

# Towards low carbon footprint from ecotourism activities and management effectiveness of Aqaba Marine Reserve

**Part I: Project Information** 

**GEF ID** 

**Project Type** MSP

**Type of Trust Fund** GET

**CBIT/NGI** 

CBIT **No** NGI **No** 

# **Project Title**

Towards low carbon footprint from ecotourism activities and management effectiveness of Aqaba Marine Reserve

# Countries

Jordan

Agency(ies) IUCN

Other Executing Partner(s) IUCN GEF Focal Area Multi Focal Area **Executing Partner Type** GEF Agency

# Taxonomy

Focal Areas, Biodiversity, Mainstreaming, Fisheries, Ceritification - International Standards, Tourism, Sea Grasses, Biomes, Coral Reefs, Species, Threatened Species, Climate Change Adaptation, Climate Change, Mainstreaming adaptation, Ecosystem-based Adaptation, Capacity, Knowledge and Research, Targeted Research, Enabling Activities, Capacity Development, Learning, Adaptive management, Innovation, Knowledge Exchange **Rio Markers Climate Change Mitigation** Climate Change Mitigation 0

**Climate Change Adaptation** Climate Change Adaptation 1

**Duration** 24 In Months

**Agency Fee(\$)** 59,677.00

**Submission Date** 

# A. Indicative Focal/Non-Focal Area Elements

Programming Direct	ions Trust Fund	GEF Amount(\$)	Co-Fin Amount(\$)
BD-2-7	GET	397,073.00	5,800,000.00
CCM-1-2	GET	266,000.00	2,000,000.00
	Total Project Cost (\$)	663,073.00	7,800,000.00

# **B. Indicative Project description summary**

# **Project Objective**

To promote low carbon ecotourism in Aqaba Marine Protected Area through evaluating and reducing carbon footprint impacts, enhancing the management effectiveness the protected area, and implementing low-carbon tourism best practices and interventions

Project Compo nent	Finan cing Type	Project Outcomes	Project Outputs	Tr ust Fu nd	GEF Amou nt(\$)	Co-Fin Amount (\$)
				nd		

Project Compo nent	Finan cing Type	Project Outcomes	Project Outputs	Tr ust Fu nd	GEF Amou nt(\$)	Co-Fin Amount (\$)
1. Establish tourism carbon footprint system for the Aqaba Marine Reserve and encourag e tourism stakehold ers to do the same	Techni cal Assista nce	<ul> <li>1.1 GHG emissions, in CO2 eq of all tourism activities in the AMR are quantified and targets for reduction are set in accordance to ISO 14000 family standards</li> <li>1.2 Aqaba tourism stakeholders are aware of the potential for GHG emission calculations, have access to the methods and understand the benefits of GHG emission reductions to make Aqaba a low- carbon venue</li> <li>@font-face {font- family:"Cambria Math"; panose-1:2 4 5 3 5 4 6 3 2 4; mso-font-charset:0; mso-generic-font- family:roman; mso- font-pitch:variable; mso-font-signature:- 536870145 1107305727 0 0 415</li> <li>0; p.MsoNormal, li.MsoNormal, div.MsoNormal {mso- style-unhide:no; mso- style-qformat:yes; mso- style-qformat:yes; mso- style-arent:""; margin:0in; mso- pagination:widow- orphan; font- size:12.0pt; font- family:"Times New Roman"; }.MsoChpDefa ult {mso-style- type:export-only; mso- default-props:yes; font- size:10.0pt; mso- ansi-language:FR; mso-fareast- language:FR; mso-bidi- language:HE; } div.Word Section1</li> </ul>	<ul> <li>?1.1.1 Aqaba Low Carbon Tourism Stakeholder Forum established</li> <li>1.1.2 Methodology for the calculation of Direct and Indirect GHG emissions agreed by stakeholders</li> <li>1.1.3 Results of the GHG calculations are shared and discussed</li> <li>1.1.4 Priority activities for GHG emission reductions in the AMR are identified and targets are set</li> <li>1.1.5 Stakeholders are encouraged to apply the methodology to all their non-AMR activities</li> <li>1.1.6 Annual meetings of GHG reduction evaluation and target setting are mainstreamed for stakeholder activities in the AMR</li> <li>1.2.1 Methods for GHG calculation are made available to a wide range of tourism stakeholders including those who do not have direct activities within the AMR</li> <li>1.2.2 The potential of transformational change of the carbon footprint of tourism in Aqaba and of becoming a low- carbon venue is understood</li> <li>@font-face {font- family:"Cambria Math"; panose-1:2 4 5 3 5 4 6 3 2 4; mso-font-charset:0; mso-generic-font-</li> </ul>	GE T	110,00	1,000,00

Project Compo nent	Finan cing Type	Project Outcomes	Project Outputs	Tr ust Fu nd	GEF Amou nt(\$)	Co-Fin Amount (\$)
2. Strengthe n manage ment effective ness and capabiliti es of Aqaba Marine Reserve	Techni cal Assista nce	2.1 AMR has the human resources, equipment and funding to fulfill its role as the custodian of the exceptional biodiversity values and consolidates the sustainable service delivery of its ecosystems, including tourism @font-face {font-family:"Cambria Math"; panose-1:2 4 5 3 5 4 6 3 2 4; mso-font- charset:0; mso-generic- font-family:roman; mso-font-pitch:variable; mso-font-signature:- 536870145 1107305727 0 0 415 0;}p.MsoNormal, li.MsoNormal, div.MsoNormal {mso- style-qformat:yes; mso- style-qformat:yes; mso- style-qformat:yes; mso- style-qfort, space style-parent:""; margin:0in; mso- pagination:widow- orphan; font- size:12.0pt; font- family:"Times New Roman",serif; mso- fareast-font- family:"Times New Roman";}.MsoChpDefa ult {mso-style- type:export-only; mso- default-props:yes; font- size:10.0pt; mso- ansi-language:FR; mso-fareast- language:FR; mso-bidi- language:HE;}div.Word Section1 {page:WordSection1;}	2.1.1 The Management Effectiveness Tracking Tool METT is adapted, applied to the AMR and the IUCN Green List Standard is mainstreamed into the cycle of Management Plan revision 2.2.2 AMR stakeholder forum is established and identifies barriers to effective Management Plan Implementation, including the potential of creating of a buffer zone to better manage tourism pressure 2.2.3 AMR staff have adequate capacity and equipment to effectively implement the 2022- 2026 management plan including surveillance and monitoring 2.2.4 productive partnerships with national and international institutions are developed in view of achieving World Heritage Listing 2.2.5 sustainable financial mechanisms are established and implemented @font-face {font- family:"Cambria Math"; panose-1:2 4 5 3 5 4 6 3 2 4; mso-font-charset:0; mso-generic-font- family:roman; mso- font-pitch:variable; mso-font-signature:- 536870145 1107305727 0 0 415 0;}p.MsoNormal, li.MsoNormal, div.MsoNormal {mso- style-qformat:yes; mso- style-qformat:yes; mso- style-qformat:	GE T	366,79	5,136,90

