

Australia Designates Massive, Interim Conservation Zone in Coral Sea

In May, the Australian government declared the area of the Coral Sea under its jurisdiction to be a “conservation zone”. Under Australian environmental law, the declaration provides interim protection while the area is assessed for possible inclusion in one or more Commonwealth marine reserves. The 972,000-km² Coral Sea Conservation Zone extends from the eastward boundary of the Great Barrier Reef Marine Park to the edge of the Australian EEZ, where it borders the waters of Papua New Guinea, the Solomon Islands, and Vanuatu.

The new conservation zone indicates the government’s interest in the area and applies new permit requirements to some existing commercial activities and scientific research. Environment Minister Peter Garrett said the goal of the conservation zone is to protect the Coral Sea environment from increasing pressures while a detailed assessment of the region is undertaken. “The conservation zone will allow for extensive consultation with local communities and stakeholders before any permanent protection measures are proposed,” said Garrett.

Area to be assessed in regional planning process

The Australian portion of the Coral Sea lies in the country’s East Marine Region. There, Australia is conducting marine bioregional planning as part of a national marine planning effort. [Australia’s first marine region to undergo such planning was the Southeast, whose process was described in the June 2004 and February 2006 issues of *MPA News*.] Assessment of potential permanent protection for the Coral Sea will be undertaken as part of the East regional process. In addition to consulting stakeholders, the assessment will analyze environmental, economic, and social values of the Coral Sea area, as well as existing and potential future uses. Marine bioregional planning is intended to provide the foundation for conservation and sustainable management of Australia’s marine environment, including the development of new MPA networks.

Pew Environment Group, an NGO, has led a campaign for all of Australia’s Coral Sea to be designated a permanent no-take area (“Huge No-Take Area Proposed for Australian Coral Sea”, *MPA News* 10:4). The Coral Sea campaign includes other NGOs, several Australian marine scientists, and former Australian Navy officials. Imogen Zethoven, campaign director for Pew, calls the conservation zone declaration “a very significant step forward.”

“Pew and other conservation groups are keen for a decision to be made about long-term protection of the Coral Sea in a no-take marine reserve by the end of next year [2010],” says Zethoven. “We are encouraged by Minister Garrett’s recognition of the area as unique and environmentally significant.”

“The Coral Sea is one of the last remaining places on Earth where populations of large ocean fish — sharks, tuna, and billfish — have not been drastically reduced,” says Nicola Temple of the Australian Marine Conservation Society (AMCS). “Consequently, AMCS welcomes the Australian Government’s announcement of the Coral Sea Conservation Zone, but it is only a first step in fully recognizing and permanently safeguarding this unique and iconic region.”

More details on the Coral Sea Conservation Zone are available at www.environment.gov.au/coasts/coral-sea.html. 

For more information:

Ilse Kiessling, Department of the Environment, Water, Heritage, and the Arts, Canberra, Australia. E-mail: Ilse.Kiessling@environment.gov.au

Imogen Zethoven, Pew Environment Group Australia, Sydney, Australia. E-mail: izethoven@pewtrusts.org

Nicola Temple, Australian Marine Conservation Society, Brisbane, Australia. E-mail: nicolatemple@amcs.org.au

Table of Contents

Australia Designates Massive, Interim Conservation Zone in Coral Sea	1
South Africa Announces Plan for Large Offshore MPA	2
Special Section: News from the International Marine Conservation Congress and Second International Marine Protected Areas Congress	3
Results of <i>MPA News</i> Poll: Appreciation Growing for EBM, and for MPAs’ Place in It.....	5
Notes & News	6

South Africa Announces Plan for Large Offshore MPA

In May, the South African government announced its intent to designate a large, multiple-use MPA around the Prince Edward Islands — two islands in the sub-Antarctic Indian Ocean located roughly 1770 km southeast of mainland South Africa. The Prince Edward Islands MPA would total 180,633 km² in area, covering one-third of South Africa's EEZ around the islands. The MPA would include a no-take Sanctuary Zone (4400 km²) as well as other zones with various use restrictions. Bottom-trawling and gillnetting would be banned throughout the site. The proposal is open for public comment until 6 July 2009.

MPA News spoke with Alan Boyd, a Deputy Director in South Africa's Department of Environmental Affairs and Tourism (DEAT), about the proposed MPA:

MPA News: The Prince Edward Islands have been subject to substantial poaching in the past. Considering the remoteness of the islands, how does the South African government anticipate enforcing the regulations of the proposed MPA?

