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## Social and economic values of coastal resources in the Comoros revealed

During March the team on Moheli carried out socio-economic surveys in four villages. These surveys, using Socmon methodology, had already been carried out in five villages on Grande Comore as a first step to set up the Comoros National SocMon network, in partnership with government bodies and local NGOs and funded by the NOAA Coral Reef Conservation Program.

The C3 team worked with six Mohelian researchers - Mouzidalifa Yssouf, Ahmed Dahalane, Nema Madi, Souonda Mikidadi, Ibrahim Mohamed Madi, Ahamadi Boustoine who had been previously trained by C3 and CORDIO (Coastal Oceans Research and Development) East Africa – the coordinating body for SocMon in the Western Indian Ocean.

As on Grande Comore, the four villages (Hamba, Hoani, Fomboni and Djoezi) were chosen according to several criteria including number of fishers, level of development, potential for tourism, presence of key ecosystems or threatened species and population size.



Hamba and Hoani to the north-west of the capital Fomboni were chosen because of their high potential for eco-tourism due to the natural beauty of the landscape and the presence of green turtles (*Chelonia mydas*) which visit their beaches all year round. Fomboni is more developed with more fishers. Djoezi, to the east of Fomboni, was also chosen because its inhabitants are highly dependent on artisanal fishing.

Altogether 240 surveys were conducted with heads of households to gain an impression of the level of dependence on

marine resources amongst the general population, the level of environmental awareness and knowledge as well as problems facing inhabitants of these villages. Twenty-four key informant surveys were also conducted with key fishers and village elders or chiefs to gather more detailed information.

In the next month the team will visit the island of Anjouan, to complete the surveys in another five villages. The data collected from these surveys will be compiled into a technical report summarizing information from all three islands of the Comoros which will be circulated to relevant government departments, NGOs and other development bodies.



A fisher's daily catch in the Comoros



## Junior Ecoguard network grows!



In March, Maoulida Kamal (MC) C3 Programme Officer, organized Moheli's second Junior Ecoguard training camp, from March 20th to 23rd at the Hoani Conservation Centre. Participating in the camp were thirteen of Hoani's teenagers, selected by a school-wide essay contest about their personal interests in the environment.

With the help of Elham Chake Souldine, Ibniz Said Bacar and Sanfia Djamaidine, three of the Junior Ecoguards from Niomachoua, students were introduced to a variety of environmental topics. Training included lectures, discussions and interactive games illustrating topics such as ecosystems, Mohelian habitats, the importance of a healthy natural environment, biodiversity, food webs, coral reefs and rubbish. The students also received training in sea turtle monitoring techniques and learnt about the significance of this endangered species to Moheli's environment and tourism; they were even lucky enough to witness a female green turtle laying her eggs on the beach during a night-time field trip!



The new Junior Ecoguard team in Hoani

During the camp, ORTM (Office de Radio et Television Mwali) filmed and produced a half-hour documentary of the activities that was aired on Mohelian television which can be viewed on YouTube at <http://www.youtube.com/C3videos>.

The newly trained Junior Ecoguards were awarded with certificates of participation which remind them of their role as community ambassadors for the environment. In addition to the general environmental awareness gained from the camp, students are now capable in assisting Moheli's adult Ecoguards in an ongoing turtle monitoring project in which parameters

such as turtle carapace and nest sizes are recorded. The training camp has bolstered the network of environmentally-aware youth on Moheli and spread enthusiasm about their unique environment.

The Junior Ecoguard training camp was funded by a Volvo-UNEP Adventure Award and the British Foreign and Commonwealth Office.

