



Australian Government

# The Southern Ocean Research Partnership Workshop: Summary of Outcomes



In March 2009 a Southern Ocean Research Partnership (SORP) was established to enhance cetacean conservation and the delivery of non-lethal whale research to the International Whaling Commission (IWC). The partnership is a major component of an Australian initiative to reform the IWC. The objectives, research plan, and procedural framework for the partnership – to be assessed by the IWC Scientific Committee – were developed through a workshop attended by 50 participants representing 12 countries (Australia, Argentina, Brazil, Chile, Costa Rica, France, Italy, Mexico, New Zealand, South Africa, Uruguay and USA) and several research and environment consortiums. This document summarises the outcomes of the workshop.

## What is the Southern Ocean Research Partnership?

The Southern Ocean Research Partnership is an integrated, collaborative, non-lethal whale research consortium that aims to maximise conservation outcomes of Southern Ocean whales through an understanding of the status, health, dynamics and environmental linkages of their populations and the threats they face.

The partners will achieve this objective by:

- committing to the development of novel, powerful non-lethal technologies, important ecological theory, and analyses;
- focusing their collective research and funding efforts on projects that link most directly to priority conservation needs, and for which a collaborative approach maximises research outcomes and funding efficiencies;
- maintaining an integrated and responsive relationship with the IWC Scientific Committee and its priorities;



- establishing strategic linkages with other relevant international research efforts; and
- communicating the rationale and outcomes of the research, and threats to the conservation status of Southern Ocean whales.

The primary focus of the SORP is the large whale species managed by the IWC, including the humpback whale, blue whale (both Antarctic and pygmy forms), fin whale, Antarctic minke whale, sei whale, southern right whale, and sperm whale. Killer whales will also be considered as an important component of the Southern Ocean ecosystem.

The Southern Ocean will be the regional focus of the partnership, but relevant research efforts will also include associated migratory corridors and breeding grounds.

## SORP research themes

Two overarching research themes ('flagships') were agreed at the workshop, under which research proposals will be assessed. The research questions (and associated projects) listed under these themes represent a summary of the core questions identified by the group. Full details can be found in the workshop report.

- **Theme 1: Post-exploitation whale population structure, health and status.**

Work under this theme will focus on developing an improved understanding of how whale populations have recovered since the cessation of commercial whaling. It will include a strategic and focused continuation and augmentation of valuable, long-term data series (such as those for humpback whales and southern right whales), initiate the collection of new focused data series, and address important unknowns such as how endangered fin whales (the mainstay of industrial whaling) have responded to protection.

- *How are populations of whales that feed in the Southern Ocean structured into identifiable breeding groups, and how are these breeding groups defined in time and space?* (Continue the relatively advanced work on humpback and southern right whales and develop the currently poor understanding for other species. Major focus on coordinated collection of biopsies, as well as strategic tagging studies to monitor movement).
- *How well have the species that were most heavily depleted during the industrial whaling era (fin and Antarctic blue whales) recovered?* (The focus of this project will be a long-term, circumpolar, acoustic monitoring network).
- *Are we able to measure a population-scale index of Southern Ocean whale health, and if so, does it correlate with estimates of life-history variables?* (Utilise novel and developing non-lethal techniques to assess whale health, with a focus on species for which long-term data exist).

- **Theme 2: Changing atmosphere and oceans: Southern Ocean whales and their ecosystems.**

The Southern Ocean is a diverse environment and whales utilise this habitat in regionally different ways. Populations of whales in some regions are recovering strongly, but in others they are not. Some regions are changing quickly and others more slowly.

- *How do whale populations respond to climate processes in contrasting regions of the Southern Ocean for which climate effects are already evident (e.g. Antarctic Peninsula/SW Atlantic Ocean) and areas in which changes are less evident (e.g. eastern Antarctica)?* (Focus on populations of humpback and southern right whales that breed off the east coast of the South American continent, with populations that breed off Australia, New Zealand and/or the African continent).

