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## UPDATE FROM THE SIRENIA SPECIALIST GROUP CO-CHAIRS: RE-ORGANIZATION OF THE GROUP AND REQUEST FOR MEMBERSHIP NOMINATIONS

In February 2012, we attended a meeting of the IUCN Specialist Group Chairs in Abu Dhabi. We learned that there were lots of different models for Specialist Groups. The most appropriate model depends on the geographic range of the group and its role(s). Some groups act largely as listing authorities; others effectively work as NGOs with paid officers.

We have decided that it would be appropriate to trial a new model for the Sirenia Specialist Group (SSG). 2012 coincides with the IUCN's quadrennial cycle, making it an appropriate time to dissolve and re-establish the membership.

The Marine Turtle Specialist Group seems an appropriate model. The Marine Turtle Specialist Group is a volunteer network of more than 210 expert members in over 70 countries and territories. These volunteer members contribute a wide range of geographic and thematic expertise to the group, making the group the global authority on marine turtle research and conservation. Marine Turtle Specialist Group members are appointed to the group after being nominated, invited and agreeing to join. There are two co-chairs plus a number of regional vice-chairs. In addition, members are grouped by country.

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UNION INTERNATIONALE POUR LA CONSERVATION DE LA NATURE ET DE SES RESSOURCES

INTERNATIONAL UNION FOR CONSERVATION OF NATURE AND NATURAL RESOURCES

Commission de la sauvegarde des especes - Species Survival Commission



*Sirenews* (ISSN 1017-3439) is published in April and October and is edited by

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*Sirenews* is available online at [www.sirenian.org/sirenews.html](http://www.sirenian.org/sirenews.html)

We decided that it would be appropriate to modify this model for the Sirenia Specialist Group as follows:

1. **Co-Chairs** (one each for dugong and manatee; preferably resident in a dugong/manatee range state). Benjamin Morales is prepared to serve as the Manatee Co-Chair for a second term which will provide continuity. Donna Kwan has agreed to become the Dugong Co-Chair.
2. **Regional Vice-Chairs** (one each for East Africa, Arabian Region, Asia, Australia, Pacific, US, Meso-America, South America and West Africa). Regional Vice-Chairs should preferably be resident in their region. The Co-Chairs are not eligible to be regional vice-chairs. Alternatively, the South American sirenian community might like to decide on two groups, one for each of their species. A Regional Vice-Chair will be expected to work to identify issues of concern, provide an annual regional report to *Sirenews*, and to work with the Co-Chairs to develop strategies (including funding) for dealing with critical issues or needs.
3. **A Listing Authority**. Cyndi Taylor has agreed to continue in this role.
4. ***Sirenews* Co-Editors**. Cyndi Taylor and Buddy Powell have agreed to continue in this role.
5. **Convenors biennial workshop**: Bob Bonde and Nicole Adimey.
6. **Members**. The criteria for membership would normally include an advanced degree (Masters or PhD) in a relevant discipline, as well as at least three years of experience in sirenian research and/or management. However, it would be useful for each regional group to appoint 1-2 people as members of the SSG who have not worked on the species in that particular region to ensure new perspectives and potential solutions.
7. **The Executive Committee of the Group** will be made up of the Co-Chairs, Regional Vice-Chairs, the Listing Authority, the Editor of *Sirenews* and the workshop convenors. The Co-Chairs may decide to co-opt up to two additional members to the Executive Committee who have a long-term, big-picture perspective and a track record for making things happen. The Co-Chairs and Regional Vice-Chairs will serve for up to two terms (8 years) in succession in a single role. Regular and well-conceived succession will help keep the group robust.

In the spirit of this reorganization, a West African manatee sub-group has recently been formed under the SSG. The goals of this sub-group are to be able to further determine the status of the West African Manatee, to be an expert resource panel for the IUCN and other stakeholders, and to lead and advise others in the growing field of manatee research and management in Africa. The subgroup also aims to promote and facilitate communication and collaboration among African manatee researchers. Inaugural members of the West African manatee subgroup are: Lucy Keith Diagne (Co-Regional Vice-Chair), Edem Eniang (Co-Regional Vice-Chair), Patrick Ofori-Dansen, James Powell, and Aristide Kamla.