Project Compo nent	Finan cing Type	Project Outcomes	Project Outputs	Tr ust Fu nd	GEF Amou nt(\$)	Co-Fin Amount (\$)
3. At least 2 site level low- carbon footprint ecotouris m interventi ons (potential nature based solutions ) identified in output 1 are impleme nted (not all stakehold ers were consulted for the PIF, more activities may be included during PGP)	Invest ment	3.1 Two types of operations (potentially Nature based solutions) within the AMR are decarbonized to ISO 14060 family level @font-face {font- family:"Cambria Math"; panose-1:2 4 5 3 5 4 6 3 2 4; mso-font-charset:0; mso-generic-font- family:roman; mso- font-pitch:variable; mso-font-signature:- 536870145 1107305727 0 0 415 0;}p.MsoNormal, li.MsoNormal, div.MsoNormal {mso- style-unhide:no; mso- style-qformat:yes; mso- style-qformat:yes; mso- style-parent:""; margin:0in; mso- pagination:widow- orphan; font- size:12.0pt; font- family:"Times New Roman";}.MsoChpDefa ult {mso-style- type:export-only; mso- default-props:yes; font- size:10.0pt; mso- bidi-font-size:10.0pt; mso-ansi-language:FR; mso-fareast- language:FR; mso-bidi- language:HE;}div.Word Section1 {page:WordSection1;}	3.1.1 the 2 priority carbon-intensive activities identified under 1.1.4 are addressed through potential nature based solutions 3.1.2 GHG emission results are evaluated and shared 3.1.3 a second set of AMR activities is identified and decarbonization targets are set @font-face {font- family:"Cambria Math"; panose-1:2 4 5 3 5 4 6 3 2 4; mso-font-charset:0; mso-generic-font- family:roman; mso- font-pitch:variable; mso-font-signature:- 536870145 1107305727 0 0 415 0;}p.MsoNormal, li.MsoNormal, div.MsoNormal {mso- style-unhide:no; mso- style-qformat:yes; mso- style-qformat:yes; mso- style-qformat:yes; mso- style-parent:""; margin:0in; mso- pagination:widow- orphan; font- size:12.0pt; font- family:"Times New Roman";}.MsoChpDefa ult {mso-style- type:export-only; mso- default-props:yes; font- size:10.0pt; mso- default-props:yes; font- size:10.0pt; mso- default-props:yes; font- size:10.0pt; mso- default-props:yes; font- size:10.0pt; mso- ansi-language:FR; mso-fareast- language:FR; mso-bidi- language:HE;}div.Word Section1 {page:WordSection1;}	GE T	126,00	1,000,00

Project Compo nent	Finan cing Type	Project Outcomes	Project Outp	outs Tr ust Fu nd	GEF Amou nt(\$)	Co-Fin Amount (\$)
Project M	anagomon	t Cost (PMC)		Sub Total (\$)	602,79 4.00	7,136,90 0.00
i iojeci m	anagemen					
	G	ŀΕΤ	60,279.00		663,100.00	
	Sub Tota	l(\$)	60,279.00		663,100.00	
Total P	raiaat Caal	<i>۱</i> (¢)	662 072 00		7 900 000 00	

#### C. Indicative sources of Co-financing for the Project by name and by type

Sources of Co- financing	Name of Co- financier	Type of Co- financing	Investment Mobilized	Amount(\$)	
Recipient Country Government	Government of Jordan	Grant	Investment mobilized	4,500,000.00	
Donor Agency	Green Fund	Grant	Investment mobilized		
Donor Agency	EU Commission	Grant	Investment mobilized	3,300,000.00	
		Tota	Il Project Cost(\$)	7,800,000.00	

## Describe how any "Investment Mobilized" was identified

The Mediterranean Forum For Applied Ecosystem-Based Management MED4EBM is an important project that is currently implemented in Aqaba to tackle the issue of Integrated Coastal Zone Management. The project contributes by assisting ICZM actors in four coastal areas of Jordan, Italy, Lebanon and Tunisia to jointly develop and apply a common methodology to make ecosystem-based ICZM much easier to design and implement by applying innovative techniques and methods. A software tool is developed to help institutional actors to better handle the complex multi-stakeholders analytical processes that characterize EBM applications and assess the relationships between ecosystem components, functions and services, as well as the associated human activities. Moreover, the project will provide government officials and managers with the necessary tools, skills and competences to develop and implement ecosystem approaches to the management of activities in the marine and coastal environments.

D. Indicative Trust Fund Resources Requested by Agency(ies), Country(ies), Focal Area and the Programming of Funds

Agenc y	Trus t Fun d	Countr y	Focal Area	Programmin g of Funds	Amount(\$ )	Fee(\$)	Total(\$)
IUCN	GET	Jordan	Biodiversit y	BD STAR Allocation	397,073	35,806	432,879.0 0
IUCN	GET	Jordan	Climate Change	CC STAR Allocation	266,000	23,871	289,871.0 0
			Total GE	F Resources(\$)	663,073.0 0	59,677.0 0	722,750.0 0

E. Project Preparation Grant (PPG) PPG Required **true** 

**PPG Amount (\$)** 25,000

**PPG Agency Fee (\$)** 2,250

Agenc y	Trus t Fun d	Countr y	Focal Area	Programmin g of Funds	Amount(\$ )	Fee(\$)	Total(\$)
IUCN	GET	Jordan	Biodiversit y	BD STAR Allocation	12,500	1,125	13,625.0 0
IUCN	GET	Jordan	Climate Change	CC STAR Allocation	12,500	1,125	13,625.0 0
			Total P	Project Costs(\$)	25,000.00	2,250.0 0	27,250.0 0

# **Core Indicators**

Indicator 2 Marine protected areas created or under improved management for conservation and sustainable use

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
280.00	0.00	0.00	0.00

Indicator 2.1 Marine Protected Areas Newly created

Total Ha (Expected at PIF)	Total Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)
0.00	0.00	0.00	0.00

Name of				Total Ha		
the			Total Ha	(Expected at	Total Ha	Total Ha
Protecte	WDP	IUCN	(Expected	CEO	(Achieved	(Achieved
d Area	A ID	Category	at PIF)	Endorsement)	at MTR)	at TE)

Indicator 2.2 Marine Protected Areas Under improved management effectiveness

Total Ha (Expected a	To (E: it PIF) Er	tal Ha xpected at ( dorsement)	T CEO (/ ) N	otal Ha Achieved a ITR)	t	Total Ha (Achieved	at TE)	
280.00	0.0	0	0.0	00		0.00		
Nam e of the W Prot D ecte P d A Area ID	IUCN Category	Tota I Ha (Exp ecte d at PIF)	Total Ha (Expec ted at CEO Endors ement)	Tota I Ha (Ach ieve d at 5 MTR )	Tota I Ha (Ach ieve d at TE)	METT score (Baseli ne at CEO Endors ement)	MET T scor e (Ach ieve d at MTR )	MET T scor e (Ach ieve d at TE)

Nam e of the Prot ecte d Area	W D P A ID	IUCN Category	Tota I Ha (Exp ecte d at PIF)	Total Ha (Expec ted at CEO Endors ement)	Tota I Ha (Ach ieve d at MTR )	Tota I Ha (Ach ieve d at TE)	METT score (Baseli ne at CEO Endors ement)	MET T scor e (Ach ieve d at MTR )	MET T scor e (Ach ieve d at TE)	
Akul a Natio nal Park Aqab a Marin e Prote cted Area	12 56 89	SelectProte cted Landscape/ Seascape	280.0 0							

