

Management and conservation at the International Whaling Commission: A dichotomy sandwiched within a shifting baseline



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ABSTRACT

The International Whaling Commission's (IWC) Scientific Committee provides important advice to the IWC on a large variety of cetacean species, sub-species and populations and the issues affecting them. Cetaceans are facing increasing, non-whaling-related threats, and the Scientific Committee (SC), in accordance with the Commission's requests, has strengthened its conservation-oriented research work. A selection of the reports of the Scientific Committee from between 1986 and 2012 was assessed for its: (i) fundamental research; (ii) management; (iii) conservation; and (iv) administrative content, and to identify potential trends over time. Recommendations and their urgency were also examined, as implied from the language used by the SC in its reports. The analysis showed that the work of the Scientific Committee has increasingly been oriented towards conservation issues over the period reviewed, but at the same time this conservation work has received little funding. Increased support for conservation-related research projects is warranted to promote the long-term survival of cetaceans. Based on this review of the content and focus of the Committee reports, the analysis suggested that its issued advice be made clearer, whenever possible, and governments are urged to give due consideration to this science-based advice particularly when urgent conservation actions are needed. In addition, more consistent funding of the IWC's conservation-related research should be pursued to improve international conservation outputs regarding cetacean populations.

1. Introduction

In recent decades, the rate of biodiversity loss has increased and human activities have caused the extinction of countless species [1]. Cetaceans are no exception: about 34 species, subspecies and sub-populations are classified as “Critically Endangered” or “Endangered” by the IUCN. The baiji (*Lipotes vexillifer*), a freshwater dolphin from the Yangtse River in China, was declared functionally extinct in 2006 [2] and several other cetacean species and populations are in immediate danger of extinction. Furthermore, the status of most small cetacean populations is poorly known, with 58% of species classified by the IUCN

as “Data Deficient” [3], and it is likely that many of the populations of these species are also threatened [4,5].

Cetaceans face an array of existing and emerging threats from anthropogenic activities that include direct removals, bycatch in fisheries, entanglement, ship strikes, pollution by persistent contaminants, outbreaks of infectious diseases and epidemics, climate change, acidification and marine noise pollution [6–12]. Some species are threatened across most of their distributions, some across only part of their ranges, while for others too little information is available to assess their conservation status [4]. Therefore, responding to the conservation needs of cetaceans poses a number of difficulties. Impacts may be cumulative

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and/or synergistic and they are difficult to monitor and assess in relatively short periods of time [4]. For example, it may take decades to establish long-term consequences on a population level, which is sometimes used as an argument to delay actual implementations. Although punctual, non-systematic measurements of the level of impacts are also useful in such cases, in order to avoid depletion or extinction, a precautionary approach is necessary whenever a species, sub-species or population is likely to be threatened or known to be declining. Unfortunately, human-induced mortality of cetaceans continues to increase in many cases.

Using bibliometric analysis to investigate the proportions of published cetacean research from 2005 to 2008 and compared to 1970–1973, Rose et al. [13] demonstrated that a key focus of modern cetacean research is on conservation-related topics, representing a clear shift from the previous basic biological and ecological emphasis. In particular, this shift in cetacean research focus has been mirrored at the International Whaling Commission (IWC), the internationally recognized body responsible for the conservation of whales and management of whaling. The IWC has expanded its areas of interest to ensure the wider conservation of whales. This is reflected in the establishment of the Scientific Committee's (SC) Standing Working Group on Environmental Concerns in 1996 [14] and, in 2003, of the Conservation Committee [15] to facilitate the implementation of a Conservation Agenda and to make conservation-related recommendations to the Commission. In 2009, the IWC endorsed Conservation Management Plans as a practical tool for improving the conservation status of the most at-risk cetacean populations [16].

The increasing amount of work of the SC on conservation-oriented topics has been extensively influenced by the Commission itself, through the adoption of a number of resolutions fostering the establishment of several sub-committees and working groups, as well as by directing the work of the SC on numerous issues such as the Arctic, whalewatching, environmental threats, and small cetaceans. Wright et al. [17] recently reviewed the evolving role of the IWC over the last two decades on climate change, chemical and ocean noise pollution, marine debris, ship strikes and whalewatching, underlining the expanded focus of the IWC SC.

