

## Information provided for the **Convention on Biological Diversity COP11, October 2012, Hyderabad, India**

### **East Asian Flyway coastal wetlands face an ecological crisis**

Intertidal habitats along the East Asian-Australasian Flyway face an ecological crisis – this is the conclusion of an independent situation analysis commissioned by IUCN<sup>1</sup>.

The report shows that fisheries and vital ecological services are collapsing and ecological disasters increasing, with resulting impacts on human livelihoods. Migratory waterbird species along the flyway, which serve as indicators of the health of the coastal ecosystem, are showing exceptionally rapid declines. These declines are linked mainly to the disappearance and degradation of coastal migratory staging posts, rather than problems on the breeding or wintering grounds.

The report identified 16 key areas for waterbirds along the flyway, with six of these in the Yellow Sea (including the Bohai Sea). Here, the most pressing threat is the fast pace of coastal land claim (also known as reclamation and defined as conversion of natural wetland into dry land and artificial wetland by mechanical means). Since the early 1980s, the mean area of intertidal habitat claimed within the six key areas in the Yellow Sea is 35%. Losses of such magnitude are the likely key drivers of declines in biodiversity and ecosystem services in the intertidal zone of the region.

#### *Waterbirds of the East Asian-Australasian Flyway coast are facing extinction*

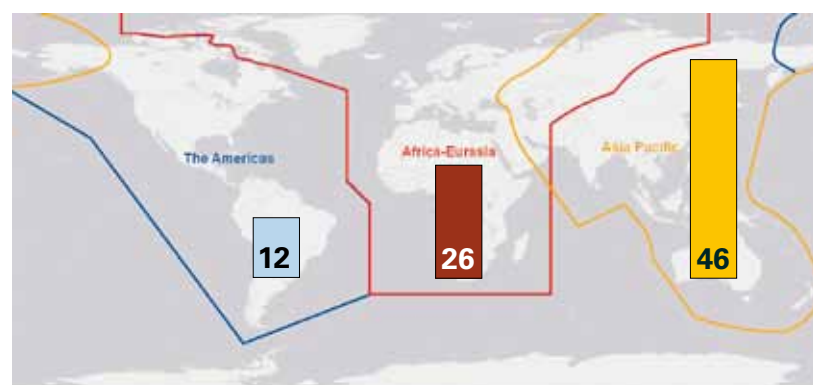
Waterbirds that depend on the Asian intertidal habitats of the East Asian-Australasian Flyway (EAAF) during their non-breeding season are the world's most threatened migratory birds, apart from albatrosses and petrels.

At least 24 such species are heading towards extinction, with many others facing exceptionally rapid losses of 5–9% per year. With declines of 26% per year the Spoon-billed Sandpiper could be extinct within a decade. These rates of species population decline are among the highest of any ecological system on the planet.



Zheng Jianping

**Spoon-billed Sandpiper wintering at the Min Jiang Estuary, Fujian Province, China.**



*Many more waterbirds are threatened with extinction in East Asia-Australasia than in other flyways. (Numbers on map include both threatened and near-threatened waterbird species.)*

Map: Wetlands International 2012. Waterbird Population Estimates, Fifth Edition. Summary Report. Wetlands International, Wageningen, The Netherlands.

Figures: Kirby, J. S., Stattersfield, A. J., Butchart, S. H. M., Evans, M. I., Grimmett, R. F. A., Jones, V. R., O'Sullivan, J., Tucker, G. M. and Newton, I. (2008) Key conservation issues for migratory land- and waterbird species on the world's major flyways. (*Bird Conserv. Int.* 18: 549-573).

