

West African marine protected areas network

by Colette Wabnitz, Charlotte Karibuhoye and Moussa Fall

rom July 15-17, I (the first author of this article) had the remarkable opportunity to participate in a workshop¹ on West African Marine Protected Areas (MPAs), held in Dakar, Sénégal, and convened by the Secretariat for the Regional Marine Protected Areas Network in West Africa (RAMPAO – Réseau Régional d'Aires Marine Protegées en Afrique de l'Ouest).

The ecoregion of "West Africa" officially includes Mauritania, Sénégal, Cape Verde, the Gambia, Guinea Bissau, Guinea (Conakry) and Sierra Leone. In 2002 a regional strategy, aimed at establishing a functional and representative network of MPAs in the region was endorsed by 10 ministers in charge of environment and fisheries in six countries. Since then, although some protected areas in the region such as the National Park of the Banc d'Arguin have benefited from substantial financial and technical support, most countries still suffer from insufficient funds, limited human capacity and weak

monitoring systems. It is in light of these limitations and to strengthen regional cooperation that the MPAs of the ecoregion decided to establish a network -RAMPAO. Officially recognized in April 2007, and further endorsed at a special event at the recent **IUCN World Conservation** Congress, the network currently includes 15 out of the region's 24 MPAs (three biosphere reserves, eight national marine parks and 13 other MPAs, of which two are community based MPAs). Together they cover less than 1% of the region's FF7.

The workshop convened 30 participants from the Secretariat's seven member countries and included individuals from diverse backgrounds and with a wide range of expertise (e.g., MPA representatives, policy makers and researchers from local institutions). As an overarching goal, the group was tasked with identifying priorities and 'next steps' for making West Africa's network of MPAs operational.

The mornings of the first two days were allocated to a number of presentations focusing on existing ecosystem management and/ or analysis tools and resourcedatabases developed locally:

- 1. The web portal CIAO (Catalogue d'Information pour l'Afrique de l'Ouest) for West African coastal zone data chiefly six MPAs;
- 2. An 'Observatory' for the Banc d'Arguin National Park; and
- 3. A primarily fisheries focused database (regulations; effort; industrial catch data), held by the CSRP (Commission Sous-Régionale des Pêches www.csrpsp.org). Focus was also given to more international approaches (e.g., Ecopath with Ecosim, Marxan).

During the afternoon breakout sessions participants were asked to:

- 1. Draft a list of MPA network performance indicators in accordance with RAMPAO's overarching goals and identify data required for their assessment; and
- 2. Define what participants see as the most functional RAMPAO

Continued on page 2 - MPAs

The Sea Around Us Project Newsletter
Issue 48 – July/August 2008

MPAs - Continued from page 1

information system set-up and define a set of utilisation criteria for it, whilst ensuring that synergies with existing databases and partners are maximised.

It was wonderful to witness the high level of motivation expressed by all participants during these breakout sessions. Discussions were incredibly lively, often highlighting the different needs of, and approaches employed by, individual countries, as well as points of view stemming from individual participants' backgrounds (i.e., government, research institution, etc). An essential element to the success of the workshop was the time allotted to participants to reconvene and allow them to reach common ground when drafting the overarching resolutions.

It was wonderful to witness the high level of motivation expressed by all participants

The **Sea Around Us** project newsletter is published by the Fisheries Centre at the University of British Columbia. Included with the Fisheries Centre's newsletter *FishBytes*, six issues of this newsletter are published annually. Subscriptions are

free of charge.

Our mailing
address is: Sea
Around Us project,
Aquatic Ecosystems
Research Laboratory,
2202 Main Mall,
Vancouver, British
Columbia, Canada, V6T

1Z4. Our fax number is (604) 822-8934, and our email address is SeaNotes@fisheries.ubc.ca. All queries (including reprint requests), subscription requests, and address changes should be addressed to Megan Bailey, Sea Around Us Newsletter Editor.

The *Sea Around Us* website may be found at www.seaaroundus.org and contains up-to-date information on the project.

