



Convention on
Biological Diversity



Aichi Biodiversity Target 11 Country Dossier: IRAQ

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GLOSSARY

AZEs	Alliance for Zero Extinction sites
CEPF	Critical Ecosystem Partnership Fund
EBSA	Ecologically or Biologically Significant Marine Area
EEZ	Exclusive Economic Zone
GCF	Green Climate Fund
GD-PAME	Global Database on Protected Area Management Effectiveness
GEF	Global Environment Facility
IBA	Important Bird and Biodiversity Area
ICCAs	Indigenous and Community Conserved Area Area (may also be referred to as territories and areas conserved by Indigenous peoples and local communities or “territories of life”)
IPLC	Indigenous Peoples and Local Communities
KBA	Key Biodiversity Area
MEOW	Marine Ecosystems of the World
MPA	Marine Protected Area
NBSAP	National Biodiversity Strategy and Action Plan
OECD	Other Effective Area-Based Conservation Measures
PA	Protected Area
PAME	Protected Area Management Effectiveness
PPA	Privately Protected Area
PPOW	Pelagic Provinces of the World
ProtConn	Protected Connected land indicator
SOC	Soil Organic Carbon
TEOW	Terrestrial Ecosystems of the World
WDPA	World Database on Protected Areas
WD-OECD	World Database on Other Effective Area-Based Conservation Measures

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Disclaimer

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This country dossier is compiled by the UNDP and SCBD from publicly available information. It is prepared, within the overall work of the Global Partnership on Aichi Biodiversity Target 11, for the purpose of attracting the attention of the Party concerned and other national stakeholders to facilitate the verification, correcting, and updating of country data. The statistics might differ from those reported officially by the country due to differences in methodologies and datasets used to assess protected area coverage and differences in the base maps used to measure terrestrial and marine area of a country or territory. Furthermore, the suggestions from the UNDP and SCBD are based on analyses of global datasets, which may not necessarily be representative of national policy or criteria used at the national level. The analyses are also subject to the limits inherent in global indicators (precision, reliability, underlying assumptions, etc.). Therefore, they provide useful information but cannot replace analyses at a national level nor constitute a future benchmark for national policy or decision-making.

The preparation of this dossier was generously supported by: the Government of the Federal Republic of Germany, *Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH*; the European Commission; the Government of the United Kingdom of Great Britain and Northern Ireland; and the Government of Japan (Japan Biodiversity Fund). The dossier does not necessarily reflect their views.

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EXECUTIVE SUMMARY

This document provides information on the coverage of protected areas (PAs) and other effective area-based conservation measures (OECMs), as currently reported in global databases (the World Database on Protected Areas ([WDPA](#)) and World Database on Other Effective Area-Based Conservation Measures ([WD-OECM](#))). It also includes details on the status of the other qualifying elements of Aichi Biodiversity Target 11 based on this data. These statistics might differ from those reported officially by countries due to difference in methodologies and datasets used to assess protected area coverage, differences in the base maps used to measure terrestrial and marine area of a country or territory, or if global datasets differ from the criteria and indicators used at the national level. Where available, data from national statistics for the elements of Target 11 are included alongside records from these global databases. This dossier also provides a summary of commitments made under Aichi Biodiversity Target 11, and a summary of potential opportunities regarding elements of the target for future planning.

The dossier has been developed in consultation with the UN Environment Programme World Conservation Monitoring Centre (UNEP-WCMC), which manages the WDPA, WD-OECM and Global Database on Protected Area Management Effectiveness ([GD-PAME](#)). Parties to the CBD are requested to contact protectedareas@unep-wcmc.org with any updates to the information in these databases.

Aichi Biodiversity Target 11 Elements: Current status and opportunities for action

Coverage - Terrestrial & Marine

- **Status:** as of May 2021, terrestrial coverage in Iraq is 6,713.7 km² (1.53%) and marine coverage is 0.0 km² (0.0%).
- **Opportunities for action:** opportunities for the near-term include updating the WDPA with any unreported PAs, and the recognizing and reporting OECMs to the WD-OECM. In the future, focus on relatively intact areas, while addressing the elements in the following sections, could be considered when planning new PAs or OECMs.

Ecological Representativeness— Terrestrial & Marine

- **Status:** Iraq contains 9 terrestrial ecoregions, 1 marine ecoregion, and 0 pelagic provinces: the mean protected coverage by reported PAs and OECMs is 3.0% (terrestrial), and 0.0% (marine); 5 terrestrial ecoregions and 1 marine ecoregion have no coverage by reported PAs and OECMs (1 other terrestrial ecoregion has <0.01% cover). Iraq also has 3 freshwater ecoregions (PA coverage has not yet been assessed).
- **Opportunities for action:** there is opportunity for Iraq to increase protection in terrestrial and marine ecoregions and pelagic provinces that have lower levels of



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coverage by PAs or OECMs. Ecoregions which currently have no coverage by PAs or OECMs are key areas for action.

Areas Important for Biodiversity

- **Status:** Iraq has 82 Key Biodiversity Areas (KBAs) recognized nationally [though only 74 included in the current global database]: the mean protected coverage of KBAs by reported PAs and OECMs is 6.0%, while 65 KBAs have no coverage by reported PAs and OECMs.
- **Opportunities for action:** there is opportunity for Iraq to increase protection of KBAs that have lower levels of coverage by PAs and OECMs; priority could be given to those with no current coverage.

Areas Important for Ecosystem Services

- **Status:** coverage of areas important for ecosystem services: In Iraq, 5.8% of aboveground biomass carbon, 3.2% of belowground biomass carbon, 2.2% of soil organic carbon, 0.0% of carbon stored in marine sediments is covered by PAs and OECMs.
- **Opportunities for action:** for carbon, there is opportunity for Iraq to increase PA and OECM coverage in both marine and terrestrial areas with high carbon stocks. Protecting areas with high carbon stocks secures the benefits of carbon sequestration in the area.
- For water, there is opportunity to increase the area of the water catchment under protection by PAs and OECMs, or in cases where there is high levels of protection, focus on effective management for these areas. Protecting the current area of forested land and potentially reforesting would have benefits for improving water security.

Connectivity and Integration

- **Status:** coverage of protected-connected lands is 1.1%.
- **Opportunities for action:** there is opportunity for a general increase of PA and/or OECM cover and to focus on PA and OECM management for enhancing and maintaining connectivity. Improving connectivity increases the effectiveness of PAs and OECMs and reduces the impacts of fragmentation.
- As well, a range of suggested steps for enhancing and supporting integration are included in the voluntary guidance on the integration of PAs and OECMs into the wider land- and seascapes and mainstreaming across sectors to contribute, inter alia, to the SDGs (Annex I of COP Decision 14/8).

Governance Diversity

- **Status:** governance type is not reported for any of the sites in Iraq currently reported in the WDPA.



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- **Opportunities for action:** increase efforts to identify the governance types for the 100.0% of sites that do not have their governance type reported. If applicable, explore opportunities for governance types that have lower representation
- There is also opportunity for Iraq to complete governance and equity assessments, to establish baselines and identify relevant actions for improvement. As well, a range of suggested actions are included in the voluntary guidance on effective governance models for management of protected areas, including equity (Annex II of COP Decision 14/8).

Protected Area Management Effectiveness

- **Status:** 20.5% of terrestrial PAs and 0.0% of marine PAs have completed Protected Area Management Effectiveness (PAME) assessments reported.
- **Opportunities for action:** the 60% target for completed management effectiveness assessments (per COP Decision X/31) **has not** been met for terrestrial PAs and **has not** been met for marine PAs. Therefore, there is opportunity to increase protected area management effectiveness (PAME) evaluations for both terrestrial and marine PAs to achieve the target.
- There is also opportunity to implement the results of completed PAME evaluations, to improve the quality of management for existing PAs and OECMs (e.g. through adaptive management and information sharing, increasing the number of sites reporting 'sound management') and to increase reporting of biodiversity outcomes in PAs and OECMs.



INTRODUCTION

The Strategic Plan for Biodiversity 2011-2020 was adopted at the tenth meeting of the Conference of the Parties (COP) to the Convention on Biological Diversity (CBD) held in Nagoya, Aichi Prefecture, Japan from 18-29 October 2010. The vision of the Strategic Plan is one of “Living in harmony with nature” where *“By 2050, biodiversity is valued, conserved, restored and wisely used, maintaining ecosystem services, sustaining a healthy planet and delivering benefits essential for all people”* (CBD, 2010). In addition to this vision, the Strategic Plan is composed of 20 targets, under five strategic goals. Aichi Biodiversity Target 11 states that *“By 2020, at least 17 per cent of terrestrial and inland water, and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well-connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes.”*

With the conclusion of the Aichi Biodiversity Targets in 2020, Target 11 on area-based conservation has seen success in the expansion of the global network of protected areas (PA) and other effective area-based conservation measures (OECMs). The negotiation of the post-2020 Global Biodiversity Framework (GBF) and its future targets provide an essential opportunity to further improve the coverage of PAs and OECMs, to improve other aspects of area-based conservation, to accelerate progress on biodiversity conservation more broadly, while also addressing climate change, and the Sustainable Development Goals. This next set of global biodiversity targets are to be adopted at the fifteenth meeting of the Conference of the Parties to the Convention on Biological Diversity. These new targets must aim to build upon lessons learned from the last decade of progress to deliver transformative change for the benefit of nature and people, to realize the 2050 Vision for biodiversity.

The United Nations Development Programme (UNDP) and the Secretariat of the Convention on Biological Diversity have developed the Aichi Biodiversity Target 11 Country Dossiers, which provide countries with an overview of the status of Target 11 elements, opportunities for action, and a summary of commitments made by Parties over the last decade. Each dossier can support countries in assessing their progress on key elements of Aichi Biodiversity Target 11 and identifying opportunities to prioritize new protected areas and OECMs.

This dossier provides an overview of area-based conservation in Iraq. Section I of the dossier presents data on the current status of Iraq’s PAs and OECMs. The data presented in Section I relates to each element of Target 11. Section I also presents the PA and OECM coverage for two critical ecosystem services: water security and carbon stocks. In addition, the dossier presents potential opportunities for action for Iraq, in relation to each Target 11 element. The analyses present options for improving Iraq’s area-based conservation network to achieve enhanced protection and benefits for livelihoods and climate change. Section II presents details on Iraq’s existing PA and OECM commitments as a summary of existing efforts towards achieving Target 11. This gives focus not only to national policy and actions but also voluntary commitments to the UN. Furthermore, where data is

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available, this dossier provides information on potential OECMs, Indigenous and Community Conserved Areas (ICCAs; also, often referred to as territories and areas conserved by Indigenous peoples and local communities or “territories of life”) and Privately Protected Areas (PPAs) and the potential contribution they will have in achieving the post-2020 targets.

