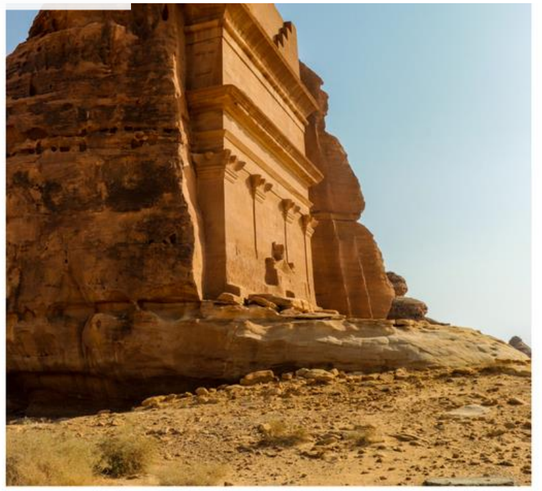
IUCN International Union for Conservation of Nature

IUCN ROWA's work in biodiversity conservation for climate resilience in West Asia



Natalia Boulad
Protected Areas, World Heritage & Biodiversity Programme Manager

WEST ASIA REGION HIGHLIGHTS

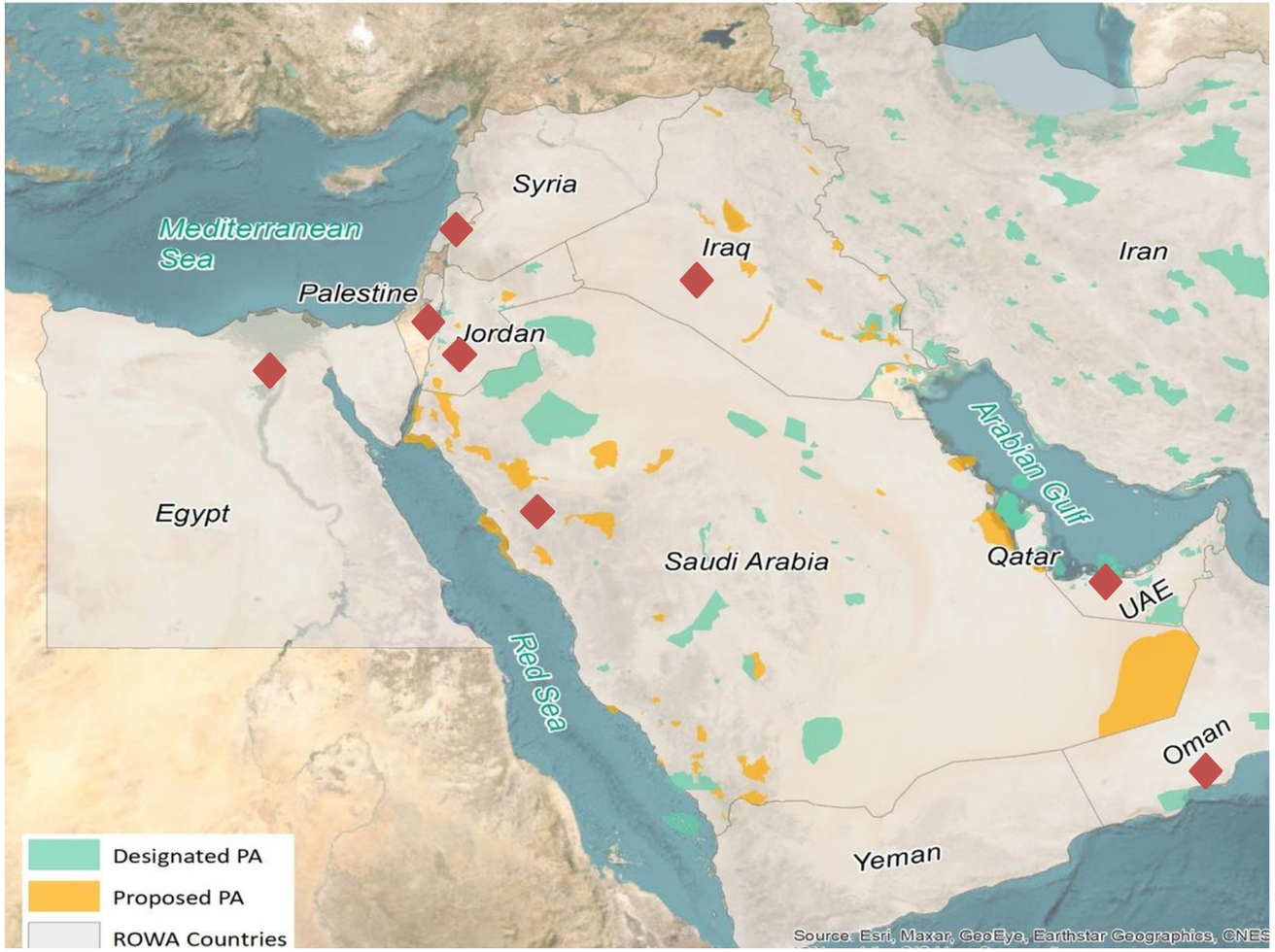
Protected Areas

564 designated Protected Areas (PAs)

