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Arabian Sea Whale Network Newsletter: Issue 2, May 2016

Multiple members of the ASWN



INTERNATIONAL
WHALING COMMISSION



Humpback whale and fishing dhows off the coast of Oman. ©Darryl MacDonald

Network News

ASWN's second instalment.....

Following our first newsletter in October 2015, we would like to update our members and other interested parties on the network's progress and the amazing work being conducted by network members. As many readers know, the ASWN was formed in January 2015 in Dubai, following a [workshop](#) involving researchers who study and conserve whales in the Arabian Sea. The network has a simple and informal structure, with the main aims of sharing resources, knowledge and collaborating on research and conservation initiatives.

The network has outlined in a "master proposal," a roadmap for an ideal three year programme that would include the design of a regional online data archiving platform, regional collaborative research using passive acoustic monitoring, traditional boat surveys, and work with the fishing industry to improve reporting of cetacean observations and bycatch. The plan also includes capacity building and training in whale research and conservation throughout the region, and awareness-raising with stakeholders ranging from government managers to fishermen in the remotest corners of the Arabian Sea. For activities that are implemented at regional level, or have a strong element of cross-country collaboration, a core team works together to draft and submit applications on behalf of the network. At the same time, individual network members are working toward the network's goals by submitting their own funding applications and implementing projects at a local or national scale. In this time of reduced budgets for almost every research, conservation, and funding organisation around the world, grants and funding are not coming easily, but the following pages demonstrate the significant progress that is being made thanks to the tireless work of members.

As detailed on the following page, the network has prioritised funding efforts for the design of a regional online data archiving tool and more professional website. While we strive toward this goal, a provisional website has been set up for the sharing of documents, photos and resources: <http://arabianseawhalenetwork.org/>. Feel free to browse this site and read or download any items of interest. To contribute documents or resources to this site, please email them to gianna.minton@gmail.com.

ASWN strategy and funding updates

As a preparation exercise for the next meeting of the Scientific Committee of the International Whaling Commission, the ASWN has drafted a brief update on the progress of the network. This document focuses on the 11 recommendations highlighted in the Executive Summary of the [report of the January 2015 workshop in Dubai](#), as a means to monitor how far the network has come in achieving its stated goals. Overall, good progress is being made on the majority of the January 2015 recommendations. The network has an identity and communication and exchange within the network is working well. The following pages will show what a fantastic job designated ASWN focal points and their colleagues are doing of documenting and collating sighting and stranding reports, working with local communities, and raising their own funds or collaborating on regional funding proposals. Where progress is lacking, it is usually due to lack of funding at regional level – an issue we are working hard to address. The network has decided to prioritize the development of an online data archiving platform above all other funding initiatives, and there are still two funding applications outstanding (Ocean Park Conservation Foundation Hong Kong, and the Marine Mammal Commission) for this initiative. Negotiations have already taken place with the designers of [Wildbook](#) and [Flukebook](#), who would like to work with the ASWN to develop an online data archiving platform with photo-matching facilities which could be used to archive and

analyse data on both national and regional levels. This system will have strong built-in security functions to allow members to share data only with those partners with whom they choose to engage in data sharing agreements. Additional funding priorities are outlined in an 18-page master funding proposal that no single grant would be likely cover – but which can be used as a roadmap for the network and a “cut and paste” resource to anyone applying for funds to address ASWN goals. This is available upon request. While a grant application to the MBZ Species conservation fund was sadly rejected earlier this year, WWF Pakistan has obtained funding from a corporate donor for regional research and capacity building. More details on this exciting opportunity will be sent to network members as soon as possible.

