expand comments area and/or add rows as necessary.

A	1	40%	
B	6	25%	
C	13	25%	
D	3	10%	

2. Evidence of livelihoods: Please try to provide objective evidence of any significant livelihood (earlier licenses, witness statements etc.

16			
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3.0 CO-MANAGEMENT:

3.1. Is the person part of any co-management framework? If YES specify the name and nature of the framework(s) in the second column after entering the relevant livelihood letter A,B,C,D from Question 2.13 in the first column and go to question 3.3. If NO go to question 3.2.

A	Protection of coral reef associated Fauna and Flora
B	3 pograms, Blue falgs, green key and Eco school
c	The promotion of socioeconomic development and the enhancement of territorial through sustainable heritage tourism and landscape protection
d	Beach management (coastal Management)

3.2 If NO ask whether they see any need in respect of their livelihoods. Enter the response and GO TO QUESTION 4.

3.3. Is the person in the position of representing the lessor in respect of the co-management agreement for the livelihood A,B,C,D (as listed above)? Enter each relevant livelihood letter (A, B, C, D) and the comment in column 2. Add additional rows if required.

3.4. Is the person in the position of representing the lessee in respect of the co-management agreement for the livelihood A, B, C, D (as listed above)? Enter each relevant livelihood letter (A, B, C, D) in column 1 and the comment in column 2. Add additional rows if required.

A	Protection of coral reef associated Fauna and Flora
B	3 pograms, Blue falgs, green key and Eco school
c	The promotion of socioeconomic development and the enhancement of territorial through sustainable heritage tourism and landscape protection
d	Beach management (coastal Management)

3.5. Estimate how many parties there are to the co-management agreement. Enter each relevant livelihood letter A, B, C, D (as listed above) and the comment in column 2. Add additional rows if required.

A	9
B	8
C	7
D	5

3.6 Identify any opportunities to the co-management agreement. Enter each relevant livelihood letter A, B, C, D (as listed above) and the comment in column 2. Add additional rows if required.

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	Strong well from JERDS to be part of any co management agreement and encourage such step

3.7. Identify any constraints to the co-management agreement. Enter each relevant livelihood letter A, B, C, D (as listed above) and the comment in column 2. Add additional rows if required.

	Financial, Communication, Educational Level and awareness
	Administrative changes , lack of Effective Regulation and enforcement

4.0: QUALITY OF LIFE AT RESIDENCE

4.1	Hours of electricity per day?	24
4.2	Refrigerator (number)?	1
4.3	Days secure supply of drinking water at residence.	Daily
4.4	Distance to primary health care facility(km)?	2 km
4.5	Distance to midwife(km)?	None
4.6	Distance to primary education(km)?	None
4.7	Principal type of cooking fuel (oil, gas, wood, charcoal, other)	If wood/charcoal is mangrove note Gas
4.8	Distance to secure source of principal cooking fuel(km)?	3 km
4.9	Distance to phone(km)?	-
4.10	Days since last ate marine animals and type.(marine fish etc)	Last week

5.0: SIGNATURES

5.1	Date, name and signature of interviewer	24-02-2015 Dr. marrof Khalf
5.2	Date, name and signature/mark of stakeholder	24-02-2015 Mohammad Al- Twaha
5.3	Date, name, contact details and signature of witness if requested.	

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PERSGA AND SEM PARTNERS LOGOS

STAKEHOLDER REGISTRATION QUESTIONNAIRE

To be completed by the interviewer for individual stakeholders. If the stakeholder interviewee is being interviewed in a group the response must be that of the specified stake holding interviewee. If possible interview the person at his/her place of residence or work.