Indicator 4 Area of landscapes under improved practices (hectares; excluding protected areas)

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
1000.00	0.00	0.00	0.00

Indicator 4.1 Area of landscapes under improved management to benefit biodiversity (hectares, qualitative assessment, non-certified)

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

1,000.00

Indicator 4.2 Area of landscapes that meets national or international third party certification that incorporates biodiversity considerations (hectares)

	Ha (Expected at		
Ha (Expected at	CEO	Ha (Achieved at	Ha (Achieved at
PIF)	Endorsement)	MTR)	TE)

Type/Name of Third Party Certification

Indicator 4.3 Area of landscapes under sustainable land management in production systems

	Ha (Expected at		
Ha (Expected at	CEO	Ha (Achieved at	Ha (Achieved at
PIF)	Endorsement)	MTR)	TE)

Indicator 4.4 Area of High Conservation Value Forest (HCVF) loss avoided

	Ha (Expected at		
Ha (Expected at	CEO	Ha (Achieved at	Ha (Achieved at
PIF)	Endorsement)	MTR)	TE)

# Documents (Please upload document(s) that justifies the HCVF)

Title

Submitted

Indicator 5 Area of marine habitat under improved practices to benefit biodiversity (excluding protected areas)

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)	
1,000.00				

Indicator 5.1 Number of fisheries that meet national or international third party certification that incorporates biodiversity considerations

nber N	Number	
pected at CEO (/	(Achieved at MTR)	Number (Achieved at TE)
	nber l bected at CEO ( lorsement) l	nber Number bected at CEO (Achieved at lorsement) MTR)

Type/name of the third-party certification

Indicator 5.2 Number of Large Marine Ecosystems (LMEs) with reduced pollutions and hypoxia

Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (achieved at MTR)	Number (achieved at TE)
0	0	0	0

LME at CEO LME at PIF LME at TE Endorsement LME at MTR Indicator 5.3 Amount of Marine Litter Avoided **Metric Tons Metric Tons** Metric Tons (expected at Metric Tons (expected at (Achieved at (Achieved at PIF) **CEO Endorsement)** MTR) TE)

Provide additional explanation on targets, other methodologies used, and other focal area specifics (i.e., Aichi targets in BD) including justification where core indicator targets are not provided

## Part II. Project Justification

1a. Project Description

## Introduction

The Gulf of Aqaba is situated at the southernmost tip of the Hashemite Kingdom of Jordan. The 27 km of coastline there are the only marine seaboard of an otherwise landlocked country. The area around Aqaba has been of considerable importance for human societies for roughly 5500 years, since the Neolithic (copper mines and Chalcolithic cultures), followed by Bronze Age and Early Iron Age settlements (Brown & Roux 2013). However, the harbour itself (known as Ayla) only became a significant trading post after the annexation of Nabataea by Rome in 106 CE. Prior to that, commerce was mainly conducted through caravans from the Euphrates to the Mediterranean via Damascus. Marine commodity trade continued throughout the Byzantine and Early Islamic period. The town, by then called Ayla, was in decline and unable to resist the Crusader conquest (1116 CE). These built the fort that was soon taken over by the Mamluks and subsequently the Ottomans until the Arab Revolt during WWI (1917 CE). It is worth noting that archaeology has shown that some of the ancient settlements were annihilated by powerful earthquakes and that Petra was severely damaged by the May 363 CE earthquake. Other strong quakes occurred in 114, 1068, 1212, 1458 and 1995 CE. These quakes are probably linked to the active Dead Sea Transform fault and rifting system that created the Gulf of Aqaba since the Early Miocene (23 to 16 MyA). Some of these quakes have to potential to trigger a 4 m high tsunami, with very short advance warning times, that would hit and damage Aqaba?s old harbour area in particular (Salamon et al 2021).

What was, for centuries, essentially a sleepy fishing village has undergone enormous transformations since the establishment of the low-tax, duty-free Special Economic Zone in 2001, attracting, mostly Arab nation investments of over 20 billion USD. The population growth rate of Aqaba 1994-2018 was 4.62% (i.e. doubling every 15 years) whereas, over the same time period, it declined in Jordan from around 4% to currently 1%. Now standing at around 200,000 inhabitants, Aqaba?s population is expected to rapidly increase, possibly to over 300,000 by 2030. Through its Aqaba Development Corporation, ASEZA (Aqaba Special Economic Zone Authority) has been overseeing, through Public Private Partnerships, the establishment and expansion of the Aqaba Container Terminal (ACT), Aqaba Ports Marine Services Company (APMSCO), Aqaba Air Cargo Terminal (NAS) and Aqaba Logistics Village (ALV). The Container Terminal is the second busiest of the Red Sea in terms of volume and Agaba?s main harbour was moved south to the New Port, on the border with Saudi Arabia. The old harbour is destined to become a major high end tourist resort with thousands of residential units planned. On top of the pollution risks associated with marine transport and of hydrocarbons in particular, special mention needs to be made of the importance of phosphate and potash exports (worth over 1 billion USD per year) from Jordan through Aqaba. Through their fertiliser effects, the negative impacts of phosphate (which also adds radionuclides to the system, reaching health risk levels close to the terminal) and potash dust on marine ecosystems are well known.

Since Jordanian independence in 1948, tourism in Aqaba was small scale and limited to the Amman elites and the foreign visitors to the neighbouring attractions of Petra and Wadi Rum. Since then, the city has been transformed beyond recognition with over half of the buildings being post-1990. Tourist numbers have been rapidly increasing e.g. from around 300,000 during the first half of 2017 to nearly 480,000 in the same time period of 2018. It is important to note that just over half of the tourists are foreigners, primarily European and that on average they spend almost 4 (3.7) nights in Aqaba (Benghadbane & Khries 2020).

In summary, a wide array of activities, harbour, transport, industrial, construction, tourism and resident, have been developing at an incredibly rapid pace along a very restricted area of coastline of 27 km and in an area of 350 km?. The coral reefs of Aqaba, restricted to about 7 km of shoreline, designated as a marine protected area covering only 2.8 km? (280 ha) have been hemmed in by these developments and, on busy weekends and holidays, protected area staff can be overwhelmed by large numbers of visitors, divers, snorkelers, swimmers, glass-bottom boats, sport fishermen, etc.

By Royal Decree by H.M King Abdullah II bin Al Hussein on 8th December 2020, the property was included in the Jordan National Protected Areas Network as a Marine Reserve. The young institution and its partners developed the 5-year Aqaba Marine Reserve Management Plan, to be implemented over the time period 2022-2026 (AMRMP). In the light of the rapid developments in the area and the substantial direct pressures within its borders, the institution faces considerable challenges.

This project aims to, on the one hand, contribute to strengthen the capacity of the institution to face these challenges and, on the other hand, serve as a pilot project for the ?greening? of the transport systems in Aqaba and raise awareness on the need for, and the benefits of, a reduction of Greenhouse Gas (GHG) emissions globally, nationally and locally. The project will prepare and layout the foundation for an efficient and well-managed marine protected area, including the definition of an appropriate IUCN management category, a well designed buffer zone, a well designed and applicable zoning plan, in addition to operational programmes that have that IUCN Green List Standard mainstreamed as a long term objective, and will eventually support the long term vision for the marine reserve as a potential Natural World Heritage Site.