1. MacKinnon, J., Verkuil, Y.I. & Murray, N. (compilers) (2012) *IUCN situation analysis on East and Southeast Asian intertidal habitats, with particular reference to the Yellow Sea (including the Bohai Sea)*. Occasional Paper of the IUCN Species Survival Commission No. 47. Gland, Switzerland and Cambridge, UK: IUCN. 72 pp. [www.iucn.org/asiancoastalwetlands](http://www.iucn.org/asiancoastalwetlands)

Jan van de kam



Shorebirds on what remains of the Bohai Bay mudflats, most of which have recently been claimed for industrial development and oil fields, such as the one at Nanpu, shown here.

The rich feeding grounds provided by tidal mudflats, especially of the Yellow Sea, are vital refuelling stops for birds on their spectacular flights, twice a year, between breeding areas as far north as the high arctic and non-breeding areas south to Australasia. Some birds do not travel further south and rely on Asian mudflats throughout the non-breeding season.



East Asian-Australasian Flyway highlighting the importance of the Yellow Sea.

Dead shellfish in 2006 following closure, by a 33 km seawall, of the estuary at Saemangeum, Republic of Korea, formerly one of the world's most important staging sites for migrating shorebirds.

Since 2006 there have been precipitous declines in species such as Spoon-billed Sandpiper that depended on the site for refuelling on migration. The claimed land is scheduled for conversion for agriculture or industry.

NASA October 2006



Ju Yung Ki



Niall Moores / Birds Korea



*Sixteen critical tidal flats for waterbirds of the East Asian Flyway.*

Sixteen critical coastal areas have been identified from an analysis of 395 eastern Asian sites with tidal flats used by waterbirds of the EAAF<sup>1</sup>. Six of these are concentrated in the Yellow Sea (including the Bohai Sea). A mean area of 35% of the intertidal habitats at these six sites has been lost to land claim since the early 1980s.

As well as these critical areas, many other sites are used by particular species as they move north or south on migration, or throughout the non-breeding season, and also need protection as part of a critical site network.

### *Rapid land claim of Asian tidal flats is driving many waterbirds towards extinction*

East Asian intertidal habitats (including beaches, marshes, mudflats, mangroves and seagrass beds) are being lost at a rate unprecedented for the coastal zone elsewhere in the world. Some countries have lost more than half their coastal wetland area to land claim since 1980. These rates of habitat loss are comparable to those of tropical rainforests and mangroves.

Evidence suggests that land claim, especially in the crucial Yellow Sea staging areas, is likely driving the waterbird declines and related environmental problems. Breeding success in the Arctic and survival in the Australasian non-breeding sites appear to be adequate; the main problems seem to be in the East Asian staging areas.

In this most densely populated part of the world, the effects of land claim act cumulatively with other threats to the ecology of the Asian intertidal zone. These threats include pollution, non-native species, silt flow reduction resulting from damming of major rivers, over-fishing, over-harvesting of waterbirds, and conversion of mudflats for aquaculture or other uses, plus the added challenges of climate change, such as increased flood risk.

### *Waterbirds indicate deterioration in Asian coastal ecosystems and their services*

The waterbird population declines signal deterioration in the quality of intertidal ecosystems. Healthy tidal flats provide many services of direct economic and cultural benefit to the lives and livelihoods of millions of people in local communities and beyond. Such services include fisheries worth billions of US\$ per year and coast defences which, if lost, expose coastal cities, towns and lands to economically devastating damage.

Marine mammals, fish, invertebrates and plants associated with tidal ecosystems are also in sharp decline with areas of the Yellow and Bohai Seas becoming 'dead' seas. Meanwhile ecological disasters are significantly increasing, including floods, salination of coastal areas, outbreaks of harmful algal blooms, and death of fish and mariculture stocks.

**Fishermen and shorebirds looking for shellfish on remaining mudflats in Bohai Bay, while dredgers work on new reclamations to expand the industrial area on the horizon.**





## *Intertidal wetlands provide vital ecological infrastructure*

The ecological crisis of the Asian intertidal zone highlights the need to maintain natural ecological infrastructure to support long-term, sustainable development. Current planning processes for the coastal zone do not adequately take into account the existing and future values of the intertidal wetlands as opposed to other uses.