Alan Boyd: In addition to our Navy, South Africa has a deep-sea environmental protection vessel (the *Sarah Baartman*), an offshore research vessel (the *Africana*),

and the Antarctic supply vessel *SA Agulhas*, which visits the region annually for approximately a month. In terms of the proposal, two South African fishing vessels will be permitted to fish in the area, with observers on board, and they are in the region for several months. Together, the government vessels and two permitted fishing vessels will constitute a significant surveillance presence in the region. But we will also rely on support from other nations in alerting us and, when appropriate, assisting us in enforcing regulations. The enhanced protection status will also allow greater penalties against transgressors. This MPA is a test case to pilot international cooperation,

including in the areas of monitoring, surveillance, compliance, and research.

MPA News: What are the specific conservation goals associated with the core Sanctuary Area, which would extend 12 nm from the coast of the islands?

Boyd: The conservation goals are to ensure a very high level of protection to the whole of this sub-Antarctic island ecosystem, and in particular Prince Edward Island which is still a pristine, uninhabited environment. [Editor's note: The other island in the archipelago is Marion Island, where there is a small research and weather station.] In the Sanctuary Area, the marine habitat, seafloor, and all species will be protected — invertebrates, fish, sea birds, and marine mammals — thus linking up with protection of the interdependent terrestrial environment and its species. The Sanctuary Area itself lies in the center of four larger restricted areas that will also provide a high degree of protection to different habitats.

MPA News: South Africa approved a National Protected Area Expansion Strategy (NPAES) this year. In what ways does the proposed MPA address issues raised in the Strategy?

Boyd: The NPAES has the goal of achieving cost-effective protected area expansion to sustain biodiversity and ecological processes, as well as resilience to climate change. The proposed MPA supports all these. The MPA is underpinned by a detailed science plan, and has been supported by a draft management and compliance plan. It will provide South Africa with our first MPA in the "offshore" environment. It also follows the Strategy in protecting a representative set of habitat types.

MPA News: What percentage of South African waters would be within MPAs if this MPA is designated?

Boyd: The percentage of South African waters in MPAs is currently measured in two ways in the NPAES — namely, by coastline length and by area. In addition there are the concepts of total protection of marine living resources, and partial protection where there is harvesting in certain areas and/or of certain species. In terms of coastline length, the percentage under total protection in South African MPAs would increase from 9% to 13%, whereas the area of South African waters within MPAs [with either total or partial protection] would increase from less than 1% to over 10%. 🌊

For more information:

Alan Boyd, Department of Environmental Affairs and Tourism, Cape Town, South Africa. E-mail: Ajboyd@deat.gov.za

Proposed MPA was five years in planning

Five years ago, South Africa's then-Minister of Environmental Affairs and Tourism, Marthinus van Schalkwyk, first announced governmental intent to declare an MPA in the Prince Edward Islands. Following that announcement, WWF South Africa worked closely with the Department of Environmental Affairs and Tourism to complete a planning and stakeholder consultation process. Plans developed include a legal analysis, spatial conservation plan, and draft management plan. A report containing the plans is available at www.wwf.org.za/?section=Publication_LivingWaters.

When the South African government released its detailed proposal for the MPA last month, Deon Nel, head of the WWF Sanlam Living Waters Partnership, called it an historic day for marine conservation. "All of South Africa's current MPAs are located very close inshore," said Nel. "The commitment of the first large offshore MPA moves South Africa into a new era of marine conservation."

For more information: Deon Nel, WWF South Africa, Stellenbosch, South Africa. E-mail: dnel@wwf.org.za

Special Section News from the International Marine Conservation Congress and Second International Marine Protected Areas Congress

More than 1200 people from over 70 countries gathered in May in Washington, DC, at the International Marine Conservation Congress (IMCC) and Second International Marine Protected Areas Congress (IMPAC2). The joint meeting provided a broad range of news and viewpoints from researchers, managers, government officials, NGOs, and commercial interests. Travel grants provided by the conference organizers supported 24 individuals from 22 countries.

