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NORTH-EAST INDIAN OCEAN REGIONAL
WORKSHOP TO FACILITATE THE DESCRIPTION
OF ECOLOGICALLY OR BIOLOGICALLY
SIGNIFICANT MARINE AREAS
Colombo, 23 to 27 March 2015

**COMPILATION OF SUBMISSIONS OF SCIENTIFIC INFORMATION
TO DESCRIBE AREAS MEETING THE SCIENTIFIC CRITERIA FOR
ECOLOGICALLY OR BIOLOGICALLY SIGNIFICANT MARINE AREAS
IN THE NORTH-EAST INDIAN OCEAN REGION**

Note by the Executive Secretary

1. The Executive Secretary is circulating herewith a compilation of scientific information in support of the North-East Indian Ocean Regional Workshop to Facilitate the Description of Ecologically or Biologically Significant Marine Areas, being convened by the Executive Secretary to the Convention on Biological Diversity and hosted by the Government of Sri Lanka, from 23 to 27 March 2015, in collaboration with the South Asia Co-operative Environment programme (SACEP) and the Bay of Bengal Large Marine Ecosystem (BOBLME) Project, with financial support from the Government of Japan (through the Japan Biodiversity Fund).
2. This compilation consists of a list of submissions made by workshop participants from Parties and organizations in response to notification 2014-130 (<http://www.cbd.int/doc/notifications/2014/ntf-2014-130-ebesa-en.pdf>), dated 11 November 2014. The original submissions are available at <http://www.cbd.int/doc/?meeting=EBSAWS-2015-01>.
3. These submissions are being circulated in the form and languages in which they were received by the Secretariat of the Convention on Biological Diversity.

Table 1. Scientific Information submitted in support of the Workshop objectives using EBSA templates

Party/ Org. of submitter	Author(s)/Contributor	Contents of EBSA submission	Short description of submission
Maldives	Mr. Mohamed Musthafa Director Environmental Protection Agency Maldives mohamed.musthafa@epa.gov.mv	Maldives-EBSA Template 1 - Rasdhoor Atoll Reef	Rasdhoor Atoll located 4°15'46"N 72°59'29"E is among the few small Atolls in Maldives and has special environment features. The atoll has 4 islands and 3 sandbanks. Of these Rasdhoor Island is the only inhabited island with a population of 867 people. The channel between Rasdhoor Island and Madivaru Island is known throughout the world as a famous diving site to spot Hammerhead Sharks. The average depth of the channel is estimated to be 400m. Hammerhead sharks can be seen in abundance throughout the year in depths of 25- 60 meters. Since the Atoll is an isolated Atoll surrounding deep sea it act as a sanctuary for the juvenile fishes to grow in safety of shallow atoll rim, for this reason the atoll is famous for large number of reef fish and frequent visits by their predators like the Hammerhead Shark. Due to its rich biodiversity value Environmental Protection Agency of Maldives has also included this Atoll in the Environmentally Sensitive Areas list of Maldives. Locals of this atoll and throughout the Maldives use these resources for different economical and personal use. The demand for these resources would be increasing as the industries boom and with the raising population. For this reason it is important to manage the resources and conserve its beauty for the generation to come.
Sri Lanka	Mr. H.B. Jayasiri, Principal Scientist,, National Aquatic Resources Research and Development Agency (NARA), Crow Island, Colombo 15, Sri Lanka. hbjayasiri@gmail.com Mr. S.S.K. Haputhantri, Principal Scientist, Marine Biological Resources Division, National Aquatic Resources Research and Development Agency (NARA), Colombo 15, Sri	Sri Lanka - EBSA Template 1 - Negombo	Negombo Lagoon is one of the most productive and sensitive ecosystems in Sri Lanka. The main fresh water input comes to this lagoon from the rivers Dandugam Oya and Ja-ela. The Negombo Lagoon and its coastal environment have had a long association with the fishery industry. The salinity of Negombo Lagoon is strongly related to the monsoon rains and varies from almost zero to near oceanic salinity. Negombo Lagoon is in the mesotrophic state according to the trophic status. Altogether 89 species of benthic invertebrates, 29 mangrove species, seven sea grass species and 140 species of fish have been recorded. The lagoon and the adjacent reef areas function as the major nursery, refuge and feeding grounds for