Other points of discussion that stood out and are worthy of note include:

- 1. The importance of governance in the successful implementation of MPAs;
- 2. The importance of conducting scientific studies on the 'spillover' effects of MPAs in tropical non-reef

areas. Many of the potential benefits communicated to communities are in part based on science that has been conducted in tropical *reef* areas, with only limited evidence to date for 'spillover' effects in tropical non-reef areas;

3. Although it is indeed important than the regional MPA network be'biologically' representative and thus conserves species, ecosystems and important ecological processes, all participants underlined the importance of social and economic aspects of MPA management, particularly their role in maintaining sustainable fisheries. Indeed, many, if not most, coastal communities throughout the region derive their livelihoods from fishing. As such it is essential that MPA performance indices and any potential plan for new MPA-implementation include



Participants at the workshop came from the RAMPAO Secretariat's seven member countries and included individuals from diverse backgrounds and with a wide range of expertise.

socio-economic valuations;

- 4. There is a disparity in experience and capacity at the scale of the region. Participants therefore stressed the importance of exchange programmes between individual countries and/or MPAs;
- 5. In the development of its own information system, RAMPAO needs to capitalise on existing efforts and prioritise information collection; and
- 6. It is vital that MPAs contribute to conservation as well as reinforce cultural and social values.

Overall, the workshop was successful in achieving what it had set out to accomplish: (i) getting participants to agree on a list of performance indicators for a regional MPA network; and (ii) laying out clear terms of reference

Continued on page 3 - MPAs

he Sea Around Us project is a Fisheries Centre partnership with the Pew Charitable Trusts of Philadelphia, USA. The Trusts support nonprofit activities in the areas of culture, education, the environment, health and human services, public policy and religion. Based in Philadelphia, the Trusts make strategic investments to help organisations and citizens develop practical solutions to difficult problems. In 2000, with approximately \$4.8 billion in assets, the Trusts committed over \$235 million to 302 nonprofit organisations.

Page 3

MPAs - Continued from page 2

for the development of a RAMPAO information system. It is now critical for RAMPAO to feed on the momentum generated at the workshop and start implementing activities highlighted as crucial 'next steps'.

On a personal note, this trip was also of sentimental value to me

(the first author). I spent eight of my formative childhood years in Sénégal, but had not been back since 1989, when we had to leave the country due to violent civil unrest at the time. From the moment I stepped onto Sénégalese soil, it felt like I was coming home; and although Dakar has changed so much since my growing up there, I found myself still able to easily navigate

the streets and find my way back to my old house – a lovely feeling!

Footnotes

¹ Made possible with technical support provided by FIBA (the International Foundation of the Banc d'Arguin - Fondation Internationale du Banc d'Arguin) and financial assistance provided by the MAVA and Oak foundations.

Reef fisheries and reaching out

by Jennifer Jacquet

he Sea Around Us Project sent three members to the 11th International Coral Reefs Symposium (ICRS) in Ft. Lauderdale, Florida, where more than 3000 scientists gathered to discuss the science and fate of coral reefs. As one suspect, the news was grim - one scientist described corals as the living dead - the zombies of the sea.

In his keynote address, Daniel Pauly confirmed the same is also true for many species of coral reef fishes. Reef fishes conform to the general trend of fishing down marine food webs, due to human overpopulation and overly efficient fishing gears now used in many tropical nations. He also pointed out that while many social scientists studying fisheries might observe such trends, these observations often go unnoticed or unrecorded - to the disadvantage of managers seeking information for data-poor fisheries. Daniel highlighted some of the results of the Sea Around Us project's catch reconstructions in the tropics, some changes in fish distributions we can expect to see as a result of climate change, and the need for a faster pace in the creation of marine protected areas (MPAs). Following Daniel's address, Dirk

Zeller and I both presented on underreporting and catch reconstructions for a handful of tropical nations in the section on reef-associated fisheries.