MPA News attended the joint meeting and will feature selected findings in this and next month's edition:

What mollusks can tell us about larval export from marine reserves

The concept of larval export is central to the role of no-take marine reserves in fisheries management. As the reasoning goes, fish that are protected inside reserves live to maturity and reproduce. At least some of their young cross the reserve boundary into unprotected waters, mature, and are eventually caught by fishers. However, the export of larvae has historically been difficult to demonstrate, particularly as it impacts fisheries yield or catch-per-unit-effort in nearby fisheries.

"The main reason larval export is so difficult to detect is because the benefits are very diffuse and therefore subtle, while natural variability of recruitment is very high in both time and space," says Robin Pelc, a Ph.D. candidate at the University of California at Santa Barbara. "So, for example, export may result in an increase in recruitment of about 10-15% across several hundred kilometers compared to recruitment before reserves were put into place. In total this is a huge benefit. But it is very difficult to detect relative to natural variability, especially if there are no good data from before reserve establishment, which is often the case."

At IMCC/IMPAC2, Pelc presented research that described a new way of looking at the problem, based on her analysis of several larval export studies. (Her co-authors were Steve Gaines, Robert Warner, and Claire Paris.) Pelc believes larval export occurs regularly, but can reasonably be detected only for species with short-distance larval dispersal, like mollusk species.

"We found that all the existing empirical evidence for larval export — mainly recruitment studies that found increases in recruitment of harvested species near reserve boundaries after the onset of protection, or higher recruitment near reserve boundaries compared to more distant sites — focused on mollusks," says Pelc. "We believe this was in part because of the shorter dispersal scale of mollusks (which on average have a planktonic

larval duration, or PLD, in the range of 10-20 days), compared to fish and crustaceans (each with average PLDs on the scale of about 30-40 days). Larval export for these longer-distance dispersers may just be too diffuse to detect, even though it is likely occurring and in fact of greater magnitude and more widespread than export in the shorter-distance dispersers. This is troubling because it suggests that the types of field studies we do to detect larval export just are not capable of detecting export for species like fish and crustaceans with long PLDs — species where the effect is probably the most important in a commercial sense."

In short, says Pelc, the longer the dispersal distance is, the greater the benefits but the harder they are to detect. She says study designs that sample across both a time series (before and after reserve establishment) and a spatial gradient are more likely to be able to detect subtle changes in recruitment. "In addition," she says, "model-based approaches that account for regional oceanography and natural variability in recruitment can be used to make more sophisticated predictions of what the signal of export should look like, and thereby be able to detect it. And as genetic techniques improve, there is also promise for using these techniques in combination with larval sampling and recruitment studies to determine where larvae produced in the reserves are going."

Until then, she says, researchers must rely on changes in fisheries yield or catch-per-unit-effort when reserves are designated to infer whether larval export is occurring. She cautions, though, that such studies have trouble differentiating effects of larval export from the effects of changes in management policies and fishing practices that may occur at the same time as reserve protection.

For more information: Robin Pelc, University of California, Santa Barbara, U.S. E-mail: robin.pelc@gmail.com

Older and larger reserves have more large fish: implications for network design

In a presentation of research he published last year in the journal *Ecology Letters*, Joachim Claudet of the University of Salento (Italy) stated that no-take marine reserves that are older and larger are more effective in protecting commercially targeted fish stocks. Specifically, the older and larger a marine reserve is, the greater the density of commercial fishes inside it are (compared to outside the reserve), and the greater the density of larger fish, too. The study analyzed 58 datasets from 19 European marine reserves.

continued on next page

World Ocean Congress calls for more MPAs

The IMCC/IMPAC2 was not the only major ocean-related meeting in May. At the World Ocean Conference in Manado, Indonesia, representatives of 75 nations called for more and better-managed MPAs worldwide among other measures to manage the oceans more effectively. In their Manado Declaration, ministers resolved to "further establish and effectively manage marine protected areas, including representative resilient networks, [...] recognizing the importance of their contribution to ecosystem goods and services, and to contribute to the effort to conserve biodiversity, sustainable livelihoods and to adapt to climate change."

Claudet says the reserve-size dependency of the response to protection has implications for the design of MPA networks. Reserve design theory in the context of fisheries management has often emphasized several smaller reserves rather than fewer large ones, to increase edge effects for fishermen. However, Claudet's findings suggest that creating several smaller reserves may actually be counterproductive to fisheries in that it limits the density of breeding populations within those reserves.