1.0 INTERVIEWER DETAILS

1.1	Name, age, sex and contact details of the interviewer	Dr. Maroof A. Khalaf, 59 years, Male, m.khalaf@ju.edu.jo
1.2	Date form completed	16/02/2015
1.3	Any comments	

2.0 INTERVIEWEE DETAILS

2.1	Location/address of interview (google map or gps).	Marine Science Station (MSS) - GPS
2.2	Name	Porf. Dr. Tareq Hasan al- Najjar
2.3	Age/date of birth	50 years. May 10, 1965
2.4	Sex	Male
2.5	Picture of interviewee	
2.6	Number and nature of dependents	Married
2.7	Place of birth and nationality	Irbid – Jordan
2.8	Address of residence and contact details. Provide GPS co-ordinates for re-visit.	8 TH Residential area
2.9	Period of residence at this residence (years) and % of time in the last year.	2 yrs
2.10	Identification card number and period of validity	9651020382
2.11	Affiliations (tribal etc)	Al- Najjar
2.12	Please indicate, in order of significance, for a specified	Livelihood

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key livelihood the interviewees principal livelihood concerns – up to 6 (do not prompt!). Note: This will act as a baseline for determining project impact.	1. Researcher	2. Monitoring
	2. Education	
	5.	6.

2.13. Livelihood employment: Please list, in order of importance the principal livelihoods over the last year (agriculturalist, carer, fisher, pastoralist, office-worker.....), an estimate of the percent of working time spent in this employment over the last year and then the number of years in this employment.

A	Researcher	50%	22
B	Monitoring	20%	22
C	Education	30%	5

2.14. Livelihood employment: For each livelihood employment over the last year enter the letter from the first column in the answer to question 2.13 in the first column, the number for the type of employment from the list below in the second column and the estimated % of that employment in the third column: (1) Self-employed; (2) Government; (3) Commercial; (4) Unemployed; (5) Retired; (6) Other; (7) Do not know.

For example if the livelihood under 2.13 is (A) in the first row in the first column enter (A) in the first row in the first column in answer to question 2.14. If the employment of (A) in row 1 is self- employed then enter the number (1) in the second column of row 1. If the self-employment is 50% then enter 50% in the third column of row 1. Proceed to describe the same, or additional, employments from 2.13 in additional rows. The total for column 3 for each livelihood should be no more than 100%. Add rows as necessary.

A	2	50%	
B	2	20%	
C	2	30%	

2.15 **Coastal and marine** biological resources assets used in specified livelihood: Enter number(s) from list and estimated % and provide relevant comment – (1) Coral reef; (2) Mangrove, (3) Seagrass; (4) Algae; (5) Bony Reef fish (Pisces); (6) Bony Pelagic fish (Pisces); (7) Sharks and rays; (8) Crustaceans; (9) Echinoderms; (10) Molluscs; (11) Marine mammals; (12) Physical asset such as mooring; (13) Access to an area; (14) Other; (15) Don't know. If the livelihood is not coastal/marine related then leave the second column blank and describe in the fourth column.

For example if the livelihood under 2.13 is (A) in the first row in the first column enter (A) in the first row in the first column in answer to question 2.15. If one of the target assets is bony reef fish then enter the number 5 in the second column in the first row and if 50% of the catch is bony reef fish then enter 50% in the third column of row 1. Proceed to add rows for the same livelihood for different assets and then for different livelihoods for column 1 of each row entered in response to question 2.13. If possible provide a map of the principle area(s) of the respective livelihood/asset. Expand comments area and/or add rows as necessary.