The information on PAs and OECMs presented here is derived from the World Database on Protected Areas (WDPA) and World Database on Other Effective Area-Based Conservation Measures (WD-OECM). These databases are joint products of UNEP and IUCN, managed by UNEP-WCMC, and can be viewed and downloaded at www.protectedplanet.net. Parties are encouraged to provide data on their PAs and OECMs to UNEP-WCMC for incorporation into the databases (see e.g., Decisions 10/31 and 14/8). The significant efforts of Parties in updating their data in the build up to the publication of the Protected Planet Report 2020 (UNEP-WCMC and IUCN, 2021) were greatly appreciated. UNEP-WCMC welcomes further updates, following the data standards described here (www.wcmc.io/WDPA_Manual), and these should be directed to protectedareas@unep-wcmc.org. The statistics presented in this dossier are derived from the May 2021 WDPA and WD-OECM releases, unless explicitly stated otherwise. Readers should consult www.protectedplanet.net for the latest coverage statistics (updated monthly).

Some data from the WDPA and WD-OECM are not made publicly available at the request of the data-provider. This affects some statistics, maps, and figures presented in this dossier. Statistics provided by UNEP-WCMC (terrestrial and marine coverage) are based upon the full dataset, including restricted data. All other statistics, maps, and figures are based upon the subset of the data that is publicly available.

Where data is less readily available, such as for potential OECMs, ICCAs and PPAs, data has also been compiled from published reports and scientific literature to provide greater awareness of these less commonly recorded aspects. These data are provided to highlight the need for comprehensive reporting on these areas to the WDPA and/or WD-OECM. Parties are invited to work with indigenous peoples, local communities and private actors to submit data under the governance of these actors, with their consent, to the WDPA and/or WD-OECM.

Overall, PAs and OECMs are essential instruments for biodiversity conservation and to sustain essential ecosystem services that support human well-being and sustainable development, including food, medicine, and water security, as well as climate change mitigation and adaptation and disaster risk reduction. The data in this dossier, therefore, aims to celebrate the current contributions of PAs and OECMs, whilst the gaps presented hope to encourage greater progress, not just for the benefit of biodiversity and the post-2020 GBF, but also to recognize the essential role of PAs and OECMs to the Sustainable Development Goals and for addressing the climate crisis.



SECTION I: CURRENT STATUS

Aichi Biodiversity Target 11 refers to both protected areas (PAs) and other effective area-based conservation measures (OECMs). This section provides the current status for all elements of Aichi Biodiversity Target 11 where indicators with global data are available. Statistics for all elements are presented using data on both PAs and OECMs (where this data is available and reported in global databases like the WDPA and WD-OECM). It is recognized that statistics reported in the WPDA and WD-OECM might differ from those reported officially by countries due to differences in methodologies and datasets used to assess protected area coverage and differences in the base maps used to measure terrestrial and marine area of a country or territory. Details on UNEP-WCMC's methods for calculating PA and OECM coverage area available [here](#). The global indicators adopted here for presenting the status of other elements of Target 11 may also differ from those in use nationally. Where available, results from national reporting are also included.



COVERAGE - TERRESTRIAL & MARINE

As of May 2021, Iraq has 23 protected areas reported in the World Database on Protected Areas (WDPA). 16 proposed PAs are not included in the following statistics (see details on UNWP-WCMC's methods for calculating PA and OECM coverage [here](#)).

As of May 2021, Iraq has **0** OECMs reported in the world database on OECMs (WD-OECM).

Current coverage for Iraq:

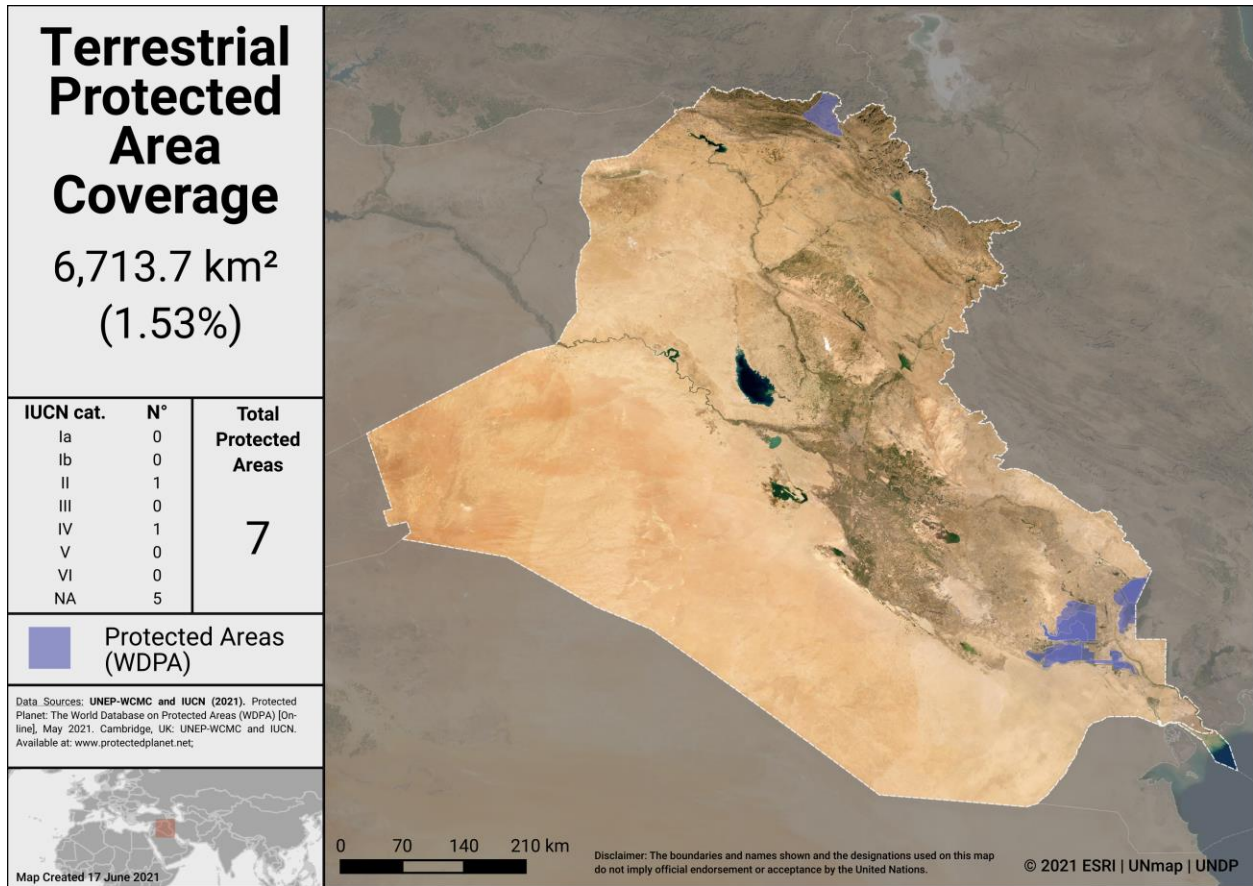
- 1.5% terrestrial (7 protected areas, 6,713.7 km²)
- 0.0% marine (0 protected areas, 0.0 km²)

Iraq notes that: five sites have so far been formally designated and 18 are in the process of formal ratification. There are a further 82 key biodiversity areas reported in 2017 that are potential future protected areas. The survey reported areas of habitat, site maps and recommendations for effective conservation. The area represented by the 82 sites comprises 6.5% of the total area of the country (28,388 km²) and covers a variety of habitat types.

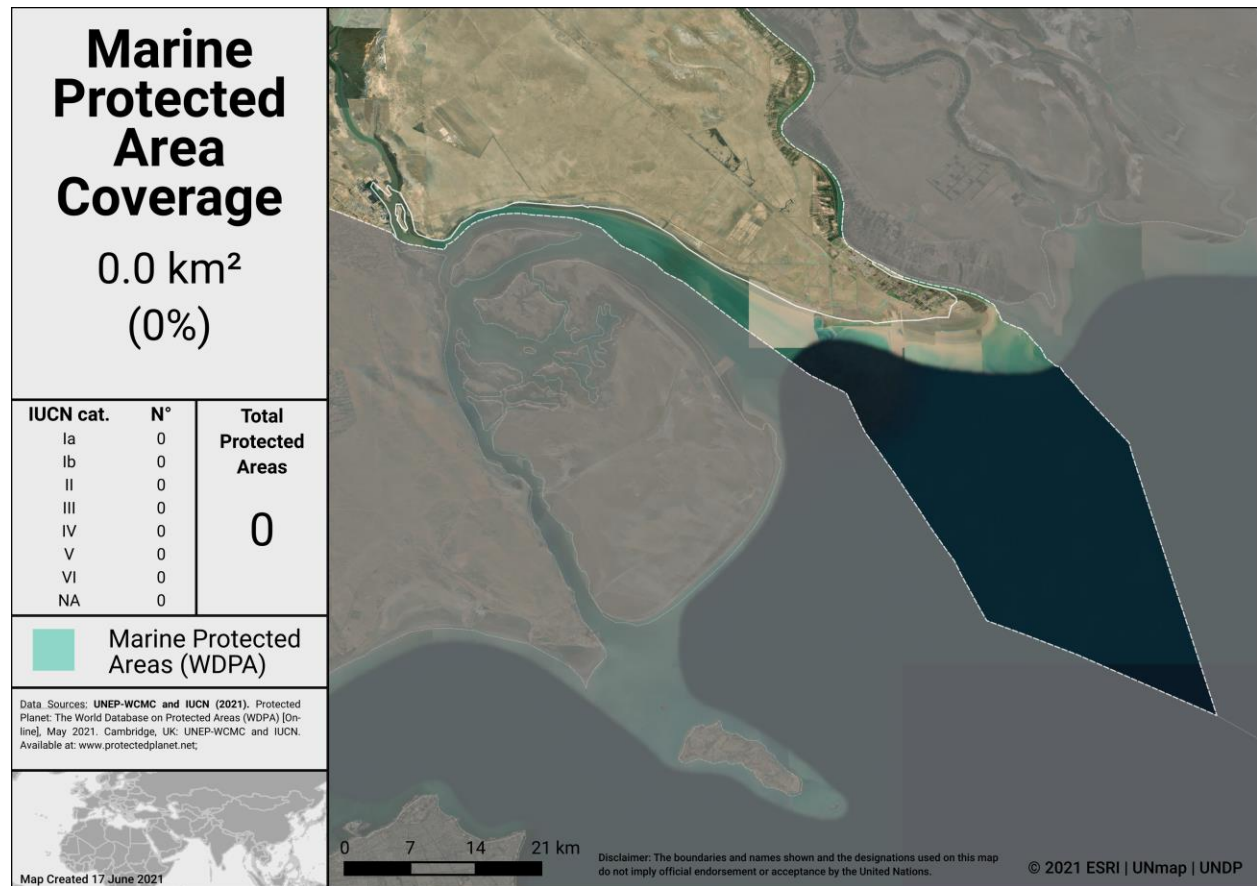
Examples of particular protected areas include the following:

- in 2014, the Central Marshes was nominated by the Iraqi government as Iraq's first National Park, and along with four other sites (Al-Hammar Marsh, Central Marshes, Hawizeh Marsh and Sawa Lake) it was declared as a Ramsar site
- in 2015, two sites (Teeb and Dalmaj) were to be as GEF funded Pilot Project for Protected Areas sites in Iraq
- in 2016, a valuable achievement for the Government of Iraq was made by nomination of the southern Mesopotamian Marshes as a UNESCO World Heritage site based on its natural, cultural, and archaeological significance