	Lanka. sisirahaputhantri@yahoo.com		most of catadromous species. Thus, it is necessary to manage and protect this sensitive ecosystem in a sustainable manner.
Sri Lanka	<p>Mr. H.B. Jayasiri, Principal Scientist,, National Aquatic Resources Research and Development Agency (NARA), Crow Island, Colombo 15, Sri Lanka. hbjayasiri@gmail.com</p> <p>Mr. S.S.K. Haputhantri, Principal Scientist, Marine Biological Resources Division, National Aquatic Resources Research and Development Agency (NARA), Colombo 15, Sri Lanka. sisirahaputhantri@yahoo.com</p>	<p>Sri Lanka - EBSA Template 2 - Gulf of Mannar</p>	<p>Gulf of Mannar is a repository of over 3,600 species of plants and animals and the first biosphere reserve in the South-East Asian region. It is one of the most biologically diverse coastal regions in the planet earth. It is also among the largest remaining feeding grounds for the globally endangered species namely dugong. Five different species of endangered marine turtles, innumerable fish, mollusks and crustaceans are also found here. The Gulf of Mannar region supports a variety of habitats within the main ecosystems of coastal lagoons, sea grass beds and coral reefs. Due to the high productivity of the area, it is an important fishing ground both for India and Sri Lanka. The marine environment and the aquatic species in the GOM are subjected to a great threat at present mainly due to use of harmful fishing methods/gear and extensive use of marine resources. Thus it is paramount important for both countries to safeguard the ecological status and sensitivity of this system.</p>
CMFRI	<p>Dr. K. K. Joshi Head of Division and Principal Scientist Marine Biodiversity Division, Central Marine Fisheries Research Institute (CMFRI), ICAR, Government of India, P. B. No. 1603, Ernakulam North P.O., KOCHI- 682018, KERALA, I N D I A. Phone: 0484 2394867, Fax. 0091-0484 2394909, E-mail:joshiyguru@gmail.com</p>	<p>CMFRI - EBSA Template 1 - Palk Bay</p>	<p>The Palk Bay situated between India and Sri Lanka is one of the biologically and ecologically diverse ecosystems. The Indian Palk Bay coast has most productive habitats such as mangroves, coral reefs, lagoons, and sea grass. One of the important bird inhabitations, the 'Point Calimere Wildlife Sanctuary' is situated adjoining Great Vedaranyam Swamp of Indian Palk Bay, which was declared as a Ramsar site on 19th August 2002. The Sri Lankan side of Palk Bay, chiefly Jaffna lagoon, Pedro Bank, Prawn Bank and Pearl Bank are known for rich fishery resources. Palk Bay is rich in biodiversity having all the important groups of flora and fauna including the endangered marine mammal Dugong dugon. It acts as breeding and feeding grounds for a variety of marine fauna. Presence of many protected species including Sea cucumbers, Rays, Sharks, Sea horses, Pipe fishes is also reported.</p>
CMFRI	<p>Dr. K. K. Joshi Head of Division and Principal Scientist Marine Biodiversity Division, Central Marine Fisheries</p>	<p>CMFRI - EBSA Template 2 - Gulf of Mannar</p>	<p>Gulf of Mannar is biologically resourceful and one of the highly productive seas of the world. Gulf of Mannar Ecosystem (GOME) covers an area spread between Rameswaram and Kanyakumari to</p>

	<p>Research Institute (CMFRI), ICAR, Government of India, P. B. No. 1603, Ernakulam North P.O., KOCHI-682018, KERALA, I N D I A. Phone: 0484 2394867, Fax. 0091-0484 2394909, E-mail: joshyguru@gmail.com</p>		<p>about 19000 sq. km and lies between 78° 11' E longitude and 8° 49' N and 9° 15' N latitude. There are 26 coral islands forms a network of habitats for different kinds fishes both resident and migratory. Within this Ecosystem the Gulf of Mannar Biosphere Reserve (GOMBR) was declared in 1989 and spread in an area of 10500 km². Under this GOMBR in the Gulf of Mannar National Park included 21 Islands and surrounding coral reefs with a total area of 560 km². The shift from pearl oyster fisheries to fin fish resources was gradual and got momentum when the mechanization and motorization of crafts and gears occurred during the five year plan period of India. Diversity of fin fishes of GOM areas is high and inventorying of the resources is important in the context of Biodiversity conservation and sustainable utilization of the resources.</p>
GOBI	<p>Brian D. Smith, Director, WCS Asian Freshwater and Coastal Cetacean Program, Wildlife Conservation Society, Bronx 10460 NY, e-mail: bsmith@wcs.org</p> <p>Rubaiyat Mowgli Mansur, Principal Researcher, WCS Bangladesh Program, e-mail: rmansur@wcs.org</p>	<p>GOBI - EBSA Template 1 - Swatch-of-No-Ground.pdf</p>	<p>The area covers 33,567 km² in the upper Bay of Bengal at the outflow of world's third largest river system. It is fed by leaf litter and fish and crustacean reproduction in the world's largest mangrove forest, and it includes the head of a submarine canyon which sustains the world's largest sediment fan and upwells productivity into a seasonally reversing current gyre with associated eddies. The proposed EBSA supports unique and rare marine species with populations living in rare habitats defined by unusual geomorphic and oceanographic features. The area includes priority habitat for threatened megafauna assemblages such as cetaceans, turtles, and chondrichthyans. It has a high proportion of sensitive habitats susceptible to degradation or depletion especially due to non-selective fishing and climate change. However, the area also supports greater natural productivity, diversity of ecosystems and species, and naturalness than most marine waters in the region and globally.</p>
ICSF	<p>Ravadee Prasertcharoensuk, Director Sustainable Development Foundation 86 Lad praw 110, Sutthiwattana 2, Plab la , Wangthongland, BKK 10310, Thailand Telephone: 6629353560-2 Fax 6629352721</p>	<p>ICSF-EBSA Template 1 - Had Chaw Mai National Park - Thailand</p>	<p>This project in Had Chaw Mai National Park, Thailand aims to address the issue of coastal resources depleting and threatening of coastal communities from in effective law enforcement, top down coastal segregated management while also considering climate change factor by introducing the concept of ecosystem based integrated coastal resource management through promoting of meaningful multistakeholders participation, knowledge management, capacity building among related actors and agencies including to bridge the gap</p>