We call for nominees for the membership of the SSG for the 2013-16 quadrennial cycle. Nominees should complete the form at <http://www.locus-nq.net/iucnssg/form> by **15 May 2012**. The members of the West African chapter need not reapply but it would be helpful if they filled in the form to aid in administrative housekeeping. **-Helene Marsh and Benjamin Morales**

## NEWS FROM THE SECRETARIAT TO THE UNEP/CMS DUGONG MOU

### S.O.S: 'Save Our Sirenians - Dugongs and West African Manatees' event announces launch of the Dugong, Seagrass and Coastal Communities Initiative

As part of the Dugong MOU's commitment to facilitate national level and trans-boundary actions leading to the conservation of dugong populations and their habitats, a new global initiative has been designed to help by addressing some of the key threats in an innovative way. The *Dugong, Seagrass and Coastal Communities Initiative* is an international program of conservation measures aimed at increasing protection of dugong populations and their seagrass habitats through tailored plans which promote local environmental stewardship through trialing alternative livelihood, sustainable development assistance in potentially accessing wider trade markets.

The new initiative was rolled out before invited members of the local business, academic and conservation communities in Abu Dhabi, UAE, on the evening of February 26, 2012. The event was well attended and featured talks from Dr. Thabit Zahran Al Abdessalaam, Executive Director of the Marine and Terrestrial Biodiversity Sector, Environment Agency - Abu Dhabi; Dr. Donna Kwan, UNEP/CMS Dugong Programme Officer; Professor Helene Marsh; and Dr. Nicolas J. Pilcher (UNEP/CMS Dugong MOU Technical Advisors). Two short films were also showcased at the event: *West African Manatee under Threat* made by Wetlands International and *Going...Going...Dugong* produced by Reef Watch Marine Conservation in association with UNEP/CMS Office - Abu Dhabi and Marine Research Foundation, Malaysia.

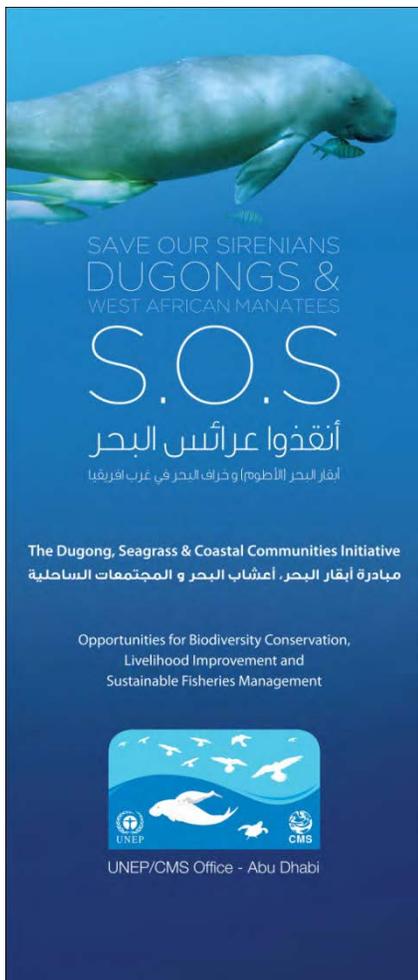
With the dugong as a flagship species, the initiative aims to return broad ecological and financial benefits in areas where both dugongs and local communities are in need of assistance. Projects will be located across range states, primarily in the Southwest Indian Ocean, Western Pacific Islands, and South and Southeast Asia. Educational and knowledge transfer tools will be used to increase awareness and facilitate access to vital information on dugong populations and seagrass habitats. Pilot projects are already underway in Mozambique and Papua New Guinea, and a first trans-boundary pilot project has been planned between India and Sri Lanka. Preliminary baseline data collection in the form of dugong catch surveys taken by local fishers is also ongoing in many of the project locations, and will provide vital information for identifying priority sites.

Attendees at the event were introduced to various levels of reflection emphasizing the biological background and conservation status of sirenians and the range of threats they face. The importance of the dugong's seagrass habitats to commercial fisheries and other species as well as their valuable role in the sequestration of marine carbon was highlighted. After the final talk of the event, a number of questions were raised by the audience for all speakers on stage to provide answers. Attendees were then invited to consider becoming a strategic funding partner to the Initiative.

The event was widely covered in several UAE newspapers that showed special interest in the event, some of which are read throughout the Arabian Gulf region and beyond. In addition, the event was reported in many online news sources and a local television channel.