Terrestrial Protected Areas in Iraq



Marine Protected Areas in Iraq

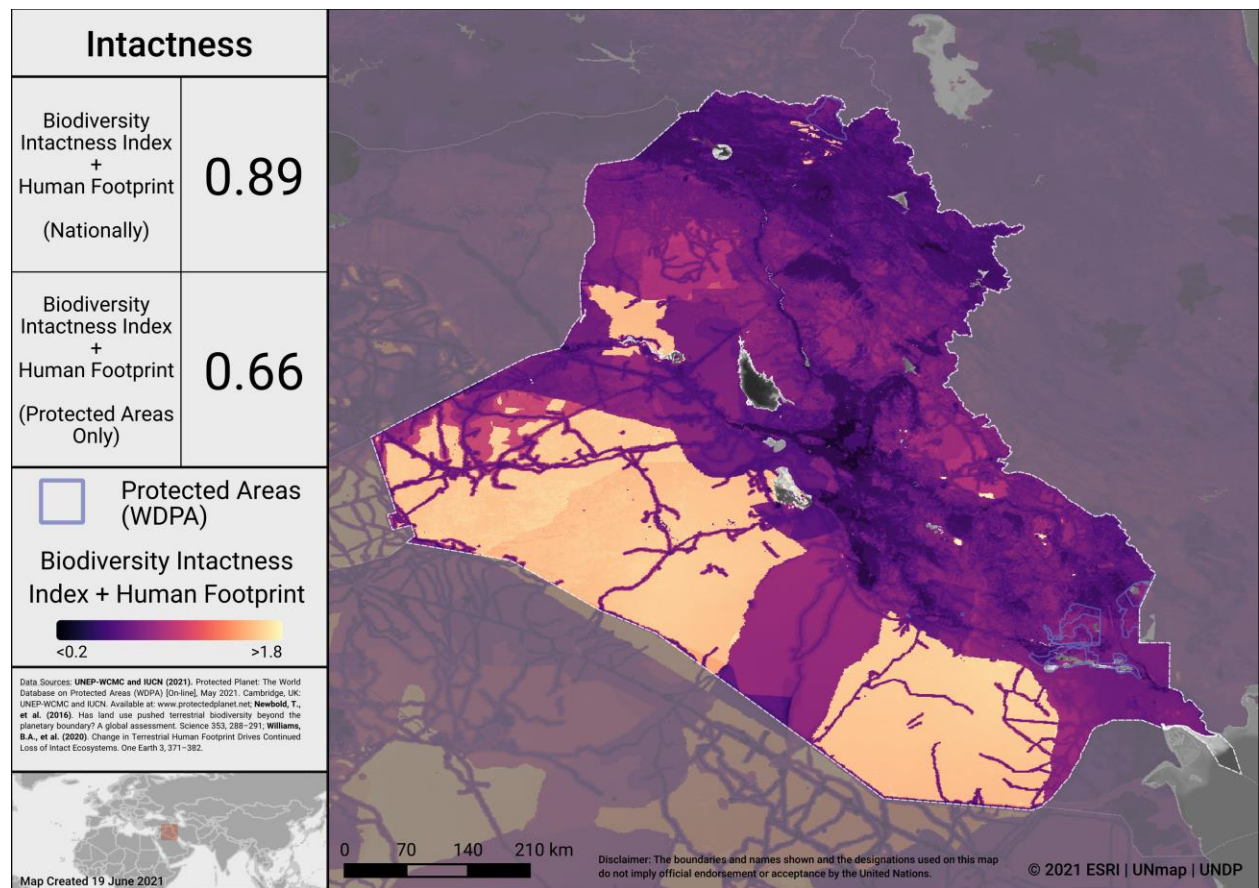
Potential OECMs

There are currently no potential OECM examples for Iraq.

Opportunities for action

Opportunities for the near-term include updating the WDPA with any unreported PAs, and the recognizing and reporting OECMs to the WD-OECM. In the future, as Iraq considers where to add new PAs and OECMs, the map below identifies areas in Iraq where intact terrestrial areas are not currently protected. Focus on relatively intact areas, while addressing the elements in the following sections, could be considered when planning new PAs or OECMs.

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Intactness in Iraq

To explore more on intactness visit the UN Biodiversity Lab: map.unbiodiversitylab.org.

ECOLOGICAL REPRESENTATIVENESS – TERRESTRIAL & MARINE

Ecological representativeness, globally, is assessed based on the PAs and OECMs coverage of broad-scale biogeographic units. Globally, ecoregions have been described for terrestrial areas (Dinerstein et al, 2017), marine coastal and shelf ecosystems (to a depth of 200m; Spalding et al 2007) and surface pelagic waters (Spalding et al 2012).

Iraq has 8 **terrestrial** ecoregions (based on ecoregions from Dinerstein et al 2017; shown in the maps below). Out of these:

- 4 ecoregions have at least some coverage from PAs and OECMs.
- 0 ecoregions have at least 17% protected within the country.
- The average terrestrial coverage of ecoregions is 3.0%.

Based on the list of 9 **ecoregions** (per Olson et al 2001), as included in Iraq's Sixth National Report to the CBD, and the *Key Biodiversity Areas of Iraq* report (see Nature Iraq, 2017):

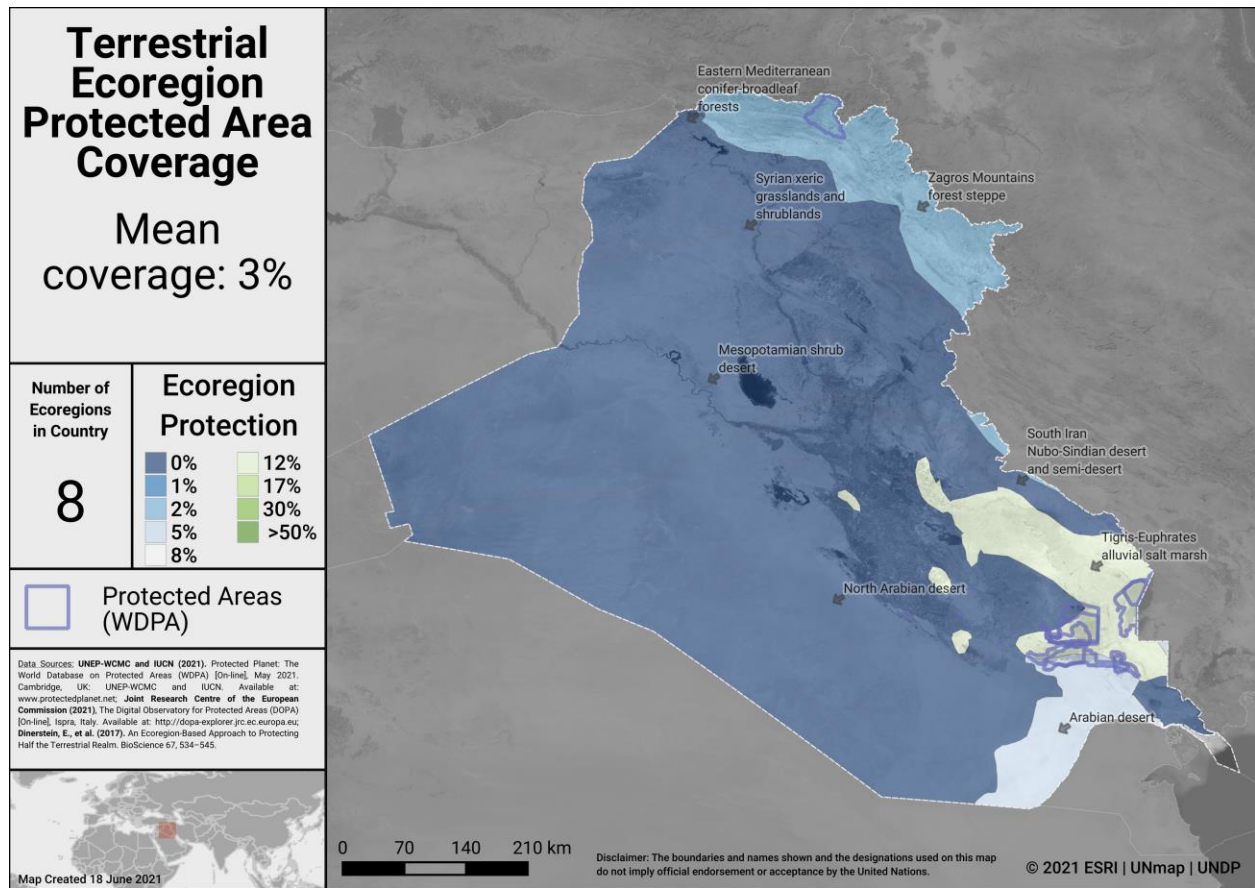
- 4 ecoregions have at least some coverage from PAs and OECMs.
- 0 ecoregions have at least 17% protected within the country.
- The average terrestrial coverage of ecoregions is 2.0%.

Iraq has 1 **marine** ecoregion and 0 **pelagic provinces**. Out of these:

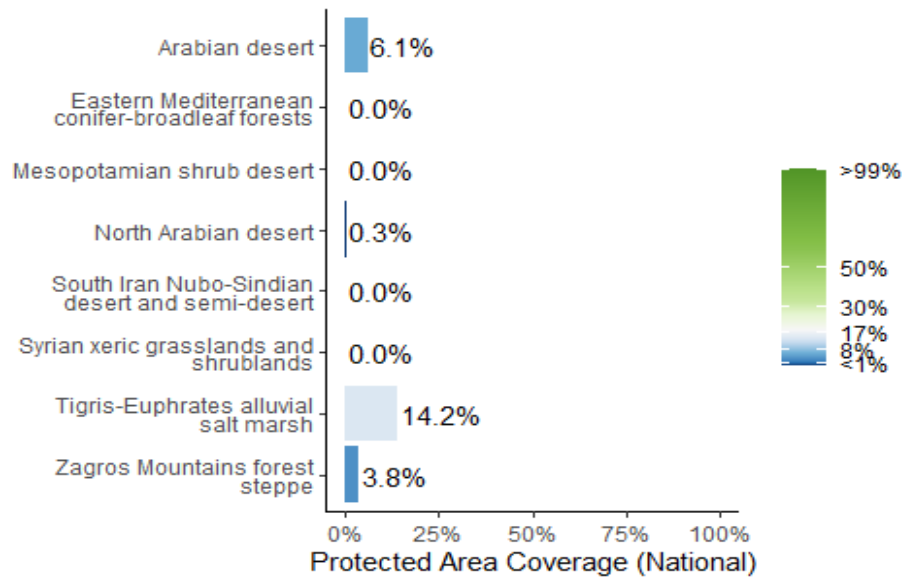
- 0 marine ecoregions have at least some coverage from reported PAs and OECMs.
- The average protected area coverage of marine ecoregions is 0.0% and the average protected area coverage of Pelagic Provinces is 0.0%.

