



The 2023 IUCN Situation Analysis on Ecosystems of the Yellow Sea with Particular Reference to Intertidal and Associated Coastal Habitats



The 2023 IUCN Situation Analysis on Ecosystems of the Yellow Sea with Particular Reference to Intertidal and Associated Coastal Habitats



Ministry of Oceans and Fisheries



The 2023 IUCN Situation Analysis on Intertidal Wetlands in the Yellow Sea (PRC, DPRK and RoK)

Raphaël Glémet
Senior Programme Officer, Water and Wetlands, IUCN Asia

About IUCN

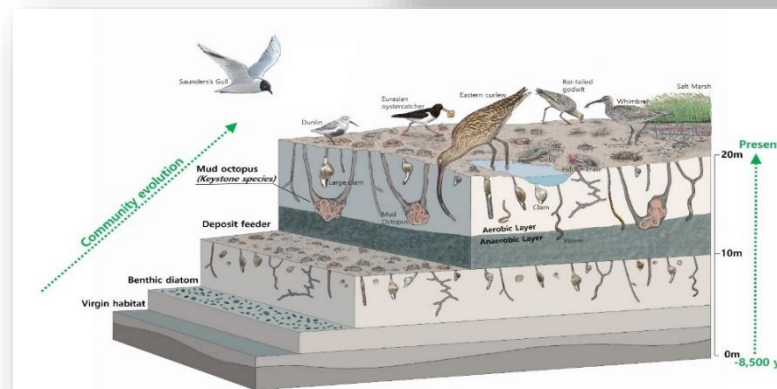
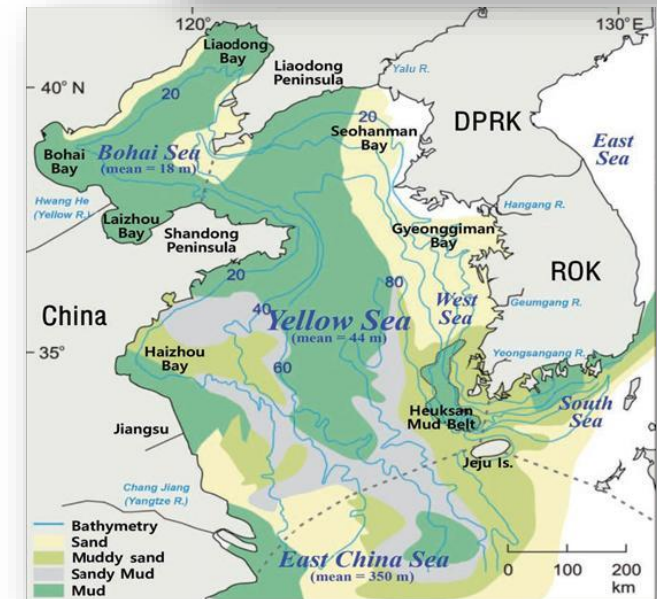
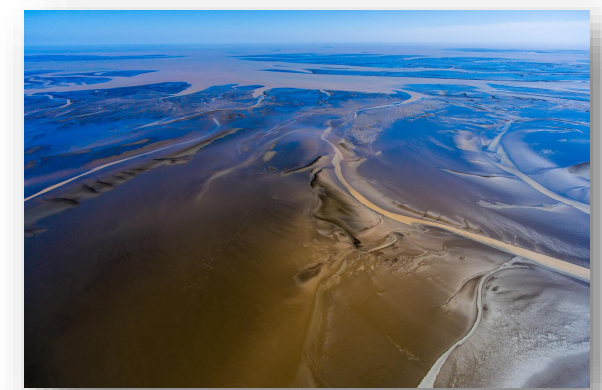
Founded in 1948, IUCN is the world's largest global environmental organization.