5 Natural or mixed World Heritage sites

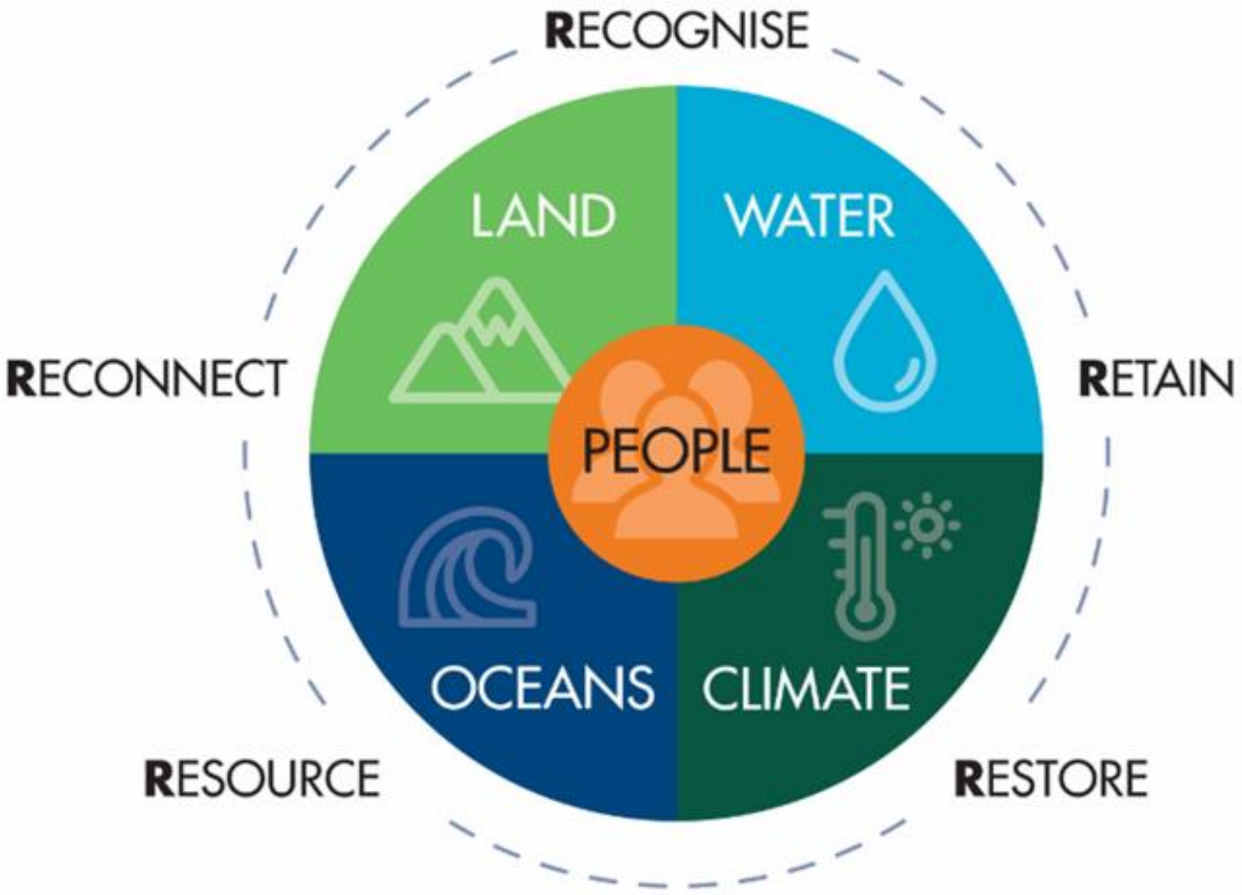
6 Green listed sites (Arab Asian countries) & Egypt

Management effectiveness weak or not assessed



ROWA PROGRAMS & THEMATIC AREAS

Aligning regional needs with Global Agenda



- **Biodiversity, World Heritage & Protected Areas**
- **Drylands, Livelihoods & Gender**
- **Water & Climate Change**
- **Marine and Coastal Ecosystems**

PROTECTED AREA, WORLD HERITAGE & BIODIVERSITY PROGRAMME

OUR PARTNERS

The Protected Areas programme helps to conserve key elements of biodiversity, plays a significant role in social and economic development, and embodies many practical approaches to participatory and collaborative management.