Iraq also has three **freshwater ecoregions** (the Arabian Interior, Lower and Upper Tigris and Euphrates River basins): PA and OECM coverage has not yet been assessed (see Iraq's Sixth National Report to the CBD, and the *Key Biodiversity Areas of Iraq* report)

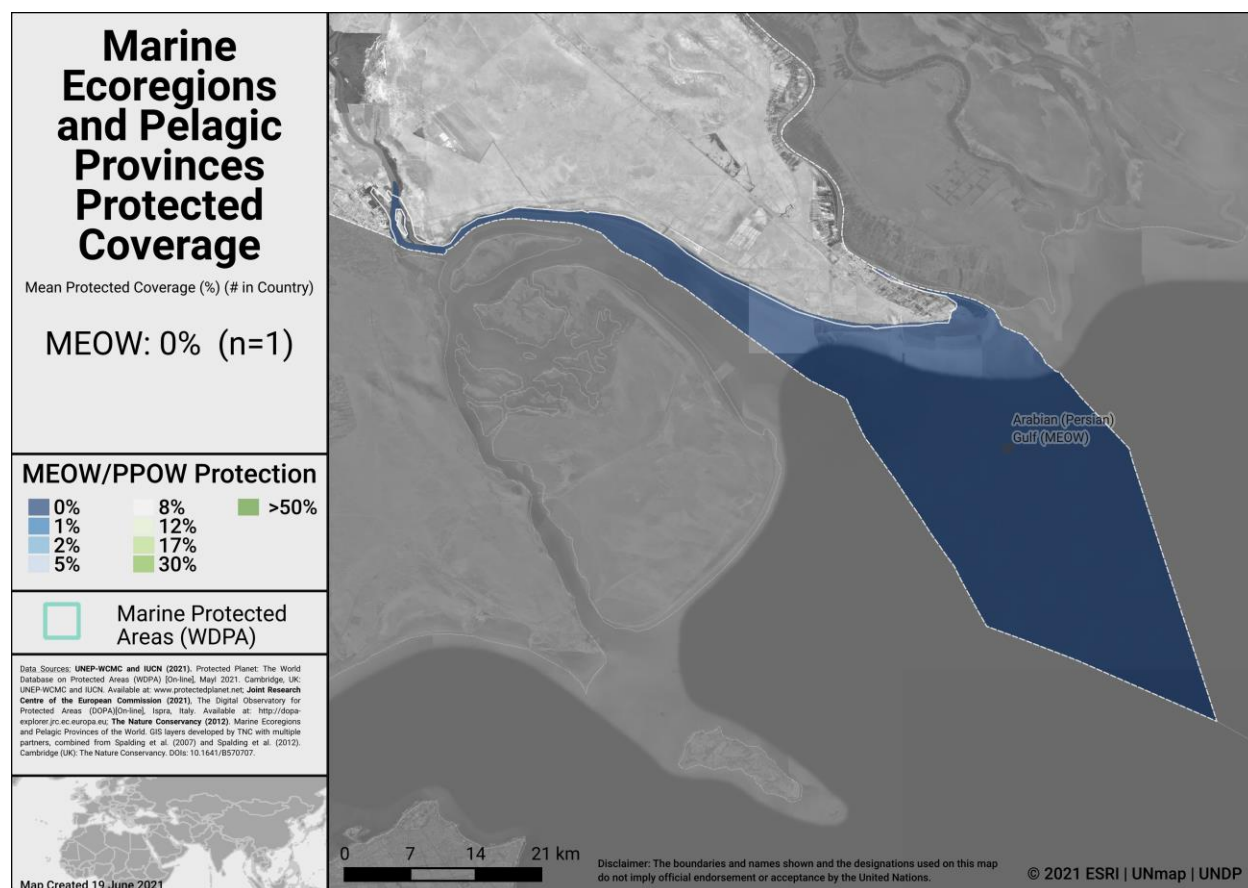




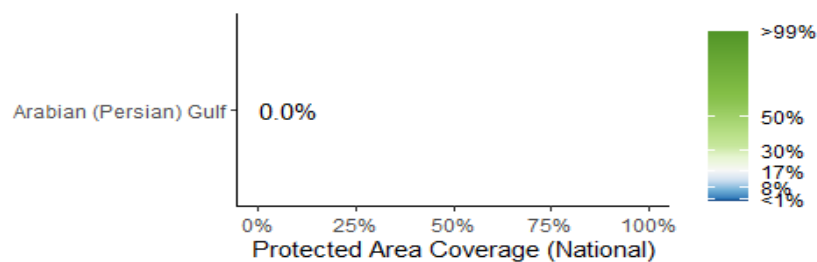
Terrestrial ecoregions in Iraq (see Annex 1 for list of ecoregions; including 9 ecoregions reported by Iraq)



Terrestrial ecoregions of the World (TEOW) in Iraq (see Annex 1 for list of 9 reported by Iraq)



Marine ecoregions and pelagic provinces



Marine Ecoregions of the World (MEOW) in Iraq

Opportunities for action

There is opportunity for Iraq to increase protection in terrestrial and marine ecoregions and pelagic provinces that have lower levels of coverage by PAs or OECMs. Ecoregions which currently have no coverage by PAs or OECMs are key areas for action.

AREAS IMPORTANT FOR BIODIVERSITY

Key Biodiversity Areas (KBAs)

Protected area and OECM coverage of Key Biodiversity Areas (KBAs) provide one proxy for assessing the conservation of areas important for biodiversity at national, regional and global scales. KBAs are sites that make significant contributions to the global persistence of biodiversity (IUCN, 2016). The KBA concept builds on four decades of efforts to identify important sites for biodiversity, including Important Bird and Biodiversity Areas, Alliance for Zero Extinction sites, and KBAs identified through Hotspot ecosystem profiles supported by the Critical Ecosystem Partnership Fund. Incorporating these sites, the dataset of internationally significant KBAs includes Global KBAs (sites shown to meet one or more of 11 criteria in the Global Standard for the Identification of KBAs, clustered into five categories: threatened biodiversity; geographically restricted biodiversity; ecological integrity; biological processes; and irreplaceability), Regional KBAs (sites identified using pre-existing criteria and thresholds, that do not meet the Global KBA criteria based on existing information), and KBAs whose Global/Regional status is Not yet determined, but which will be assessed against the global KBA criteria within 8-12 years. Regional KBAs are often of critical international policy relevance (e.g., in EU legislation and under the Ramsar Convention on Wetlands), and many are likely to qualify as Global KBAs in future once assessed for their biodiversity importance for other taxonomic groups and ecosystems. To date, nearly 16,000 KBAs have identified globally, and information on each of these is presented in the World Database of Key Biodiversity Areas: www.keybiodiversityareas.org.

Iraq has 74 Key Biodiversity Areas (KBAs) [**71 KBAs** included in analysis]

- Mean percent coverage of all KBAs by PAs and OECMs in Iraq is **6.0%**.
- **1** KBA has full (>98%) coverage by PAs and OECMs.
- **5** KBAs have partial coverage by PAs and OECMs.
- **65** KBAs have no (<2%) coverage by PAs and OECMs.

*According to Iraq's national update (see Iraq's 6th National Report, 2018) there are **82 KBAs** in the country (the global KBA database may need to be updated to account for these additional sites).*

See Annex II in this dossier for Iraq's map of 82 KBAs. For additional details, see the 2017 report *Key Biodiversity Areas of Iraq* (Nature Iraq, 2017).

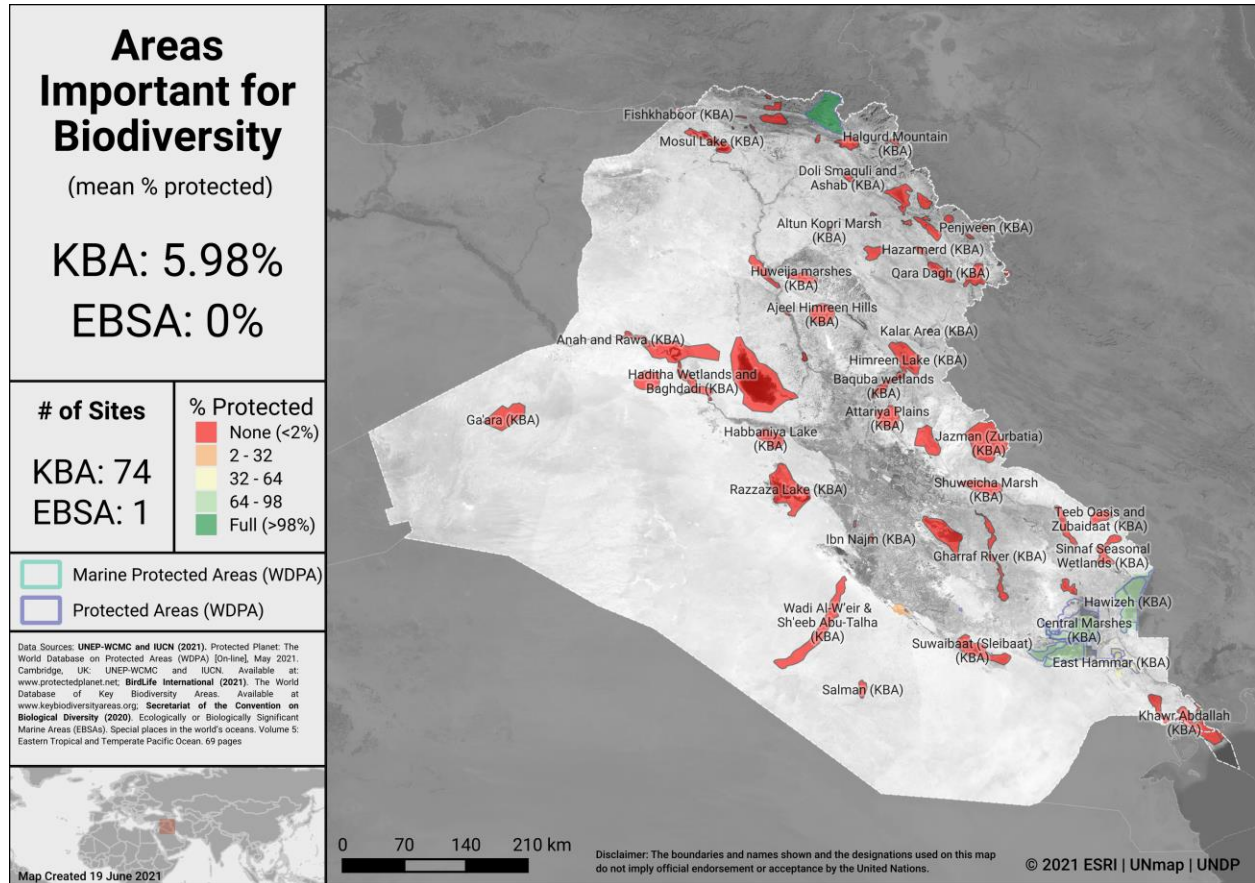
Ecologically or Biologically Significant Marine Areas (EBSAs)

Other important areas for biodiversity may also include Ecologically or Biologically Significant Marine Areas (EBSAs), which were identified following the scientific criteria adopted at COP-9 (Decision IX/20; see more at: <https://www.cbd.int/ebsa/>). Sites that meet the EBSA criteria may require enhanced conservation and management measures;

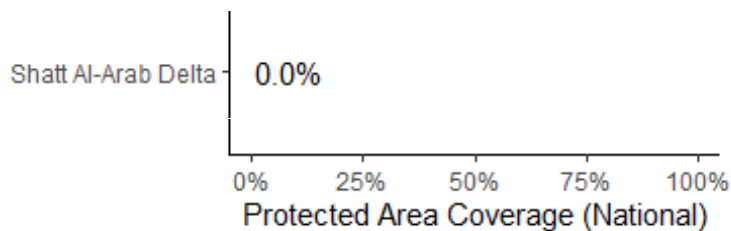
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this could be achieved through means including MPAs, OECMs, marine spatial planning, and impact assessment.