The sustainability of coastal zone planning needs to be addressed to maintain the well-being of coastal-dwelling people, as well as to enable countries along the EAAF to meet their commitments to global biodiversity targets and key multilateral environmental agreements.

## *International co-operation, and effective environmental safeguards, are needed*

The birds and habitats of the EAAF are the shared natural heritage of 22 countries. At present, each country's economic and environmental sustainability is being damaged by the actions of its neighbours. International cooperation is required to secure the region's tidal ecosystem resources in the long term.

A healthy environment is essential for sustainable development. This means that rapid economic growth must build in effective environmental safeguards. Otherwise, economic gains may be short-lived – being undermined by the loss of valuable ecosystem services and costly ecological disasters.

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**http://www.birdlife.  
org/community/tag/  
asiancoastalwetlands**

## **Please support implementation of *Motion 32 Conservation of the East Asian-Australasian Flyway and its threatened waterbirds, with particular reference to the Yellow Sea, as adopted at IUCN World Conservation Congress 2012, including, among others, the following operative paragraphs:***

1. REQUESTS the Director General, IUCN Commissions and Members to undertake an in-depth study that
  - a) investigates the benefits of ecosystem services provided by intertidal wetlands, especially tidal flats and associated habitats, in East Asia with particular reference to the Yellow Sea, in relation to the benefits arising from the land claim or conversion of such habitats;
2. ENCOURAGES governments along the EAAF to recognize the international importance of their intertidal wetlands for biodiversity and ecosystem services, halting further approval of intertidal mudflat land claim at priority sites for biodiversity, irrespective of protection status, until a full assessment of the economics of ecological services and cultural values and identification of biodiversity needs can be completed;
3. FURTHER ENCOURAGES governments along the EAAF, in view of the importance of cooperation between countries, to achieve effective management, to develop international and national action plans by 2014 to secure the future of this fundamentally important resource, focusing on:
  - a) Agreeing on the key sites for endangered birds that require urgent conservation and restoration, leading to the conservation, before 2020, of at least 10% of the intertidal zone as sustainably managed protected areas;
  - b) Strengthening implementation of the Ramsar Convention (including encouraging ratification by the Democratic People's Republic of Korea) to highlight the importance of key sites and improve funding and capacity to manage them;
  - c) Strengthening protected area legislation and management, including increasing flexibility regarding the integration and control of human activities, to ensure achievement of conservation objectives;
  - d) Ensuring that enhanced coastal zone planning results in stability of the biodiversity of the intertidal zone by embracing the principles of sustainable development and specifically by fully considering the ecological services and dependent biodiversity of tidal flats and associated habitats in integrated planning that incorporates appropriate independent Strategic Environmental Assessment and Environmental Impact Assessment processes, including appropriate site selection that considers alternatives, design to reduce impacts, compensation for unavoidable residual damage, and monitoring to assess mitigation effectiveness and trigger adaptive management;
  - e) Restoring impounded internationally important intertidal wetlands through increasing tidal exchange to such sites;
  - f) Strengthening levels of awareness, transparency and public participation as regards the importance, values and benefits of tidal flats and associated habitats;
  - g) Improving understanding of bird conservation needs via increased population monitoring and research on migratory bird patterns and ecological requirements; and
  - h) Using the EAAF Partnership, a Ramsar Regional Initiative, as a mechanism for implementing a clear strategy to guide investments, programmes and activities for strengthening habitat and species protection along the EAAF; and
4. FURTHER REQUESTS the Director General and IUCN Commissions (to the extent possible within available resources) to:
  - a) Provide assistance to governments along the EAAF, and particularly those around the Yellow Sea, to find sustainable means of managing intertidal wetlands that meet the needs of economic development and biodiversity conservation, and to provide support to the proposed or existing national and international action plans as required.