A	1	40%	
B	3	30%	
C	4	10%	

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D	6	10%	
E	10	10%	
2.16	Evidence of livelihoods: Please try to provide objective evidence of any significant livelihood (earlier licenses, witness statements etc.		
3.0 CO-MANAGEMENT:			
3.1. Is the person part of any co-management framework? If YES specify the name and nature of the framework(s) in the second column after entering the relevant livelihood letter A,B,C,D from Question 2.13 in the first column and go to question 3.3. If NO go to question 3.2.			
A	Scientific Community of Administrative of Aqaba main port		
B	Scientific Community R& M		
c	Impact assessment for the Environment Aqaba Community ASEZA		
3.2	If NO ask whether they see any need in respect of their livelihoods. Enter the response and GO TO QUESTION 4.		
3.3. Is the person in the position of representing the lessor in respect of the co-management agreement for the livelihood A,B,C,D (as listed above)? Enter each relevant livelihood letter (A, B, C, D) and the comment in column 2. Add additional rows if required.			
3.4. Is the person in the position of representing the lessee in respect of the co-management agreement for the livelihood A, B, C, D (as listed above)? Enter each relevant livelihood letter (A, B, C, D) in column 1 and the comment in column 2. Add additional rows if required.			
A	Research, Monitoring and scientific advise		
B	Research, Monitoring and scientific advise		
c	Research, Monitoring and scientific advise		
3.5. Estimate how many parties there are to the co-management agreement. Enter each relevant livelihood letter A, B, C, D (as listed above) and the comment in column 2. Add additional rows if required.			
A	9		
	8		

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B	
C	7

3.6 Identify any opportunities to the co-management agreement. Enter each relevant livelihood letter A, B, C, D (as listed above) and the comment in column 2. Add additional rows if required.

	Strong support the co management of fisheries recourses in Aqaba.

3.7. Identify any constraints to the co-management agreement. Enter each relevant livelihood letter A, B, C, D (as listed above) and the comment in column 2. Add additional rows if required.

	Financial, Coordination, Educational Level, Communication, Administrative changes , lack of legislation and enforcement

4.0: QUALITY OF LIFE AT RESIDENCE

4.1	Hours of electricity per day?	24
4.2	Refrigerator (number)?	2
4.3	Days secure supply of drinking water at residence.	daily
4.4	Distance to primary health care facility(km)?	2 km
4.5	Distance to midwife(km)?	None
4.6	Distance to primary education(km)?	1 km
4.7	Principal type of cooking fuel (oil, gas, wood, charcoal, other)	If wood/charcoal is mangrove note Gas
4.8	Distance to secure source of principal cooking fuel(km)?	3 km
4.9	Distance to phone(km)?	-
4.10	Days since last ate marine animals and type.(marine fish etc)	Last night

5.0: SIGNATURES

5.1	Date, name and signature of interviewer	26-02-2015 Dr. marrof Khalf
5.2	Date, name and signature/mark of	26-02-2015

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	stakeholder	Dr. Tareq Al Najjar
5.3	Date, name, contact details and signature of witness if requested.	

APPENDIX IV: BIBLIOGRAPHY/REFERENCES

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APPENDIX V: PROTECTED COASTAL AND MARINE SPECIES

Species/group	Yes/No/?	Law/regulation reference including year
Sea turtles	Yes	Instruction to regulate Fishing in Aqaba (No 5/ج) for the year 2006. Instructions Numbers (g/5 to g/15) for the Year 2006, Issued by the Minister of Agriculture Under the Agriculture Law No (44) for the Year 2002, Instructions No. (g / 5) for the Year 2006 for the Regulation of Fishing in Aqaba
Dolphins	Yes	Same as above
Sharks	Yes	Same as above
Corals	Yes	Same as above
Shells	Yes	Same as above
Ornamental colourful fishes	Yes	Same as above

APPENDIX VI: PROPOSED PROTECTED COASTAL AND MARINE SPECIES

Species/group	Yes/No/?	Policy document name and year
None	No	No policy to add to/revise the list of species.

APPENDIX VII: OPERATIONAL CO-MANAGEMENT SCHEMES

No	Operational	COM	INT	ZONE	FIS	MAR	MAN	MAR	OTH
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	scheme name			BPA	REF				TOU	
1	None	No	No	No	No	No	No	No	No	No
	Note: None									
2										
	Note:									

Enter (Y) if yes, (N) if no, (?) if don't know. COM=co-management. INT = International, BPA = Coastal and Marine biodiversity protection area. REF = Fisheries Refugia. FIS = Fishing. MAR = mariculture. MAN = mangrove. MARTOU = Marine Tourism. OTH = Other.