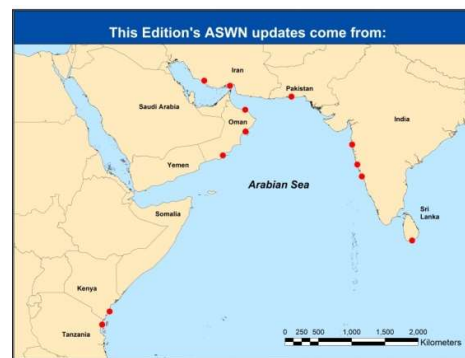
A new logo

The ASWN is not an officially recognized organisation or legal entity. It is simply a group of researchers and NGO, IGO or government representatives who have agreed to collaborate with the aim of better understanding whales and promoting their conservation needs in the Arabian Sea. However, having a logo gives members a sense of unified purpose, and provides a recognisable “brand” or symbol to efforts that we undertake collectively or regionally under the network name. Toward the end of 2015, network members were presented with 10 alternative designs developed for the ASWN by two different graphic designers. A group vote exercise resulted in the selection of the logo above, which many members liked for its simplicity and even its ambiguity – clearly a baleen whale with characteristics like our flagship species – the Arabian Sea humpback whale – but ambiguous enough to include Bryde’s, blue, or Omura whales as well! The chosen design was developed by **Brian Jacobs** of **Brick Design** in San Francisco (<http://bricksf.com/#work>), who offered his professional services free of charge. Two versions of the logo are available for different colour backgrounds, and for members who wish to have a version of their logo in their own language, please get in touch with Oliver Kerr at EWS-WWF (who we also have to thank for the formatting of these last two newsletters): Okerr@ewswwf.ae



Welcoming new members and partners

Since the Dubai workshop and the the last issue of our newsletter, the ASWN has expanded a little, and is happy to welcome new members from India and Kenya. While Kenya and Tanzania are not strictly within the suspected range of the Arabian Sea Hupback whale population, as countries that host the nearest neighbouring population of humpback whales, it is important to maintain strong links with research initiatives there, and to be vigilant for evidence of possible exchange between our regions. Ultimately, the ASWN goal is to promote communication and exchange between the stakeholders involved in whale research and conservation in the Arabian Sea, and the more people involved in this exchange, the better. To see an updated list of members and partners click [here](#). The red dots in the map to the right demonstrate a good coverage of contributed news items in this issue. But we still have obvious gaps in Yemen and Somalia. Working in these countries sadly looks difficult in the near future – but if anyone has contacts in these countries that you think would be interested in contributing to the network, please let us know. Read on and enjoy!



New Whale species for the Arabian Sea region

A recently published [paper documents the stranding of a baleen whale on Qeshm Island](#) off the coast of Iran. The stranding turns out to be highly significant as it represents the first confirmed record of an Omura’s whale (*Balaenoptera omurai*) in the region. The authors confirm the identification with the presence of all of the following diagnostic characteristics for Omura’s whale: “(i) asymmetrical colouration of the lower jaws, with lightly pigmented right jaw and darkly pigmented left jaw; (ii) asymmetrical colouration of the gape (inner lower lip) with whitish left gape and darkly pigmented right gape; (iv) dark eye and ear stripes on the right side; (v) a third dark stripe (flipper-to-flank); (vi) a highly falcate dorsal fin; and (vii) 82 narrow throat grooves which extended caudad of the umbilicus (Bryde’s whales, which are more frequently documented in the region have fewer throat grooves). The paper concludes that generally, Omura’s whale may be far more widespread than currently available records seem to suggest (reviewed in Cerchio et al., 2015) This exciting discovery obviously has important implications for ASWN members that are working to document whale sightings and strandings throughout the region.

Cerchio S, Andrianantenaina B, Lindsay A, Rekdahl M, Andrianarivelo N, and Raoloarijao T. 2015. Omura’s whales (*Balaenoptera omurai*) in Northwest Madagascar: ecology, behavior and conservation needs. Royal Society Open Science 2: 150301. DOI:10.1098/rsos.150301

Ranjbar, S., Dakhteh, M. S., & Van Waerebeek, K. (2016). Omura’s whale (*Balaenoptera omurai*) stranding on Qeshm Island, Iran: further evidence for a wide (sub)tropical distribution, including the Persian Gulf. *bioRxiv*. doi: 10.1101/042614