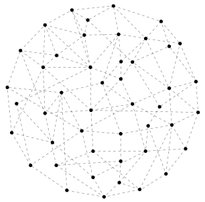
Number of projects (2023): 4 ongoing, 3 in the pipeline

Portfolio: 12.7 M USD (Additional 9 M in the pipeline)

Partners and donors: Government, International Agencies and Private Sector

CURRENT INITIATIVES WITH POTENTIAL FUTURE DEVELOPMENT

IUCN's Projects on Biodiversity for Climate Resiliencies The Arab Region



Introducing Systematic conservation planning for climate resilient designs and better connectivity (Jordan, KSA, Palestine, Iraq)

Enhancing management effectiveness of protected and conserved areas (Egypt, KSA)

Identification of terrestrial and marine key biodiversity, and including the within PCA systems (UAE)

Documentation of biodiversity and building Data bases in (Kuwait, KSA)

Introducing Nature Based Solutions for Biodiversity and climate change in (Jordan and Egypt)

Capacity Building for mainstreaming climate and biodiversity (Kuwait, Egypt, Jordan, Iraq, Lebanon, Palestine, UAE, KSA)

Restoration of forests and rangelands (Jordan, Egypt and KSA)

Alignment of PCA management Plans with the Green List Standard (monitoring and planning for climate change) (Iraq, KSA, Jordan, Lebanon and Egypt)

IUCN's Projects on Biodiversity for Climate Resiliencies The Arab Region

Introducing Systematic conservation planning for climate resilient design and better connectivity

UAE KBA's updated using the Global KBA Standard for the first time in the region

Publishing the State of Biodiversity of Kuwait

Publishing the National Red List of Mammals for Jordan

Review and update of the PAs network in Palestine (Endorsed by the Prime Ministry)

Review and update of the PAs network in Iraq

Review and update of the PAs network with the integration of Climate Change (Jordan - ongoing)

Identification of PA management categories (7 PAs including KSRNR)

SPECIAL ACHIEVEMENTS

IUCN Green List Gap Assessment IBEX tool implemented in AlUla, KSA

UAE KBA’s updated using the Global KBA Standard for the first time in the region

Publishing the State of Biodiversity of Kuwait

Publishing the National Red List of Mammals for Jordan

Review and update of the PAs network in Palestine (Endorsed by the Prime Ministry)

Review and update of the PAs network in Iraq

Review and update of the PAs network with the integration of Climate Change (Jordan - ongoing)

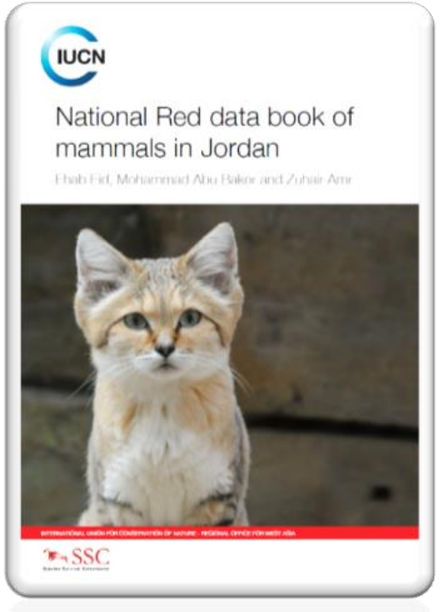
Identification of PA management categories (7 PAs including KSRNR)