"Large MPAs are potentially more effective for fisheries management since they may have higher densities of breeding populations compared to smaller ones," says Claudet. "Moreover, if a network of several smaller reserves is established and if most fish spilling outside the reserves are fished, you lose connection between the reserves (at least at the adult level) and the several reserves are not part of a network anymore."

However, he adds, socio-economic issues need to be considered in network design, too, and may counterbalance the advantages of large MPAs. "Large no-take zones may increase the displacement costs for fishermen, depending on the MPA location and the distance the fishermen must travel," says Claudet. "Enforcement costs and time at sea are also more expensive with larger MPAs than for smaller MPAs. And, finally, very large MPAs in coastal areas with high human densities may increase conflicts between different users and stakeholders due to potentially higher concentration of users outside the MPA, due to displacement. If the MPA is not well-enforced or if it cannot be accepted by the local communities due to the considerations stated above, the MPA will not be effective, whatever its objectives are."

For more information: Joachim Claudet, Laboratory of Zoology and Marine Biology, DiSTeBA, University of Salento, CoNISMa, Italy. E-mail: joachim.claudet@gmail.com

Web-based campaign launched for MPAs in U.K.

A new Web-based campaign to engage the public in planning MPAs in the U.K. — called *Your Seas Your Voice* — was announced at IMCC/IMPAC2. The Marine Conservation Society, a U.K. NGO, devised the campaign to compile data for informing regional MPA planning efforts, as well as to raise public awareness of the marine environment and the problems facing it.

The campaign website is www.yourseasyourvoice.com. Visitors are invited to tell the website about an ocean place they want to see protected. Through a six-step process, the visitor indicates that place on a map, describes why it is important (e.g., "Spectacular scenery", "It is isolated and secret"), and suggests which activities if any should be prohibited there. The questionnaire also asks the visitor how he or she primarily uses the ocean, such as for recreation, commercial fishing, or industry.

The U.K. Marine and Coastal Access Bill, which sets out plans for a new network of marine conservation zones around Britain's coast (*MPA News* 9:10), is currently under consideration by Parliament.

"We tested *Your Seas Your Voice* in Autumn 2008 by building a very simple version of the current website," says Jean-Luc Solandt, Biodiversity Policy Officer for the Marine Conservation Society. "We learned that the information from the questionnaire was useful at identifying specific areas of U.K. coasts that were of importance to people who had a wildlife conservation interest. The main challenge now is to promote and engage the wider general public in completing the questionnaire — those who are not marine conservation specialists. Our aim is to make them feel they can and should enter the information. If we can engage a wider section of society, the stakeholder-led MPA development projects (such as Finding Sanctuary in Southwest England — www.finding-sanctuary.org) should see that there is societal support for MPAs that extends beyond the usual range of stakeholder groups." Solandt says he is interested to hear from *MPA News* readers on the *Your Seas Your Voice* approach and website, and the value of its results.

For more information: Jean-Luc Solandt, Marine Conservation Society, Ross on Wye, U.K. E-mail: jean-luc.solandt@mcsuk.org

Case study: Tobago Cays Marine Park and stakeholder involvement

In a presentation at IMCC/IMPAC2 on Caribbean MPA governance, Patrick McConney of the University of the West Indies (Barbados) offered the case of Tobago Cays Marine Park. McConney described an unsuccessful attempt by the government of St. Vincent & the Grenadines to privatize the park in 2003. Stakeholder involvement played a role both in opposing that plan and in the park's effective rebirth since then.


Consisting of five small, uninhabited islands and a horseshoe-shaped reef, the Tobago Cays are the Grenadines' most popular anchorage for yachts, charter boats, and cruise lines. The government of St. Vincent & the Grenadines purchased the islands from a family in 1999 and began managing them as the Tobago Cays Marine Park. However, following years of lackluster management with meager budgets and low enforcement presence, the government entertained an offer from a private resort developer to take over management of the park. The plan involved building several structures on the islands. In addition, the private company would retain a portion of the park's user fee revenue as profit.

Concerned by the idea of losing the islands to a private foreign company, citizens groups protested the plan and a new "Friends of the Tobago Cays" organization was formed to oppose privatization. Eventually, following

months of political pressure, the privatization plan was dropped.