APPENDIX VIII: POTENTIAL CO-MANAGEMENT SCHEMES

No	Potential scheme name	COM	INT	ZONE		FIS	MAR	MAN	MAR TOU	OTH
				BPA	REF					
1	None	No	No	No	No	No	No	No	No	No
	Note: None									
2										
	Note:									

Enter (Y) if yes, (N) if no, (?) if don't know. COM=co-management. PA = Coastal and Marine biodiversity protection area. REF = Fisheries Refugia. INT = International, FIS = Fishing. MAR = mariculture. MAN = mangrove. MARTOU = Marine Tourism. OTH = Other.

APPENDIX IX: STAKE IN OPERATIONAL CO-MANAGEMENT SCHEME

No	Name of person interviewed	SEX	COM	INT	FIS	MAR	MAN	MAR TOU	OTH
1	None	-	-	-	-	-	-	-	-
	Note: None								
2									
	Note:								

SEX: Male = M, Female = F. COM=co-management. INT = international. FIS = Fishing. MAR = mariculture. MAN = mangrove. TOU = Tourism. OTH = Other. Mark(Y) if yes, (N) if no, (?) if don't know. If one stakeholder participates in multiple schemes then add rows against the same name.

APPENDIX X: STAKE IN POTENTIAL CO-MANAGEMENT SCHEME

No	Name of person	SEX	COM	INT	FIS	MAR	MAN	MAR	OTH
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	interviewed							TOU	
1	None	-	-	-	-	-	-	-	-
	Note: None								
2									
	Note:								
Notes:									

SEX: Male = M, Female = F. COM=co-management. INT = international. FIS = Fishing. MAR = mariculture. MAN = mangrove. TOU = Tourism. OTH = Other. Mark (Y) if yes, (N) if no, (?) if don't know. If one stakeholder participates in multiple schemes then add rows against the same name.

APPENDIX XI: STAKEHOLDER PRINCIPAL LIVELIHOODS

No	Name of person interviewed	SEX	COM	FIS	MAR	MAN	MAR TOU	OTH
1	Abdullah Abu-Awali	male	1					
	Notes: Manager of Aqaba Marine Park in support of co-management agreement							
2	Aqaba Fishermen Cooperation Society Center	male		1				
	Notes: Ready to join co-management agreement							
3	Naser Salah Khalil Al-Khudary	male		1				
	Notes: Ready to join co-management agreement							
4	Abdullah Momany	male					1	
	Notes: Aqaba south beach Diving Association (ADA)							
5	Muhammad Salem Al – Tawaha	male						1
	Notes: Royal Marine Conservation society (JERDS)							

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6	Porf. Dr. Tareq Hasan al-Najjar	male						1
Notes: Marine Science Station (MSS) can act as scientific advisor								

SEX: Male = M, Female = F. COM=co-management. FIS = Fishing. MAR = mariculture. MAN = mangrove. TOU = Tourism. OTH = Other. Mark (Y) if yes, (N) if no, (?) if don't know.

APPENDIX XII: STAKEHOLDER QUALITY OF LIFE

No	Name of person interviewed	SEX	RFR	WTR	PRI	PRE	FUE	MAN
1	This represent the 6 stakeholder	male	1 to 2	7 days	3 to 5 Km	3 to 5 Km	gas	1 to 7 days
Notes:								

SEX: Male = M, Female = F. RFR = enter number of refrigerators at residence. WTR = days secure supply of drinking water at residence. PRU = Enter distance to primary health care facility in kilometers. PRE = Enter distance to primary education facility in kilometers. FUE = list main type of cooking fuel (Oil, gas, wood, charcoal – mention if fuel is from mangrove in notes). MAN = indicate when the stakeholder last ate marine animals in days and specify type and details in comments.