It thus targets both biodiversity conservation through improved management and climate change that can be included in the following GEF focal areas:

- BD-2-7 Address direct drivers to protect habitats and species and Improve financial sustainability, effective management, and ecosystem coverage of the global protected area estate
- CCM-1- Promote innovation and technology transfer for sustainable energy breakthroughs for electric drive technologies and electric mobility

# Background

# 2.1 Energy and climate change

Jordan is dependent, for well over 90% of its energy use, on fossil fuels, in particular oil and gas imported from the subregion. These imports constitute a substantial and increasing fraction of GDP (around 17%). Reducing both GHG emissions and energy dependency offers a potential win-win situation, especially in a country with vast solar potential, notably in the South, i.e. with relatively low

power transport costs to Aqaba. The wider Aqaba area would not be an appropriate site for wind farm development because of its importance as a major flyway for millions of Eurasian Raptors funnelling around the Gulf on their migrations to and from Africa, which has given it Important Bird Area status (Birdlife International), one of only 7 such sites in Western Asia.

Considering the high fiscal cost of its energy dependence, the transition to a lower GHG emitting economy has been on the cards for Jordan since 2010 (IMF 2015), but implementation has been hampered by the high upfront investment costs and the comparatively low oil prices. Still, Jordan achieved a remarkable upsurge in the use of renewable energy, from 2 to 11% between 2015 and 2020. Unfortunately, the comprehensive energy sector strategy (2020-2030) (Jordan 2020-2030 Energy Strategy ? International Institute for Non-Aligned Studies (IINS)) seems decidedly unambitious, only adding a further 3% of renewables and planning for a very modest 10 % reduction in GHG emissions (currently at around 25 Mt of CO2). Basically, the emphasis is on replacing crude oil with fossil liquefied gas, brought in through a new LNG terminal and a 15-year supply contract with Noble Energy as well as developing domestic shale gas. In view of the substantial water needs and the well-described risks of aquifer contamination of this type of non-conventional fossil fuel extraction in one of the world?s most water-stressed countries, this planned development can raise some eyebrows.

There is scope for a much more fundamental transition from fossil fuels to renewables in Jordan and in the transport and tourism sector around Aqaba in particular. The Aqaba Marine Reserve, by bringing together the stakeholders of the tourism industry, the ASEZA, NGOs and development partners to debate ways and means to achieve low-carbon tourism and analyse the benefits thereof (achieving ISO 14060 family standards) could be a catalyst of what probably amounts a transformative change in the perception of energy use in Jordan. Such as change is required to reduce the global warming that is bound to have strong negative impacts on economies globally and locally (e.g. through Sea Level Rise, which can harm the seaboard hotel investments) and risks damaging the coral reefs through increased sea surface temperature and evaporation.

#### 2.2 Tourism

The Jordanian economy is highly dependent on the service industry (60% of GDP) and tourism accounts for about a third of this. Aqaba is strategically located as a transit hub and a post-desert tour beach haven for the Wadi-Rum and Petra circuits.

According to the <u>UNWTO/ITF</u> report, released in December 2019 at UNFCCC COP25, it is expected that, by 2030, transport-related CO<sub>2</sub> emissions from tourism will grow by 25% from 2016 levels (from 1597 Mt to 1998 Mt of CO<sub>2</sub>). This growth in CO<sub>2</sub> emissions will represent 5.3% of all man-made emissions in 2030 (up from 5% in 2016). Reducing the Carbon footprint of tourism globally is therefore of crucial importance. In its ?One Planet vision for a responsible recovery of the tourism sector post COVID?, the UNWTO recommends to strengthen the measurement and disclosure of CO<sub>2</sub> emissions in tourism and to accelerate the decarbonisation of tourism operations (<u>One Planet Vision for a Responsible Recovery of the Tourism Sector | UNWTO</u>). The Paris Climate Agreement sets a global Carbon neutrality deadline at 2050 but, in view of accelerating climate change and sea level rise, the earlier tourism is decarbonised the better. The language is changing from ?Climate Change? to ?The Climate Emergency? (Declaration by the Government of Spain in early 2021) and the

city of Valencia has the ambition to become a leading example of a carbon-neutral tourism destination, a process from which much can be learned.

The tourism and residential expansion investments, with their privatized beaches, target primarily the high-end tourists, but the Aqaba Marine Reserve also has 5 km of public beaches that are important for the quality of life of more modest users. Such social concerns are to be taken seriously, especially in view of the impacts of the Covid 19 pandemic on the economy and on tourism in particular.

Tourism is a sector that is very sensitive to, even ?minor?, shocks (a case of cholera in Mombasa, a bomb on a terrace in Mali can result in months or even years of stagnation). In Jordan, the COVID related decline in tourism caused a drop of 10 GDP points, fortunately buffered by the decline in oil prices (resulting in a 52% decline in import costs, or 5% of GDP). Thanks to the Government?s fiscal stimulus, the final decline in GDP was only 1.6% which is amazing in a country that locked down so strongly. The current upsurge in prices of fossil fuels should be a warning sign and increase the urge to transition quickly to a low GHG economy. In addition, in spite of the fact that - according to the IMF - the macro-economics of Jordan look relatively solid for recovery, the unemployment levels, especially of the youth (50% of young men, 75% of young women), could be a source of concern and favour the development of labour-intensive activities, e.g. awareness and education campaigns on GHGs and low-carbon tourism as explained under

# Component 1 Establish tourism carbon footprint system for the Aqaba Marine Protected Area and encourage tourism stakeholders to do the same.

The slowing of the pace of development related to the pandemic could be beneficial for the Aqaba Marine Reserve and offer opportunities for a different, greener, smaller-scale approach to tourism (?build back better?).

#### 2.3 The Aqaba Marine Reserve

The Gulf of Aqaba is home to the most northerly hard corals of the Western Indo-Pacific biogeographic region to which it belongs. The Red Sea (the Bab-al-Mandab threshold at its southern limit has a depth of only 137 m), is reletively isolated from the Indian Ocean leading to high levels of endemism. With 16,000 km? of coral cover, the Red Sea is extremely important for this high biodiversity habitat. Within the Red Sea, the Gulf of Aqaba, marked by a second threshold in the Strait of Tiran (-252m), is the area most isolated and the most divergent in its biota.

Red Sea endemism is particularly significant for Echinoderms (17%), Crustaceans (15%), Fish (14.7%) and Scleractinian corals (10%).

The Red Sea has some 1166 fish species (Bogorodsky & Randall 2019) of which the vast majority (1120) are shallow water species occurring at less than 200 m depth, and has the third highest rate of endemism globally (165 species, i.e. 14.7%) after Hawaii and Easter Island. A total of 507 species were recorded in Jordanian waters (Khazaf 2014), over 40% of the Red Sea total and most of the endemic species (22) restricted to the Gulf of Aqaba are closely associated with the coral reef habitat.