Dr. Donna Kwan, Prof. Helene Marsh and Dr. Thabit Zahran Al Abdessalaam taking questions at the S.O.S. event (photograph by UNEP/CMS Office - Abu Dhabi).



### Sri Lanka Becomes 21<sup>st</sup> Signatory to the Dugong MOU

Sri Lanka has pledged its support to the long-term survival of dugongs and the protection of their critical seagrass habitats by becoming a signatory state to the Dugong MOU on January 31, 2012.

In Sri Lanka, the UNEP/CMS Office - Abu Dhabi is currently working with the Department of Wildlife Conservation, IUCN Sri Lanka and Dilmah Conservation to conduct surveys which will improve knowledge of dugong distribution, abundance, and ‘hotspots’ of main threats particularly from incidental captures by net fisheries. More projects are planned under the new initiative, as outlined above. It is hoped that other countries in the South Asia sub-region will join India and now Sri Lanka by formally joining the Dugong MOU in due course.

### Second Signatory State Meeting of the Dugong MOU (SS2) to take place later this year

The Secretariat is in the process of making arrangements for SS2, and, subject to confirmation, the meeting is likely to take place towards the end of 2012 with the Philippines as host country. Formal notification will be released on the CMS website soon.

*For more information on the work of the dugong MOU, please visit <http://www.cms.int/species/dugong/index.htm>*

Banner for the S.O.S. event (courtesy of Mandy Etpison)

## SIRENIAN INTERNATIONAL ANNOUNCES NEW LIBRARIAN

Sirenian International (SI) has announced a new volunteer librarian who will maintain and update the online Sirenian and Desmostylian Bibliography Project housed on the SI website at [www.sirenian.org/biblio/](http://www.sirenian.org/biblio/). Jaime Goldman has recently joined the SI Board of Directors as Librarian and will work with Dr. Daryl Domning and Dr. Caryn Self-Sullivan to rapidly update the bibliography with new literature citations and add missing citations as they are identified. The bibliography is the result of a lifetime of work by Dr. Domning and provides a comprehensive database of sirenian citations. If you have additions or revisions for the bibliography please submit them to [librarian@sirenian.org](mailto:librarian@sirenian.org) along with a PDF of the article which will be housed in the SI archive.

## LOCAL NEWS

### BELIZE

***Update on manatee conservation efforts in Belize.*** The Belize Manatee Conservation Project is a joint effort of Sea to Shore Alliance (S2S), the Coastal Zone Management Authority & Institute (CZMAI) together with many national and international partners. The report of strandings along the coastal zone of Belize from 2005-2010, which includes the update on manatees in rehabilitation, is available online at [http://public.sea2shore.org/news\\_room/publications](http://public.sea2shore.org/news_room/publications). The report highlights the increase in mortality over five years, and explains the main causes of death, the most significant being watercraft collisions. As a result of the increase in strandings, the Belize Port Authority (BPA) has been working closely with us to address the high speed boating situation. The area where these deaths have been occurring, the Belize River, has now been approved as a "No Wake Zone" and "Manatee Area". The BPA has also agreed to assist in the monitoring and enforcement of signage compliance. We are very grateful that Save the Manatee Club has donated signs in this much needed effort.

The orphaned calf "Twiggy", which has been in rehabilitation for almost three years at the Belize Manatee Rehabilitation Centre, is doing very well. She is in "soft release", the last stage of rehabilitation. She is still supervised and has supplemental feed, but is free to come and go. As her release date isn't finalized, she is brought into the lagoon enclosure (a fenced-off part of the lagoon) each evening and fed a blended mix of banana and water hyacinth leaves, then each morning she is released back out into the lagoon. While she is still provided some supplemental food, she is actually self-reliant and capable of feeding herself. She has been fitted with a VHF tag so we now have a better understanding of how she uses the lagoon, which will help Wildtracks with the rehabilitation of other calves in the future. "Duke", a juvenile animal found emaciated in a canal near to the Belize River, has been making strides in the right direction and looks much better than when he came in to captivity in January. He is still being tube fed, but occasionally nibbles on vegetation in the pen or pool. He is now spending time in the pen with "Twiggy" where they are separated by a fence but are often seen interacting along the fence.

