
Conservation Management Plans for Improved Cetacean Management

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Australia's paper to the March 2008 intersessional meeting, 'Whale Conservation and Management: A Future for the IWC' (IWC/M08/INFO 11) outlined constructive proposals to address some shortfalls of the historical approach to cetacean conservation and management under the IWC. One practical proposal that would modernise the IWC's framework is to develop **conservation management plans**, tailored to support the recovery of vulnerable cetacean species or regional populations and to address threats that affect multiple species.

Future threats to recovering cetacean species will not be limited to directed take, which has been the primary concern of existing IWC management tools. Rather, additional threats are expected to range from global problems – such as climate change and marine pollution – to localised issues including fishery activities, shipping, habitat disturbance and unregulated wildlife tourism.

Management responses based on adjustment of catch quotas from fisheries models arrived at through divisive debates over legally binding changes to the Schedule will not be adequate to quantify and address the full range of threats to cetaceans. If the IWC is to meet conservation and management challenges in years to come, it will need to be equipped with comprehensive plans tailored to the particular circumstances of the species or region. Such plans should be based on the available information on status, trends and threats, identify research needs and set targets to respond to the key threats through threat abatement actions, improved regulations or other mitigation strategies. They should be put into effect cooperatively by consensus and not require legally binding decisions.

The response to Australia's proposal at the March intersessional meeting confirmed that there is sufficient support among IWC members for developing conservation management plans to warrant a more detailed discussion of the concept. This discussion will need to address a number of key questions, which are explored in this paper:

1. *Why does the IWC need conservation management plans?*
2. *What could be the essential elements of a conservation management plan?*
3. *How might the IWC develop conservation management plans?*

1. Why the IWC needs conservation management plans

When the International Convention for the Regulation of Whaling (ICRW) was drafted, the primary interest in whales was an extractive industry, and the only recognised threat to cetacean species was the level of directed take by that industry. It was understandable that the historical tools employed in the effort to 'provide for the proper conservation of whale stocks' while attempting to bring this industry into order were drawn from the fisheries management paradigm and focused on catch limits. However, it is indisputable that the IWC's early management actions failed to arrest the dramatic depletion of global whale populations.

Today, in the seventh decade of work under the Convention, the primary interest in whales is non-consumptive. Moreover, there are multiple known and emerging threats to whale species as they recover from historical over-exploitation, and these are not confined to directed or indirect take. However, even the key conservation measures belatedly adopted since the late 1970s have been based on catch limits: whale sanctuaries are effectively no-take zones, and the moratorium on commercial whaling is a simple decision to set catch limits at zero. In a changing world, as some whale populations recover, the IWC cannot meet its mandate unless we move beyond the fisheries paradigm. Procedures based solely on whaling catch limits will not suffice.

During the period of the moratorium, the IWC's Scientific Committee has greatly improved its capacity to deal with the types of uncertainty that undermined its earlier efforts to inform the management of commercial whaling. The Revised Management Procedure addresses demographic stochasticity, life history parameters, stock boundaries and assessment errors to an unprecedented extent. It includes a feedback loop that would stop whaling if the population of whales was to decline in a manner not predicted by the model. However, since the RMP is a simulation framework, it is worth asking how adequately in the real world it might deal with other threats facing a whale population that is also subjected to whaling.

The RMP is designed to address non-whaling threats (a) by simulating scenarios that vary carrying capacity for the whale population by as much as 50%, to accommodate environmental variability, and (b) to discount any derived catch quota by the number of known human-induced mortalities from other causes. However, this procedure does nothing to manage or reduce non-whaling threats, and has clear limitations:

- Such an approach can only be applied to populations subject to whaling, and the primary objective remains to maximise the number of whales that can be taken.
- There is no direct management of the threat, only a compensatory reduction of the number of whales killed in whaling, and if the number of other mortalities exceeds quotas, the discount cannot fully accommodate the other removals.
- As whaling under the RMP would only occur on sufficiently abundant populations, this does not apply to depleted cetacean populations requiring urgent attention.
- The mechanism in the RMP to protect against imperfect knowledge of other human-related mortalities, as well as other sub-lethal or cumulative impacts, is to detect unexpected population declines and to do so by surveys, which generally have poor statistical power to detect anything other than substantial trends.

Whether or not the future of the IWC sees sufficient members supporting a resumption of commercial whaling under the RMP, the IWC will certainly require coordinated international efforts to determine and respond to the nature and scale of the full range of threats to whales. The key threats are likely to be multiple, complex and differing between regions and populations.

Identified threats include fisheries by-catch, the consequences of climate change, anthropogenic sound, habitat degradation, ship strikes or pollution. The IWC Scientific Committee is a unique resource among the Conventions that deal with marine conservation issues and includes the leading experts who could readily support the development of the procedures to create non-whaling related threat and/or population focused procedures in the form of conservation management plans. Such plans could improve conservation outcomes for cetaceans and legitimise the IWC as the prime international instrument for cetacean conservation and management.

2. What could be the essential elements of a conservation management plan

In developing conservation management plans, IWC members with expertise in cetacean conservation are well placed both to propose the key elements of a model plan and to identify candidate species, regions or threats for the first plans under the auspices of the IWC.