Fish assemblages in the Gulf of Aqaba, where coral reefs are dominant, differ substantially from those in the neighbouring Gulf of Suez (shallower and sandier) and the rest of the Red Sea, which is characterised by higher turbidity because of less steep drop-offs. Indeed, the Gulf of Aqaba, because of its rifting geology has mountains of around 1000 m around its edges and drops off to around 900 m depth (reaching around 1800 m in some places) over a very short distance, the maximum width of the Gulf of Aqaba being 24 km. So even during lowered Sea Levels in the Pleistocene (-135m), there was no possibility for the development of coral reef assemblies offshore. There is no continental shelf and thus the coral reefs are restricted to a very thin band, generally less than 300 m wide, along the predominantly rocky shorelines, a unique situation in comparison to other coral reef habitats globally that are often characterised by gentle slopes and reef flats of different ages related to changing sea levels. Thus the coral reefs of the Gulf of Aqaba are, in general, easily accessible from the coast and not protected from shore-based activities such as beach tourism.

Over 176 species of coral have been recorded in the Jordanian waters of the Gulf of Aqaba (Al-Tawaha et al 2019).

The coral reefs of the Gulf of Aqaba are thought to be sensitive to Climate Change as they occur in a semi-enclosed basin fed by surface water from the Red Sea resulting in a nutrient-poor, hypersaline sea (> 40 ppt, Ocean average 35 ppt) with little or no stratification, high transparency and low primary production in the water column. Water temperature and salinity are expected to increase with Global Warming and the thresholds for coral species survival and reproduction are not well known for the Red Sea species. So far, the reefs of the Gulf of Aqaba have resisted well to the increase in Sea Surface Temperature (SST) but data from elsewhere (Great Barrier Reef, Maldives, Galapagos, etc.) have shown a very strong correlation between coral bleaching, i.e. the loss of its primary producing algae, and SST.

Another important and sensitive, but rather less well documented habitat are the seagrass beds that are known to be vitally important nursery areas for many fish species. Dense seagrass beds exist in the Tala Bay area and generally occur in between sections of coral reef. They are sensitive to bottom disturbance such as anchoring of boats.

The importance of conserving these unique reefs, representing only around 0.01% of Red Sea coral cover but with exceptional levels of endemism, especially in its fish, which constitute the main attraction for the underwater tourism industry, can hardly be overemphasized.

The baseline scenario is a further increase of tourism pressures, pollution, fishing, physical harm to the coral reef from diving and snorkeling operations, etc. and a tourism sector unaware of the potential consequences of continuing increases in GHG emissions from the industry that will ultimately, on top of its global impacts, negatively affect the industry itself with loss of biodiversity (the attractor) and loss of investments (sea level rise).

The proposed alternative scenario, to be implemented with a range of stakeholders through support from the GEF and co-financing angencies, is summarized below:

# Component 1: Establish tourism carbon footprint system for Aqaba Marine Protected Area and encourage tourism stakeholders to do the same

Currently there are no standards for what constitutes ?green? tourism in in Aqaba. Many of the hotel operators have obtained Blue Flag and Green Key but these are voluntary, not verified ?eco-certifications?, based on declarations by the operators themselves and generally considered as a promotional rather than an effective footprint reduction tool.

The AMRMP 2022-2026 mentions the ambition to move from Blue Flag to benchmarked international standards for beaches. Tourists globally are becoming increasingly aware of Climate Change issues and especially of the GHG emissions linked to their travel. Setting high standards of effective GHG reductions can be an attractor, as is currently being touted by the city of Sevilla in Spain. This can be brought to the hospitality industry as an opportunity towards becoming a carbon-neutral destination, a much more engaging label.

The Aqaba Marine Reserve (AMR) is in a privileged position to provide leverage on this transition as a showcase for both domestic and foreign tourists. At the same time, by bringing on board the AMR stakeholders (dive operations, beach tourism, hotels) in a concerted effort to ?green? all their operations, and transport in particular. The lessons learned can feed into a transformational change within the Aqaba Special Economic Zone Authority (ASEZA) to mainstream a low-carbon approach to its Blue Economy operations and incorporate it in its guidelines for investments.

The ambition of the various stakeholders should be to achieve ISO 14060 family standards that provide clarity and consistency for quantifying, monitoring, reporting and validating or verifying GHG emissions and removals to support sustainable development through a low-carbon economy.

An **AMR low-carbon tourism stakeholder forum** could be created to facilitate the dialogue and discuss the necessary steps to achieve these standards. In parallel, the process can be the highlighted in the outreach programmes of the various stakeholders to raise tourist awareness on Aqaba?s ambition to -initially - become a low-carbon and ? ultimately - a carbon-neutral venue.

Beyond the Petra and Wadi Rum circuit, the expanding accommodation industry in Aqaba also opens opportunities for so called ?MICE tourism? (Meetings, Incentives, Conventions and Exhibitions) and

companies are increasingly required to justify the carbon footprint of these activities as part of their Corporate Social Responsibility Reporting.

The various stakeholders can also be encouraged to achieve ISO 18606 standards on organic recycling with composting that could also contribute to the development of organic vegetable and spice farms around Aqaba, reducing the need of bringing them in from further away (which adds to the GHG footprint). Such activities are labour-intensive and frequently female-dominated, improving the gender balance of the economy and resorbing part of the extremely high unemployment in young women (75%).

The ASEZA low-carbon tourism stakeholder forum (provisionally designated as the ?Low-C forum? but the participants could come up with their own name/acronym that could have a poetic force in Arabic) could provide technical advice to the stakeholders on how to package and promote its low-carbon messages at various places such as the Marine Life Gallery at the Marine Science Station (MSS) of the University of Jordan, Aqaba branch, the Aqaba Bird Observatory, the Aqaba Tourism Information Centre but also through promotional videos, with attractive underwater footage, to be shown in the waiting lounges of the King Hussein International Airport and on the aircraft flying into Aqaba themselves. This may also help to improve the GHG image of the air carriers themselves, a sensitive issue. The international tour operators can then also use these to promote Carbon-low and subsequently a carbon-neutral Aqaba at tourism fairs. Obviously, all this will have to be documented with verifiable carbon-accounting.

To widen the outreach to civil society, beach clean-up campaigns and, if required, submerged litter clean-up campaigns, can help to raise awareness on more general conservation issues but waste management in the tourism industry and individual tourism behaviour are also important communication targets. In order to also reach the next generations, schools could be a self-evident obvious beneficiary of such programmes and many countries have ?coral reef ecology? snorkelling initiation as part of their curriculum. In a country like Jordan, with a young demography, this approach can be particularly effective.

With regard to transport, on top of the introduction of electric High Occupancy Vehicles (HOVs) for transport from the hotels to and from the beaches, as well as from the dive centres to the landing points, bicycle tourism is to be encouraged. The hotels can install electric vehicle recharging stations and encourage electrical transport also to and from the airport. For the elderly, electric bicycles can easily be charged by off-grid solar PV. The creation of bicycle-only paths to and between the public beaches is an option. The width of the main roads could be halved to accommodate a two-way bicycle lane, the other half becoming a one-way road for southward-heading motorised traffic only. The northbound motorised transport can then be directed to a more easterly inland route. The electrification of the glass-bottom boats can be another important step. These initiatives by the Low-C forum could benefit from exploring synergies and collaboration with the GEF Global Programme to Support Countries with the Shift to Electric Mobility of which Jordan will be one of the beneficiaries.

