Presentation script for Tim Adams

Discussion Panel B

Vulnerable marine ecosystems in the Pacific islands region

Introduction

Co-chairs: Because I am a last-minute stand-in for a subject-matter *specialist*, I would warn the meeting not to expect an enormously charismatic presentation, or an in-depth analysis of a particular vulnerable marine ecosystem. What I will simply try to do here, as a *generalist*, is describe a range of key marine ecosystem issues and their importance to the Pacific Islands region.

Mr Co-chair – the islands of the Pacific Community have a strong stake in the topic of vulnerable marine ecosystems. Because of their strong dependency on the ocean that surrounds them, island economies are themselves vulnerable. Maintaining the intrinsic value of certain marine ecosystems is not just an intellectual or moral issue, but a matter of immediate economic survival and food security for many islands in the Pacific Community.

And it is not just a matter of concern for governments and NGOs. Most islands have a long tradition of customary marine tenure that provides ownership or use-rights to individuals and communities. The management of coastal ecosystems has a strong personal aspect in the Pacific.

I will not be suggesting any radical new ideas here, but will bring a few issues and events to your attention:- suggestions on the most vulnerable Pacific Island marine ecosystems, key threats and key management approaches. And the Pacific Islands look forward to hearing the views of others, over the course of this discussion, on how best the international community might cooperate with them in addressing the issues of most concern.

Now, the annotated provisional agenda of this meeting referred to the GESAMP report – "A sea of troubles" – and suggested that the biggest problems were closest to shore. It coined a useful aphorism: that "the crises are deepest where the waters are shallow". We fully agree with this, and do not propose to differ. However, this prioritisation was made in terms of present-day *impact.* When we assess problems of vulnerability, we also have to take into account the fragility of ecosystems to potential *future* stresses. In this respect, we feel it is important that high seas marine ecosystems should not be left out of the discussions of this panel/ are pleased to see that high seas ecosystems are being taken into account in the discussions of this panel. Although *land-based* impacts are less pronounced on the high seas, the ability to control exploitative impacts more than 200 nautical miles from the nearest shore is currently inadequate, both in terms of the governance machinery and the potential to ensure compliance.

I will be using the phrase "Pacific Community" occasionally during the course of this presentation. I should explain here that the Pacific Community is the broad non-political collective term that we use for the islands of the western and central Pacific,

including the islands administered by France, New Zealand, UK and USA, as well as the Pacific Islands Forum countries. The "Pacific Community" is thus a useful collective term that covers the entire work area of all the members of the Council of Regional Organisations in the Pacific (CROP).

Vulnerable marine ecosystems

Pacific Islands are worried about the vulnerability of several of their key marine ecosystems, particularly the following:

Coral reefs are a prime concern, particularly as scientists have so far plumbed little of the depths of their complexity, thus making scientifically-based management difficult, but I won't dwell on them here, since these are covered by another speaker.

I would however note that:

- The Pacific Community region is devoting considerable new resources to evaluating the limits of sustainability for exploitation of Pacific coral reef ecosystems, developing practical management guidelines, and, for the first time, evaluating nearshore fisheries impacts in a *systematic* way across the region. SPC has recently set up a regional Reef Fisheries Observatory, with assistance particularly from the EU, for this purpose.
- Many Pacific Island countries are also putting a new focus onto coral reef fishery governance systems. There has been an overall strengthening of traditional pride in tenure and stewardship, and increasing recognition by governments of traditional and community systems, despite the loss of some of the traditional knowledge and institutions that have evolved to sustain these systems since the initial colonisation of each Pacific island.
- New hybrid and co-management systems are emerging, and whilst Pacific Island coral reef fisheries can in no way be considered safe, the ground for sustainable management and conservation is considerably more fertile than it was 20 years ago. Local food security fisheries are in general under less threat than reef export fisheries. Traditional systems are not always robust in the face of external trade and the cash economy, and Pacific Islands have a fight on their hands to restrict the more fragile export fisheries to sustainable levels. The live reef food fish trade is built on a particularly limited resource base, where spawning aggregations are particularly vulnerable.
- Atoll lagoons are of great economic importance in eastern Polynesia, where they support a major black pearl industry. I mention this here because this highly significant economic linkage with reefs is often overlooked in regional analyses. These lagoon culture systems are prone to water quality and disease problems if the ecosystem is not rigorously managed, and this is one area where traditional wisdom has limited applicability.
- One final key point concerning coral reefs is the worry that many islands feel about the possible effects of global warming on reef-building corals, and the implications for coastal protection, particularly on the lower-lying atolls. This, of course, is not a worry that is restricted to the Pacific.

Seagrass ecosystems, although they are comparatively small in area in the Pacific Islands, are the critical habitat for several economically important as well as endangered species. You are all aware of the fragility of dugong marine mammal

populations in Melanesia, and sea-grass is important grazing for the green sea-turtle. But seagrass is also the key nursery habitat for all of the highest-value species of sea-cucumber – very important to the rural economies of many islands. Seagrass beds, of course, are themselves very vulnerable to human impacts – not just physical damage, but eutrophication, and invasive species.