While it will be important for IWC members to synthesise the essential elements of successful plans, this should not delay taking action to address threats. In several cases the most important aspect is to act quickly. Where there are immediate but manageable threats facing critically endangered species – e.g. the north western Pacific grey whales – a plan could lead to immediate conservation gains. In these cases the IWC should move to mitigate threats immediately, and in doing so, assemble the elements of a model conservation management plan. Interseasonal work and direct resourcing will be required to expedite such efforts. A consensus-based approach will ensure success.

While acting on the most time-critical issues there are a wide range of existing frameworks from which conservation management plans could be built. Models include: recovery plans to improve the conservation

status of threatened species; threat abatement plans to address key threatening processes; species action plans that prioritise management and research actions for conservation; and conservation plans for other taxa, values or protected areas.

A review of these models should generate a set of elements common to conservation management plans, for instance:

- (i) conservation objectives (e.g. a population recovered to long-term stability by virtue of its geographic range and distribution, abundance and genetic diversity);
- (ii) well defined scope (species / population / thematic by threat / regional);
- (iii) targets for statistical recovery over particular timeframes based on population and threat models (e.g. the population increases by 15% over 5 years);
- (iv) targets for improving management responses and regimes;
- (v) the best available information on abundance, distribution and habitat use;
- (vi) assessment of threats to the species – both known and potential;
- (vii) links to complementary national and international initiatives;
- (viii) prioritised actions – monitoring programs, protection measures and threat mitigation;
- (ix) identified resources to deliver the actions; and
- (x) mechanisms and timeframes for monitoring and review.

IWC members might also establish a range of criteria to assess the merits of proposed conservation management plans for cetaceans. To add value by filling the gap in the IWC's suite of management tools, such plans should respond positively to key questions:

- Does the plan **address a recognised need**? For example:
 - Critically endangered cetacean populations / unsustainable threats / multiple range states (North West Pacific grey whales?)
 - Remnant populations / uncertain recovery forecasts / recovery retarded by threats (Southern Hemisphere southern right whales?)
 - Rapidly emerging unquantified threat / uncertain population dynamics (Arctic and Antarctic whales in the face of climate change?)
- Does the plan **coordinate and direct efforts** to improve conservation outcomes?
 - An effective plan should coordinate the strategic efforts of multiple parties (which may currently be unilateral and fragmented), to achieve conservation outcomes.
 - An effective plan should complement national and international conservation initiatives (e.g. CMS, CBD, CITES, IMO) and identify the links.
- Are the objectives **focused and measurable**?
 - An effective plan should focus on priority human-cetacean interactions, with the highest estimated likelihood of positive conservation outcomes.
 - An effective plan should be based on achievable and measurable conservation objectives, regularly peer reviewed and assessed against its objectives.
- Does the plan add value by **levering resources and marshalling expertise**?
 - An effective plan should secure access to resources and expertise beyond that available to existing efforts.
 - An effective plan should support appropriate priority research and provide for centralised databases and open access to data and samples.

Above all else, where the need for the action is time-critical, the question should be:

- Does the plan **deliver direct and rapid mitigation actions?**

3. How the IWC might develop conservation management plans

The IWC is well positioned to overcome the historical shortcoming of the fisheries paradigm and move beyond merely setting catch limits of zero for conservation purposes. The experts who gather annually under its auspices have the knowledge and innovation required to help the IWC formulate a conservation focused plan for the future.

Much of the preparatory work to underpin modern conservation management plans has already been done by the Scientific Committee, which comprises the world's cetacean specialists. Work towards 'comprehensive assessments' of whale populations and its sub-committees and working groups on by-catch, environmental concerns, ecosystem modelling, whale watching, sanctuaries and small cetaceans will all provide valuable input to such plans.

The Conservation Committee, responsible for the IWC's conservation agenda, has begun to consider the management implications of non-whaling threats to cetaceans. Its consideration of regional whale sanctuaries and national cetacean conservation legislation and other measures, initiatives to address the ship strikes threat and collaboration with other organisations including the Convention on Migratory Species will all be relevant to such plans.

Work on conservation management plans would fit within the existing mandates of these committees and would draw upon their work to date. The Commission as a whole will have an interest in the framework and achievements of the plans. A workable process could be:

- IWC members collaborate to draft conservation management plans where appropriate and sponsor them at an annual meeting.
- The Scientific Committee and the Conservation Committee review draft plans and make recommendations for the consideration of the sponsoring IWC members.
 - The Scientific Committee provides advice recommending candidate species, areas or threats to be prioritised for conservation management plans – synthesising its existing work.
 - The Conservation Committee keeps under review a flexible template for conservation management plans – a set of essential elements arising from a review of the performance of the first plans developed by the IWC, comparative models from elsewhere – and develops criteria for reviewing the merits of future draft plans.
- The Commission as a whole reviews the recommendations and determines the level of support or funding to allocate to actions under the plans.
- Once in place, the designated sponsor(s) report annually on progress under the plans.

Through this kind of a process to develop conservation management plans, IWC members could: more adequately address non-whaling objectives and non-consumptive uses of cetaceans; respond to emerging non-whaling threats to vulnerable cetacean populations; foster cooperation to improve the conservation status of species or populations; build on the technical work of the Scientific Committee; and draw on the strategic management advice of the Conservation Committee.

Unlike the divisions over other IWC management proposals, conservation management plans should be able to attract consensus because they would address well established needs and be characterised by collaborative responses. Equipped with such plans, the IWC would be making a positive contribution to conservation. By developing conservation management plans the IWC will demonstrate that it remains a dynamic organisation fit for the challenges facing the relationship between humanity and cetaceans in the twenty-first century.