	<p>Email: ravadee.prasertcharoensuk@gmail.com; sdfthai@gmail.com</p>	<p>between local and state policy makers and coastal communities in their ecosystem management concerning natural resource regulation. The ecosystem selected targeted sites is at Trang province. A coalition of high-level national institutions that include university, ministerial authority, international agency and civil society organizations join force in championing the initiatives for national endorsement and campaigning for state policy incorporation. The process once achieved will streamline marine coastal resource regulations as well as responding to community needs for livelihood survival. To achieve the objective, local partner CSOs concentrate their work on livelihood and community networking, while the national-level partners provide technical and management backstopping to substantiate the communities' measures in managing the ecosystem in a sustainable manner. These measures also take into consideration the potential impacts from climate change and other disaster risks. The anticipated project outcomes are congruent with the new Fishery and coastal resource management laws enacted in 2015 in terms of participatory ecosystem management, and also support the decentralization directives of the Government.</p>
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Table 2. Other scientific information submitted in support of the Workshop objectives

Party/org. of submitter	Author(s)/Contributor	Title/Contents of submission
ICSF	Ravadee Prasertcharoensuk, Jonathan Shott, Duangkamol Sirisook Weston and Wichoksak Ronarongpairee	Time for a Sea Change: A Study of the Effectiveness of Biodiversity Conservation Measures and Marine Protected Areas Along Southern Thailand's Andaman Sea Coastline
GOBI	Compiled by the acting secretariat on Important Marine Mammal Areas (IMMAs) and the IUCN Joint SSC-WCPA Marine Mammal Protected Areas Taskforce (MMPATF)	Submission of marine mammal information for the assistance in identifying Ecologically or Biologically Important Marine Areas (EBSAs) at the Northwest (Dubai) and North-east (Colombo) EBSA Regional workshops 2015

GOBI	Sattar S.A., Anderson R.C. and Adam M.S. (compilers) (2009)	Report of the Indian Ocean Cetacean Symposium 2009, held at Paradise Island Resort and Spa, Maldives, 18-20 July 2009. Marine Research Centre, Maldives. 46pp. Revised edition 2012.
GOBI	R.P. Nanayakkara BEAR (Biodiversity Education And Research), 12/2, RajamahaVihara Road, Pita Kotte, Sri Lanka. E-mail: ranil_n@hotmail.com	An account on the beaked-whales (Family: Ziphiidae) and their occurrence in oceanic territories of Sri Lanka (2012)
GOBI	Ranil P. Nanayakkara ^{1,2,3} Jayampathi Herath ^{2,4,5} and Ruvinda K. de Mel ² E-mail: jayampathi_herath@yahoo.com <i>1 Department of Zoology, University of Kelaniya, 11600 Kelaniya, Sri Lanka 2 BEAR (Biodiversity Education and Research), No. 4, Dr. E.W. Adikaram Mawatha, 10100 Pita Kotte, Sri Lanka 3 IUCN-Sirenian Specialist Group, Regional Member (Indian Ocean), Sri Lanka 4 Postgraduate Institute of Science (PGIS), University of Peradeniya, 20400 Peradeniya, Sri Lanka 5 Department of Biology and Ecology, Faculty of Medicine, South Asian Institute of Technology and Medicine, 10115 Malabe, Sri Lanka</i>	Cetacean Presence in the Trincomalee Bay and Adjacent Waters, Sri Lanka (2014)
GOBI	Tilak Priyadarshana, ¹ Sameera Madusanka Randage ² , Abigail Alling, ³ Susannah Calderan, ⁴ Jonathan Gordon, ⁵ Russell Leaper, ⁶ Lindsay Porter ⁷ <i>¹Faculty of Fisheries and Marine Sciences & Technology, University of Ruhuna, Matara, Sri Lanka. tilakgamage@gmail.com ²Captain Raja & the Whales, 21 Kottasha Gedara Para, Mirissa South Sri Lanka and Field Research Assistant, Faculty of Fisheries and Marine Sciences & Technology, University of Ruhuna, Matara, Sri Lanka. ³Biosphere Foundation, P.O. Box 201, Pacific Palisades,</i>	Preliminary Results of Surveys to Investigate Overlap between Shipping and Blue Whale Distribution off Southern Sri Lanka