## Waste management workshop at American Corner

On Saturday, 4<sup>th</sup> April 2009, C3 Programme Officer David Hunter gave a presentation to students at the American Corner, a facility at the University of Comoros responsible for English language tuition. The presentation involved a short introduction to C3 and its previous work and a lesson on the impacts of and potential solutions to the litter problem in the Comoros Islands. Twenty-five students attended and were assigned several tasks and activities relating to the problem of waste management. They enjoyed seeing David dress up as a turtle to help demonstrate the similarity between a plastic bag and a jelly fish to a turtle (the turtle outfit suited him very well!). The students were taught how long different types of rubbish take to decompose and the distinction between man-made and natural items and the value of sorting rubbish before disposal. The presentation culminated in a short brainstorming

session in which the students had to come up with their own solutions to the litter problem and present their ideas to the rest of the class. A prize was given to the group with the best presentation. The students were very enthusiastic and keen to learn and we hope to return to American Corner soon.



## Year of the Reef song

In January the Junior Ecoguards of Grande Comore worked together with C3, local musicians and Djabal Television to produce a video clip for the Reefcheck- International Year of the Reef Singing contest.

The words provided by Reefcheck emphasized the importance of coral reefs and the need for their protection. These were translated into Comorian and the melody to the song was composed by Chamoun Soudjay.

The Junior Ecoguards were coached by

Chamoun, Said Mohamed Said Ali, Ibrahim Youssef Ahmed (Diamand), Mohammed Youssef Tarik and Ismael Mansoib and the song was recorded in the musicians' practice studio.

Ali Maoulida from the local television station, Djabal Television, helped to produce a short video clip which shows places which are of importance to the students, both from cultural and historical perspectives (such as the 15<sup>th</sup> century fort dating to the time of the sultans in Iconi) and also from an environmental perspective (the beach of Iconi).

The group was ecstatic then they received news that the video clip had won third prize in the contest- a prize of US\$400! This money will be used by the Junior Ecoguards and C3 in future environmental awareness-raising and education activities including producing an album of environmental songs. The Junior Ecoguards are now looking for funding to produce and distribute 10,000 copies of the album around Grande Comore



## Regional bycatch survey reaches Mauritius

Following C3's successful partnership with Duke University's Project GloBaL, funded by the Gordon and Betty Moore Foundation, to attempt to quantify bycatch of sea turtles, dugongs, cetaceans and sharks in the artisanal fisheries of Comoros, C3 has adapted the methods and utilised them across the island of Mauritius. The surveys have now been completed and have revealed some interesting patterns including bycatch pressure on the critically endangered hawksbill turtle and indications of shark bycatch being concentrated around the northern coast. There also seems to be animosity towards sharks, with fishers sometimes deliberately catching them because they perceive them as a threat to their fishing livelihoods and to themselves. The aim is to now extend this work to the island of Madagascar and analyse the data across all three island nations later this year. This is the first study of its kind in the western Indian Ocean islands and the results are sure to be extremely useful to fisheries ecologists, marine resource managers and conservation practitioners.



## Socioeconomic values of MPAs for Small and Medium-sized Enterprise (SME) development

A study has just been concluded in collaboration with Brita Backlund and Dr. Komalsingh Rambaree of the University of Mauritius to ascertain the relationship between MPAs in Mauritius and the growth of small and medium enterprises (SMEs). As part of the study 10 social science students were trained to conduct the surveys and visited numerous coastal villages. The study sites were Black River Fishing Reserve on the south-west coast and Blue Bay Marine Park in the south-east of the island. Knowledge and perceptions of these protected areas were gathered from various user groups including snack-sellers, tourism operators and fishers including opinions of environmental



An early explorer's illustration of a dugong

change and distribution of benefits amongst different stakeholder groups.

## The extinction of the dugong from Rodrigues island

SHOALS Rodrigues has partnered with C3 to implement research into the disappearance of the dugong, or sea cow from Mauritian waters. The study is funded by UNEP's Convention on Migratory Species and will investigate the suspected extinction of this marine mammal using a combination of historical records and fisher interviews. Most fishers approached so far are aware of the creole word for dugong, 'lamentin' but have never seen one and have not been told of them by their fathers or grandfathers. Dugongs used to appear in herds of several hundred animals in the shallow lagoon of Rodrigues in the early 19th century and were quickly exploited as a source of meat (that apparently tasted like beef!) by European mariners en route to India.