This April, the Coastal Zone Management Authority & Institute completed marine mammal aerial surveys along the entire coast of Belize. Nicole Auil Gomez led manatee surveys on April 3-4 and the Oceanic Society carried out the surveys for the Turneffe Atoll on April 10-11, led by Dr. Holly Edwards. Manatee aerial surveys have been carried out for the coastline of Belize since 1977, and the last national count was done in 2007. The surveys provide information on distribution and relative abundance, which are applied to management strategies, including the national Coastal Zone Management Plan. All rivers, large lagoons, and a large sample of cayes were surveyed using standard

protocol. A total of 508 manatees were observed, with 10% of them being calves. This is the highest count recorded for Belize [the previous maximum count was 338 manatees sighted in 2002 (April 2004)], still known globally to have the greatest number of Antillean manatees. Some key areas were in and around the Belize River, with 25 manatees documented in the river itself; the Turneffe Atoll had 15 manatees; Placencia Lagoon had 31 individuals; and the Southern Lagoon (Gales Point) had a remarkable 52 animals. These numbers represent a minimum population size, as for every animal seen, others present are missed. The donated aircraft service was provided by the conservation NGO LightHawk.

Manatee researcher Jamal Galves earned two professional development awards this year. Firstly, he was chosen for the inaugural 2012-2013 class of “Caribbean Emerging Wildlife Conservation Leaders” (CEWCL). During the two-year training program participants will work in teams to develop, implement and evaluate a wildlife conservation project in the Caribbean. They will have access to seasoned conservation professionals who will help guide them on this journey and who will provide one-on-one mentoring and career development. Jamal also secured a Conservation Leadership Program (CLP) grant for a team project in the Belize River area, where the majority of manatee deaths and injuries occur. The project, titled “Ameliorating Threats to the Manatee in the Heart of Belize”, and complementing previous support from the Columbus Zoo and Disney's Cast Conservation Program, hopes to conserve an important area to Belizeans, manatees and other species by conducting a threat assessment in the Belize River mouth area. Management systems will be proposed to protect the habitat and manatees. Solutions will be established in collaboration with the Coastal Zone Management Authority and Institute (CZMAI), Friends of Swallow Caye, the Government of Belize, and Sea to Shore Alliance. Objectives of the project include satellite tagging and tracking wild manatees to identify usage patterns and travel corridors at the Belize River site. The next manatee capture and tagging event will take place in the Belize City area and the Southern Lagoon in early June. Additionally, we will be employing manatee scar analysis to categorize boat strikes; increasing monitoring of the Belize River site; determining appropriate speed zones (no wake zones, slow speed zones, manatee zones); working with local authorities to implement speed zones; creating and installing speed zone signs as well as developing and distributing education materials to increase local awareness of the importance of following speed restrictions; and educating local boat operators to become stewards of the area and the wildlife. The prize includes travel to Canada to accept the award and participate in a training workshop, and working with other participants to develop a strong, professional network, facilitating future international collaboration. -**Jamal Galves** (Sea to Shore Alliance and Coastal Zone Management Authority & Institute. E-mail: [manateeczmai@gmail.com](mailto:manateeczmai@gmail.com))

## BRAZIL

***When just returning to the wild is not enough: New steps for Reintroduction of Amazonian Manatees in Brazil.*** The Aquatic Mammals Laboratory of the National Institute of Amazonian Research (INPA) is continuing the pioneering Reintroduction Program of the Amazonian manatees raised in captivity, in progress since 2008 (see *Sirenews* No. 49). To date, four male individuals have been released and monitored in the wild. These manatees arrived at INPA as orphaned calves less than six months old and were kept in captivity for approximately 10 years. However, we discovered that their perception of the natural environment was very poor, requiring changes in the procedures in use. The Reintroduction Protocol was revised, introducing a longer period in the pre-release (semi-captive) phase to gradually re-adapt the animals into the wild. In October 2011 the first translocation of three young captive manatees (two males and one female) was performed. The semi-natural facility is a 14 hectare natural lake,