Mangroves are not present across all of the Pacific Islands region, but are important in the west. The presence of mangroves permits the survival of whole communities of organisms, and thus has a major knock-on effect in the maintenance of western Pacific biodiversity. There have been great social strides made in recent years to recognise that mangroves are not just smelly swamps occupying prime areas of seafront, but are essential for maintaining the current shoreline and balance of marine life in many countries.

Fiji is a good example of a country where progress is being made, both in the enactment of a mangrove management plan in the 1980s that defines shoreline development zones in order to preserve the integrity of the mangrove ecosystem, and where several local NGOs have been successful in encouraging replanting and rehabilitation schemes. Traditional use rights to mangroves have been enshrined in the Fiji legal system for many decades, and have provided a fundamental basis for cultivating an attitude of community stewardship.

We also recognise a **large pelagic ecosystem** coincident with the western tropical Pacific oceanographic "warm pool", and the sustainable management of this ecosystem is of critical importance to the economic future of the Pacific Islands Forum States, since it supports fisheries which now supply a majority of the world's tuna. Most of this ecosystem lies within the EEZs of the Pacific Community, and access for tuna fishing has been managed for the past 25 years by Pacific Islands acting collectively through the Forum Fisheries Agency.

Although the Pacific Islands region has been protected from the worst excesses of industrial fisheries by distance, and economics, and because the region emerged late on the distant water fishing scene, we also feel that the common interests of Pacific Island coastal states have combined to produce a comparatively effective regional management regime for these tuna fisheries: one that has so far kept the fishery sustainable. We hope that the system will remain reactive enough to avert possible future problems, as it has reacted in the past to such issues as the apparent impact on juvenile albacore tuna by the driftnet fishery. One or two such issues are currently active on the regional "fisheries radar" system (the monitoring and assessment carried out by the SPC Oceanic Fisheries Programme and others).

One of these concerns the current lack of control over all of the **high seas** components of Pacific Islands regional tuna fisheries. The new Western and Central Pacific tuna convention is expected to go a long way towards providing a mechanism for regulating tuna fishing and bycatch on the high seas in the region.

Reasons for vulnerability

Mr Co-chair: I have briefly run through some of the marine ecosystems of most concern to the Pacific Community in terms of their vulnerability, or in their

contribution to *our* vulnerability as inhabitants of those islands. The vulnerabilities of these particular marine ecosystems can be due to proximity of large concentrations of humans, as is the case with nearshore marine ecosystems (coral reefs, mangroves and seagrasses), or to remoteness and isolation from effective governance by humans, as is the case with the high seas.

And they can be vulnerable because of their direct economic importance. The Western and Central Pacific large pelagic ecosystem is also critical to Pacific Islands because of our economic vulnerability if it is damaged, whilst the atoll lagoon ecosystems that support black pearl farming are critical to the economies of eastern Polynesia. The tuna fisheries of the large pelagic ecosystem are of particular relevance at the international level because they involve not only migratory species in populations which cover the jurisdiction of more than one country, but also because they involve vessels fishing outside the waters of their flag states.

Mr Co-chair. To conclude, I will briefly address the "specific aspects for discussion and elaboration" that were suggested in the provisional annotated agenda:

- the **key threats** to the protection of these ecosystems are, as pointed out just now, people, and international cooperation is usually warranted where people have effects outside their area of national allegiance or responsibility. **Global and regional coordination**, is particularly warranted to assist in the protection of ecosystems that are threatened by trade, or which fall outside, or across, the jurisdiction of several states. In the Pacific Community, the only transboundary marine ecosystem is really the pelagic tuna fishery ecosystem, and international and regional cooperation is already well-developed here. But several ecosystems, particularly coral reefs, are also impacted by international trade, where regional cooperation and solidarity over minimum standards and sharing best practises can be valuable. The main threats to mangrove and seagrass ecosystems are more local. However, international tourism can also be considered a transboundary issue, and in the Pacific Islands almost all tourism is dependent on marine ecosystems, if only beaches.

- **Do we have adequate information and knowledge**? After having worked with island marine resource management information systems for the past 20 years, I would venture the opinion that *yes*, Pacific Island people *do* have adequate information and knowledge to take effective management measures in many cases. The main requirement is to have agreed governance mechanisms in place that include tight negative feedback loops – in other words, monitoring of key ecosystem or resource characteristics that can quickly trigger action that is effective. Many Pacific Island marine tenure systems exhibit these characteristics, and those that remain have certainly withstood the test of time, but it is not always easy to transfer such principles to the governmental and international levels, which are so much farther removed from the problems, and which cannot effectively use the kind of oral information that activates traditional governance systems (although I notice that they certainly try).