- A unique **democratic** Union with more than 1,200 State and NGO Member organizations in 160 countries.
- The leading provider of the **latest knowledge** about biodiversity, with more than 16,000 experts and scientists.
- The only environmental organisation with official **Observer Status** at the **United Nations** General Assembly.
- 58 members in China and China is a state member, represented by the Ministry of Natural Resources



Importance and values of the Yellow Sea ecosystems

- Globally **unique intertidal transboundary ecosystem**, among the largest on Earth, as recognised by several recent World Heritage nominations
- A vital stop-over that supports the migration of shorebirds through **one of the most important global migration flyways**
- Fisheries contribute to **30% of all fisheries of the three countries**
- The **most important mariculture production area globally**
- Provides essential **ecosystem services for 200 million people** living in the Yellow Sea low-elevation coastal zone.
 - Sequestration of blue carbon,
 - Protecting coastal communities from the impacts of climate change
 - Nature-based tourism industry that supports coastal livelihoods.



Yellow Sea – high on IUCN’s agenda

- The IUCN World Conservation Congresses adopted **Resolutions 28 and 26 in 2012 and 2016**, emphasizing the importance of the Yellow Sea region intertidal zone, migratory birds and the need for their protection. **In 2020 WCC adopted Res 94 - Safeguarding the Endangered narrow-ridged finless porpoise (*Neophocaena asiaeorientalis*) in the Yellow Sea.**
- PRC, DPRK and RoK launched the **IUCN Working Group on the Conservation of the Yellow/West Sea Intertidal and Associated Coastal Wetlands** during the Yancheng Symposium held in Yancheng, PRC in December 2017. It aims to facilitate common approaches to the protection, restoration, management of intertidal wetlands

WCC-2016-Res-026-EN
Conservation of intertidal habitats and migratory waterbirds of the East Asian-Australasian Flyway, especially the Yellow Sea, in a global context

RECALLING Resolution 5.028 *Conservation of the East Asian-Australasian Flyway and its threatened waterbirds, with particular reference to the Yellow Sea* (Jeju,2012);

ALARMED by the Red Listing as Globally Threatened or Near Threatened of an additional six migratory waterbird species due to the rapid rate of conversion of intertidal wetlands in the East Asian-Australasian Flyway (EAAF), particularly the Yellow Sea;

NOTING the results of studies arising from Resolution 5.028 on the benefits of ecosystem services provided by intertidal wetlands, and the status of threatened birds and their habitats to prioritise sites requiring urgent conservation and restoration and identification of important migratory waterbird habitat and expert networks;

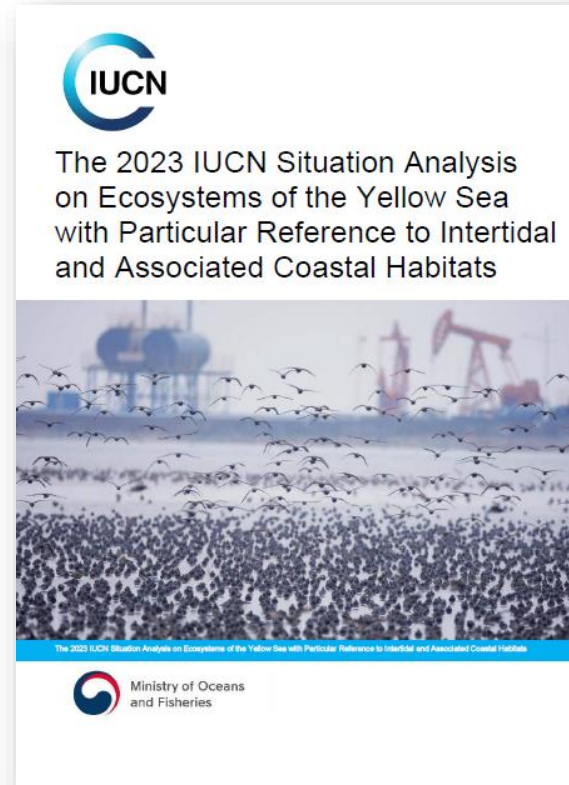
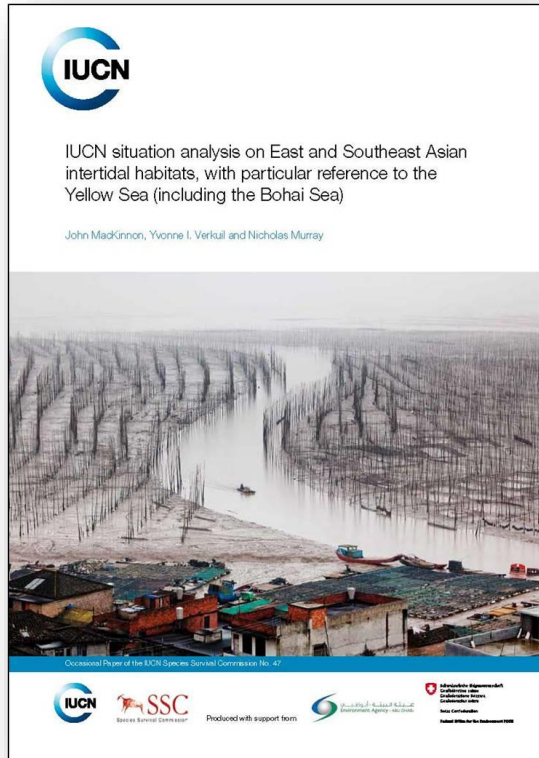
RECOGNISING workshop outcomes on the conservation of intertidal areas, including nationally for China (September 2014) and the Republic of Korea (May 2016), and the Yellow Sea (August 2016), calling for increased recognition of the importance of intertidal ecosystems and their stronger protection;

