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The New COBSEA State of the Marine Environment Report for the East Asian Seas 2009"

East Asia-Sea Change Needed in Management of Crucial Marine Resources

New UNEP Report Underlines Multiple Challenges to Nature-Based Infrastructure Threatening Regions' People and Economies

Bangkok, 15 February 2010– The economic future of East Asia and the region's ability to overcome poverty are facing serious challenges unless urgent action is taken to manage the health and wealth of its marine environment.

A new report released today underlines that multiple threats facing the East Asian seas as a result of factors including insensitive development, pollution, alien invasive species and climate change.

The East Asian Seas State of the Marine Environment report says economically important coastal habitats and ecosystems are under pressure with 40 per cent of coral reefs and half of all mangroves having already been lost.

Meanwhile high levels of suspended solids are entering the marine environment via rivers with levels having quadrupled since the late 1970s and many fish stocks are being rapidly depleted triggering a looming fisheries and food crisis unless action is taken to better manage and regulate the industry.

The region is also seeing an increasing frequency of harmful algal blooms or red tides caused by land-based nutrients, which have significant economic repercussions. Red tides have been increasing in frequency in China, Republic of Korea, Japan, the Philippines, Thailand, Indonesia and Australia.

Achim Steiner, UN Under-Secretary General and Executive Director of the UN Environment Programme (UNEP), said: "With nearly three quarters of the region's population depending directly or indirectly on coastal areas, and with 80 per cent of the region's GDP linked to the coastal natural resources, the time must be right for factoring the marine environment into the centre of economic planning".

'These ocean ecosystems are a critical lifeline for the region's economies and people. You can say that the health of these oceans and their ecosystems is very much tied to the economic health of these countries and well-being of their citizens. They also constitute 30% of the world's sea space under national jurisdiction and governments in the region have a major role in maintaining effective stewardship of the marine environment," said Dr. Chou Loke Ming, of the National University of Singapore, author of the report.

A Wealth of Natural Capital

The East Asian Seas is home to nearly 80% of global coral species, over 60% of mangrove species, and over 55% of sea grass species. They accounts for 50% of global fisheries production and 80% of global aquaculture production.

Coastal areas account for an estimated 80% of the region's economic activity, and in some of the less developed countries, almost 40% of GDP. Annually, coral reefs are estimated to generate US$112.5 billion, mangroves US$5.1 billion, wetlands US$1.2 billion and sea grass US$86 million.

Pressures on coastal environment and habitats are expected to mount as a result of climate change. Extreme events and disasters are already increasing in countries in the region, and this is expected to rise with global warming. Warming waters will also adversely affect the survival rate of corals.

Coastal areas, especially deltaic, wetland and coral reef ecosystems are also at risk with deltas deemed most vulnerable. The most exposed areas are deltas and mega-deltas of China, Vietnam and Thailand. Sea level rise is estimated to affect as much as 55% of the population in Vietnam, 26% in Thailand, 18% in the Philippines, and 11% in China.

"Governments in the region have taken some actions to deal with these issues, but it is crucial that they strike a balance between development and the protection of these coastal resources. Strong political will is needed if the myriad of problems that plague the region are to be addressed," said UNEP's Dr. Ellik Adler, who is also Coordinator of the Coordinating Body of the Seas of East Asia (COBSEA).

Future Challenges and Recommendations

The report projects that the problem of marine and coastal invasive species is likely to worsen over the coming decade, resulting from the increase in shipping in the region which already has one of the world's highest concentrations of shipping and fishing vessel activity.

The report underlines the urgency of implementing a regional action plan on marine litter which has now been developed for the region.

Oil, gas and hydrates exploration are also of concern because of the lack of a legal framework governing the petroleum sector. Oil spills remain a threat and the extensive damage to the marine ecosystem is well known.

Overall the report recommends a more systematic and integrated approach to managing coastal and oceanic issues allied to improved data collection and management and economic incentives to encourage private sector involvement in environmental protection efforts.

Such actions can support better decision-making, national assessments of coastal and ocean resources and conditions, enhanced public private partnerships.