Clearly, with regard to carbon, the crux of this electrification drive will be the way in which the electricity is being produced. As long as the electricity in Aqaba continues to be thermal, even as crude oil is being phased out and replaced by liquefied fossil gas, the GHG emissions from the tourism

industry will only be marginally reduced though, in principle, the recharge stations at the hotels HOVs, glass-bottom boats and bicycles could be charged directly from off-grid solar panels.

The low-C tourism forum would therefore ideally become a policy-influencing instrument that pleads for the gradual transition from fossil fuels to renewables in Aqaba, specifically to solar photovoltaics (PV). According to the International Renewable Energy Agency (www.irena.org), of which Jordan is a member, the cost of electricity from utility-scale solar photovoltaics (PV) fell by 85% between 2010 and 2020 and now stands at USD 0.057/kWh (2020). As a consequence, Solar PV generation globally increased by 22% (+131 TWh) in 2019 and the Southern deserts around Aqaba are the perfect location for such developments. The upfront installation costs are still substantial but quickly undercut thermal power generation costs, a strong incentive for the hotel industry for which electricity is a major operating cost.



#### 1. ?Measure to manage?:

Different approaches exist to establish the baseline GHG emissions by the tourism industry. This will be interesting for the stakeholders as it will offer insights for increased energy efficiency (and thus reduced costs) and is required to compare progress through the measures that will be agreed to be taken. The Low-C Forum could opt for the Greenhouse Gas Protocol Corporate Standard. This divides GHG emissions (converted into CO2 equivalents) into three scopes.

Scope 1: Covers direct GHG emissions from sources (mainly fossil fuels) operated by the company or organisation, in physical units (e.g. litres of petrol and lubricants). This should be relatively easy to establish from the accounting systems (fuel expenditures) of diving (including running the compressors) and glass-bottom boat operations as well as the transport of the tourists to and from the AMR. The IPCC provides guidelines on how to convert these into CO2 equivalents.

Scope 2: Covers the indirect emission of GHG from electricity purchases, especially for the hotels. Electricity consumption (e.g. in kilowatt-hours) is then converted into CO2 equivalents. Country-specific emission factors can be obtained from the International Energy Agency but for Jordan and Aqaba specifically this should be straightforward because of the overwhelming if not exclusive dependence on thermal power generation.

Scope 3: Covers all other indirect GHG emissions include transportation used by company employees (commuting), emissions from waste disposal, the extraction and production of purchased inputs other than electricity and the emissions due to the use of produced goods.

The hotels can be encouraged to take part in the Hotel Carbon Measurement Initiative (HCMI), freely available from **www.sustainablehospitalityalliance.org/hcmi** which brings together major hotel chains<sup>[1]</sup> and can be used by any accommodation provider. The data are entered in a simple excel database and the results are shared at the forum.

If the **Low-C forum** succeeds in creating interest in the ASEZA as a whole, this could follow the lead taken by the city of Sevilla that implements a digital carbon footprint management system, using smart tags that record the emissions of each organization (with the possibility of calculating the carbon footprint in real time). This provides input to the digital platform that verifies and manages the information?using blockchain technology, which recently received the Wakalua-UNWTO Innovation Award. This certified process will make it possible to verify?individually and in aggregate?the progress in the carbon footprint reduction, which can be communicated to users at any time.

At the level of the AMR, this analysis will provide the input for the selection of the priority carbonintensive activities to be transformed. Other stakeholders can propose similar interventions.

#### 2. Set the targets:

Once the results are shared, the stakeholders can set the next year?s targets for GHG emission reductions and discuss the means to achieve these, including policy recommendations to the appropriate bodies, e.g. the Ministry of Energy.

#### 3. Evaluate the accomplishments, disclose and plan for the next steps:

**In summary**, the Aqaba Marine Reserve cannot carry the much needed transition to a Low-C tourism industry in Aqaba on its shoulders but it can, in close collaboration with the ASEZA and the IUCN,

become a stalwart for the promotion of a strong reduction of GHG emissions from tourism, and potentially other activities, in Aqaba through a stakeholder forum supplied with information, methodologies and approaches and highlighting the potential of becoming a low-Carbon venue.

On its property, in concertation with the Low-C forum, it can select 2 pilot GHG emission reduction interventions, e.g. in the transport and waste management systems, from which the lessons learned can be widely shared.

Project Outcomes	Project Outputs		
1.1 GHG emissions, in CO2 equivalents of all tourism activities in the AMR are quantified and targets for reduction are set in accordance to ISO 14000 family standards	1.1.1 Aqaba Low-Carbon Tourism Stakeholder Forum established		
	1.1.2 Methodology for the calculation of Direct and Indirect GHG emissions agreed by stakeholders		
	1.1.3 Results of the GHG calculations are shared and discussed		
	1.1.4 Priority activities for GHG emission reductions in the AMR are identified and targets are set		
	1.1.5 Stakeholders are encouraged to apply the methodology to all their non-AMR activities		
	1.1.6 Annual meetings of GHG reduction evaluation and target setting are mainstreamed for stakeholder activities in the AMR		
1.2 Aqaba tourism stakeholders are aware of the potential for GHG emission calculations, have access to the methods and understand the benefits of GHG emission reductions to make Aqaba a low-	1.2.1 Methods for GHG calcultation are made available to a wide range of tourism stakeholders including those who not have direct activities within the AMR		
carbon venue	1.2.2 The potential of transformational change of the Carbon Footprint of tourism in Aqaba and of becoming a low-carbon venue is understood		

The Outcomes and Outputs of Component 1 are summarised in Table 1.

**Component 2 Strengthen management effectiveness and capabilities of Aqaba Marine Reserve** In 1997, the Aqaba Special Economic Zone Authority (ASEZA) established the Aqaba Marine Park (AMP). Its boundaries fall within the southern parts of the Jordanian coastline. In 2000, the Aqaba Marine Park By-Law No. 22 (2001) was issued. The establishment of the AMP was important in order to conserve the marine biodiversity resources of Aqaba. The AMP area is 2.8Km2 and it supports the conservation of around 3% of the Jordanian Territorial water. In June 3rd, 2020, His Majesty King Abdulla II gave his directive to declare the AMP as a national Marine Reserve AMR. Based on this, ASEZA has initiated the process to declare the site (following generous support from the United Nations Development Program (UNDP)), and the process was conducted under the supervision from the Royal Hashemite Court, the Ministry of Environment (MoE) and steering committee members and the process was started through an official decision (made by the Board of Commissioners No. 38 (2020)) to declare the AMR. This process was ended with an official declaration of the AMR in December 2020 by the cabinet of Jordan.

The AMR is a young institution that lacks both human resources and equipment to effectively perform its role as the custodian of the exceptional biodiversity of its domain. The needs are detailed in the comprehensive Aqaba Marine Reserve Management Plan (AMRMP 2022-2026), as are the research needs, the indicators for the monitoring programme, etc. Especially on weekends, the AMR is overwhelmed by visitors who are largely unaware of the sensitivity and frailty of the coral and the seagrass and of the impacts of litter on marine ecosystems. The GEF grant can contribute to provide

inputs to kick-start the implementation of the AMRMP 2022-2026 by building capacity and providing equipment.