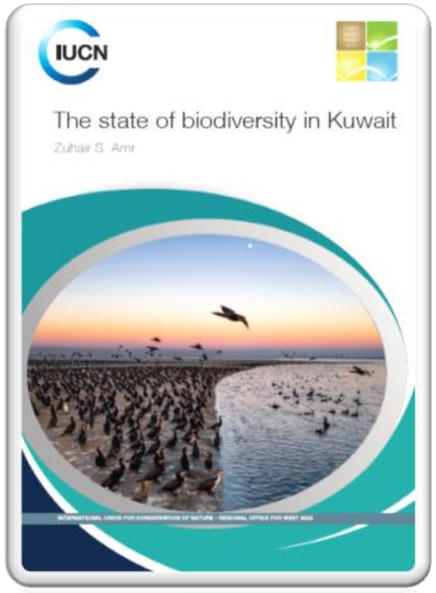
SPECIAL ACHIEVEMENTS

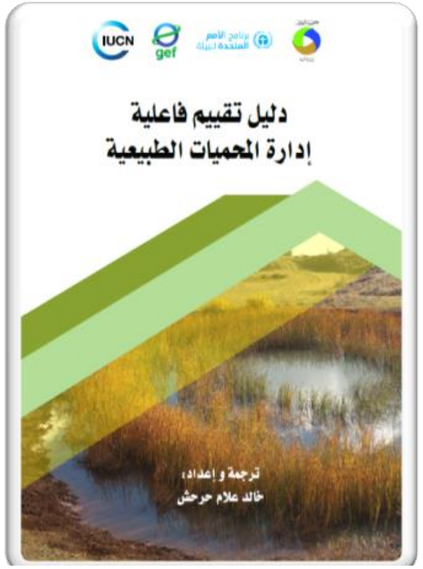
Management Plans (11 PAs)

METT Assessment (4 PAs)

Guidelines and Publications







Resources on Biodiversity and Climate Change

International Union for Conservation of Nature

ISSUES BRIEF

DECEMBER 2019

SPECIES AND CLIMATE CHANGE

- The ~1°C rise in mean global temperature is causing **serious and often unexpected impacts on species,** affecting their abundance, genetic composition, behaviour and survival.
- Species declines **threaten the services that nature provides to people**, which include functioning as carbon sinks and increasing our resilience to climate change.
- **Environmental policies aimed at reducing CO2 emissions are essential** for reducing the impact of climate change on species.
- **Prioritising nature conservation and embracing strategies to promote climate change adaptation** can enhance species survival.
- **Tools are available to support species conservation under climate change**, including the IUCN Red List, the IUCN SSC Guidelines for Assessing Species' Vulnerability to Climate Change, and the Integrated Biodiversity Assessment Tool.

What is the issue?

Mean global temperatures have risen ~1°C since pre-industrial times as a result of human activities. In addition to increasing global temperatures, the impacts of climate change include extreme weather events such as drought, hurricanes and rising sea levels.

Global mean temperature over time since 1880 (NASA, 2017)

Species are already being impacted by anthropogenic climate change, and its rapid onset is limiting the ability of many species to adapt to their environments. Climate change currently affects at least 10,967 species on the IUCN Red List of Threatened Species™, increasing the likelihood of their extinction. The Bramble Cay melomys (*Melomys rubicola*) is the first mammal reported to have gone extinct as a direct result of climate change. Previously found only on the island of Bramble Cay in Great Barrier Reef, its habitat was destroyed by rising sea levels.

Corals form one of the most biodiverse ecosystems, yet they are among the most rapidly declining species groups due to mass bleaching, disease and die-offs caused by rising ocean temperatures, as well ocean acidification. Meeting the Paris Agreement's target of less than 2°C rise in global temperatures is essential for the survival of coral reefs.

In addition to increased rates of disease and degraded habitats, climate change is also causing changes in species themselves, which threaten their survival. Rising temperatures have led to **ecological changes** including the migration of Chinook salmon (*Oncorhynchus tshawytscha*) to Arctic rivers, while **behavioural changes** in species include earlier breeding times for North American tree swallows (*Tachycineta bicolor*). Climate change is also causing significant **physiological changes**. Warmer temperatures during egg incubation are causing imbalanced female to male sex ratios among Endangered green sea turtles (*Chelonia mydas*), with females accounting for 99% of newly hatched turtles on some nesting beaches. **Genetic changes** attributed to climate change include hybridisation – interbreeding as species' habitats change – affecting species such as the common toad (*Bufo bufo*) and green toad (*Bufotes balearicus*) in southern Italy.

Why is this important?

In addition to their intrinsic value, species play essential roles in ecosystems, which in turn provide vital services to humans. Climate change interacts with threats such as habitat loss and overharvesting to further exacerbate species declines. The decline of species and ecosystems can then accelerate climate change, creating a feedback loop that further exacerbates the situation.