From Our Members

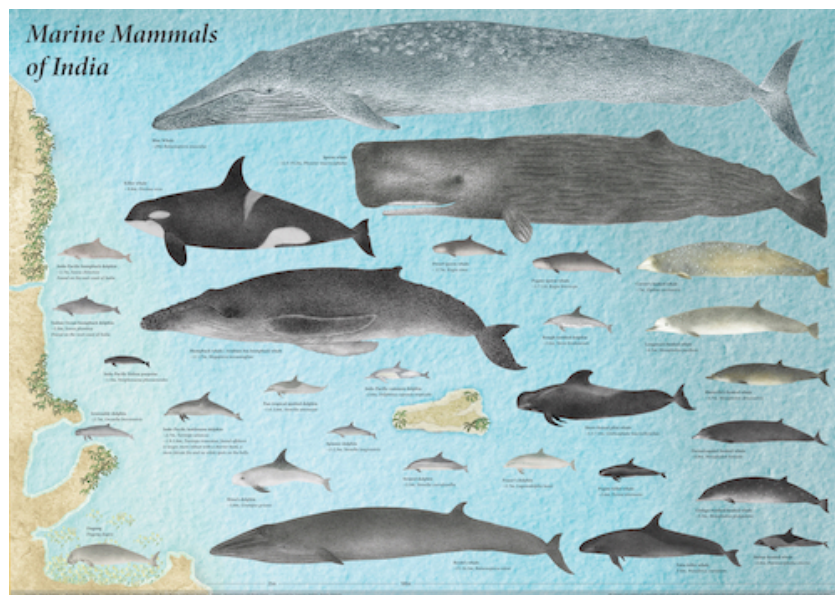
India

(Text and images contributed by [Dipani Sutaria](mailto:dipani.sutaria@gmail.com) dipani.sutaria@gmail.com, [Abhishek Jamalabad](mailto:abhishek.jamalabad@gmail.com) abhishek.jamalabad@gmail.com, and [Mihir Sule](mailto:mihir.sule@gmail.com) mihir.sule@gmail.com)

In February 2016 Dipani Sutaria and other members of the Konkan Cetacean Research Team facilitated a four-day national level cetacean research methods workshop, funded by the UNDP, the Government of India and the Maharashtra State Government. The workshop introduced future marine researchers and veterinarians to shore- and vessel-based research methods; passive acoustic methods; the pros and cons of biopsy sampling and satellite tagging, and data collection from stranded marine mammals. It also informed authorities and policy-making agencies about stranding response protocols and other cetacean conservation management issues. The workshop was the first of its kind in India and provided a platform for 26 independent or institution-affiliated researchers from all over India, to present to, and learn and interact with 20 participants from Forest Departments and other government bodies. Trainers facilitating the workshop included Nick Tregenza, Sarah Piwetz, James Barnett, John Wang, Thomas Jefferson and Dipani Sutaria.

Members of the ASWN from the west coast of India have been updating their database with whale sighting and stranding records. Nineteen records of Baleen whales have been reported since April 30th 2015. Of these, eight were live sightings of Bryde's whales; four were Bryde's whales carcasses washed ashore; five carcasses washed ashore whose species id was not confirmed, one blue whale washed ashore and one live stranding of a blue whale. The online database can be viewed on: <http://www.marinemammals.in/>. These renewed and well-coordinated efforts, when taken together with those in neighboring ASWN countries contribute to an improved regional overview of baleen whale distribution and conservation issues in the Arabian Sea.

With support from individual donors, Dipani Sutaria and artist Pooja Gupta, have collaborated with Bernd Wursig and Thomas Jefferson to create a 'Marine Mammals of India' poster and an A5 size field guide for species identification from shore. The field guide includes common names in the local languages. While the posters are intended for use in offices and classrooms, the field-guide targets stranding response networks and forest department field staff. A low resolution of the poster is reproduced below. To purchase a hard copy please contact: dipani.sutaria@gmail.com



UPCOMING EVENTS:

June 8-16, 2016 – International Whaling Commission Scientific Committee, Bled Slovenia

In June the Scientific Committee of the International Whaling Committee will be meeting in Bled, Slovenia. This body, which is responsible for the global coordination of the management of whale populations, has always shown a strong interest in the Arabian Sea and its unique whale populations, particularly since the revelation during the 1996 and 97 IWC meetings that the Soviets had illegally hunted 1294 blue whales, 849 Bryde's whales, 242 humpback whales, and 954 sperm whales during clandestine operations in the Arabian sea in the 1960's.