Al-Tawaha et al. (2019), found that the central part of the MPR, especially to the South of the headland around King Abdullah Reef and Yamaniya beach, is seriously impacted by fishing, diving, snorkelling, swimming and trash. Pointing out the situation to a meeting of all key stakeholders and jointly thinking about measures that should and can be taken, as well as evaluating these (cost-benefit analysis, who wins, who loses, what are the risks of simply moving the pressures to other places, temporary closures, etc.) seems to be a necessity. Coral mortality may not be pronounced (yet) but surely this state reduces resilience to other stressors that can mostly be expected to increase (e.g. SST, salinity).

A post-COVID lockdown, pre-tourism recovery survey of the key sites replicating the JREDS methodology (Al-Tawaha et al. 2019) could yield a very interesting comparison to see how the reefs have reacted to reduced pressure and what the impacts could be of, e.g. rotational closing of certain sections of the MPA or restricting the number of boats that can operate there at any one time.

Fishing activities in particular seem to be poorly regulated in the Gulf of Aqaba as a whole and a specific meeting with these stakeholders, if they are tractable also seems to be important. Measures can be quite simple, respecting distance to shore, rules on anchoring, banning certain gears, getting an agreement on a rotational calendar of fish cages implemented by a fishing stakeholder association (voluntarily created or imposed) by the ASEZA. Impacts can then be evaluated and intensification (or relaxation) of measures proposed. The southern areas of the park, just north of the Tala Bay resort seem to be the most heavily affected. If fishing is to be allowed to continue in the AMR waters, some form of fishing licensing seems inevitable with unlicensed boats denied access. This can incentivise the stakeholders to organise themselves and take responsibility.

The METT (Management Effectiveness Tracking Tool) methodology is a rapid assessment based on a scorecard questionnaire. The scorecard includes all six elements of management identified in the IUCN-WCPA. Framework (context, planning, inputs, process, outputs and outcomes), with an emphasis on context, planning, inputs and processes. Basic and simple to use it provides a mechanism for monitoring progress towards more effective management over time. It is used to enable park managers and donors to identify needs, constraints and priority actions to improve the effectiveness of protected area management and has become a standard tool for the assessment of project activities by the GEF.

The Management effectiveness is one of four components of the IUCN's Green List Standard which aims to identify quality of protected areas performance in terms of achieving successful conservation outcomes. IUCN launched the IUCN Green List initiative to encourage, achieve, and promote effective, equitable and successful protected areas in all partner countries and jurisdictions. The objective of the global IUCN Green List Standard is to: provide a global benchmark for protected and conserved areas to assess whether they are achieving successful conservation outcomes through effective and equitable governance and management. The IUCN Green List Standard includes globally consistent Components and Criteria, which are supported by indicators, to measure site performance. The project will mainstream the Green List standard in the AMR operational programmes and management plan in order to achieve the Green Listing criteria on the longer term. Figure (2) shows the four components underwhich the IUCN Green List criteria are grouped.

<sup>111</sup> Accor, Beijing Tourism Group, Carlson Rezidor Hotel Group, Diamond Resorts International, Fairmont Hotels and Resorts, Hilton Worldwide, Hong Kong & Shanghai Hotels, Hyatt Corporation, InterContinental Hotels Group, Jumeirah Group, Mandarin Oriental Hotel Group, Marriott International Inc, Meli? Hotels International, MGM Resorts International, NH Hoteles, Orient-Express Hotels Ltd, Pan Pacific Hotel Group, Premier Inn - Whitbread Group, Starwood Hotels & Resorts Worldwide, Inc., Shangri-La Hotels and Resorts, The Red Carnation Hotel Collection, TUI AG, Wyndham Worldwide.

Good Governance	Sound Design and Planning	Effective Management	Successful Conservation Outcomes
<ol> <li>1.1 Guarantee Legitimacy and Voice</li> <li>1.2 Achieve Transparency and Accountability</li> <li>1.3 Enable Governance Vitality and Capacity to Respond Adaptively</li> </ol>	<ul> <li>2.1 Identify and Understand Major Site Values</li> <li>2.2 Design for Long-Term Conservation of Major Site Values</li> <li>2.3 Understand Threats and Challenges to Major Site Values</li> <li>2.4 Understand Social and Economic Context</li> </ul>	<ul> <li>3.1 Develop and Implement a Long Term Management Strategy</li> <li>3.2 Manage Ecological Condition</li> <li>3.3 Manage Within Social and Economic Context of the Area</li> <li>3.4 Manage Threats</li> <li>3.5 Effectively and Fairly Enforce Laws and Regulations</li> <li>3.6 Manage Access, Resources Use and Visitation</li> <li>3.7 Measure Success</li> </ul>	<ul> <li>4.1 Demonstrate Conservation of Major Natural Values</li> <li>4.2 Demonstrate Conservation of Major Associated Ecosystem Services</li> <li>4.3 Demonstrate Conservation of Cultural Values</li> </ul>

Figure (2): The four componets of the IUCN Green List

The Outcomes and Outputs of Component 2 are summarised in Table 2.

Project Outcomes	Project Outputs
2.1 AMR has the human resources, equipment and funding to fulfill its role as the custodian of the exceptional biodiversity values and consolidates the sustainable service delivery of its ecosystems, including tourism	2.1.1 The METT is adapted, applied to the AMR and is mainstreamed into the cycle of Management Plan revision
	2.1.2 The IUCN Green List standard is mainstreamed in AMR operational and management plans and communincated with stakeholders
	2.1.3 AMR stakeholder forum is established and identifies barriers to achieving Green List Standards including effective Management Plan Implementation, and the potential of creating of a buffer zone to better manage tourism pressure

	2.1.4 AMR staff have adequate capacity and equipment to effectively implement the 2022-2026 management plan including surveillance and monitoring
	2.2.5 productive partnerships with national and international institutions are developed in view of achieving World Heritage Listing
	2.2.6 sustainable financial mechanisms and resource mobilization options are established and implemented

# Component 3: Two types of operations including potential Nature-based solutions within the AMR are decarbonized to ISO 14060 family level

The Low-C forum established under component 1 has calculated the GHG emissions in CO2 equivalents of all the stakeholder activities within the AMR: diving, snorkelling, glass-bottom boats tours including transport to and from the beaches, the dive sites and the landing points.

These calculations will show which activities are most carbon-intensive and whose decarbonisation to ISO 14060 ISO family level would have the largest impacts and what would be the costs of implementation. From this 2 types of operations are selected for implementation with support through the GEF.

It should be noted that not all stakeholders were consulted for the PIF and that more activities may be included during the PGP.

Nature based solutions NBS have been recently recognised as one of the IUCN tools to address societal challenges for climate change. Nature-based Solutions are defined as actions to protect, sustainably manage and restore natural and modified ecosystems in ways that addresses societal challenges effectively and adaptively, to provide both human well-being and biodiversity benefits? (IUCN, 2016). The fundamentals of NbS are derived from established practices such as forest landscape restoration FLR, integrated water resource management, ecosystem-based adaptation and mitigation, and ecosystem-based disaster risk reduction. IUCN developed a Global Standard on Nature-based Solutions which aims to ensure the application of this approach is credible, and its uptake tracked and measured for adaptive management so that its contributions can inspire others. Figure (3) shows the eight criteria that make up the NBS standard. This component will aim to test the application of the NBS standard on the carbon intensive activities for the identification of potential applicable NBS in and around AMR.