Altered food chains

The effects of climate change on even the smallest species can threaten ecosystems and other species across the food chain. For example, increased sea-ice melt and ocean acidification in the Arctic Ocean is reducing krill populations, threatening the survival of whales, penguins and seals that depend on krill as a primary food source. Because species lowest in the food chain are often among the first impacted by

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International Union for Conservation of Nature

ISSUES BRIEF

FEBRUARY 2021

FORESTS AND CLIMATE CHANGE

- **Forests help stabilise the climate.** They regulate ecosystems, protect biodiversity, play an integral part in the carbon cycle, support livelihoods, and can help drive sustainable growth.
- To maximise the climate benefits of forests, we must **keep more** forest landscapes intact, **manage them more sustainably**, and **restore more** of those landscapes which we have lost.
- Halting the loss and degradation of natural systems and promoting their restoration have the **potential to contribute over one-third of the total climate change mitigation** scientists say is required by 2030.
- **Restoring 350 million hectares** of degraded land in line with the Bonn Challenge could sequester up to **1.7 gigatonnes of carbon dioxide equivalent annually.**

What is the issue?

Forests are a stabilising force for the climate. They regulate ecosystems, protect biodiversity, play an integral part in the carbon cycle, support livelihoods, and supply goods and services that can drive sustainable growth.

Forests' role in climate change is two-fold. They act as both a cause and a solution for greenhouse gas emissions. Around 25% of global emissions come from the land sector, the second largest source of greenhouse gas emissions after the energy sector. About half of these (5-10 GtCO$_2$e annually) comes from deforestation and forest degradation.

Forests are also one of the most important solutions to addressing the effects of climate change. Approximately 2.6 billion tonnes of carbon dioxide, one-third of the CO_2 released from burning fossil fuels, is absorbed by forests every year. Estimates show that nearly two billion hectares of degraded land across the world – an area the size of South America – offer opportunities for restoration. Increasing and maintaining forests is therefore an essential solution to climate change.

Why is this important?

Halting the loss and degradation of forest ecosystems and promoting their restoration have the potential to contribute over one-third of the total climate change mitigation that scientists say is required by 2030 to meet the objectives of the Paris Agreement.

Other benefits in support of both people and nature are considerable:

- Globally, **1.6 billion people** (nearly 25% of the world's population) rely on forests for their livelihoods, many of whom are the world's poorest.
- Forests provide **US$ 75–100 billion per year in goods and services** such as clean water and healthy soils.
- Forests are home to **80% of the world's terrestrial biodiversity**.

Mount Elgon, Uganda © Barbara Bomfim / IUCN

What can be done?

IUCN's forest work tackles the role of trees and forests in building resilience to climate change in several ways:

- **Combatting deforestation and forest degradation** in areas of high biodiversity and cultural significance, such as primary forests and World Heritage sites. This helps conserve the benefits that people and societies get from forests, including forest carbon stocks and livelihoods.
- **Restoring forest landscapes** helps enhance climate change mitigation and adaptation. As the co-founder and Secretariat of the Bonn Challenge – a global

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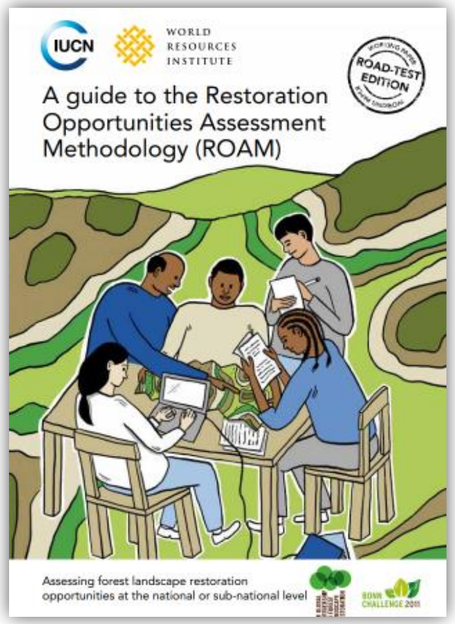

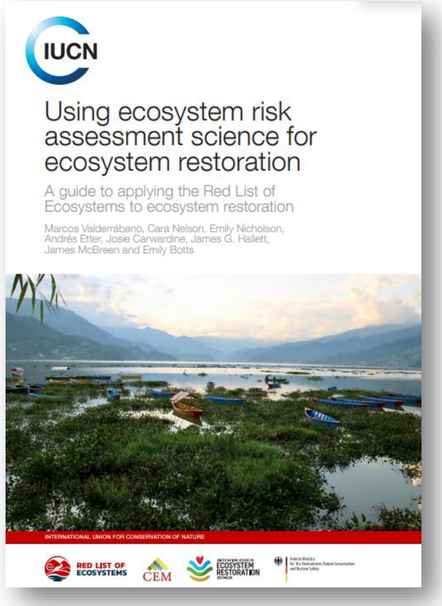

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Thank you

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