Iraq has 1 EBSA with some portion of its extent within Iraq's EEZ. There are currently no MPAs in Iraq.

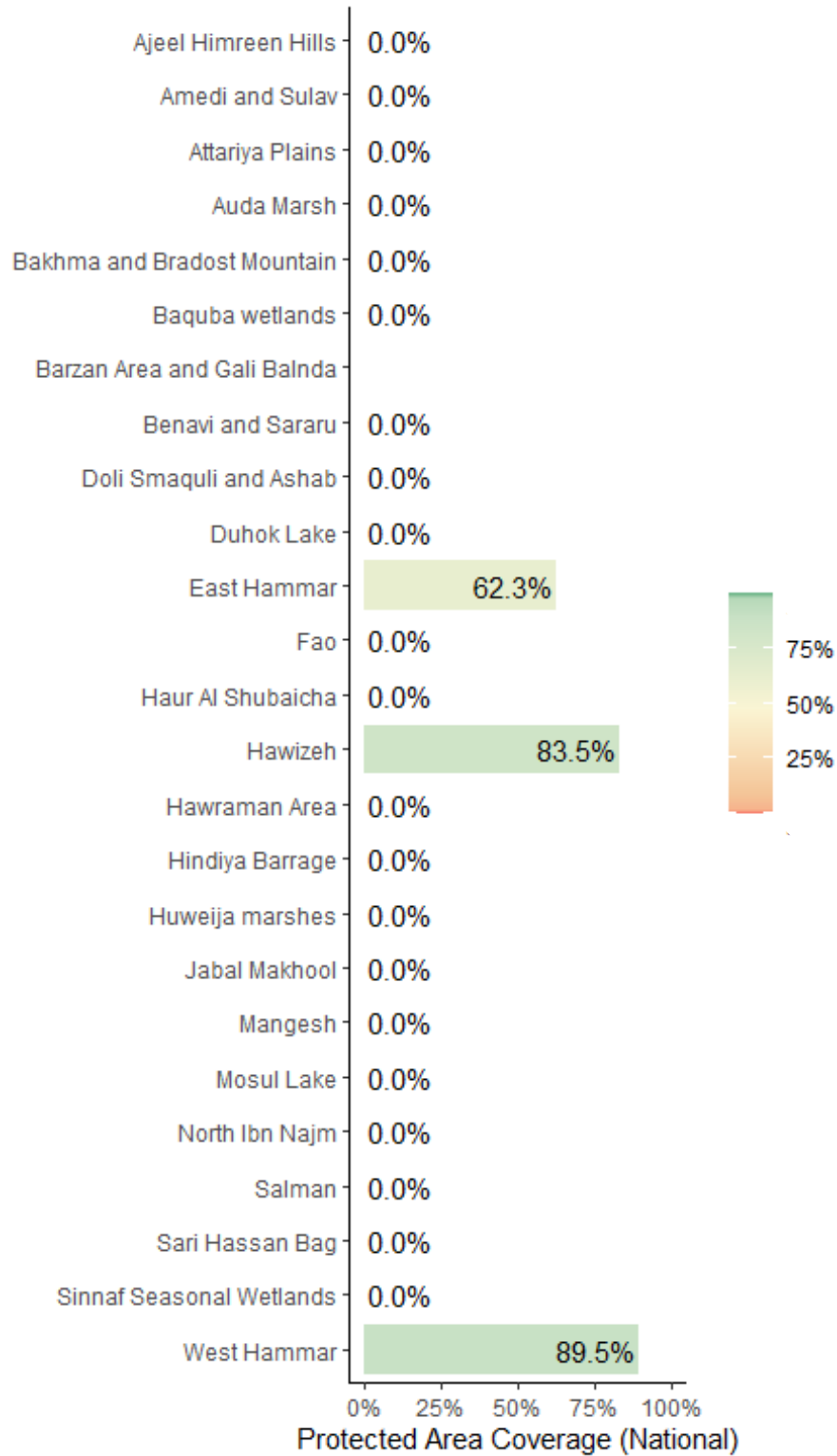


Areas Important for Biodiversity in Iraq (see Annex II for Iraq's KBA map, with 82 reported sites)



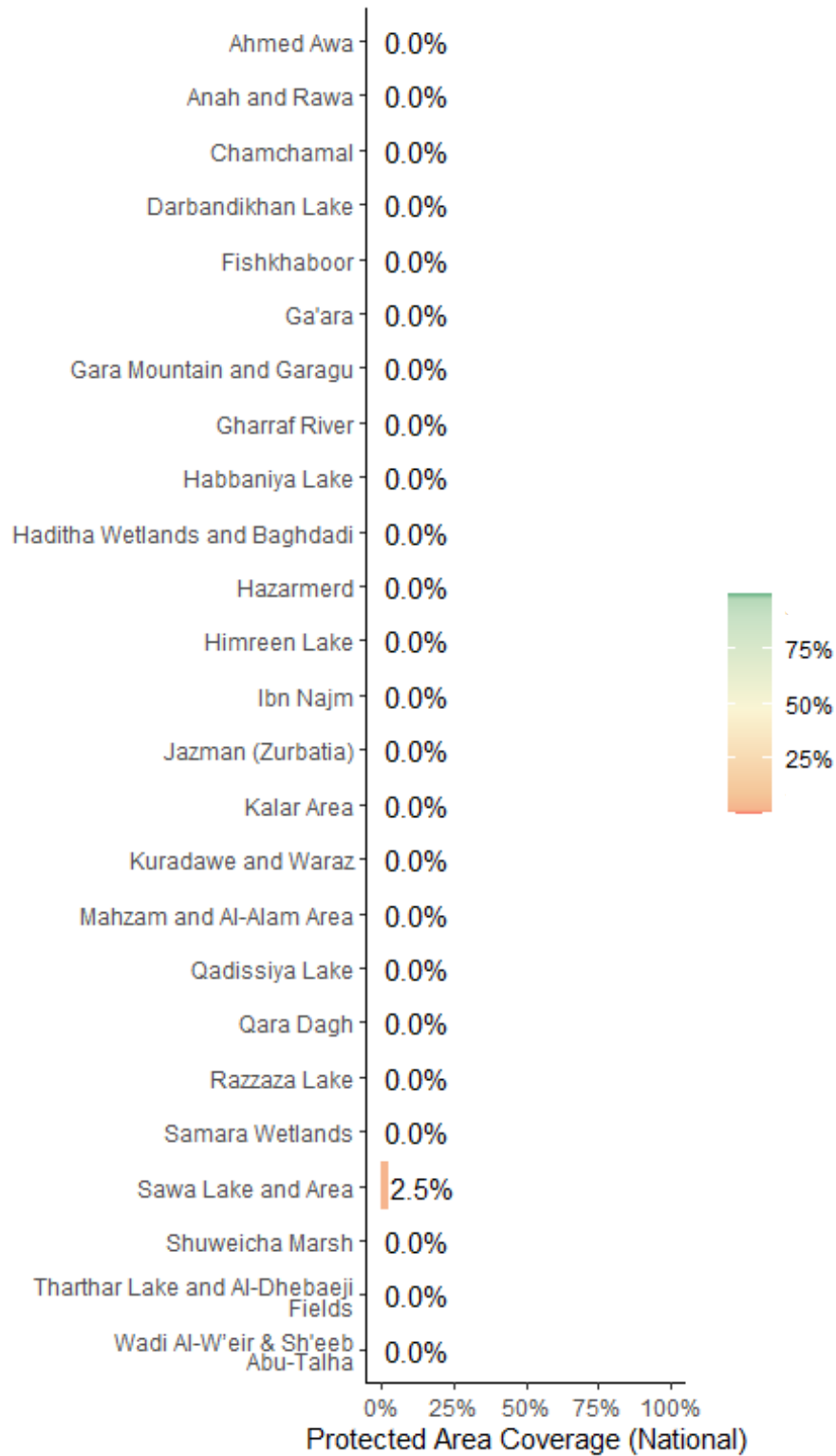
Ecologically or Biologically Significant Marine Areas (EBSAs) in Iraq (currently no MPAs reported)

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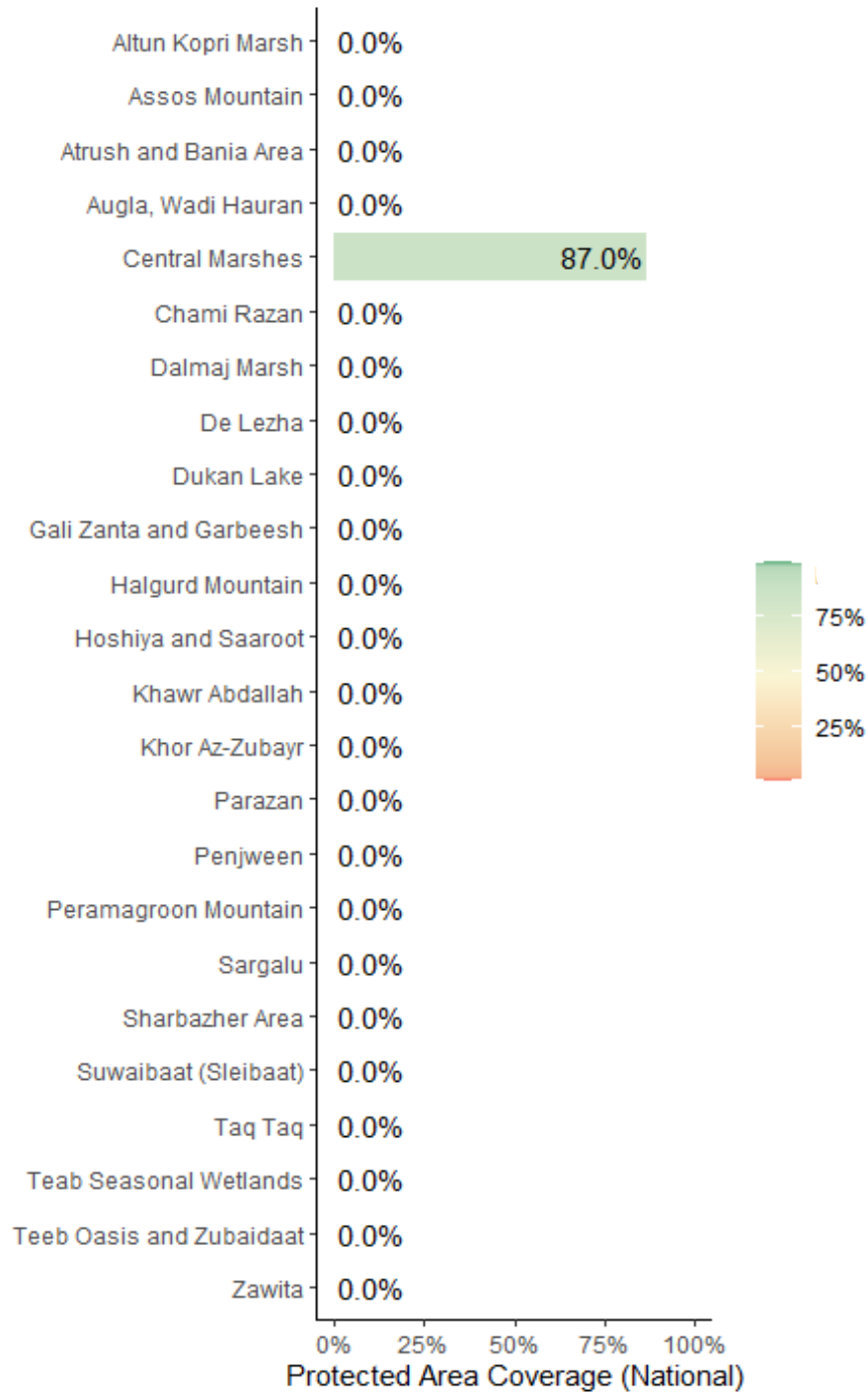
Key Biodiversity Area Coverage (KBA) in Iraq (see Annex II for Iraq's KBA map, with 82 reported sites)

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Key Biodiversity Area Coverage (KBA) in Iraq (continued)

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Key Biodiversity Area Coverage (KBA) in Iraq (continued)

Opportunities for action

There is opportunity for Iraq to increase protection of KBAs that have lower levels of coverage by PAs and OECMs; priority could be given to those with no current coverage.