Fig (3): The eight criteria that make up the Global Standard for Nature Based solutions

The Outcomes and Outputs of Component 2 are summarised in Table 3.		
Project Outcomes	Project Outputs	
3.1 two types of operations (potentially Nature based solutions) within the AMR are decarbonized to ISO 14060 family level	3.1.1 Potential nature based solutions studied and NBS criteria applied and tested	
	3.1.1 the 2 priority carbon-intensive activities including potential NBS identified under 1.1.4 are implemented	
	3.1.2 GHG emission results are evaluated and shared	
	3.1.3 a second set of AMR activities is identified and decarbonisation targets are set	

1.1 2 . .

**1b. Project Map and Coordinates** 

Please provide geo-referenced information and map where the project interventions will take place.



2. Stakeholders

Select the stakeholders that have participated in consultations during the project identification phase:

**Indigenous Peoples and Local Communities** 

**Civil Society Organizations** Yes

Private Sector Entities Yes

If none of the above, please explain why:

In addition, provide indicative information on how stakeholders, including civil society and indigenous peoples, will be engaged in the project preparation, and their respective roles and means of engagement

3. Gender Equality and Women's Empowerment

Briefly include below any gender dimensions relevant to the project, and any plans to address gender in project design (e.g. gender analysis).

Does the project expect to include any gender-responsive measures to address gender gaps or promote gender equality and women empowerment? TBD

closing gender gaps in access to and control over natural resources;

improving women's participation and decision-making; and/or

generating socio-economic benefits or services for women. Yes

Will the project?s results framework or logical framework include gender-sensitive indicators?

TBD 4. Private sector engagement

Will there be private sector engagement in the project?

Yes

Please briefly explain the rationale behind your answer.

Most of the developments supervised by the ASEZA, the Aqaba Special Economic Zone Authority, have been through Public Private Partnerships. All tourism stakeholders, the hotels, dive and snorkeling operations, the trasnport sector, etc. to be involved in the GEF project are private operators. **5. Risks to Achieving Project Objectives** 

Indicate risks, including climate change, potential social and environmental risks that might prevent the Project objectives from being achieved, and, if possible, propose measures that address these risks to be further developed during the Project design (table format acceptable)

Identified Risk Risk		Mitigation Measures	
	Assessment		
Government resources (e.g.	Medium	The project will aim to have a participatory	
counterpart staff) and cofinancing		approach starting from the project preparation	
contributions are not forthcoming in		phase. The co-financing will be discussed during	
a timely manner		the project document development during the PPG	

Change in leadership in relevant governmental bodies could cause delay in implementation of the project activities	Low	The establishment will involve the establishmed of a Project Steering Committee (PSC) which we ensure that the policy agreements reached duri the Inception Phase remain in place. Prelimina TOR for the PSC will be drafted during the PPG	
Failure of government partners to resolve the conflicts between stakeholders	Low	All relevant stakeholders will be involved from the start to create ownership and strengthen commitment to proposed changes and reforms. The PSC will also play an important role in high level coordination and political support to the project	

## 6. Coordination

# Outline the institutional structure of the project including monitoring and evaluation coordination at the project level. Describe possible coordination with other relevant GEF-financed projects and other initiatives.

The project will be implemented and executed by IUCN through its regional office for West Asia IUCN ROWA.It will be managed under the Protected Areas and Biodiversity porogramme portfolio following all IUCN?s well established internal policies guidelines and procedures. IUCN has internal monitoring and evaluation procedure from the project proposal development phase. IUCN?s Project portal allows for tracking and monitoring projects against predefined indicators derived from IUCN?s programme and the Sustainable Development Goals.

The project will coordinate with an important complementary project funded by the European Union which is called The Mediterranean Forum For Applied Ecosystem-Based Management MED4EBM. The project contributes by assisting ICZM actors in four coastal areas of Jordan, Italy, Lebanon and Tunisia to jointly develop and apply a common methodology to make ecosystem-based ICZM much easier to design and implement by applying innovative techniques and methods. A software tool is developed to help institutional actors to better handle the complex multi-stakeholders analytical processes that characterize EBM applications and assess the relationships between ecosystem components, functions and services, as well as the associated human activities. Moreover, the project will provide government officials and managers with the necessary tools, skills and competences to develop and implement ecosystem approaches to the management of activities in the marine and coastal environments.

7. Consistency with National Priorities

Is the Project consistent with the National Strategies and plans or reports and assessments under relevant conventions?

# Yes

If yes, which ones and how: NAPAs, NAPs, ASGM NAPs, MIAs, NBSAPs, NCs, TNAs, NCSAs, NIPs, PRSPs, NPFE, BURs, INDCs, etc

- National Bio Strategy Action Plan (NBSAP)

- CBD National Report

- Cartagena Protocol National Report
- Nagoya Protocol National Report
- UNFCCC National Communications (NC)
- UNFCCC Biennial Update Report (BUR)
- UNFCCC National Determined Contribution
- UNFCCC Technology Needs Assessment
- UNCCD Reporting
- ASGM National Action Plan (ASGM NAP)
- Minamata Initial Assessment (MIA)
- Stockholm National Implementation Plan (NIP)
- Stockholm National Implementation Plan Update
- National Adaptation Programme of Action Update
- Others
- 8. Knowledge Management

Outline the knowledge management approach for the Project, including, if any, plans for the Project to learn from other relevant Projects and initiatives, to assess and document in a user-friendly form, and share these experiences and expertise with relevant stakeholders.

Capturing and sharing knowledge and lessons learned will constitute an important element of the project and an essential way to ensure sustainability and replicability of project achievements. The project will identify important best practices and lessons learned that can be of value to all key stakeholders, specifically national decision makers as well as important development actors in the country. These best practices and lessons learned will be documented; the project team will prepare guidelines for facilitating the wider replication and ?up-scaling? of results from the project; The project will utilize IUCN?s library and knowledge management platform as it provides a reputable and widely accessible publication platform.

# 9. Environmental and Social Safeguard (ESS) Risks

Provide information on the identified environmental and social risks and potential impacts associated with the project/program based on your organization's ESS systems and procedures

Overall Project/Program Risk Classification\*

PIF	CEO Endorsement/Approva I	MTR	ТЕ
Not available at this stage			

# Measures to address identified risks and impacts

Provide preliminary information on the types and levels of risk classifications/ratings of any identified environmental and social risks and potential impacts associated with the project (considering the GEF ESS Minimum Standards) and describe measures to address these risks during the project design.

# Supporting Documents

Upload available ESS supporting documents.

Title

Submitted

# Part III: Approval/Endorsement By GEF Operational Focal Point(S) And GEF Agency(ies)

Name	Position	Ministry	Date
Marwan Al	Secretary general GEF	Ministry of Planning and International	3/8/2021
Refai	OFP	Cooperation	

# A. RECORD OF ENDORSEMENT OF GEF OPERATIONAL FOCAL POINT (S) ON BEHALF OF THE GOVERNMENT(S): (Please attach the Operational Focal Point endorsement letter with this template).

ANNEX A: Project Map and Geographic Coordinates

Please provide geo-referenced information and map where the project intervention takes place