NOTING the September 2015 recommendations of the China Coastal Wetland Conservation Blueprint project to strengthen wetland legislation and improve the protection, management and restoration of coastal wetlands in the spirit of ecological civilisation (a state China wishes to achieve by harmonising the co-existence of the global ecosystem and human economic development);

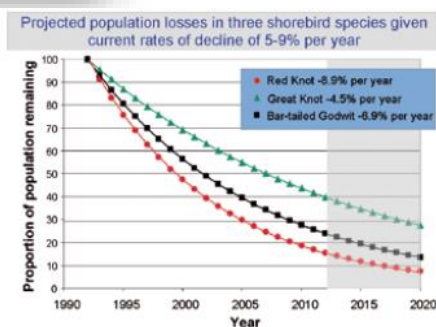
RECOGNISING the creation of the China Coastal Wetland Conservation Network in June 2015 to increase awareness and cooperative actions to protect coastal wetlands among government and society;



IUCN Situation Analysis on the Yellow Sea



Provides an overview of regional wetland trends, biodiversity and ecosystem services of the Yellow Sea, including assessments of important sites, threats to intertidal wetlands and ecosystem services, an analysis of the policy and conservation frameworks, and recommendations for wetland policy makers and managers.



Policy changes at national level

China

- In 2012, The State Oceanic Administration launched the **delineation of red lining in the Bohai Sea**, aiming to implement a stricter marine ecological protection system. Currently such red lined areas cover about 30 percent of the total coastal management area of PRC.
- In 2018, under the circular entitled ***Reclaiming land to be restricted***, PRC prohibited all business-oriented coastal land claim activities and abolished local governments' authority over the matter. In 2019, the National Administration for Forests and Grasslands issued new regulations banning the construction of new windfarms in sensitive migratory bird flyways, so windfarm development in this sector has reduced



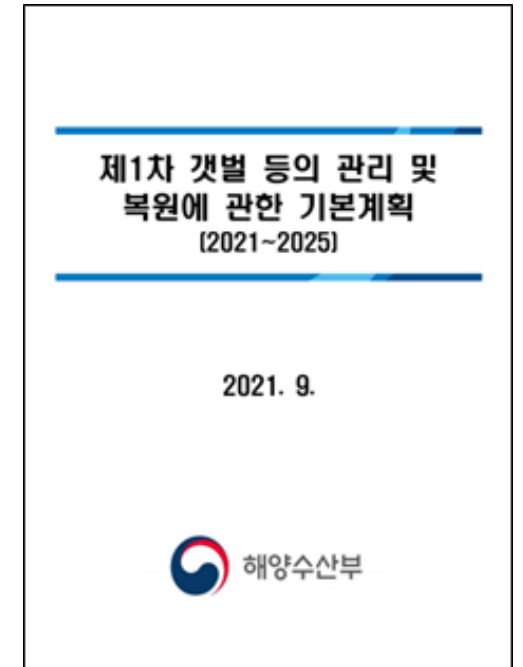
Policy changes at national level

RoK

- Enacted in 1999 and amended in 2016, **RoK's Wetlands Conservation Act** aims to conserve wetlands and wetland biodiversity and to promote international cooperation by reflecting the purpose of the Ramsar Convention.
- **2021 Act on the Sustainable Management and Restoration of Tidal Flats** (Getbol). Under the Getbol Act, The Master Plan on Management and Ecological Restoration of Tidal flat and Adjacent Areas, first edition (2021-2025) was released in September 2021.