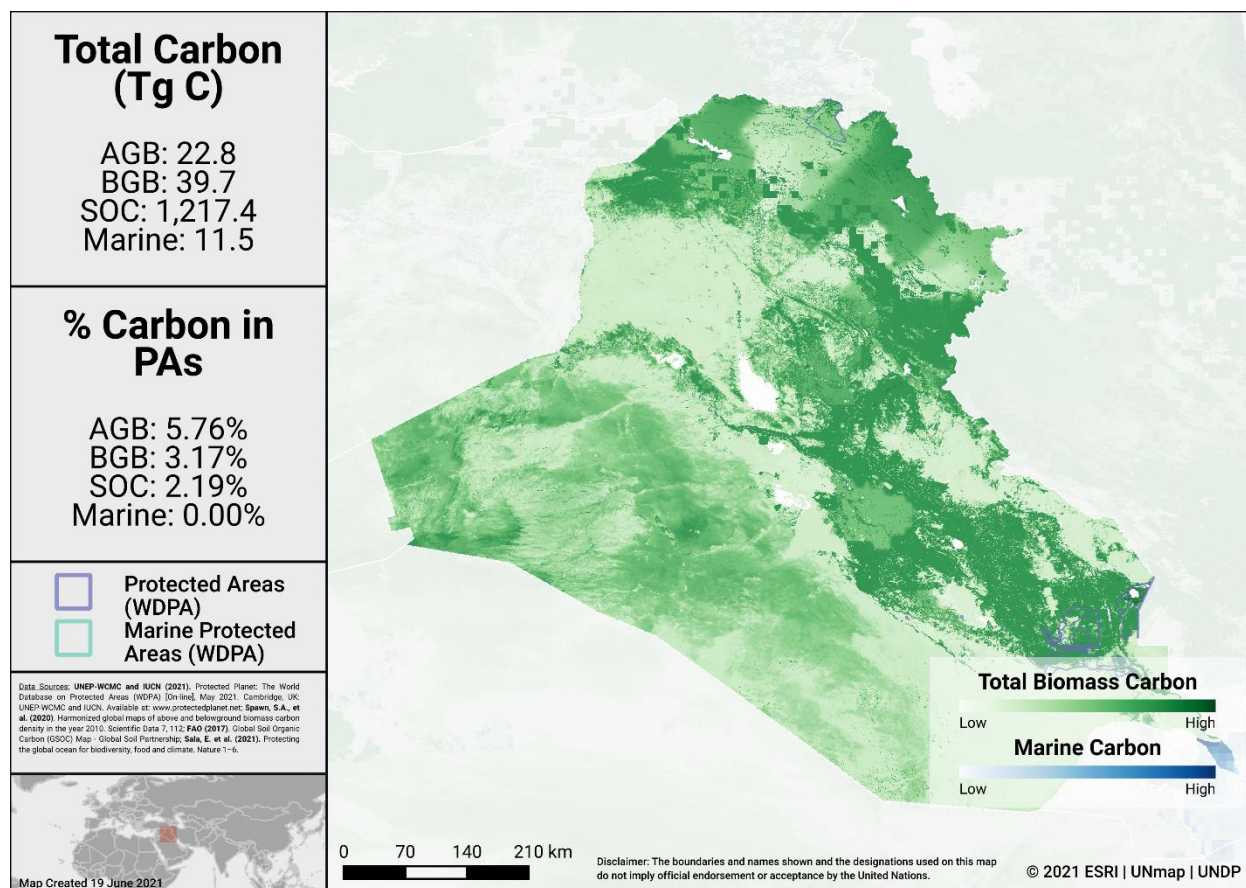
AREAS IMPORTANT FOR ECOSYSTEM SERVICES

There is no single indicator identified for assessing the conservation of areas important for ecosystem services. For simplicity, two services with available global datasets are assessed here (carbon and water). In future, other critical ecosystem services could be explored.

Carbon

Data for biomass carbon comes from temporally consistent and harmonized global maps of aboveground biomass and belowground biomass carbon density (at a 300-m spatial resolution); the maps integrate land-cover specific, remotely sensed data, and land-cover specific empirical models (see Spawn et al., 2020 for details on methodology). The Global Soil Organic Carbon Map present an estimation of SOC stock from 0 to 30 cm (see FAO, 2017). Data is also presented from global maps of marine sedimentary carbon stocks, standardized to a 1-meter depth (see Sala et al., 2021, and Atwood et al., 2020).

The map below presents the total carbon stocks in Iraq and the percent of carbon in protected areas. The total carbon stocks is 22.8 Tg C from aboveground biomass (AGB), with 5.8% in protected areas; 39.7 Tg C from below ground biomass (BGB), with 3.2% in protected areas; 1,217.4 Tg C from soil organic carbon (SOC), with 2.2% in protected areas; and 11.5 Tg C from marine sediment carbon, with 0.0% in protected areas.

