



# National Oceanography Centre, Southampton

UNIVERSITY OF SOUTHAMPTON AND  
NATURAL ENVIRONMENT RESEARCH COUNCIL

*Response from the National Oceanography Centre, European Way, Southampton SO14 3ZH to the Foreign and Commonwealth Office's Consultation on the Overseas Territories Strategy, closing date 31<sup>st</sup> December 2011.*

Dear Sirs, the National Oceanography Centre ( [www.noc.ac.uk](http://www.noc.ac.uk) ), the UK's national focus for ocean science, welcomes the opportunity to provide input to this consultation. NOC works closely with the FCO on issues relating to access to the world's oceans for the conduct of marine scientific research, and has for some years provided the FCO with scientific advice concerning seabed territorial jurisdictions and more recently to questions related to the British Indian Ocean Territory Marine Protected Area.

We note that the UK's overseas territories contain very large areas of marine space, ranging from shallow coastal areas to deep tropical oceans. In many instances these are located in areas of outstanding biodiversity value, as demonstrated by the designation of the BIOT Marine Protected Area.

**For the purposes of this consultation we will only concern ourselves with the marine/maritime aspects of the Overseas Territories.**

## FOR CONSULTATION ON IMPLEMENTING THE OVERSEAS TERRITORIES STRATEGY

### 1. Challenges

- *What are the main challenges facing your Territory/the Territories?*

1.1 Climate change (including sea level rise), ocean acidification, geohazards, and the impacts of exploitation of marine living and non-living resources either by the local population, or in some instances by foreign-owned ships or organisations. The other major category of hazard is geopolitical, resulting from disputes over sovereignty or access to resources. The following paragraphs expand on each of these areas.

1.2 Climate Change – challenges include rising temperature and sea levels, changes in rainfall quantity or distribution, changes in soil moisture content, changes in the kind of crops that can be planted, changes in diseases and parasites, and a major risk from population displacement out of – or in to – the Territory from neighbours who are also suffering from climate related problems. It is important to note that change may not necessarily have a negative impact on a given Territory, there will be locations where net changes are positive, perhaps improving conditions for agriculture and fisheries. Climate change may be mitigated to some extent by suitable adaptation by the local population, and good forward

planning based on sound scientific evidence.

Sea level rise is underway as a consequence of thermal expansion of sea water, and loss of land-based ice caps. Relative sea level rise can also occur because of subsidence of land due to natural processes, or subsidence arising from human actions such as extraction of fresh water from aquifers. The rate of change is not uniform across the planet due to a number of local physical factors, so not all locations will see significant changes and some may see slight falls, but in general sea level rise has two impacts – a higher base-line from which extreme events such as storm surges may be able to inundate low-lying land, and long-term gradual change in sea level over many centuries which will eventually overwhelm low-lying land, but which happen slowly enough to enable humans and local ecosystems to adapt. Secondary effects include saline infiltration of aquifers, loss of fresh water supply and damage to infrastructure such as ports and harbours. It would be prudent to take into account the long-term nature of sea level rise when investing in capital-intensive coastal infrastructure, so that jetties, sea walls, and road or rail access do not require expensive upgrades within a century of two of installation.

- 1.3 Ocean acidification – this is the process by which oceanic pH is undergoing change due to addition of anthropogenic CO<sub>2</sub> into the ocean. The process has been underway since the start of the industrial era but the impacts have only become apparent in the last few decades. Likely longer-term results include damage to coral reefs, changes in plankton populations and distribution (leading to changes in the food chain), and changes in shell thickness in organisms that have calcium carbonate shells. Secondary effects include flood risk as coral barriers crumble and loss of livelihood from tourism or fishing if coral ecosystems decay. There is little that individual territories can do to prevent ocean acidification, though research suggests that local action may be possible to help offset some damage to reefs. Understanding ocean acidification is a relatively new science and research is underway at a number of centres in the UK and internationally to better understand the speed, impacts and mitigation of the problem.
- 1.4 Geohazards include Tsunami, earthquakes and volcanoes. Several Overseas Territories are located in regions of the planet where there are significant risks of infrastructure damage or loss of life from geohazards. The UK has world class expertise in geohazard risk assessment, early warning and post-event reconstruction. Many technologies are becoming available to provide early warning of tsunami, and suitable prior planning can reduce the impact to life and property from natural disasters, but no present-day technology can prevent them from occurring.
- 1.5 Exploitation of living and non-living resources – the experience of the last century has shown that marine resources are vulnerable to collapse or degradation if intensive industrial exploitation techniques are applied

without careful assessment, regulation and management. For fisheries, the risk is that a mixture of unregulated illegal fisheries by foreign vessels and excessively high fish extraction by legal fisheries leads to stock collapse, with large impacts on local ecosystems and the livelihood of artisanal fishers.

For resources such as sea-floor based mineral deposits, aggregates and hydrocarbons the main risks are that industry may not apply the same care and safeguards in a small Territory as they would in the waters of a wealthier nation. Local expertise may not always be sufficient to safely license and enforce safe working practises and external support or training may be needed in the early phases of development.

In the case of deepwater polymetallic nodule or rare-earth metal mining, the techniques and challenges are new to industry as well as science, and there may be very little real-world expertise available, particularly within the government sector. This does pose a risk of unforeseen consequences, and difficulties in rectifying damage, especially in very deep waters. In these cases advice from Learned Societies and Professional Bodies may be the most up-to-date available.

1.6 Tourism is usually beneficial, but can cause problems if there is unregulated development in sensitive areas. Examples may include damage to coral reefs from sewage outflow and building wastes, loss of mangrove-type habitat, and loss of breeding and feeding areas for wildlife. Significant bird and turtle-breeding sites are found on some of the Overseas Territories and these require special care.