DPRK

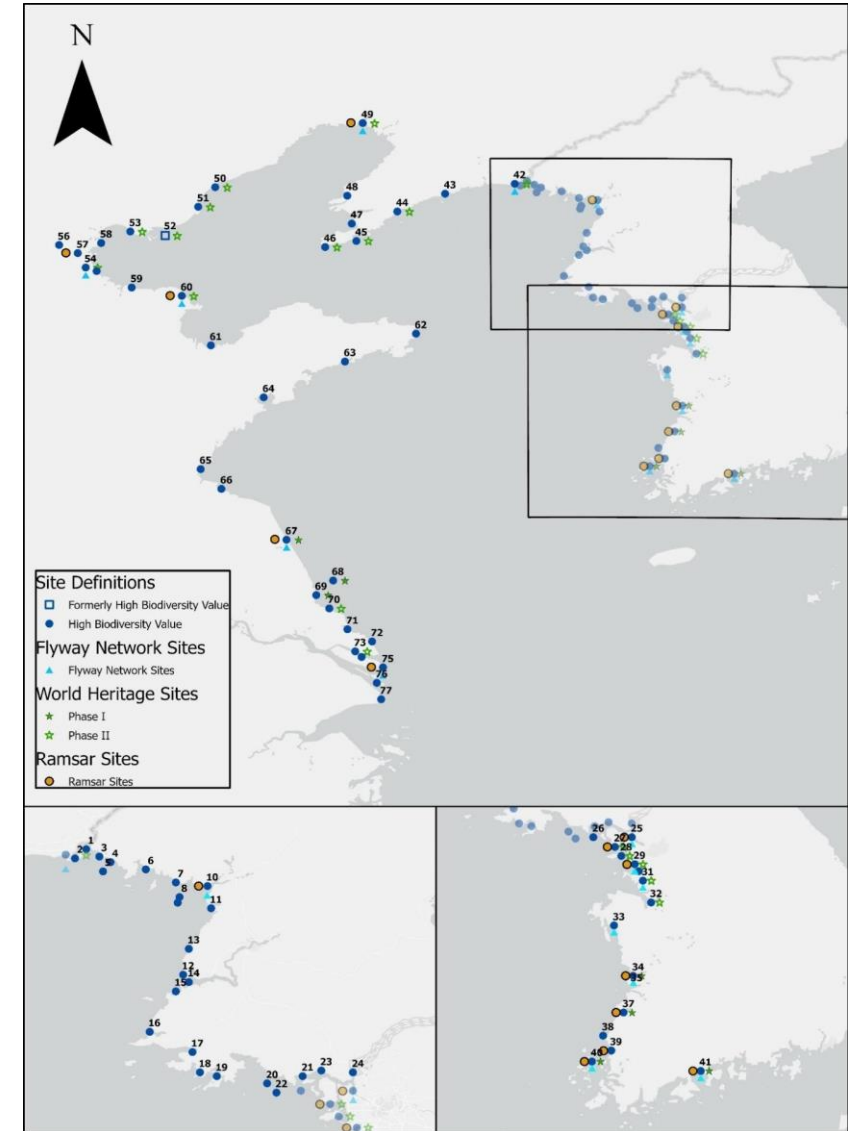
- **DPRK has ratified the Ramsar Convention.**
- DPRK EIA law revised in 2014:
 - *Institutions in charge of exploiting natural resources, and institutions, enterprises, and organizations concerned that wish to develop marine resources or undertake construction projects along seashores, shall have them evaluated for their impact on the marine environment and take measures to prevent marine pollution.*



The Master Plan on Management and Ecological Restoration of Tidal flat and Adjacent Areas