located at the border of the right margin of the Solimões River, 80km from the city of Manaus (Amazon, Brazil). Initially, to facilitate monitoring and veterinary interventions, the animals were maintained in an enclosed area of 3000m<sup>2</sup>, secured with a wooden fence. In preparation for the translocation, still at INPA, each manatee was freeze-branded in the dorsum to help visual identification during the semi-captive management. The animals were transported from INPA to the new facility by truck at night to avoid the heat, inside an empty fiberglass pool covered with wet foam mattresses. During the three hour trip, the manatees were kept wet and constantly monitored by INPA/AMPA staff. Before release into the lake, each animal received a prototype of the VHF transmitter belt adapted to the caudal peduncle. A “regional breakfast” was organized to assemble all the inhabitants of the communities around the area to welcome the manatees and to learn about the project. Since the release, Manatee Project staff have been monitoring these animals to understand their adaptation in their new home. Every trimester, during the adaptation period, the manatees are captured to evaluate health, blood collection, body mass and adjustment of the belts. Our aim is to maintain these animals for about one year in this controlled semi-natural area before release into the wild. The next steps will be to select the area for release and promote an intense environmental education program with the riverine communities in the release area, in order to create conservation awareness and to ensure the protection of these manatees in the area. If successful, this will be the beginning of a long-term program supporting release of more manatees raised in captivity, with the goal of recovering natural populations. A total of ten other animals with excellent potential to be released in the wild are ready to be translocated. In 2012, five animals will be transferred to the semi-captive facility. This project is being conducted by INPA and AMPA (Friends of the Manatee Association - [www.ampa.org.br](http://www.ampa.org.br)), and supported by Petrobras S.A. and Fundação Grupo Boticário de Proteção à Natureza. – **Diogo Alexandre de Souza, Vera Maria Ferreira da Silva, José Anselmo d’Affonseca Neto, Isabel Manhães Reis and Fernando César Weber Rosas** (Instituto Nacional de Pesquisas da Amazônia (INPA) Laboratório de Mamíferos Aquáticos (LMA), E-mail: [diogo.peixeboi@gmail.com](mailto:diogo.peixeboi@gmail.com)). Photos credit: AMPA.



Semi-captive area for gradually re-adapting the Amazonian manatees into the wild.



Welcome of the Amazonian manatees by the students and inhabitants of the communities around the semi-captivity area.



INPA/AMPA staff conducting the final procedures before the release of the manatee into the semi-captivity lake.

***Mermaids of the Amazon - Using Amazonian manatees as a “flagship species” for the conservation of the lower Rio Negro region, Brazilian Amazon*** The Amazonian manatee is vulnerable to extinction mainly due to poaching and logging in the Brazilian Amazon. Considering this, the IPÊ – Instituto de Pesquisas Ecológicas (Institute for Ecological Research), a Brazilian NGO, is attempting to research and conserve Amazonian manatees (*Trichechus inunguis*) in the lower Rio Negro region. The project focuses on regional conservation by researching the species and engaging local citizens in the conservation of the species and of the region itself. Since October 2010, we have interviewed more than 120 residents from the small city of Novo Airão to get acquainted with the population's traditional knowledge and main threats to species. We presented 17 lectures about the Amazonian manatee and lower Rio Negro region conservation. Furthermore, the Project staff along with partners from Novo Airão organized the Environmental Week of Novo Airão in June 2011, which included lectures to the students and general public in the region; and the Manatee Mini EcoFestival of Novo Airão in October 2011, which included enjoyable activities with students, such as theater, dance and music, lectures about several environmental concerns of the region and a drawing and poetry contest. In 2011, 45 drawings and 60 poems were submitted and more than 200 people voted in the contest. Approximately 1500 citizens of Novo Airão participated in public awareness activities in 2011. Regarding the research activities, we recorded evidence from 38 manatee samples of feeding from 13 different plant-species. Two sightings of five Amazonian manatees were recorded in June and December 2011. Along with the Amazonian manatee monitoring at Anavilhanas National Park, some potential threats to the species' conservation were also noted including two instances of illegal logging, one of a trawl net, and six gillnets. In July and September 2011, in a partnership with Mamirauá Institute for Sustainable Development (IDSM), we used side-scan sonar attached to a small boat to develop a methodology for locating and recording the species to enhance our knowledge of wild animals. During this preliminary test with the sonar we defined the range of the detection of the transducer and the boat speed to record images. In 2012 more tests are being carried out. More than 200 km were sampled with the side-scan sonar to develop the protocol to use this equipment and to search for Amazonian manatees. However, during the preliminary tests, no individuals were recorded. The absence of animals could be related to the flooded period, when the animals move into the “igapós” (the flooded forest) to feed and conceal themselves. The tests are going to be carried out during 2012 to define the methodology, sampling during both the wet and the dry season. -**Cristina F. Tofoli (cftofoli@gmail.com), James Powell & Claudio B. Valladares-Padua**



Using side-scan sonar to locate Amazonian manatees in the Rio Negro river, Brazil.