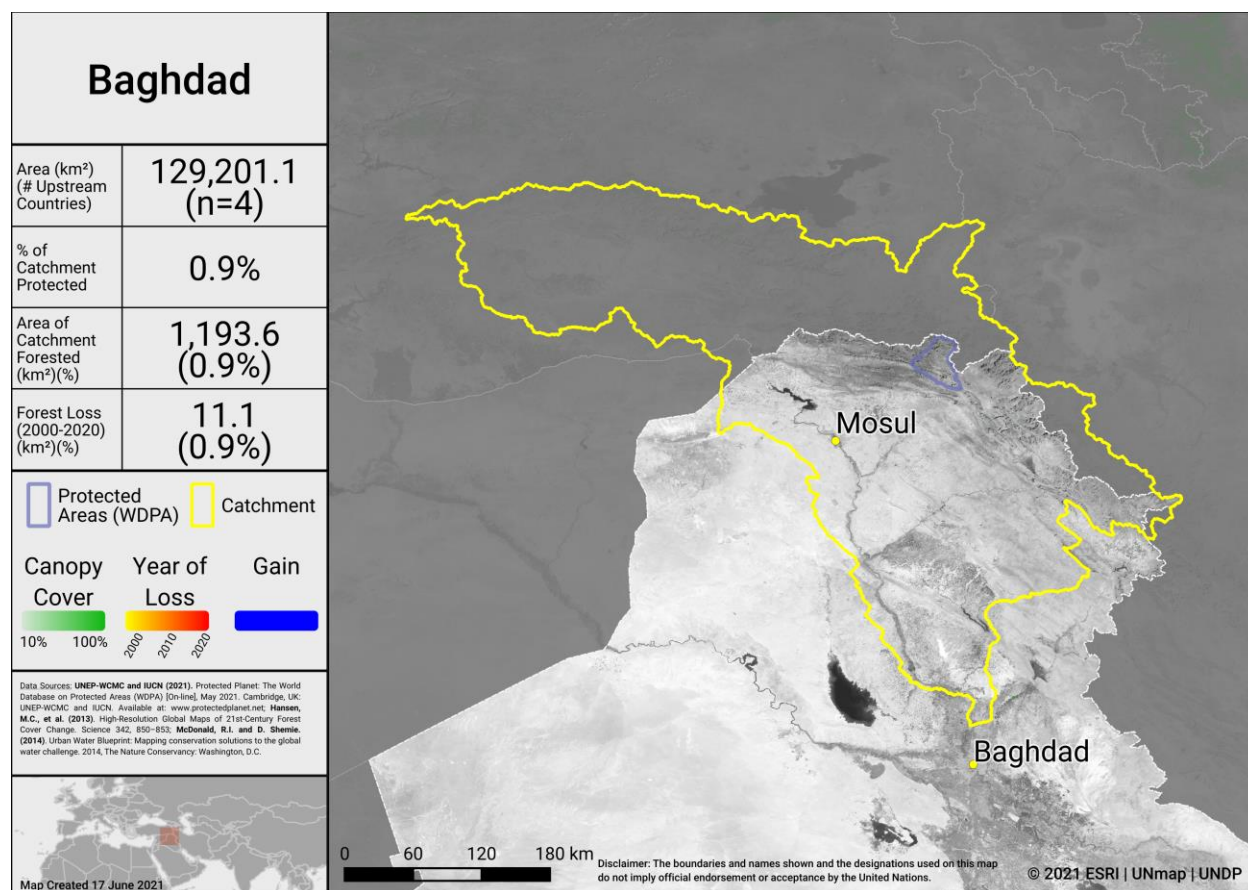


Carbon Stocks in Iraq

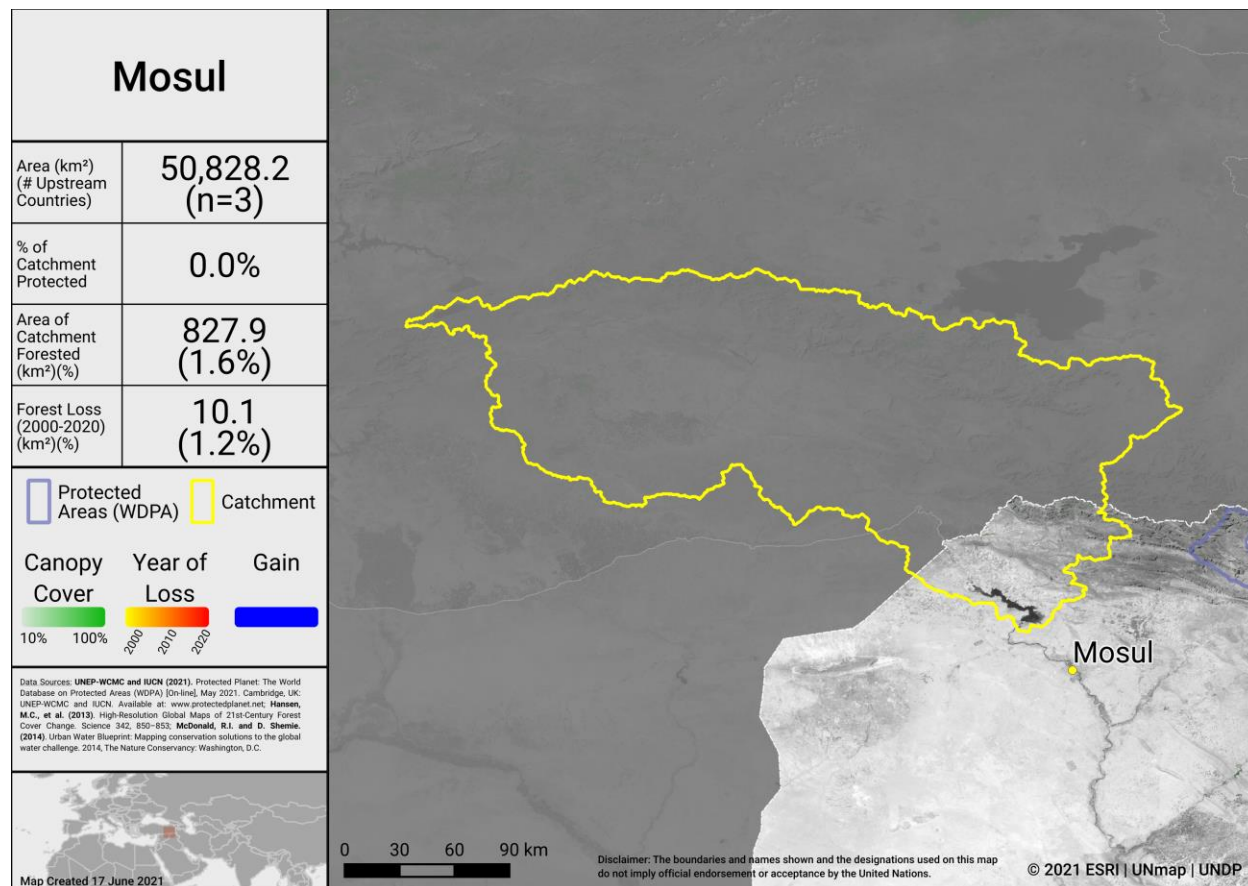
Water

Forests and intact ecosystems support stormwater management and clean water availability, especially for large urban populations. Research that has examined the role of forests for city drinking water supplies shows that of the world's 105 largest cities, more than 30% (33 cities) rely heavily on the local protected forests, which provide ecosystem services that underpin local drinking water availability and quality (Dudley & Stolton, 2003).

Drinking water supplies for cities in Iraq may similarly depend on protected forest areas within and around water catchments. The maps below show the percentage forest and PA cover and the forest loss from 2000-2020 in the most heavily populated water catchments of Iraq. Intact catchments can support more consistent water supply and improved water quality.



Water supply area for the city of Baghdad



Water supply area for the city of Mosul

Opportunities for action

For carbon, there is opportunity for Iraq to increase PA and OECM coverage in both marine and terrestrial areas with high carbon stocks, as identified in the map above. Protecting areas with high carbon stocks secures the benefits of carbon sequestration in the area.

For water, there is opportunity to increase the area of the water catchment under protection by PAs and OECMs, or in cases where there is high levels of protection, focus on effective management for these areas. Protecting the current area of forested land and potentially reforesting would have benefits for improving water security.

CONNECTIVITY & INTEGRATION

Two global indicators, the Protected Connected land indicator (ProtConn; EC-JRC, 2021; Saura et al., 2018) and the PARC-Connectedness indicator (CSIRO, 2019), have been proposed for assessing the terrestrial connectivity of PA and OECM networks. To date there is no global indicator for assessing marine connectivity, though some recent developments include proposed guidance for the treatment of connectivity in the planning and management of MPAs (see Lausche et al., 2021).

Protected Connected Land Indicator (Prot-Conn)

As of January 2021, as reported in the Joint Research Centre of the European Commission's Digital Observatory for Protected Areas (DOPA) (JRC, 2021), the coverage of protected-connected lands (a measure of the connectivity of terrestrial protected area networks, assessed using the ProtConn indicator) in Iraq was 1.1%.

PARC-Connectedness Index

In 2019, as assessed using the PARC-Connectedness Index (values ranging from 0-1, indicating low to high connectivity), connectivity in Iraq is 0.28. This represents no change since 2010.

Corridor case studies

There are currently no corridor case studies available for Iraq (but see general details on conserving connectivity through ecological networks and corridors in Hilty et al 2020).

Opportunities for action

There is opportunity for a general increase of PA and/or OECM cover and to focus on PA and OECM management for enhancing and maintaining connectivity. Improving connectivity increases the effectiveness of PAs and OECMs and reduces the impacts of fragmentation.

As well, a range of suggested steps for enhancing and supporting integration are included in the voluntary guidance on the integration of PAs and OECMs into the wider land- and seascapes and mainstreaming across sectors to contribute, inter alia, to the SDGs (Annex I of COP Decision 14/8).



GOVERNANCE DIVERSITY

There is a lack of comprehensive global data on governance quality and equity in PAs and OECMs. Here, we provide data on the diversity of governance types for reported PAs and OECMs.

As of May 2021, PAs in Iraq reported in the WDPA have the following governance types:

- 0.0% are governed by **governments**
- 0.0% are under **shared** governance
- 0.0% are under **private** governance
- 0.0% are under **IPLC** governance
 - 0.0% by Indigenous Peoples
 - 0.0% by local communities
- 100.0% **do not** report a governance type

OECMs

As of May 2021, there are **0** OECMs in Iraq reported in the WD-OECM, therefore there is no data available on OECM governance types.

Privately Protected Areas (PPAs)

There is currently no data available on PPAs for Iraq (see Gloss et al., 2019, and Stolton et al., 2014 for details).

Territories and areas conserved by Indigenous Peoples and local communities (ICCAs)

There is currently no data available on ICCAs for Iraq (see Kothari et al., 2012 and the [ICCA Registry](#) for further details).

Other Indigenous lands

There is currently no data available on lands managed and/or controlled by Indigenous Peoples in Iraq (see Garnett et al 2018 for details).

Opportunities for action

Increase efforts to identify the governance types for the 100.0% of sites that do not have their governance type reported. If applicable, explore opportunities for governance types that have lower representation.

There is also opportunity for Iraq to complete governance and equity assessments, to establish baselines and identify relevant actions for improvement. Examples of existing tools and methodologies include: Governance Assessment for Protected and Conserved Areas (Franks & Brooker, 2018), Social Assessment of Protected Areas (Franks et al 2018), and Site-level assessment of governance and equity (IIED, 2020). As well, a range of suggested actions are included in the voluntary guidance on effective governance models for management of protected areas, including equity (Annex II of COP Decision 14/8).

PROTECTED AREA MANAGEMENT EFFECTIVENESS

This section provides information on the coverage of PAs and OECMs with completed protected area management effectiveness (PAME) assessments as reported in the global database (GD-PAME). The proportion of terrestrial and marine PAs with completed PAME assessments is also calculated and compared with the 60% target agreed to in COP-10 Decision X/31.

Protected area management effectiveness (PAME) assessments

As of May 2021, Iraq has 7 designated PAs (23 total, included proposed PAs) reported in the WDPA; of these PAs, 1 (14.3%) have management effectiveness evaluations reported in the global database on protected area management effectiveness (GD-PAME).

- 0.3% (1,378 km²) of the terrestrial area of the country is covered by PAs with completed management effectiveness evaluations.
 - 20.5% of the area of terrestrial PAs have completed evaluations.
- 0.0% (0.0 km²) of the marine area of the country is covered by PAs with completed management effectiveness evaluations.
 - 0.0% of the area of marine PAs have completed evaluations.

The 60% target for completed management effectiveness assessments (per COP Decision X/31) **has not** been met for terrestrial PAs and **has not** been met for marine PAs.

As of May 2021, there are 0 OECMs in Iraq reported in the WDOECM and no information available on the management effectiveness of potential OECMs.

Opportunities for action

The 60% target for completed management effectiveness assessments (per COP Decision X/31) **has not** been met for terrestrial PAs and **has not** been met for marine PAs.

Therefore, there is opportunity to increase protected area management effectiveness (PAME) evaluations for both terrestrial and marine PAs to achieve the target.

There is also opportunity to implement the results of completed PAME evaluations, to improve the quality of management for existing PAs and OECMs (e.g. through adaptive management and information sharing, increasing the number of sites reporting 'sound management') and to increase reporting of biodiversity outcomes in PAs and OECMs.



SECTION II: EXISTING PROTECTED AREA AND OECM COMMITMENTS

PRIORITY ACTIONS FROM 2015-2016 REGIONAL WORKSHOPS

National priority actions for Aichi Biodiversity Target 11 were provided by Parties following a series of regional workshops in 2015 and 2016. The Capacity-building workshop for South, Central and West Asia on achieving Aichi Biodiversity Targets 11 and 12 took place 7 - 10 December 2015 in New Delhi, India. Progress towards the quantitative targets for marine and terrestrial coverage has been assessed based on data reported in the WDPA and WD-OECM as of 2021. For more information, see the workshop report at: <https://www.cbd.int/meetings/>

The following actions were identified during the workshops:

Terrestrial and marine coverage:

- 1) Implementation of the project of the establishment of the first network of protected natural areas in Iraq.
- 2) Updating the procedure for the declaration of National Reserves.

Ecological representation: Striving to complete the evaluation and declaration procedures.

Areas Important for biodiversity and ecosystem services:

- 1) Enhance surveys.
- 2) Development of the Legislation and policies to enhance reserve protection.
- 3) Implementation of operational programs of the NBSAP.

Connectivity: No actions were identified for this element of Target 11.

Management effectiveness:

- 1) Implementation of monitoring and evaluation of the first National Strategy of biodiversity in Iraq.
- 2) Implementation of operational programs of the NBSAP.

Governance and Equity:

- 1) Contribution of public awareness to conserve threatened species in protected areas.
- 2) Achieve higher coordination among governments, relevant agencies and Indigenous People.



Integration into the wider landscape and seascape:

- 1) Implementation of marine coastline strategy.
- 2) Implementation of the focal area of the protection marine and wild coast as stated in the national strategy for the protection of the environment.

OECSs:

- 1) International support for the Marshland areas as part of Ramsar designated area.
- 2) Announcement of reserves and national (parks).
- 3) Implementation of KBA monitoring and evaluation projects.

NATIONAL BIODIVERSITY STRATEGY AND ACTION PLANS (NBSAPs)

Iraq has submitted an NBSAP during the Strategic Plan for Biodiversity 2011-2020 (most recent NBSAP is available at: <https://www.cbd.int/nbsap/search/>).

Targets for Protected Areas include:

National Target 12. By the end of 2014 a decree is issued for the establishment of protected areas in Iraq.

National Target 13. By the end of 2016 at least three training workshops on PA management have been conducted.

National Target 14. By the end of 2016 a study and GIS maps of the most sensitive habitats (i.e. under high level of threats and containing high numbers of globally threatened species) have been developed.