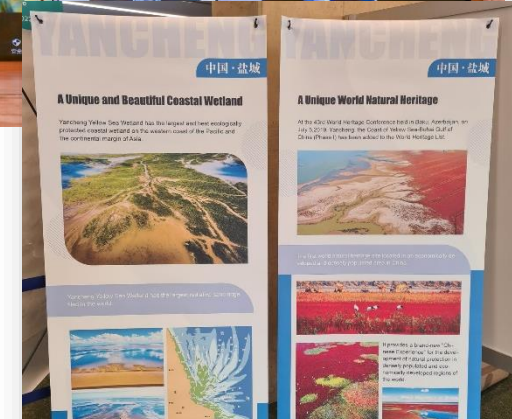
Site-level protection

- Coastal PA area increased significantly in RoK and DPRK (more than 250,000 ha)
- **UNESCO has designated two natural World Heritage sites along the Yellow Sea;**
 - Migratory Bird Sanctuaries along the Coast of Yellow Sea-Bohai Gulf of PRC (Phase I)
 - Getbol Korean tidal flats in RoK (Phase I)
- DPRK designated 2 Ramsar sites, one of which – Mundok Migratory Bird Reserve – lies within the Yellow Sea Ecosystem and is also designated as an EAAFP Flyway Network site. Mundok on WH tentative list.



Awareness and capacity building

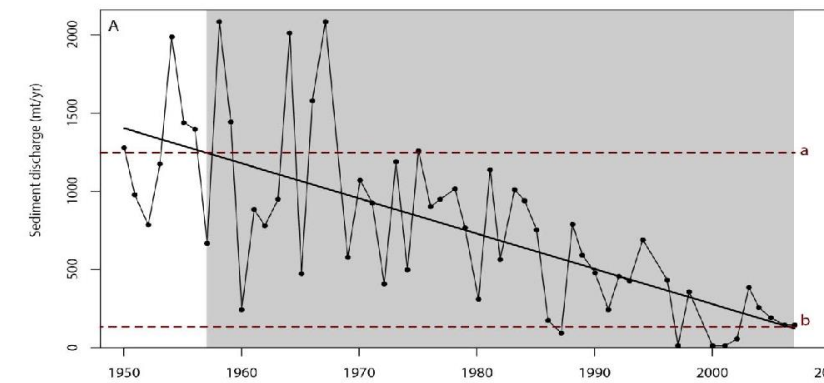
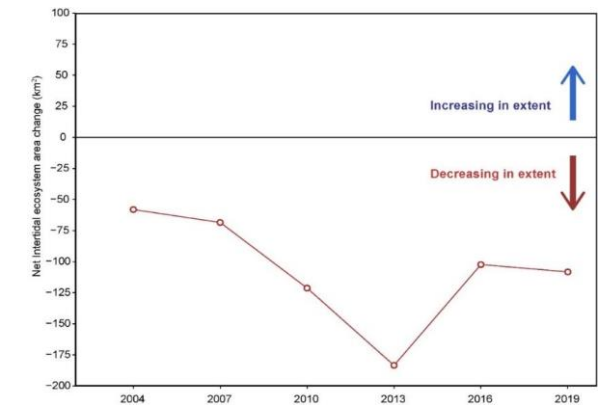
- In 2017, 2018, 2019 and 2020 Jiangsu, Yancheng hosted a series of **international symposia on coastal wetlands**, with a focus on the Yellow and Bohai Sea.
- In 2019, Shinan county (RoK) organised the **International Symposium on Conservation Strategy for Migratory Birds and Their Habitats in the Yellow Sea**.
- Volunteers strengthen the **China Coastal Waterbird Census**. In RoK, citizen science monitoring is organized for key species (Black-faced Spoonbill, Far Eastern Curlew) and in DPRK there is an annual waterbirds census (led by the Academy of Science).
- **Many festivals and bird events** now take place around the Yellow Sea. Bird races have emerged as a popular way to celebrate bird diversity and gain new records.
- **Several eco-museum built**. Suncheon City has built a cooperative network with other regions where cranes inhabit to strengthen conservation. Yancheng has developed a wetlands museum.