This year, members of the ASWN will be presenting papers on the results of research conducted in Oman and India, as well as general updates on the progress of the network. Endorsement of the network's activities by the IWC is critical, particularly for research activities like satellite tagging, which carries some risks for small populations and requires sound scientific review and advice from the international panel of experts participating in the IWC Scientific Committee.

23-26 May "International workshop on whale entanglement prevention", Portsmouth, USA

This technical workshop will bring together scientists, fishers, engineers and industry to review what is known about how entanglements occur, what whales perceive, what prevention measures have been attempted, with a goal to identifying what, if anything, works. The results of this meeting are certain to be highly relevant to ASWN efforts to respond to and mitigate entanglement risk in the Arabian Sea. Watch this space and the ASWN website for updates!



Bryde's whale found entangled in a gill net off the coast of Oman, October 2001 (Photo by Gianna Minton)

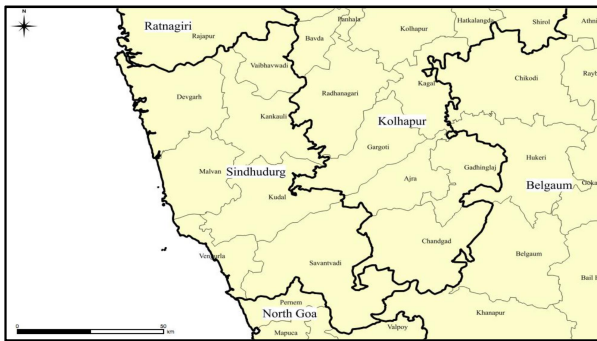
Working with fishermen to collect opportunistic and third-party records

Abhishek Jamalabad, has been working with Rufford and Ravi Sankaran small grants to study interactions between small cetaceans and coastal purse seine fisheries off Karwar, India. Combining opportunistic observations from aboard active purse seine fishing vessels, and interviews with fishers, he has documented valuable first-hand sightings of common dolphins, spotted dolphins and Bryde's whales (a mother-calf pair pictured here to the right), as well as third-party reports of various cetacean species including killer whales and unidentified baleen whales. Using an illustrated guide, he asks fishermen to identify the species that they observe at sea. Fishermen indicate that they see Bryde's like whales regularly, but do not seem to have seen any whales fitting the illustrations of humpback whales. [Click here](#) to read Abhishek's personal account of witnessing an accidental encirclement and successful release of spotted dolphins in an offshore purse seine fishery.



The Konkan Research Team is up and running on the Sindhudurg coastline

As a part of the Gol- GEF- UNDP Sindhudurg Project, this study was initiated to assess the biodiversity of marine mammals along the Sindhudurg coastline and to estimate the population size of coastal cetacean species like *Sousa plumbea* (Indian Ocean Humpback Dolphin) and *Neophocaena phocaenoides* (Finless porpoise). The project has also recorded incidental mortalities and strandings of cetacean throughout the Sindhudurg coastline with the help of a widespread community network. Necropsies were conducted to gain life history data and to understand causes of mortality if possible. We also assessed the spread and socio-economic impact of dolphin watching in the Sindhudurg district of Maharashtra.



Over 9 months, the project has conducted 531 hours (over 2700km) of inshore line transect surveys (<8nm from shore) and 30 hours (almost 250km) of offshore surveys (8-17nm from shore). Direct observations were documented of humpback dolphins, finless porpoises, blue and Bryde's whales. Interviews with fishermen yielded additional anecdotal evidence of bottlenose dolphins, spinner dolphins and sperm whales occurring in the area. While humpback dolphin and finless porpoise sightings were numerous enough to conduct habitat preference and "hotspot" analyses, whale sightings were limited to one blue whale sighting (a mother-calf pair) and four Bryde's whale groups, which included a mother-calf pair and observations of foraging and defecation – indicating that the area may serve as both a nursery and feeding ground for this species.