National Target 15. By the end of 2020 ten new Protected Areas have been gazetted and established.



APPROVED GEF-5, GEF-6, PROTECTED AREA PROJECTS

Approved GEF-5 and GEF-6 PA-related biodiversity projects

This includes biodiversity projects from the fifth and sixth replenishment of the Global Environment Facility (GEF-5 and GEF-6) with a clear impact of the quantity or quality of PAs; also including some projects occurring within the wider landscapes/seascapes around PAs. Only those with a status of 'project approved' or 'concept approved' as of June 2019 were considered. The qualifying elements likely benefiting from each GEF project is assessed based on a keyword search of Project Identification Forms (PIF). Where spatial data for the proposed PAs was available, further details (based on an analysis by UNDP) regarding their impacts for ecological representation, coverage of KBAs, and coverage of areas important for carbon storage is included.

GEF ID	PA increase?	Area to be added (km ²)	Type of new protected area	Qualitative elements potentially benefitting (based on keyword search of PIFs)
5392	Yes	2,240	Terrestrial	Ecologically representative; Effectively managed; Equitably managed; Integration



ANNEX I

FULL LIST OF TERRESTRIAL ECOREGIONS

From Olson et al 2001

This is the list that was included in Iraq's Sixth National Report to the CBD, and also included in the *Key Biodiversity Areas of Iraq* report (see Nature Iraq, 2017).

Ecoregion Name	Area (km ²)	% of Global ER in Country	% Protected in Country
Arabian Desert and East Sahero-Arabian xeric shrublands	192,285	10	0.8
Eastern Mediterranean conifer-sclerophyllous-broadleaf forests	1,475	1	0
Mesopotamian shrub desert	129,995	62	0
Middle East steppe	37,598	28	0
Gulf desert and semi-desert	1,480	2	<0.01
Red Sea Nubo-Sindian tropical desert and semi-desert	5,189	1	0
South Iran Nubo-Sindian desert and semi-desert	7,993	2	0
Tigris-Euphrates alluvial salt marsh	28,795	81	14.2
Zagros Mountains forest steppe	29,376	7	3.8

***Ecoregion names, area, and % in the country from Nature Iraq (2017; see map in Annex II), area protected from DOPA Explorer (see EC-JRC, 2021, and JRC, 2021)*

From Dinerstein et al 2017

Ecoregions included in the maps in this dossier

Ecoregion Name	Area (km ²)	% of Global Ecoregion in Country	% of Country in Ecoregion	Area Protected (km ²)	% Protected in Country
Arabian desert	17,273.5	2.1	4.0	1,048.1	6.1
Eastern Mediterranean conifer-broadleaf forests	1,220.0	0.9	0.3	0.0	0.0

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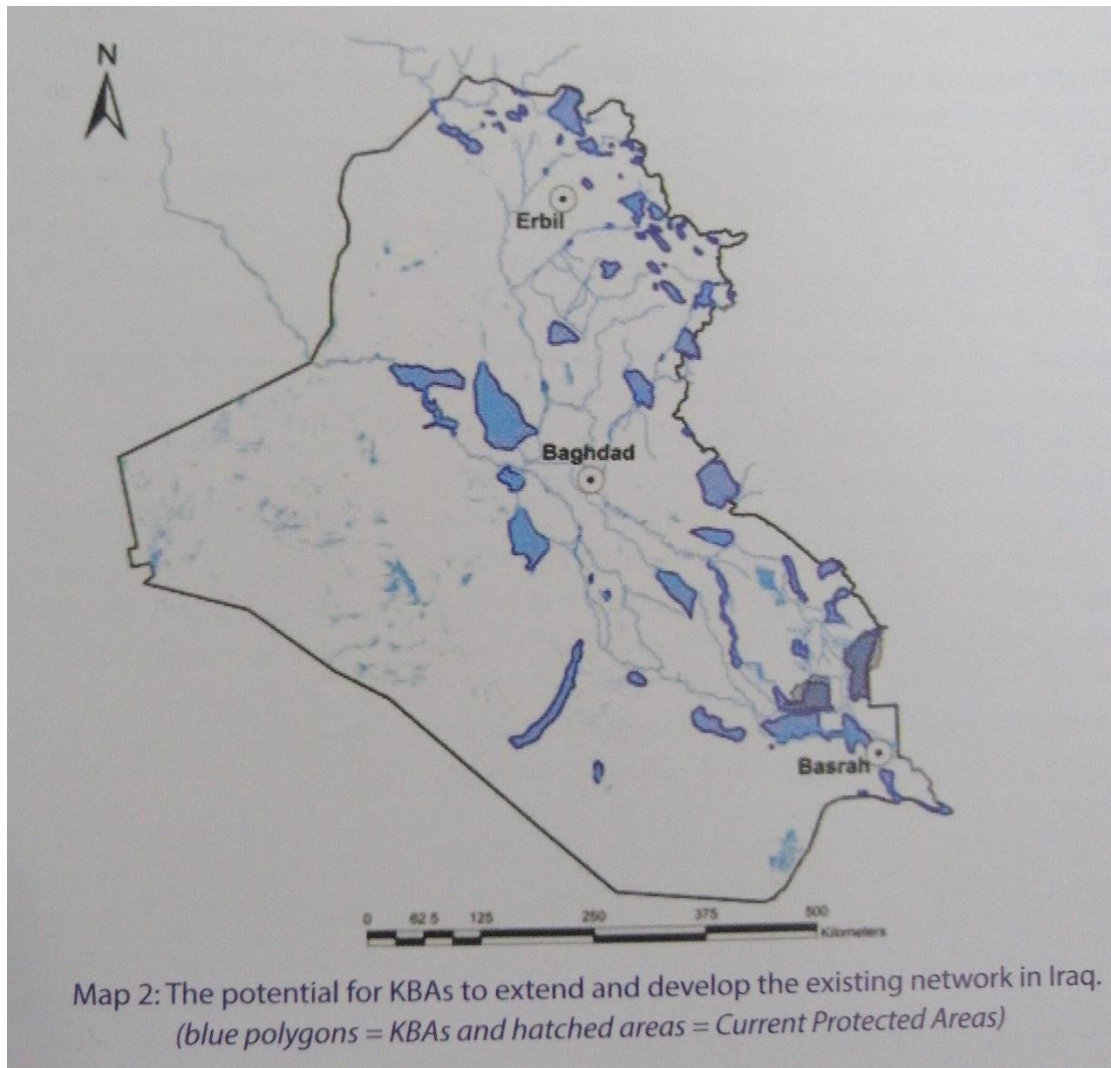
Ecoregion Name	Area (km²)	% of Global Ecoregion in Country	% of Country in Ecoregion	Area Protected (km²)	% Protected in Country
Mesopotamian shrub desert	130,463.7	63.8	29.9	0.0	0.0
North Arabian desert	182,909.8	39.1	41.9	489.9	0.3
South Iran Nubio-Sindian desert and semi-desert	8,595.2	2.4	2.0	0.0	0.0
Syrian xeric grasslands and shrublands	37,905.7	27.5	8.7	0.0	0.0
Tigris-Euphrates alluvial salt marsh	28,275.9	79.5	6.5	4,007.3	14.2
Zagros Mountains forest steppe	30,322.0	7.6	6.9	1,149.0	3.8

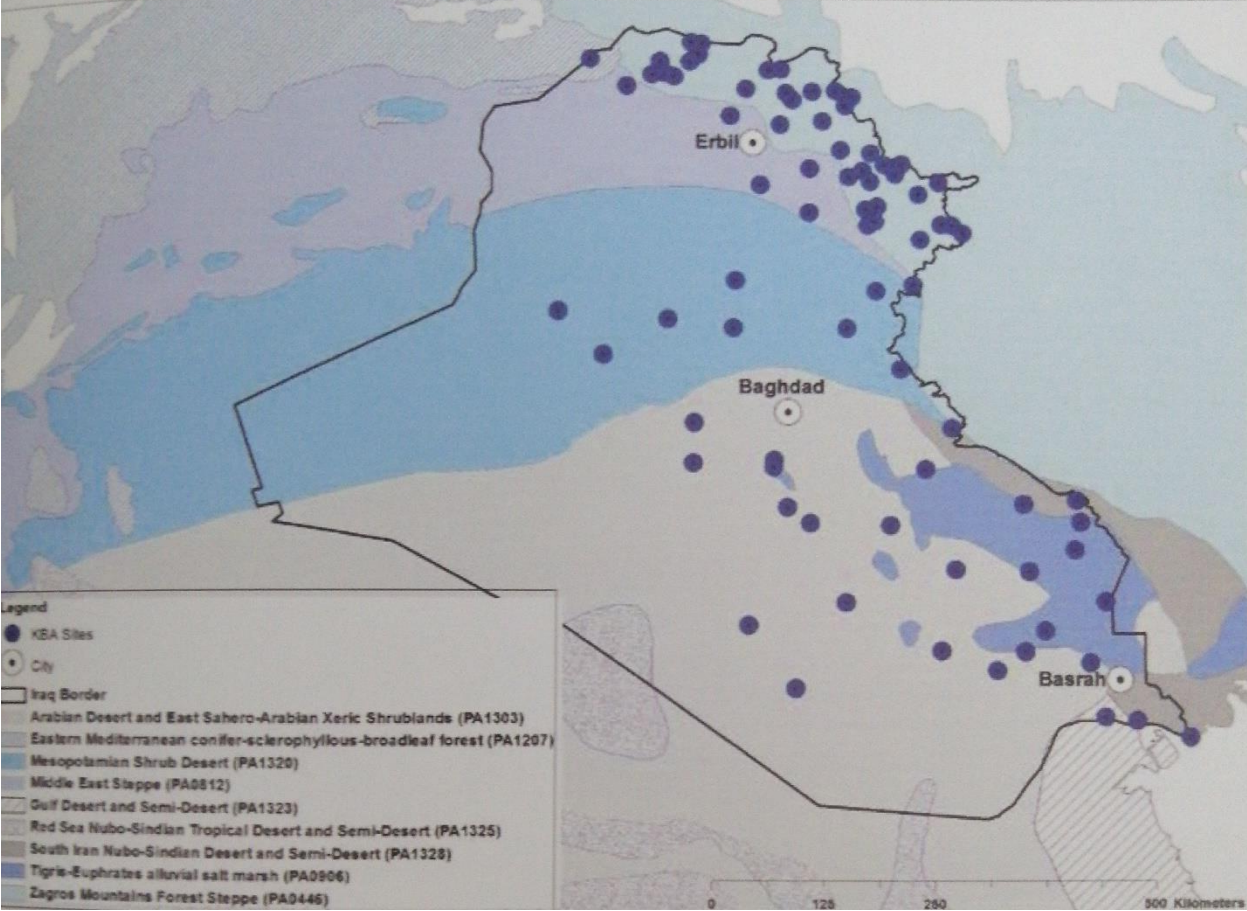


ANNEX II

IRAQ'S KBA MAPS

According to the current update (see Iraq's 6th NR 2018) there are 82 KBAs in Iraq. For full details on these 82 KBAs, see *Key Biodiversity Areas of Iraq* (Nature Iraq, 2017).





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