Threats and drivers – habitat loss and degradation

- **The Yellow Sea tidal flats ecosystem has been listed as a globally Endangered ecosystem under the IUCN Red List of Ecosystems.**
- ***The rate of coastal land claims has reduced since 2013.*** Land claim area in the period 2010-2020 is 64% less than the previous decade, **but there is now more land claimed area than remaining intertidal habitat.**
- **Some claims continue** (pre-approved projects, extension projects, new reclamation in DPRK)
- The construction of hundreds of dams on the rivers flowing into the Yellow Sea, together with closure and land claims of many estuaries in all three countries, has resulted in a dramatic reduction in the amount of new silt washing into the sea. This ***change in discharge rate greatly affects the distribution, movement and nature of exposed intertidal habitats available for shorebirds*** and other biota. The quality of muddy habitat is affected and productivity is reduced.

Period	Land claimed Area Estimate (km ²)	Cumulative Land claimed area since 1980 (km ²)	Tidal flat extent estimate (km ²)
1980-1990	2884	2884	10486
1990-2000	1935	4819	9327
2000-2010	3622	8441	8315
2010-2020	1286	9727	6668



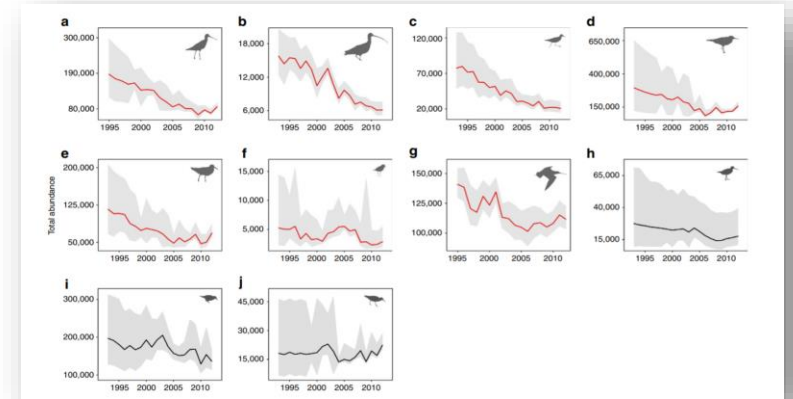
Threats and drivers – other pressures

- **Wind and solar farms** together with other large infrastructure developments impact migratory birds through collision and competition for space
- **Over-harvesting of seafood and unsustainable aquaculture/mariculture** practices are degrading natural environments
- **Invasive species** are a threat to both marine and inter-tidal ecosystems
- **Pollution** from human waste, farming practices and industry is a threat to wildlife and human health
- **Climate change** is increasing sea level, temperature and extreme weather events, causing a loss of intertidal habitat. Projections highlight a loss of coastal habitat as well as threats of flood risk to human populations
- **Many sites used by threatened species remain unprotected.**



Species trend

- Despite efforts of all three countries to strengthen protection in the Yellow Sea, particularly the intertidal zone, the trends for most species continue to decline.
- Of 34 populations of globally threatened and near threatened bird species, 14 (41%) are declining, only 3 increasing and the rest stable or uncertain
- **Region-wide fisheries have also declined by an estimated 40% since 2012**, highlighting a loss of marine biodiversity and impacts on local livelihoods. The fisheries catch value peaked in 2000 at about 222.5 billion RMB (US \$30 billion)
- Few marine mammals and turtles remain but **spotted seals are responding to recent conservation efforts**



Opportunities

- Reduce fragmentation of governance of the coast
- Appoint an effective agency, directly under the highest authorities, to coordinate and supervise all government agencies involved in coastal management at national, subnational and local levels
- Strengthen Yellow Sea transboundary cooperation:
 - Adopt a regional and coordinated PA strategy using a variety of tools (WH, MPAs, Ramsar, OECM...)
 - Establish tripartite agreement of fishing rights and zones in the Yellow Sea to control overfishing and reduce tensions between competing national fishing fleets. UN agencies may be best able to facilitate this.
 - An institutional framework for WH management, such as a regional coordination committee to foster a cooperative approach, could be established, evolving from the YSWG.
- Upscale Nature-based solutions approaches building on intertidal wetlands ecosystem services.
- Develop and implement management plans taking into account new and growing threats (e.g. Invasive Alien Species management)





Thank you very much

Report available in Chinese

English version available on IUCN website.

Raphael.glemet@iucn.org