Despite the number of presentations outlining the ill fate of coral reefs and their fisheries, the news at ICRS was not all bad, particularly if one takes a historical perspective of coral reef scientists. Given that this was my first coral reef conference, my baseline was that week. But scientists such as Daniel Pauly, Dirk Zeller, and Jeremy Jackson from the Scripps Institution of Oceanography, all of whom have attended ICRS for decades, noticed a real shift in values in the scientists. Not too long ago, the majority of ICRS attendees were disinclined toward political activism and media attention. This year, there was resounding support for policy action, media awareness for reefs, and to form something akin to the Union of Concerned Scientists (who unified for climate change) for coral reefs. After applauding the efforts of Greenpeace in her keynote address, one scientist added:"I'm ready! You can chain me to an Acropora."

The Sea Around Us project members also showed commitment to media outreach as part of a panel of speakers that also included Hawaiibased scientist Alan Friedlander. Hosted by the Communication Partnership for Science and the Sea (COMPASS), we were each given four minutes to convey our perspective on underreporting coral reef fisheries catches to the room full of journalists. Daniel described the phenomenon of studying coral reefs while ignoring fisheries as similar to studying a butterfly in a cornfield. The butterfly is indeed beautiful and of scientific importance but its future depends on its ecosystem, which has been severely altered. Likewise, in the case of coral reefs, reef-associated fisheries cannot be ignored. Dirk described results from several countries in the South Pacific, including the dramatic results in American Samoa, where reported catches for the FAO period were 1525 metric tonnes, but catch reconstructions resulted in an estimated annual catch of 25,380 tonnes. I reported my findings from reconstruction small-scale fisheries catches in Mozambique and Tanzania, where foreign fishing boats compete with local fishers for the same fish resources. I described the licensing of European shrimp

This year, there was resounding support for policy action [and] media awareness for reefs

Continued on page 4 - ICRS

ICRS - Continued from page 3

trawlers in East African waters as the antithesis of the Robin Hood parable. Rather than stealing from the rich to give to the poor, these agreements facilitate stealing seafood from the poor to give to the rich.

The fact that several news outlets. including Nature, The L.A. Times, The Guardian and The Telegraph reported on the problem of underreported fish catches is

testament to the importance of the findings. Equally important, the news coverage shows the value of good communications and the effectiveness of the COMPASS group in arranging the event.

Overall, our time in Ft. Lauderdale was well spent. The media outreach and talks were without incident, save one. I brought a life-size cardboard cutout of Senator Barack Obama with me and, just before I was to present, he was carted away. I ran after him and his apprehenders and was told that the conference organizers had received complaints about him being in the room. Although I made assurances that the cardboard Senator Obama would not say anything, the powers that be insisted he was folded up and stowed away. Coral reefs, scientists, concern for coral reefs or not, Florida is still Florida.