This essentially allowed TCMP a new beginning, says McConney. "TCMP was not impressive in assessments of co-management potential and MPA management effectiveness done in 2004 and 2005," says McConney. "However it was selected as a demonstration site for an initiative called the Protected Areas and Associated Livelihoods Project (OPAAL), operated by the Environment and Sustainable Development Unit of the Organisation of Eastern Caribbean States (OECS-ESDU — www.oecs.org/esdu). In 2006, the TCMP was officially 're-launched'. It has received OPAAL and government support that has included policy-, livelihood-, and capacity-development studies; a management plan; infrastructure such as a patrol boat; additional staff; new user fees; and other revenue-generation arrangements. It has had a make-over."

Although stakeholder involvement in current TCMP management is largely consultative rather than collaborative, says McConney, it is slowly approaching co-management. "Small MPAs such as the TCMP, which

are used mainly for nautical tourism, can perhaps be run by a government office that has adequate capacity since it is primarily service-oriented," he says. "However, the stakeholders still play an important role in informally monitoring and evaluating the state authority's performance. A key point is to ensure that the informal and formal criteria for evaluating management effectiveness do not diverge as may happen when stakeholders are not closely involved. To address this, OPAAL places emphasis on communication for public awareness." 

For more information: Patrick McConney, University of the West Indies, Cave Hill, Barbados. E-mail: patrick.mcconney@cavehill.uwi.edu

Tobago Cays Marine Park website: www.tobagocays.com

Next month: More news from IMCC/IMPAC2

In next month's *MPA News*, we will report on more findings from IMCC/IMPAC2, including a feature on lessons learned from MPA networking efforts worldwide.

Results of *MPA News* Poll: Appreciation Growing for EBM, and for MPAs' Place in It

The April 2009 edition of *MPA News* featured an article on the role of MPAs in ecosystem-based management (EBM). We invited readers to participate in an online poll on the subject, with the goal of measuring attitudes on the relationship between these management measures. *MPA News* conducted an identical poll in 2006 (*MPA News* 8:6).

Several dozen readers from around the world participated in the poll — thank you. A summary of your answers is below. Most noteworthy is an apparent shift in appreciation for the importance of ecosystem-based management to the success of MPAs. Whereas three years ago results were evenly mixed, this year's respondents strongly stated that EBM of surrounding water and land was necessary for MPAs to achieve their conservation goals.

The poll results are below, with a comparison to the 2006 findings:

Question 1: Can an MPA be successful if there is no ecosystem-based management of adjacent water and land outside the MPA?

2006: Yes 52% No 48% Don't know/Not sure 0%
2009: Yes 37% No 59% Don't know/Not sure 4%

Question 2: Can ecosystem-based management be successful if MPAs are not used as a component in that management system?

2006: Yes 46% No 48% Don't know/Not sure 6%
2009: Yes 32% No 50% Don't know/Not sure 18%

Question 3: If you can, please give examples of places where you think ecosystem-based management is being implemented effectively.

Answer (2009): The most common answer in this year's poll, shared by 59% of respondents, was either no response at all or a variation on "I don't know any examples." The second-most common answer was the Great Barrier Reef (9%). Other places mentioned by multiple respondents included New Zealand, Fiji, California's MPA system, and the Florida Keys National Marine Sanctuary.

Three respondents were selected at random to receive an *MPA News* canvas tote bag. 

Editor-in-Chief

John B. Davis

Project Assistant

Anna Varney

Editorial Board**Chair** - David Fluharty, Ph.D.
U.W. School of Marine Affairs

Patrick Christie, Ph.D.

U.W. School of Marine Affairs

Michael Murray

Channel Islands National
Marine Sanctuary

Direct correspondence to:

MPA News, School of Marine
Affairs, University of

Washington, 3707 Brooklyn

Ave. NE, Seattle, WA 98105,

USA. Tel: +1 425 788 8185;

Fax: +1 206 543 1417; E-mail:

mpanews@u.washington.edu

MPA News is published monthly by Marine Affairs Research and Education (MARE), a 501(c)(3) not-for-profit corporation, in association with the School of Marine Affairs at the University of Washington.

Financial support for *MPA News* is provided in part by a grant from the David and Lucile Packard Foundation.

All content has been written by the *MPA News* editorial staff unless otherwise attributed. The views expressed herein are those of the author(s) and should not be interpreted as representing the opinions or policies of the Packard Foundation or other funders of *MPA News*.

Subscriptions to MPA News are free.