The group has also compiled data on 43 cetacean strandings, of which 13 were large whale species. They were on hand to respond to and collect data and samples from a live blue whale stranding which resulted in the animal's death (see photo to the left). They have conducted a socio-economic study on dolphin watching tourism in the area, and created a number of outreach and education materials – which can be viewed and downloaded from the ASWN website by [clicking here](#).

Sri Lanka Text and images contributed by Asha deVos ashadevos@gmail.com

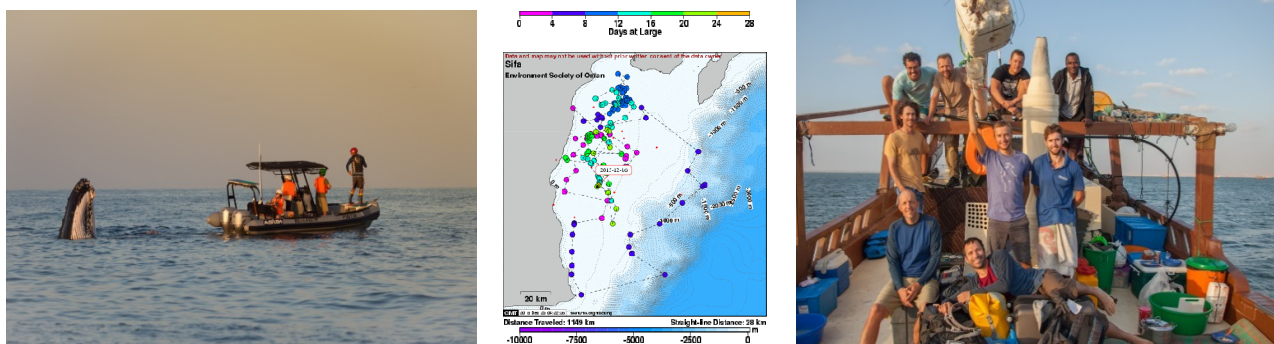
Network member Asha deVos is using her [Pew marine fellowship](#) to build an organization that will provide training and education to Sri Lanka's next generation of marine conservationists and policymakers. The organization will work to create an informed and aware public through online and hands-on field educational courses in marine ecology and conservation. Working closely with the Hon. Minister of Sustainable Development and Wildlife, the organisation is currently focusing on policy measures to reduce the risk posed by heavy shipping traffic to blue whales off the coast of Sri Lanka, as well as the implementation and enforcement of effective guidelines for the growing whale-watch industry in the country. Collaboration with the whale-watch industry has led to the publication of a [paper documenting the longevity](#) of "Whalentine" a Sri Lankan blue whale first photographed in 1984 (photo A below) and again in 2011 (photo B below).



Oman

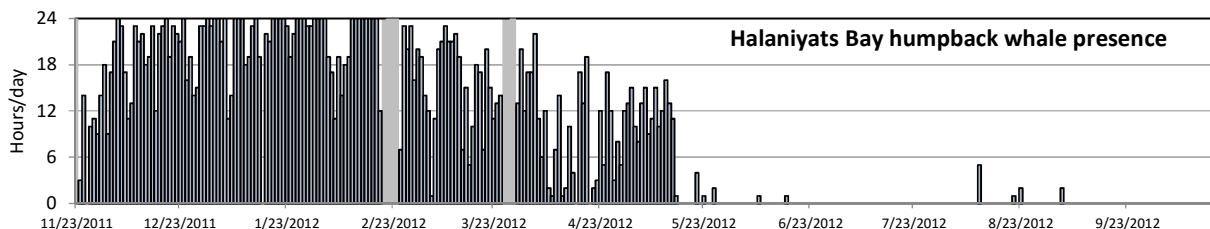
Renaissance Whale and Dolphin Project: ESO Satellite Tracking Survey - Nov 2015 (Text contributed by Andy Willson andy.willson@5oes.com):