The SC has very regularly provided important management as well as conservation recommendations to the Commission and to other bodies on a large variety of species and issues. The statements made by

Table 1
Most commonly used statements in SC reports (normally in the form of “The SC agrees / recommends / supports”, etc.).

Acknowledges	Expresses with serious concerns	Stresses
Adopts	Expresses regret	Strongly advises
Advises	Notes	Strongly encourages
Agrees	Notes with serious concerns	Strongly endorses
Commends	Reaffirms	Strongly recommends
Concurs	Recognises	Strongly reiterates
Considers	Recommends	Strongly supports
Draws attention	Re-emphasises	Suggests
Emphasises	Reiterates	Supports
Encourages	Requests	Thanks
Endorses	Repeats its recommendation	Urges
Expresses concerns	Repeats its advice	Welcomes

the SC are substantial for the work of the Commission, e.g. by identifying species/populations of special concern, highlighting specific threats or recommending particular mitigation measures.

Here a novel approach is presented based on an analysis of statements in the SC reports from 1986 to 2012 to assess the focus given to cetacean fundamental research, management, conservation or administrative matters. This type of statement analysis can help monitor the evolution of the SC and may also be applicable to assess the development of other international fora.

2. Methods

The SC meets annually and provides advice to the IWC. Thirteen SC reports from the annual meetings spanning the period from 1986 (when the global moratorium on commercial whaling was implemented) until 2012 were selected randomly in order to cover each sample period (three from 1986 to 1989, four from each 1990–1999 and 2000–2009, and two from 2010 to 2012) and to ensure a representative overview of the SC's work. The reports were analyzed for statements made in four categories:

- *fundamental research matters* - when a comment/conclusion/recommendation is primarily aimed at *inter alia* gathering new scientific information, ongoing research projects;

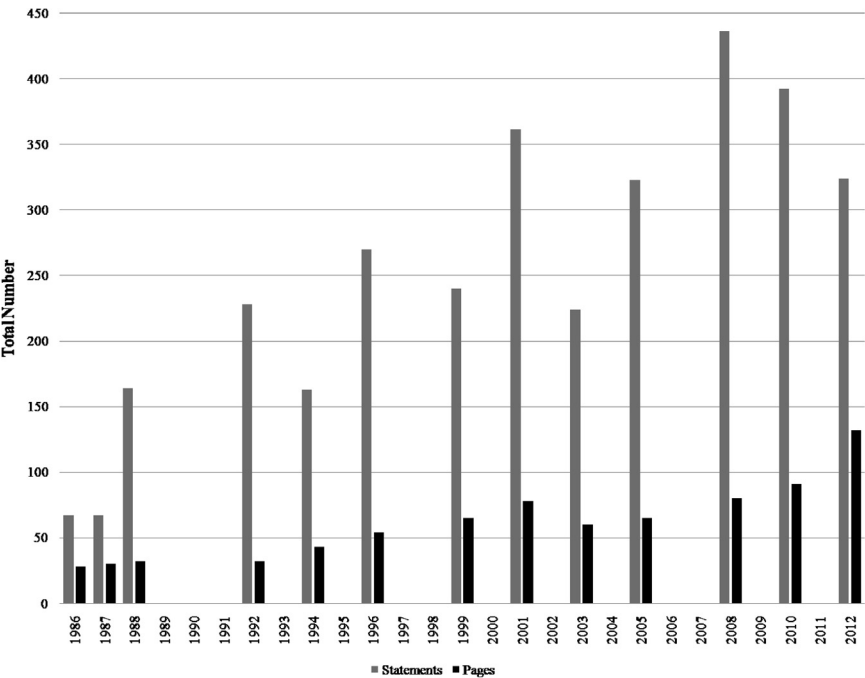


Fig. 1. Number of statements and pages from SC report.

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