Amazonian manatee educational activities in the lower Rio Negro region of Brazil.

## CUBA

***Update on the manatee conservation process in Cuba, 2011-2012.*** A standardized monitoring program is taking place in six protected areas in the south of Cuba, located in the provinces of Pinar del Río, Isla de la Juventud, Matanzas and Granma. The research program involves boat surveys to detect manatees, habitat evaluation and interviews with fishermen. The main goal is to locate places most used by manatees, to estimate relative occurrence and to detect potential threats. This monitoring program is implemented with funds from the Sea to Shore Alliance, MacArthur Foundation, Global Environmental Fund (GEF) and United Nations Development Program (PNUD), with the joint collaboration of the Center for Marine Research at the University of Havana, the National Center for Protected Areas and the Enterprise for Flora and Fauna. Since 2011 nine expeditions have been organized in four protected areas: North Guanahacabibes on the western end of the island, La Coloma in Pinar del Río on the southwest coast, Siguanea Gulf in Isla de la Juventud off the southwest coast, and South Granma on the southern coast of Cuba. We were able to detect manatee presence in only two areas, Isla de la Juventud and Granma. Nonetheless fishermen from the other areas have reported manatee presence in this last period. Relative occurrence was higher in Granma (1.14 sightings/10 nautical miles) than in Isla de la Juventud (0.61 sightings/10 nautical miles). Potential threats in the surveyed areas were illegal hunting and entanglement in fishing nets. In addition, two satellite tags are ready to be deployed on two animals in order to register their movement patterns in the southwest part of Cuba.

We have also started an educational campaign with informative posters distributed to fishermen, the coastguard, marinas, diving centers, etc. all over the island, to collect information about manatee sightings and strandings. Initial results have included sightings in North and South Pinar del Río (see picture below), Isla de la Juventud, Matanzas and Villa Clara. As a result of this program people are becoming more involved in the manatee conservation process taking place throughout the country.

**-Anmari Alvarez Alemán (anmari@cim.uh.cu), Jorge Angulo Valdés, and James Powell**



Manatees in Guanahacabibes. Three manatees swimming from the north to the south coast of Guanahacabibes were photographed by scuba divers from the International Club “Maria la Gorda”.

## MALAYSIA

### ***Universiti Sains Malaysia launches dugong education program at Sibu island, Johor.***

A three-year university-community project entitled “Testing the effectiveness of conservation education programs: a case study of the dugong (*Dugong dugon*) in Johor, Malaysia” was recently initiated in August 2011. This project is led by Dr. Leela Rajamani from the Centre for Marine and Coastal Studies, Universiti Sains Malaysia with a multidisciplinary team and collaboration from non-governmental organizations.

Dugongs are found south of peninsular Malaysia and in certain parts of Sabah in east Malaysia. The islands of Tinggi and Sibu, east of Johor, particularly have consistent reports of dugongs. This project will seek to engage local communities, schools and resorts at Sibu Island, Johor in an education program about dugongs, seagrasses and their conservation. In April 2012, we will be distributing posters and giving talks to seek permission and support to conduct the education program. The following year, we intend to carry out field trips to seagrass habitats with schoolchildren and local community members to further educate them on the ecology of dugongs, seagrasses and related ecosystems. We are also working with the School of the Arts to develop an alternative method of conveying conservation education. The community will have been asked whether they would like to participate in a processional performance/installation near the seagrass habitat. If the community agrees, a dugong storybook with cartoons will be prepared relating facts about dugongs and seagrasses, conservation of dugongs, and socio-cultural relationships with the dugong (perceptions, myths). Props

for the procession will include flags with seagrass motifs, T-shirts with dugong prints and masks depicting mermaids.

A time will be set for the procession, preferably early evening or morning near the seagrass bed. As the props are handed out to the participants, each person will be asked to play a part in the performance. Several storybook readers from our team as well as enthusiastic community members will be selected to narrate the dugong story. Using materials from the shore and surrounding villages (pebbles, shells, fallen twigs) we will together create a dugong monument on the sand. The procession will begin from this point at the waterline and the readers will begin narrating. Once the narration has finished, the procession will then end back at the dugong monument to symbolize that life is a continuous cycle. The dugong monument is then disassembled and returned to nature.