Late 2015 saw the Oman team venturing back into the field for a 3rd season of deploying satellite tags on humpback whales. Having previously deployed 6 tags in the Dhofar region in the south of Oman in March 2014 and 2015, the most recent work aimed to target a different time of year and a different humpback whale hotspot, the Gulf of Masirah (GoM). Previous surveys in the GoM resulted in the identification of higher proportions of both new individuals and females, both the target of new tagging efforts. The team used a 25m traditional dhow flanked by two 6m RIBs to work their way into remote offshore areas that had been used by previously tagged whales. The strategy paid off, and three whales were tagged in the first three days of the project before the team was turned back to port with poor weather. A second 3 day weather window allowed the fleet to sight 26 groups of whales (3 Brydes groups and 23 humpback whale groups). All of the photos obtained during the survey were matched against the Oman Photo-ID catalogue, revealing that 21 individual whales were observed through the survey, 6 of which were new to the catalogue. The deployed tags from this survey transmitted successfully for 18-50 days, with two whales remaining within the GoM throughout the transmission period, and one whale venturing down to Southern Oman and back into the GoM. The results of this work will be reported to the Scientific Committee of the IWC in June, and will then be submitted for publication in a peer-reviewed journal. Partners supporting the fieldwork include; 5OES supervising field operations and data management, NOAA providing access and advice to tagging technology, Instituto Aqualie in tag application, WCS leading survey design, the University of Exeter for guidance with telemetry data. Tracks of tagged whales can viewed at: http://www.seaturtle.org/tracking/?project_id=1084&dyn=1428381267



Left: The Oman research team preparing to tag a humpback whale. Center: The tracks of a new whale "Sifa" tagged in November 2016 in the Gulf of Masirah. Right: The Gulf of Masirah 2016 survey team on board the traditional dhow used as a research vessel. Photos courtesy of Darryl MacDonald and ESO.

Analysis of humpback whale presence in acoustic data from the coast of Oman (text and figure contributed by Sal Cerchio scerchio@gmail.com)



During 2011 to 2013, long-term acoustic monitoring data was collected by the Environment Society of Oman and Fives Oceans Environmental Services under the Renaissance Whale and Dolphin Programme, in Halaniyat Bay and Gulf of Masirah. Analysis of the data set has been progressing in collaboration with researchers from the New England Aquarium and Woods Hole Oceanographic Institution, through funding from Shell Development Oman LLC. The presence of humpback whales through the recording period and across different sites within each region has been documented through detection of humpback whale song and social vocalizations. Interesting patterns are emerging showing varying temporal presence of vocalizations in the different regions. A very strong and consistent occurrence was documented in the Halaniyats Bay region between November and May, as illustrated in the graphic below showing the number of hours in each day in which humpback whales were detected at three sites spread out by ca. 30km. These data and results, to be finalized by the end of 2016, will provide new insights into the temporal and geographic distribution of Arabian Sea humpback whales off the coast of Oman.

ESO Community outreach and education (Text and photos contributed by Maia Sarrouf Willson maia.sarroufwillson@eso.org.om)

The Community Outreach team at the Environment Society of Oman has been busy visiting local communities in the coastal villages where sightings of the Arabian Sea Humpback Whale are frequent. The team visited schools, women's associations, fishing communities and public meeting halls to raise awareness about Oman's biodiversity, including its rich whale population. In January 2016, ESO took part of the celebrations on Oman Environment Day, organized by the Duqm Special Economic Zone Authority (SEZAD) in Duqm, the site of a large new industrial port. The event was attended by representatives from various government authorities, such as the Ministry of Agriculture and Fisheries, the Ministry of Transport and the fishing community, and the audience learned about the importance of the Duqm area for marine mammals.

In November 2015, a team from the Environment Society of Oman played a key role in the marine mammal stranding and entanglement response training workshop, organized by the Ministry of Environment and Climate Affairs and the International Whaling Commission in Muscat. A more detailed [summary of this workshop](#) can be found on the ASWN website.