	<p>CA USA. ⁴Canal House, Banavie, Fort William, PH33 7LY, UK. ⁵Ecologic, 7 Beechwood Terrace West, Newport on Tay, Fife DD6 8JH, UK ⁶International Fund for Animal Welfare, 87-90 Albert Embankment, London, SE1 7UD</p>	
GOBI	<p>Kumaran Sathasivam 29 Jadamuni Koil Street, Madurai 625001, India</p>	<p>A Catalogue of Indian Marine Mammal Records</p>
GOBI	<p>Wildlife Conservation Society's Bangladesh Cetacean Diversity Project E-mail: cetacean.bangladesh@gmail.com; bsmith@wcs.org</p>	<p>Proposal to establish a marine protected area in the Swatch-of-No-Ground submarine canyon and surrounding coastal waters in the Bay of Bengal</p>
GOBI	<p>A. de Vos,¹ R. Clark,^{3,2} C. Johnson,³ G. Johnson,⁴ I. Kerr,³ R. Payne³ and P.T Madsen⁵ Contact email: asha.devos@lincoln.oxon.org</p> <p>¹ School of Environmental Systems Engineering and The University of Western Australia Oceans Institute, 35 Stirling Highway, Crawley, WA, 6009, Australia. ² Passed away in the 2004 Indian Ocean tsunami during fieldwork in Thailand. ³ Ocean Alliance, 191, Weston Road, Lincoln MA 01773, USA. ⁴ earthOCEAN, 95, Nelson Rd, South Melbourne, Victoria 3205, Australia. ⁵ Department of Bioscience, Aarhus University, Denmark</p>	<p>Cetacean sightings and acoustic detections in the offshore waters of Sri Lanka: March–June 2003</p>

<p>GOBI</p>	<p>A. de Vos¹, T. Wu², and R. L. Brownell, Jr.³ ¹<i>The School of Environmental Systems Engineering and Oceans Institute The University of Western Australia, 35 Striking Highway, Crawley WA 6009, Australia</i> ²<i>Yokohama, Japan</i> ³<i>Southwest Fisheries Science Center, 1352 Lighthouse Ave. Pacific Grove, California 93950, USA</i></p>	<p>Recent Blue Whale Deaths Due to Ship Strikes around Sri Lanka</p>
<p>GOBI</p>	<p>Asha de Vos^{1,2,3,*}, Charitha B. Pattiaratchi² and Robert G. Harcourt⁴, ¹<i>Centre for Ocean Health, University of California Santa Cruz, 100 Shaffer Road, Santa Cruz, CA 95060, USA</i> ²<i>School of Environmental Systems Engineering and The Oceans Institute, The University of Western Australia, 35 Stirling Highway, M470, Crawley, WA 6009, Australia;</i> <i>E-Mail: chari.pattiaratchi@uwa.edu.au</i> ³<i>The Sri Lankan Blue Whale Project, 131 W.A.D. Ramanayake Mawatha, Colombo 2, Sri Lanka</i> ⁴<i>Department of Biological Sciences, Macquarie University, North Ryde, NSW 2109, Australia;</i> <i>E-Mail: robert.harcourt@mq.edu.au</i> <i>E-Mail: asha.devos@lincoln.oxon.org;</i></p>	<p>Inter-Annual Variability in Blue Whale Distribution off Southern Sri Lanka between 2011 and 2012</p>
<p>Manta Trust</p>	<p>Stevens, G.^{1,2}; Fernando, D.^{1,3,4}; Ender, I.¹ ¹<i>The Manta Trust, Catemwood House, Corscombe, Dorchester, Dorset, DT2 0NT, United Kingdom</i> ²<i>University of York, Environment Department, Heslington, York YO10 5DD, United Kingdom</i> ³<i>Department of Biology and Environmental Science, Linnaeus University, 39182 Kalmar, Sweden</i> ⁴<i>Blue Resources, Colombo, Sri Lanka</i></p>	<p>Submission of information on mobulid species in support of the Northeast (Dubai) and Northwest (Colombo) Indian Ocean EBSA workshops</p>