The 'East Asian Seas State of the Marine Environment Report 2009' was produced by the Coordinating Body of the Seas of East Asia (COBSEA) of the United Nations Environment Programme

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NOTES TO EDITORS:

Copies of the report can be downloaded at: http://www.roap.unep.org/

Key findings of the report include:

- Recent estimates indicate that coastal habitats are disappearing at a rate of 1.2 to 9% a year globally (four to ten times faster than that of the tropical rainforest), and are currently considered the most imperilled of all ecosystems on earth
- The Coordinating Body on the Seas of East Asia (COBSEA) consists of ten member countries: Australia, Cambodia, the People's Republic of China (henceforth referred to as China), Indonesia, the Republic of Korea, Malaysia, the Philippines, Singapore, Thailand and Vietnam.
- Trends were analysed based on information over a 25-year period between 1981 and 2006 with new information up to 2009 included as far as is possible, and the outlook for the region is projected up to 2012.
- Almost all COBSEA member countries have extensive coastlines and a combined sea area equivalent to about 30% of the world's sea space under national jurisdiction. The region therefore has a large influence and a major role in maintaining the health of earth's marine environment.
- EAS countries support almost two billion people making the region one of the world's most populous, with almost 75% concentrated in the coastal areas.
- One of the main reasons for the region's high marine biodiversity and production (accounting for more than 40% of the world's total fish catch), is that it contains almost half of the world's coral reef. The coral reefs of Southeast Asia alone are estimated to generate goods and services valued at US$112.5 billion annually. aquaculture activities are growing throughout the region. The EAS region provided 87% of the global aquaculture production in 1992
- Aquaculture expansion has its impact on the coastal areas through exotic species introduction, increased use of chemicals, excess nutrients, and habitat clearing and conversion. As a result, aquaculture has been cited as a major cause of the destruction of over 3 million hectares of Southeast Asia's mangrove forests.
- The East Asian Seas (EAS) region accounts for 14 of the world's 64 semi-enclosed and interconnected large marine ecosystems (LMEs).The region as a

whole is highly urbanised, with populations fast transforming from rural to urban. In 1980, about 42% of COBSEA countries' population lived in urban areas. This proportion is estimated to grow to 69% (a regional total of 1.5 billion people) by 2030.

- EAS cities are among the most populated in the world. Five of the 21 global megacities (cities in excess of 10 million inhabitants) are located in the region and it is estimated that more cities will achieve this status within the next five decades.
- Coastal fisheries provide up to 12% of total protein consumed in the region, twice the global average.
- Aquaculture production between 1970 and 1985 was relatively low at regional and global levels. In 1985, it accounted for about 19% and 3.6% of total fisheries production, in the EAS region and the world, respectively. However, it has increased significantly since then, with figures reaching 27% and 13%, respectively, in 2005. By this time, aquaculture production totalled almost half of the capture production in the EAS region, and contributed almost 80% of global aquaculture production. Much of this was contributed by China.
- In Hong Kong, harmful algal blooms resulted in the collapse of mariculture industries worth US$10 million in 1997, and an additional US$32 million in 1998. In 2005, HABs impaired coastal fisheries and algae cultivation in China, causing a direct economic loss of US$8.6 million (SEPA, 2006). In Republic of Korea, 126 incidences of HABs were recorded in 1996 alone, with losses to aquaculture estimated at US$10 million
- Landslides are another major natural hazard in many COBSEA countries, both in terms of damage to property and loss of life. In the Republic of Korea alone, it has been estimated that landslides result in an average annual loss of 60 lives and property valued at US$10-30 million.
- Recent evidence shows that climate change has already begun to affect the coastal areas of the EAS region. Overall, trends indicate both rising temperatures and also an increase in rainfall variability. An overall increase of 0.1 - 0.3°C per decade was reported for Southeast Asia between 1951 and 2000.
- Particularly important is the increasing number of extreme weather events affecting the EAS region. In China, the number and intensity of cyclones has clearly increased since the 1950s, (of a total of 21 extreme storm surges during 1950 - 2004, 14 occurred during 1996 - 2004). In the Philippines, which has historically seen an average of 20 cyclones each year, the frequency of such events increased by 4.2 during the period 1999 to 2003.
- The region has one of the world's highest concentrations of shipping and fishing vessel activity. The anticipated tripling of international trade in the next 20 years will intensify shipping intensity.
- Many fisheries stocks have been overexploited, fully exploited or moderately exploited and increasing demand can lead to a fisheries crisis in the region.