1.7 Geopolitical challenges are significant in some locations, most notably in the South-west Atlantic. Disputes over sovereignty, maritime boundaries and access to living and non-living resources present a real challenge for some Overseas Territories, ranging from international court or tribunal actions through to armed military confrontation. British-flagged research ships or commercial survey craft are already experiencing difficulties obtaining transit and docking rights in some South American countries as a consequence of the ongoing Falklands Islands dispute, and ships registered in the Falklands are (as of December 2011) prevented from using ports in Argentina, Uruguay and Brazil except in case of emergency. Research in South Atlantic waters, exploration for resources, and access to Antarctic bases are at significant risk of disruption, and private investors are less likely to risk allocating resources to Territories where there are unresolved disputes.

## **2. Cooperation with the UK**

- *What are the most important areas of cooperation between your Territory/the Territories and the UK?*

2.1 The UK has some of the best marine science expertise, know-how and technology in the world, developed and tested on a global basis. The UK's marine and maritime sector (research councils, universities, private industry, and our Learned and Professional Societies) are able to provide advice, training, capacity-building expertise and knowledge transfer in any marine-related area and offer help in issues such as marine territorial disputes, ocean

mapping, resource assessment and legal advice.

- *In what areas would you like to see greater engagement and interaction between the UK and your Territory/the Territories?*

2.2 There are a large number of possibilities for greater engagement and interaction including knowledge/technology transfer, training of Territory citizens, investment in the sustainable development of marine resources, governance of marine space, education and outreach, industrial investment.

- *How can the UK and your Territory/the Territories strengthen cooperation and build more effective partnerships?*

2.3 Through much greater awareness in the UK of the needs of overseas Territories, secondments of suitably qualified UK staff to the Territories, assistance for students to be able to come and study at UK universities and research centres, opportunities for Territory civil servants to spend time in UK equivalent departments, through directly promoting the interests and requirements of the Territories to the UK Marine and Maritime sector.

### **3. Governance, financial management and economic planning**

- *How do you assess the quality of good governance, public financial management and economic planning in your Territory/the Territories?*

NOC does not have sufficient direct experience of cooperation with the governments of the Territories to be able to comment on this question.

- *What are the priorities for improvement?*

- *How can the UK best work with your Territory/the Territories to strengthen these areas?*

### **4. External support**

- *What do you think of the quality and range of external support (i.e. support other than from the UK) available to your Territory/the Territories, including from regional bodies, the Commonwealth, and the European Union?*

4.1 There are a number of international organisations who are working with small islands and developing states to improve ocean governance and management of resources. These include UNESCO's Intergovernmental Oceanographic Commission (especially in the area of capacity building/training of local staff – see for example the Bilko project <http://www.bilko.org>) and regional scientific or wildlife conservation programmes such as the Academic Council of the United Nations 'Sustainable Governance of the Caribbean Sea' project – see <http://www.acuns.org/programsan/sustainablegovernanceofthecaribbeansea> Funding for such programmes is however not secure, and is not well coordinated to prevent duplication or to identify gaps. The recent decision of the USA to withdraw from UNESCO has also had a very major negative impact on the funding of programmes.

Outside of the UN system the Non-Governmental Organisations such as WWF play a major role of providing training and knowledge exchange to the Territories. Aid is also available in exchange for access to minerals or

fisheries, or in exchange for votes in international fora, from countries such as China and Japan, particularly in the Pacific and Indian oceans.

- *What can the UK best do to help Territories access external support?*

4.2 An understanding of the needs of Territories by UK marine and maritime professionals, civil servants, scientists and NGO staff would enable staff to address the support needs of the Territories when engaging with international bodies and industry. At present it is unclear, for example, if UK delegations to international bodies routinely advocate on behalf of our overseas territories. Similarly there are items of UK domestic legislation such as the Marine and Coastal Access Act 2009 where there could be a possibility of application within the Territories. Doing so would release marine management resources to the Territories which may otherwise be too expensive to acquire.

## **5. Cooperation between Territories**

- *What potential do you see for increased cooperation and partnership between Territories?*

5.1 There is much potential for Territories to work together on marine management related issues. Many of them share similar issues regarding availability of resources, access to basic marine environmental data, access to trained scientific advice etc. Where Territories share similar marine-related management issues and ecosystems there would be a great value in being able to pool resources, expertise and training. There are opportunities for representatives of UK academia, industry and government to work with the Territories for mutual benefit.

- *In which areas does your Territory/the Territories provide support to other Territories? How might this be expanded?*

5.2 We are not aware of cases where Territories are already pooling marine/maritime knowledge and capabilities, though examples may exist.

## **6. Global profile of the Territories**

- *How does your Territory/the Territories promote its successes? What more could be done to raise Territories' profile internationally? How can the UK best support this?*

6.1 At present we are not aware of any concerted, high-profile advocacy of the marine/maritime successes of Territories, other than in a few specialist areas such as small scale eco-tourism.

6.2 The Territories could quite easily be promoted both within the UK (where a high proportion of the population may be unaware that the UK still has overseas territories) and internationally at the many trade fairs, scientific conferences, Expositions and other international events that are such an integral and well-established part of globalised knowledge exchange.

6.3 A government-funded travelling 'British Overseas Territories' road show or exhibit should be part of the UK contribution to overseas trade fairs and

events, preferably with native-born Territory staff available to represent the interests of their Territories.

6.4 An awareness of the opportunities afforded by the Territories should be trained-in to UK representatives at International events so that they can identify and interest potential investors and partners.

*This input prepared by Stephen Hall CMarSci FIMarEST [sph@noc.ac.uk](mailto:sph@noc.ac.uk) on behalf of the National Oceanography Centre, December 2011.*