Left: ESO awareness-raising with stakeholders in the Gulf of Masirah area, a key hotspot for Arabian Sea humpback whales. Right: Participants get practical experience with marine mammal stranding response during a training workshop in Oman in November 2015.

Iran (Text and images contributed by Hamed Moshri moshiri@plan4land.org and Nazanin Mohsenian mohsenian@plan4land.org)

Plan for the Land Society in Iran has continued with the monthly boat surveys they have been conducting in the Dayyer - Nakhiloo National park in Bushehr Province. Since last October they have conducted 34 days of surveys comprising about 750 km, and more than 62 hours of effort. This brings their total over the past 21 months to 111 days and 3469 km of boat survey effort. While the team has observed humpback dolphins, no humpback whale observations have been documented to date.



Using a grant from the New England Aquarium Marine Conservation Action Fund, the team has also been working on building trust with fishermen and attracting their participation to spread awareness of marine mammals and to improve fishing methods. Of the 150 boats that operate from the landing site where Plan4theLand has been based, they have conducted meetings with more than 70 fishing teams, as well as fish merchants and distributors to raise awareness of cetacean bycatch risks and mitigation measures. Fishermen were traditionally fearful of authorities and did not report any bycatch or entanglement, but through the trust built up between the Plan4theLand team and the fishermen, two carcasses have been obtained for examination.

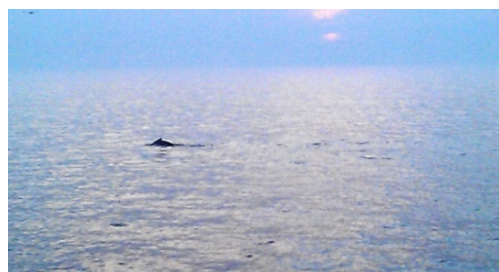


The team also continued educational programmes, and have been able to reach 620 students in 10 schools located in 4 different villages and one city over the past months. They have completed a second illustrated information book that focuses on humpback dolphins and their conservation needs. This [handbook](#) is available for download on the ASWN website.

Finally, Plan4theLand has also formed core group of trained local volunteers who accompany the field team in both boat and beach surveys, with the aim of empowering them to be able to record sightings and strandings. The Plan4theLand team continues to document and archive all sightings and strandings records they receive, and has indicated a willingness to collaborate on the ASWN regional online data platform when it becomes available.

Pakistan (Text and images contributed by Muhammad Shoaib Kiani, shoaib.cemb@gmail.com)

There have been no dedicated cetacean research activities in Pakistan in last eight to ten months due to absence of any actively funded projects in any of the relevant government organizations or NGOs (e.g. WWF-Pakistan, IUCN). The Arabian Sea Humpback Whale Network members based at the University of Karachi and WWF-Pakistan however, have been working efficiently in collaboration with core ASWN team for submission of various proposals (see news item above) which we hope will bear success for the ASWN in near future. The University of Karachi has also submitted three additional proposals for cetacean research and conservation activities in Pakistan to Rufford Small Grants, The Ocean Park Conservation Foundation Hong Kong, and the Higher Education Commission of Pakistan. If funded, these grants would allow the Pakistan team to collect data on stranded cetaceans and turtles, and conduct dedicated boat surveys in suspected key Arabian Sea humpback whale habitats.



