

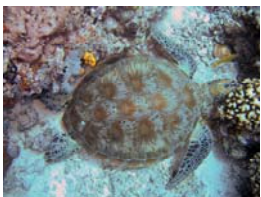
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Understanding customary and religious practices associated with artisanal fishing in the Comoros

In October 2008 C3 began a study of customary and religious practices relating to artisanal fishing in the Comoros. Twenty-one interviews were conducted in Moroni, Hahaya, Hatsambou, Itsandra and Iconi with key informants including fishers and religious experts. The interviews covered a range of issues relating to fishing, traditional beliefs and Islam. These included practices associated with particular species, informal laws and local legislation, medicinal uses of marine resources, taboos and religious restrictions.



Tuna fisherman



A Grande Comorian fisherman with an oilfish, locally known as *niesa* and regarded to have medicinal properties

Preliminary results from this work indicate that religious and traditional beliefs no longer exist to the same extent as in the past. Fishing is now more opportunistic out of necessity because of reduced availability of marine resources. Consequently, informal laws and beliefs as well as local legislation are less stringently adhered to. Religion has great potential as a conservation tool because Islam preaches respect for and empathy with the environment. Information gained from this work will thus provide opportunities for future efforts to sustainably manage marine resources in the Comoros.



Turtles, dugongs and dance in Iconi



Foreign & Commonwealth Office



A Junior Ecoguard in a turtle awareness-raising sketch

On 13 November 2008, an awareness –raising day was held in C3's home village of Iconi, Grande Comore. The day was centred on the importance of the Comorian environment and threats facing its endangered species such as marine turtles and dugongs. Over 100 people attended including local dignitaries, students, other members of the Iconi community, C3's sponsors and a delegation from the British High Commission based in Mauritius which included the Deputy British High Commissioner, Ewan Ormiston and Policy and Programmes Officer, Jean Phillipe l'Eveque. The local environmental group ADELEC and Djabal TV assisted with the organization of the day.

The programme consisted of informative talks, in French and Comorian, by C3 staff and interns about their current and previous work and plans for the future. A further presentation

was given by ADELEC, discussing their environmental work conducted during the year. Entertainment was provided in the form of traditional Comorian song and dance, performed by the Women's Association of Iconi and other local dance troupes. The Junior Ecoguards of Grande Comore performed two sketches, covering a range of topics from turtle poaching to the protection of seagrass and coral reefs. Oumar Ali Sambu, a member of the Junior Ecoguards of Mohéli, spoke about this group's work protecting endangered sea turtles, and the resulting trip to Sweden in which they won third prize in the Volvo-UNEP Adventure International Award 2008. The day ended with a selection of interactive environmental games designed for both children and young adults, followed by a short quiz. The day was a great success with a good turn out from all age groups in the community. C3 would like to thank the British High Commission in Mauritius for funding our work into resolving conflicts over marine resources in the Union of the Comoros.

State of the World's Sea Turtles (SWOT)

In 2007, C3 collaborated with Duke University, USA, University of the Comoros, Hoani Uni Pour La Protection de la Environnement (HUPPE) and the Fisheries Department of the Comorian government to evaluate the threat of artisanal bycatch on sea turtles and marine mammals in the Comoros. Interviews were carried out with fishers at 25 villages on Grande Comore and 5 villages on Moheli. The results of this study revealed that turtles are under serious threat from accidental and deliberate capture in the Comoros.

This year, C3 was funded by State of the World's Sea Turtles (SWOT) to present the findings of the study to the fishers of Grande Comore and raise awareness in the villages that were found to have the highest levels of turtle mortality due to bycatch. This awareness-raising targeted five fishing communities on Grande Comore; Foubouni, Hantsambou, Iconi, Chindini and Mitsamiouli. The presentation includes 30-minute powerpoint presentation of the findings of the study followed by a discussion about by-catch and issues

relating to turtle conservation in the Comoros.

The presentations have been attended by over 100 people in each village. Both villagers and fishers were attentive and keen to learn more about alternatives to turtle meat, employment opportunities related to turtle conservation and the turtle life cycle. Find out more about SWOT at www.seaturtlestatus.org.



Socmon Pilot Study

C3 has been working with a number of local partners and CORDIO East Africa since 2007 to implement a SocMon socioeconomic monitoring network in the Comoros. This work, funded by NOAA, aims to more fully understand the human dimension of coastal resources to provide useful recommendations for the future implementation of MPAs and other management tools.

During the month of December, preliminary questionnaires designed for key informants and household surveys were composed and tested in a pilot study in the village of Iconi to determine the efficiency of the interview methods and to resolve any problems that may arise during data collection. Interviewees included fishers, farmers, village elders, town officials and heads of households. After making any necessary adjustments, data collection will begin on Grande Comore in January.



SocMon pilot survey



World Water Monitoring Day Hits The Comoros!

Hiking around the foot of the world's largest active volcano, demonstrations before hundreds of students, and



A Grande Comorian student tries out a testing kit

visits to remote jungle villages were just some of the activities during World Water Monitoring month in the Comoros Islands.

World Water Monitoring Day, coordinated by the Water Environment Federation (WEF) and the International Water Association (IWA) is an initiative to assess water quality worldwide through the use of simple test kits which measure variables such as turbidity, temperature, dissolved oxygen and pH. The tests are designed to be used, particularly by the youth, in local communities to raise awareness through active participation.

Between October and November 2008 C3 visited five schools in Iconi and Moroni to give presentations on our work, World Water Monitoring Day and to raise awareness about the importance of the environment. The schools visited included Ecole Privée le Gymnase, Le Progrès, Univers, Groupe Scolaire Avenir and Ecole Muigni Baraka.