  The precautionary approach itself is also a mechanism to address cases where potential problems are suspected, based on other experience, but where unequivocal information is inadequate. The words "precautionary approach" are

sensitive in my own field of fisheries management, but if the precautionary approach is applied in a realistic manner as a management tool, rather than as an excuse for prohibition, and with the principle of "reasonable doubt" firmly in mind, it is reasonable to put the onus on the potential exploiter to improve the information and monitoring necessary for managing their activities.

We will never, of course, have sufficient information and knowledge to completely understand these extremely complex ecosystems, but with effective governance mechanisms, with effective linkages to realistic monitoring mechanisms, we probably have enough knowledge to take effective action on many issues.

That having been said, it is important to have management frameworks that are not completely prescriptive – not set in legal stone – but where actions can be modified as basic knowledge improves. We will never be entirely sure that we are monitoring the most critical indicators, or that we have taken all ecosystem interactions into account, and I would point out that some countries are now finding that it may be difficult to apply the ecosystem approach under existing fisheries management legislation without major re-tuning.

Another point about information is that many Pacific small island countries lack the capacity to sustain much marine ecosystem monitoring at the government level, and must rely on international and regional organisations to supply or pool scientific expertise for occasional major surveys, and on communities and NGOs to monitor locally-important events and indicators. In many cases, there is no formal mechanism to link all of these processes together, and this is one of the reasons that the Pacific Islands Forum region has agreed the basic framework of a regional ocean policy, as means of fostering and harmonising these linkages.

- **What are the key management approaches and tools to protect vulnerable marine ecosystems?** These vary hugely by ecosystem, and the marine protected area is not a complete panacea for every problem, despite its great value in achieving conservation goals. For the organisms targeted by the live reef food fish trade, the protection of spawning aggregations from excessive exploitation at certain points in time is critical. For the protection of mangroves, agreement on coastal development planning and effective zoning can be of primary benefit. The control of effluent is likely to be of great importance for the maintenance of sea-grasses. For the protection of sea-turtles, the survival of hatchlings from nesting beaches is of huge importance, whilst for the protection of tuna fisheries, regional agreement on the limits of exploitation is critical. For severely impacted vulnerable species, like the giant turban shell at one end of the scale, and many of the great whales at the other, long-term time or area closures are likely to most effective.

  These are simply some of the more workable of the many different management approaches that have been applied within the Pacific Islands region for different ecosystems or exploited resources. Sharing these lessons between countries and between regions is an often thankless task that is difficult to sustain budgetarily over the long-term, but is still one of the most effective ways forward to improving the management of vulnerable ecosystems, and the natural resources

that are supported by them. It is also a key linkage role for national, regional and international institutions.

Integrated social and ecosystem-based management of various natural-resource exploitation systems is of course the current goal, but nobody is yet agreed on exactly how this should work. I would venture to suggest that action based on existing management measures, whilst taking as many other components of society and the ecosystem into account as possible, is preferable to waiting for fully integrated systems to be perfected.

- **What international cooperation is required?** The islands of the Pacific Community are proud of their record of inter-cooperation.

  Within the UN family of organisations they are classed as part of the Asia-Pacific region and, since the land-area of Asia is so much larger than the Pacific Islands, and the huge human population of Asia requires a great deal of the attention of the international community, the Pacific Islands often have a different set of priorities and have had to develop their own subregional mechanisms to collectively address them. Marine issues are an extreme case of subregional specialisation.

  Despite their small land-area, the Pacific Community covers a significant part of the earth's sea surface, and small-island developing states have pooled some of their limited human, financial and aid-resources in order to more effectively exercise responsible stewardship over this area. The Pacific Islands make use of several regional organisations in addition to the UN family of organisations – these include the Pacific Islands Forum Secretariat, the Secretariat of the Pacific Community, the South Pacific Regional Environment Programme, the South Pacific Forum Fisheries Agency, the South Pacific Applied Geoscience Commission, and the University of the South Pacific. All of these organisations cooperate within a coordinative mechanism called the Council of Regional Organisations in the Pacific (CROP), which has a Marine Sector Working Group to promote harmonised action on ocean issues. This group also invites participation in discussion by regional NGOs and international organisations with regionally-active marine programmes.

I previously mentioned the Pacific Islands Regional Ocean Policy, and this brief statement of basic principles, derived from an in-depth consideration of ways of promoting the further implementation of the Law of the Sea in the region, is the framework within which the marine programmes of these CROP organisations operate.

I may be able to provide a little more detail about this policy at the lunchtime side-event on Thursday. I would also point out that a conference of Pacific Community island representatives and other experts will take place next February, in Fiji . This is to take stock of the current state of Pacific Ocean knowledge, and decide future priority actions under the regional ocean policy, particularly cross-sectoral coordinative action on the ground (or rather in the water). We expect this particular conference, or Forum, to be of great assistance in helping potential capacity-builders to decide where their assistance is most effectively directed, as well as developing an implementing framework for the regional ocean policy.

This whole exercise is also part of a type II partnership initiative emerging from the Johannesburg summit on sustainable development, and through this the Pacific Islands region will be seeking to engage partners and share lessons learned – some of which may be applicable to other regions.