To subscribe, send an e-mail to mpanews@u.washington.edu. Type "subscribe" on the subject line, and include your name, mailing address, and daytime phone number in the text of the message. Also, please note whether you would like your subscription to be delivered electronically or in paper form. Thank you.

Notes & News

Large areas on Mid-Atlantic Ridge closed to bottom fisheries

In April the North-East Atlantic Fisheries Commission (NEAFC) closed several areas along the Mid-Atlantic Ridge to bottom fisheries. The new closures total 330,000 km² and are intended to protect deep-sea diversity from fishing gear that contacts the seafloor. The protected areas are all on the high seas, outside any national jurisdiction. Contracting parties to the NEAFC include Denmark, the E.U., Iceland, Norway, and the Russian Federation. A press release on the closures, including maps and a history of other NEAFC conservation measures, is available at www.neafc.org/system/files/vmes_press_rel_april2009.pdf.

St. Eustatius Marine Park uses technology to track illegal anchoring

In recent months two commercial vessels have been boarded and fined by representatives of St. Eustatius Marine Park in the Caribbean for anchoring outside the park's designated anchoring zone. The offending vessels — a cargo vessel and a tanker — damaged coral reefs in the marine park by dragging their anchors. The violations were determined through the park's use of the Automatic Identification System, or AIS — described in the September 2008 issue of *MPA News* ("MPA Tip: Tracking Ships to Avoid Damage to Sensitive Areas", *MPA News* 10:3). Since December 2004, AIS has been required by the International Maritime Organization to be installed on virtually all large commercial ships worldwide. The technology automatically transmits a vessel's name, position, and course by VHF signal. St. Eustatius Marine Park tracks these signals with an antenna and base station, both on land. The marine park is in St. Eustatius, one of the islands that make up the Netherlands Antilles.

For more information: Duncan MacRae, Director, Coastal Zone Management (consultancy), U.K. E-mail: solutions@cozm.co.uk

Report available on locally managed marine areas in South Pacific

A new report analyzes locally managed marine areas (LMMAs) in the South Pacific, including their contributions to integrated island management. Published by the Secretariat of the Pacific Regional Environment Programme (SPREP) and WWF, the report provides a regional inventory of community-run management areas and describes how they can help address the challenges South Pacific nations face, such as climate change and rapid population growth. The

authors offer several recommendations for LMMA management, including that traditional tenure and governance systems be respected and that integrated island management serve as the primary goal rather than simply designating protected areas. The geographic area covered by the report includes the countries or territories of Papua New Guinea, Fiji, Solomon Islands, New Caledonia, Vanuatu, French Polynesia, Samoa, Tonga, American Samoa, Wallis and Futuna, Cook Islands, Tuvalu, Niue, and Tokelau. The 148-page report *Status And Potential of Locally-Managed Marine Areas in the South Pacific: Meeting Nature Conservation and Sustainable Livelihood Targets through Widespread Implementation of LMMAs* is available at www.sprep.org/att/publication/000646_LMMA_report.pdf.

Report analyzes how much U.S. coral habitat is protected

The NOAA Coral Reef Conservation Program has released a report that provides digital boundaries for MPA sites in the five U.S. coral territories, the state of Hawaii, and the state of Florida, and assesses how much coral reef habitat is protected within those MPAs. The analysis shows that the percentage of coral reef ecosystem resources in MPAs and no-take areas varies substantially by location. Within the five U.S. coral territories, the U.S. Virgin Islands have the largest percentage of their coral reef resources in MPAs in general (64%). American Samoa has protected the largest percentage of any territory in no-take status (15%). The report *Coral Reef Habitat Assessment for U.S. Marine Protected Areas* is available at www.coris.noaa.gov/activities/habitat_assessment.

MPA Fund launched in U.S.

In the U.S. the National Fish and Wildlife Foundation (NFWF), in partnership with the National Marine Protected Areas Center, has established a new fund to assist in the development and implementation of a national system of MPAs. Called the National Marine Protected Area Fund, it will comprise separate accounts established by government agencies, private foundations, and/or corporations. Grants from the fund will be used to advance the conservation and management of ecosystems and ecological processes, renewable living resources, and cultural resources. The goal is to grow this fund to US \$2 million annually in grant awards, subject to the federal appropriations process.

For more information: Anthony Chatwin, NFWF, Washington, DC, U.S. E-mail: anthony.chatwin@nfwf.org