A fishermen shared a picture of an Arabian Sea humpback whale near Swatch area captured on a mobile phone camera on 21.02.0215 at 18:32 hrs (Photo Courtesy: M. Moazzam Khan, WWF-Pakistan)

Pakistan network members have been highlighting cetacean research and conservation needs at various conferences, workshops and seminars. These include:

- 1) Seminar on World Water and Earth Day at Khan Institute of Biotechnology and Genetic Engineering, University of Karachi, 22 April 2016.
- 2) Consultative workshop to develop an action plan to combat illegal wildlife trade in Pakistan, Karachi, 23-24 February 2016.
- 3) One day workshop on cumulative assessment and ecosystem service review of Port Qasim on Indus delta 16 February 2016.
- 4) One day seminar on the occasion of World Fisheries Day organised by the National Centre for Maritime Policy Research (NCMPR), Bahria University, 21 November 2015.
- 5) One day seminar Healthy Oceans, Healthy Planet (Issues and Responsibilities) on occasion of World Ocean Day organised by the Centre of Excellence in Marine Biology, University of Karachi, 8 June 2015.
- 6) One day seminar on Environmental Data Analysis organized by the Institute of Environmental Studies, University of Karachi, 5 June 2015.

Kenya

Kenya and Tanzania lie just outside of the ASHW suspected range. To date, the timing of all humpback whale observations off these countries' coastlines are consistent with a Southern Hemisphere migratory pattern. However, it is important for the ASWN to maintain regular communication with researchers in Kenya and Tanzania to keep abreast of any possible evidence of exchange with the Arabian Sea population.

Text and images contributed by Michael Mwang'ombe michaelgilbert.geo4@yahoo.com, Kahindi Charo ckahindi@rocketmail.com, Jane Spilsbury janespilsbury@watamu.biz and Sergi Pérez-Jorge sergiperezjorge@gmail.com)

The abundance and distribution of humpback whales is still poorly understood in Kenyan waters, thus hindering effective conservation and management strategies. In order to increase awareness and reporting on a national scale, a coalition of research, conservation groups and government agencies established the Kenya Marine Mammal Network (KMMN) in 2011. Between 2011 and 2013, the KMMN collated 198 humpback whale sightings from designated boat surveys conducted by local NGOs and governmental bodies and opportunistic reports from deep sea fishermen. The peak period for observations is between July and September, with reports of humpbacks traveling north, close to shore. Reported sightings from September and October describe individuals travelling south, mainly in deeper offshore waters off the Pemba Channel and Watamu Banks. Two of the organizations involved on the KMMN, Global Vision International (GVI) and WMA (Watamu Marine Association), have developed humpback whale photo-identification catalogues with the inclusion of dorsal fins, tail fluke and pectoral fin pigmentation. The GVI catalogue consists of 61 adults which have visited Kisite-Mpunguti Marine Protected Area, southern Kenya, and the WMA catalogue includes 12 adult individuals, all of which were sighted in 2012. Land-based surveys conducted by the WMA between July and August 2014 in the Malindi-Watamu Marine Protected Area documented a total of 54 sightings of humpback whales over five weeks. These surveys will continue in 2016, with the funding provided by the African Fund for Endangered Wildlife, and will involve Kenya Wildlife Service staff, university students and local communities. This data highlights the importance of the Kenyan waters for the humpback whales inhabiting in the Western Indian Ocean. Further research is needed to provide greater insight into the ecology of this species, and to enable a national and regional conservation strategy.



Kenyan Land-based humpback whale surveys 2014. © Watamu Marine Association.



Tanzania *(Text contributed by Gill Braulik – WCS Tanzania gbraulik@wcs.org)*

WCS in Tanzania have conducted a series of surveys in the north of the country including most recently two weeks of line transect and photo-ID surveys west of Pemba Island and 2 weeks on the mainland coast of Africa just south of the Kenya border in March 2016. Despite almost 50 sightings of 6 species no humpback whales were seen. Surveys have been conducted in October 2014, March 2015, November 2015 and March 2016 and the only surveys that sighted humpback whales were those in October 2014. Two whales with calves were sighted west of Pemba and these assumed to be part of the Southern hemisphere population near to the end of the migratory season.

Line transect surveys off the coast of Tanzania. © WCS Tanzania.

The Arabian Sea Whale Network has been formed with support from WWF International, WWF Pakistan, Emirates Wildlife Society - WWF (EWS-WWF), the Marine Mammal Commission and the Wildlife Conservation Society.

For more information see the temporary website:

www.arabianseawhalenetwork.org or contact Arabian.sea.whale.network@gmail.com.