- *How important is sea-ice habitat for southern ocean whales?* (Utilise aerial surveys, tagging and remote satellite-sensed technologies).
- *How do baleen whales interact with the physical and biological environment of their feeding grounds?* (Focus on combined predator-prey-environment studies using hydro-acoustics, environmental sensors and tagging).
- *What aspects of their physical and biological environment shape the distribution and movements of Southern Ocean whales?* (Focus on existing survey and environmental data, along with new multi-scale tagging studies coupled with collection of ecological data).
- *Will Southern Ocean whales recover to their former ecological role?* (Continue long-term monitoring of population trend data of species that migrate close to low latitude coastlines, i.e. humpback and southern right whales. These studies would also incorporate studies on the ecological role of large whales, including nutrient cycling)
- *How are the different types of killer whales distributed in their Southern Ocean environment, and what role do they play in shaping baleen whale communities?* (Coordinated collection of killer whale photographs, biopsies and ecosystem modelling exercises).



## SORP research plan and projects

To simply re-brand existing research efforts by partners as the 'SORP program' would do little to drive research towards an integrated and focused framework. Consequently, a two-tiered SORP research framework was developed and agreed. Specific criteria for these two types of project will be developed and agreed by the SORP Scientific Steering Committee (SSC).

The first tier of **SORP core projects** will drive the SORP initiative and directly address the SORP objective of improving our understanding of the status and health of whales within the Southern Ocean ecosystem and the threats and environmental changes they may face.

The second tier of **SORP associated projects** may contribute to the SORP objectives and flagship programs. However, they will be effectively stand-alone research efforts that do not necessarily benefit from the collaborative framework, or are likely to be focused on smaller spatial scales, or on species of lesser interest to the consortium.

## Assessment and registry of SORP research projects

The SORP SSC will assess where existing and newly proposed research efforts fit within the research framework (core or associated status) and facilitate external peer review of proposed research projects for scientific merit. The committee will then assess the relevance of the proposal to SORP objectives and the degree to which it benefits from the partnership framework. Qualifying projects will be centrally registered as 'core' or 'associated' SORP projects. The registry will be maintained and updated by the SSC.

The SORP research plan is expected to develop over the course of the collaboration, particularly in response to IWC and other input. The process of project prioritisation and the development of more detailed research plans will likely occur during IWC61, and subsequently under the direction of the SORP SSC during 2009 and beyond.

## Partnership coordination, structure, reporting and reviewing processes

The SORP SSC will oversee the work and direction of the partnership. Membership of the steering committee will, at least, include regional representation from the participating governments. Given the importance of linking SORP to broader multidisciplinary programs, (e.g. the Integrated Climate and Ecosystem Dynamics program, and the Southern Ocean Observing Systems program) representative membership from these programs would be considered. Membership of the IWC (e.g. Chair of the Southern Hemisphere whale Sub-Committee) would also be advantageous.

Additional specific steering committees will be appointed to direct each of the core research projects that sit within the flagship programs.

The Australian Marine Mammal Centre, based at the Australian Antarctic Division in Hobart, will coordinate the overall work of SORP and manage the reporting responsibilities. An annual progress report and a report of activities proposed for each forthcoming year will be provided to the IWC Scientific Committee. The IWC Scientific Committee will be asked for annual input into the SORP research plan, and to evaluate progress. An independent review process will also be established to assess the progress of SORP against stated objectives and to determine if improvements in direction or process can be achieved.

## Data, tissue and analysis management and coordination

The Australian Marine Mammal Centre will coordinate centralised registries of data, tissue and analysis protocols. Where possible these repositories will utilise existing facilities, and are likely to be dispersed throughout the partnership membership. Updates of the holdings of these registries will be included in reports.

## SORP non-lethal science workshop

A steering committee will be established to plan and conduct a symposium and workshop to review and update developments in non-lethal research techniques for whales in 2011. *Living Whales in the Southern Ocean Ecosystem: A symposium and workshop on non-lethal research techniques*, will showcase existing non-lethal techniques and develop mechanisms to inform and accelerate the development of further relevant non-lethal methods.

## The SORP Year of the Whale: 2013/14 circumpolar research effort

Many of the research programs developed within the SORP Themes would benefit from a single season, multi-platform, integrated and coordinated research effort around the Southern Ocean. Planning for such events takes many years and such efforts need to be incorporated within other large-scale research efforts. A Steering Committee to plan and conduct this initiative will be established within the SORP.

**Further information can be found at:**

**E-mail:** [SORP@aad.gov.au](mailto:SORP@aad.gov.au)

**Web:** [www.marinemammals.gov.au/iwc-initiatives/southern-ocean-research-partnerships-sorp](http://www.marinemammals.gov.au/iwc-initiatives/southern-ocean-research-partnerships-sorp)