- Recent publications
 Alder, J.A., B. Campbell, V. Karpouzi, K. Kaschner and D. Pauly. 2008. Forage Fish: From Ecosystems to Markets. *Annual Review of* Environment and Resources 33:153-166.
- Arbarch-Leloup, F., N. Desroy, P. Le Mao, D. Pauly and O. Le Pape. 2008. Interactions between a natural food web, shellfish farming and exotic species: the case of the Bay of Mont Saint Michel (France). Estuarine, Coastal and Shelf Science 76: 111-120.
- Bhathal, B. and D. Pauly. 2008. 'Fishing down marine food webs' and spatial expansion of coastal fisheries in India, 1950-2000. Fisheries Research 91: 26-34.
- Cheung, W. W.L., C. Close, V. Lam, R. Watson and D. Pauly. 2008. Application of macroecological theory to predict effects of climate change on global fisheries potential. Marine Ecology Progress Series 365: 187-193.
- Freire, K., V. Christensen and D. Pauly. 2008. Description of the East Brazil Large Marine Ecosystem using a trophic model. Scientia Marina 72(2): 477-491.
- Gascuel, D., L. Morissette, M.L.D. Palomares and V. Christensen. 2008. Trophic flow kinetics in marine ecosystems: toward a theoretical approach to ecosystem functioning. Ecological Modelling 217:33-47.
- Guénette, S, V. Christensen and D. Pauly. 2008. Trophic modeling of the Peruvian upwelling ecosystem: towards reconciliation of multiple datasets. Progress in Oceanography (http://dx.doi.org/10.1016/j.pocean.2008.10.005).
- Halpern,B.S., Kappel,C.V., Micheli,F., Selkoe,K.A., D'Agrosa,C., Bruno,J., Casey,K., Ebert, C., Fox,HE., Fujita.R., Heinemann,D., Lenihan,H.S., Madin, E.M.P., Perry, M., Selig, E., Spalding, M., Steneck, R., Walbridge, S., Watson, R. 2008. Southern ocean not so pristine and Diminishing sea life. (Commentary Letters) Science 321: 1443-1444.
- Halpern, B.S., Walbridge, S., Selkoe, K.A., Kappel, C.V., Micheli, F., D'Agrosa, C., Bruno, J., Casey, K., Ebert, C., Fox, HE., Fujita. R., Heinemann, D., Lenihan, H.S., Madin, E.M.P., Perry, M., Selig, E., Spalding, M., Steneck, R., Watson, R. 2008. Mapping the impact of human threats to global marine ecosystems. Science 319: 948-952.
- Jacquet, J. and D. Pauly. 2008. Trade secrets: renaming and mislabeling of seafood. Marine Policy 32: 309-318.
- Jacquet, J. and D. Pauly. Funding Priorities: Big Barriers to Small-scale Fisheries. Conservation Biology 22(4): 832-835.
- Pauly, D. 2008. Agreeing with Daniel Bromley. Maritime Studies (MAST) 6(2): 27-28.
- Pauly, D. 2008. Global fisheries: a brief review. Journal of Biological Research-Thessaloniki 9: 3-9.
- Pauly, D. and K.I. Stergiou. 2008. Re-interpretation of 'influence weight' as a citation-based Index of New Knowledge (INK). Ethics in Science and Environmental Politics 8: 1-4.
- Pauly, D., W. Graham, S. Libralato, L. Morissette and M.L.D. Palomares. 2008. Jellyfish in ecosystems, online databases and ecosystem models. Hydrobiologia [Online publication].
- Selkoe, K.A., Kappel, C.V., Halpern, B.S., Micheli, F., D'Agrosa, C., Bruno, J., Casey, K., Ebert, C., Fox, HE., Fujita. R., Heinemann, D., Lenihan, H.S., Madin, E.M.P., Perry, M., Selig, E., Spalding, M., Steneck, R., Walbridge, S., Watson, R. 2008. Response to Comment on "A Global Map of Human Impact". (Technical Comment) Science 321: 1446c
- Srinivasan, U.T., Carey, S.P., Hallstein, E., Higgins, P.A.T., Kerr, A.C., Koteen, L.E., Smith, A.B., Watson, R., Harte, J. and Norgaard, R.B. 2008. The Distribution of Ecological Impacts from Human Activities over 1961-2000 and the Debt of Nations. Proceedings of the National Academy of Science 105: 1768-1773.
- Sumaila, U. R., L. Teh, R. Watson, P. Tyedmers and D. Pauly. 2008. Fuel price increase, subsidies, overcapacity, and resource sustainability. ICES Journal of Marine Science 65: 832-840.
- Wabnitz C.C.C., S. Andréfouët, D. Torres-Pulliza, F. Müller-Karger and P. Kramer. 2008. Regional-scale seagrass habitat mapping in the Wider Caribbean region using Landsat sensors: applications to conservation and ecology. Remote Sensing of Environment 112 (8): 3455-3467
- Walters, C., S.J.D. Martell, V. Christensen and B. Mahmoudi. 2008. An Ecosim model for exploring ecosystem management options for the Gulf of Mexico: implications of including multistanza life history models for policy predictions. Bulletin of Marine Science 83(1): 251-271.
- Walters, CJ, R. Hilborn, V. Christensen. 2008. Surplus production dynamics in declining and recovering fish populations. Canadian Journal of Fisheries and Aquatic Research 65:2536-2551.