## OTHER NEWS

### Decline in sea turtle nesting populations highlighted at international conference

Patricia Davis gave a presentation at the International Sea Turtle Symposium (ISTS) in Brisbane in February 2009 on the importance of historical data including grey literature such as travel writers' accounts, ships



Patricia Davis at the International Sea Turtle Symposium

logs and colonial administration records in reconstructing historic sea turtle nesting populations. She used Mauritius and St. Brandon as examples of how quickly and effectively sea turtle nesting populations can be decimated without drawing the same attention from the public as terrestrial counterparts such as the Giant Land Tortoise, the Dodo and the Solitaire which also disappeared around the same time. The concept of shifting baselines must also be considered when creating a picture of past populations as the current habitats we see around many island nations today are vastly different from those which supported large sea turtle populations of the past. There is still time to take action and preserve the nesting habitats and sea turtle populations around the archipelago of St. Brandon by learning from the past decimation of these

endangered species around Mauritius. There have only been two recorded nestings of green sea turtles in Mauritius in the past thirty years on the undeveloped southern coast, although fishers have suggested that there could be unreported nestings around the small islands off the north and east shores in recent years. These few returning mariners represent a 'ghost' population of a species that was once found and harvested in abundance from this island's shores. C3 would like to thank the ISTS and the BP Conservation Leadership Programme for funding Patricia's travel to the conference and accommodation in Brisbane.



## C3's dugong work extends to Madagascar

Patricia Davis travelled to Madagascar to meet partners at the University of Antsirananana, the Centre National de Recherches Oceanographiques and Ministry of Education and Scientific Research in January 2009. We anticipate the start of a fruitful new partnership with the opening of a new C3-Madagascar office in May 2009. Our first project will be focusing on the unknown population of dugongs thought to inhabit the northern region of the country and will shed light on various cultural taboos or 'fadys' relating to the consumption



Migrant fishers research group in Mombasa, Kenya

of dugong meat in remote coastal communities. A threat assessment will be conducted along with the extension of our regional bycatch study. This work is generously funded by the BP Conservation Leadership Programme and the Convention on Migratory Species.

## Regional Migrant Fishers Study

Chris Poonian of C3 travelled to Mombasa, Kenya from 15th to 18th January 2009 to attend the inception workshop of the project: Migrant fishers and fishing in the Western Indian Ocean: Socio-economic dynamics and implications for management. The workshop was extremely productive, and resulted in finalization of the methodology and surveys to be used for this work. The project involves researchers from Kenya, Tanzania, Mozambique, Madagascar and Comoros and is led by Innocent Wanyonyi and David Obura of CORDIO-EA and funded by a Marine Science for Management grant from

the Western Indian Ocean Marine Science Association (WIOMSA) and ReCoMaP.

## Recent publications

[Poonian CNS, Hauzer MD and Ben Alloui A \(2009\) ARTISANAL BYCATCH OF TURTLES IN THE UNION OF THE COMOROS, WESTERN INDIAN OCEAN – ARE GEAR RESTRICTIONS ALWAYS EFFECTIVE? In Project GloBAL. Workshop Proceedings: Tackling Fisheries Bycatch: Managing and reducing sea turtle bycatch in gillnets. Project GloBAL Technical Memorandum No. 1, 57pp.](#)

[Poonian CNS, Hauzer MD and Ben Alloui A \(2009\) CAPTURA INCIDENTAL ARTESANAL DE TORTUGAS EN LA UNION DE COMOROS, EN EL OCEANO INDICO - ¿SON LAS RESTRICCIONES DE EQUIPO SIEMPRE EFECTIVAS? In Project GloBAL. Workshop Proceedings: Tackling Fisheries Bycatch: Managing and reducing sea turtle bycatch in gillnets. Project GloBAL Technical Memorandum No. 1, 57pp.](#)

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We are also grateful to **NEOWEB** internet café in Moroni for allowing us to use their electricity supply free of charge

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