For both the conventional and innovative methods, it is expected that the community will have a better understanding of ecological processes and how organisms are linked and interdependent on each other. Ecosystems such as mangroves, seagrasses and coral reefs sustain fisheries, which are very important for community livelihoods. Perhaps the dugong will bring a sense of pride to the community when they learn that Sibu Island is one of the key places where dugongs are found.

We will then learn the effectiveness of such a program through community opinion. Interview surveys will be carried out with the local community to inquire about communication efficiency of the educators, community reaction to the education program and progress made in terms of positive attitude change and daily activities with regards to conservation of the dugong. The results of this study will be analyzed and presented to the local community to enable them to effectively understand the purpose of the education program. These results will also give key insights to conservation implementers and educators on how to effectively evaluate and improve their own programs, bearing in mind community needs. -**Leela Rajamani** (leelarajamani@gmail.com)

## MYANMAR

***Myanmar Dugong and Seagrass Information Websites.*** The Republic of the Union of Myanmar is one of the first signatory States to the “Memorandum of Understanding on the Conservation and Management of Dugongs and their Habitats throughout their Range” by signing the MoU at Abu Dhabi, United Arab Emirates, in 2007. Myanmar has a 2280km coastline and it can be divided into three coasts: Rakhine, Ayeyawaddy and Tanintharyi. Presence of dugongs and seagrass has been reported from the Rakhine and Tanintharyi coasts, and 11 seagrass species have been found in Myanmar waters to date. Information on Myanmar dugongs and seagrass can be obtained from the following website: <http://sites.google.com/site/tintdugong>. -**Tint Tun** (tintun@gmail.com)

## NEW CALEDONIA

***Informing dugong movement and habitat use behavior in New Caledonia – A pilot study.*** New Caledonia supports one of the world’s largest populations of dugongs. However, conservation and management actions are hampered by a lack of knowledge on the status of the population as well as on the species movement and habitat use behavior. Animal tracking using telemetry devices provides valuable information into species’ distribution, movements and habitat use. However, tag deployment on sirenians is particularly challenging because it requires capturing the animal. The aim of this pilot project was to catch, tag, and track two dugongs with satellite/GPS transmitter devices in order to assess the feasibility of a more extensive study in New Caledonian waters.

The project was carried out by Christophe Cleguer, a PhD student supervised in co-tutelle by

Professor Helene Marsh (James Cook University, Australia) and Professor Claude Payri (University of Pierre and Marie Curie-IRD, France-New Caledonia). We searched for dugongs from 5-20 March 2012 in two different regions of the west coast of New Caledonia. Capture using the rodeo technique (Lanyon et al., 2006) and tagging using both satellite and TDR tags were successful and the movement of the two dugongs (one male, 'Foni', and one female, 'Mara') can now be followed on the seaturtle website at [http://www.seaturtle.org/tracking/?project\\_id=719](http://www.seaturtle.org/tracking/?project_id=719).

The project following this pilot study will lead to a greater understanding of movement and habitat use of dugongs in New Caledonia. It will also improve methods for studies that define habitat use and linkages between habitats by further evaluating the use of new developments in GPS/ARGOS tracking technology to acquire large numbers of fixes from dugongs that are travelling large distances and moving rapidly. This technology will enable us to investigate questions such as the relative time dugongs spend in deepwater areas (e.g., in channels inside the lagoon or outside of the barrier reef) versus the time spent on reef tops or close to mangrove areas (where they are easier to catch).

This will be a critical step towards a better understanding of dugong ecology in New Caledonia with important implications for management agencies. In particular, it will help facilitate future conservation and management planning in relation to dugong habitats and to inform whether current levels of protection are sufficient.

### Project Partners

This project was implemented throughout the Dugong 2010-2012 Action Plan in New Caledonia. It was financed by the French Marine Protected Area Agency, the South Province of New Caledonia, the WWF and Opération Cétacés. The partners of the project are the French Marine Protected Area Agency, the North Province, the South Province, the Loyalty Island Province, the New Caledonian Government, the French Government, the WWF and Opération Cétacés (NGO).



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## RECENT LITERATURE

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