Students were given a presentation on World Water Monitoring day itself, followed by a talk on the importance of the marine environment. The visit was concluded with a discussion on diseases that can arise when water is not properly treated and a demonstration of the water monitoring tests. The school visits were well received with 50-100 students attending each presentation. C3 aims to continue school visits in the future to continue work with the next generation of Comorians.

The Junior Ecoguards of Grande Comore assisted C3 on visits to various sites throughout Grande Comore. A total of 23 sites, including coastal water, mangrove sites, drinking water and cisterns were tested. Due to the lack of freshwater bodies on Grande Comore it was only possible to test one underground stream. Our data has now been submitted for inclusion in the worldwide database available at www.worldwatermonitoringday.org.

MAURITIUS



Study of the exploitation and demise of marine megafauna

C3 has been digging up some interesting old references from ships' logs, the Dutch, French and English colonial eras and grey literature in order to piece together the story of the demise of the dugong and sea turtles around the island.

Only two turtle nesting events have been recorded in the past 50 years, reflecting the near extinction of the green and hawksbill turtle nesting populations. How did this extinction come about and over what timeframe? Research to reconstruct the habitats and populations several centuries ago during early contact with humans is essential in informing and setting realistic contemporary conservation goals.

It appears that these marine animals suffered the same fate as their terrestrial counterparts, the infamous dodo, the solitaire and the giant land tortoise but unfortunately they escaped the limelight due to their existence in the sea rather than on land. A letter was written by Charles Darwin to the British colonial administration in the mid 1800s

begging them to protect the remaining giant land tortoises before their likely extinction. Unfortunately he, like most people at that time, was unaware of the concurrent plight of their marine cousins.

On the arrival of the Dutch traders in the 1600s, dugongs and sea turtles were described as abundant and so tame they could easily be harvested and loaded onto ships in their hundreds. By the late 1700s, they were obviously in decline, and by the 1800s they were described as being rare. The subsequent shift in coastal and marine ecosystems since the industrial revolution meant that once available habitat including seagrass beds and undisturbed nesting beaches has disappeared.

Now nesting sea turtles and dugongs are either extinct or occasional 'ghosts' of a bygone era may be spotted (a marine mammalogist claims to have spotted a dugong in the early 1990s and a green sea turtle came ashore to lay her eggs in November 2007, 30 years after the last emergence!). How can we focus on restoring populations in vastly altered habitats which may no longer offer sufficient feeding areas and reproductive environments?

This study emphasizes the urgency of protecting Mauritius' dependencies of Rodrigues, St. Brandon and Agelega, which with less historical human exploitation, could offer a stronghold for these globally threatened species.

Promoting interdisciplinary studies amongst a new generation of researchers

C3 has been working closely with the Department of Social Sciences at the University of Mauritius to instill an interest and appreciation for cross-cutting research in areas where ecology and sociology are intertwined.

Students have been trained in contemporary research techniques to explore the social, economic and cultural implications of marine resource management. Some projects conducted by the students have revealed fascinating insights into current coastal management issues and provided key recommendations for improving the success of protected areas through the implication of local stakeholders in the planning and implementation stages.

OTHER NEWS

Cetacean workshop

Patricia Davis of C3 was invited to a regional workshop on the Research and Conservation of Cetaceans and the Dugong organized by the Indian Ocean Commission in the Seychelles on 25th and 26th November 2008. The feasibility of a cetacean and dugong network was discussed and the success of the Indian Ocean South East Asia (IOSEA) Turtle Memorandum was presented as an example of a multilateral voluntary agreement designed to coordinate research and conservation efforts for sea turtles. Working groups were created to work on proposals for funding various activities and Patricia worked with colleagues from Mayotte, Comoros, Seychelles and Madagascar to develop a funding proposal for a regional dugong research project. Let's hope that funding is secured for the network in 2009 so that we can start coordinating our research and

conservation activities more effectively to better understand and conserve marine mammals in the future!

Please vote for the Junior Ecoguards in Year of the Reef singing competition!

The youth group 'Junior Ecoguards' of the Comoros are competing against various other youth from around the world and have composed a song and video about coral reef conservation with the hope of winning a prize!

Your vote will certainly make a difference so please click on the link http://www.reefcheck.org/video/video_contest.php and join Reefcheck (it's free!) by filling out the brief membership form, then vote for the video.

Recent publications

[Le Courtois S, Blake D \(2008\) MAPPING SEAGRASS MEADOWS ON THE REMOTE BIMBINI PENINSULAR OF ANJOUAN ISLAND. Seagrass Watch 35:18](#)

[Hauzer M, Poonian C, Moussa Ibouira C \(2008\) MOHÉLI MARINE PARK, COMOROS – SUCCESSES AND CHALLENGES OF THE CO-MANAGEMENT APPROACH. In Obura DO, Tamelander J, Linden O \(Eds\) Ten years after bleaching - facing the consequences of climate change in the Indian Ocean. CORDIO Status Report 2008. Coastal Oceans Research and Development in the Indian Ocean/Sida-SAREC. Mombasa. <http://www.cordioea.org>](#)

[Forbes C and Blake D \(2008\) YOUNG ENVIRONMENTAL LEADERS IN THE COMOROS. African Conservation Telegraph 3:12](#)

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THANKS TO OUR LATEST SUPPORTERS AND PARTNERS



Rufford Small Grants Foundation has agreed to fund C3 to develop its capacity-building work for marine conservation in the Indian Ocean Islands



Cameras Underwater has generously supplied C3 with a discounted underwater video housing to produce awareness-raising videos.



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