MARINE PROTECTED AREAS FOR WHALES, DOLPHINS AND PORPOISES. Erich Hoyt. 2011. London & New York: earthscan. xiii + 464 p, softcover, illustrated. ISBN 978-1-84407-763-2. £31.99.

For many decades whales have been at the forefront of environmental protection by constituting a powerful symbol for the fragility of the earth's ecosystems as well as the negative impacts of anthropogenic activity. The role of non-governmental organisations (NGOs) in creating this symbol cannot be neglected, as Epstein so vividly portrays (Epstein 2008). One of these NGOs is the Whales and Dolphins Conservation Society (WDCS) which is a leading organisation in the peaceful protection of whales, working for the abandonment of any commercialisation of whale products and associated whale hunts. Indeed, the WDCS also makes the 'adoption' of a whale or a dolphin possible on its website (WDCS undated).

Although whales are a powerful symbol, they have never as a singled-out species appeared in the context of marine protected areas (MPAs) and there is therefore 'little cetacean habitat protection in the open ocean or on the high seas' (page 5). The present volume was published for the first time by Erich Hoyt in 2005 in order to change the perception of MPAs and in order to specifically include cetaceans in the planning and implementation of MPAs. In this 2011 update of the 2005 version, Hoyt engages in a very impressive assessment of MPA planning and potential realisation and has indeed created '[a] world handbook for cetacean habitat conservation and planning', as the sub-title states.

Published under the auspices of the WDCS, this carefully researched work is divided into five chapters. In chapter one, *From whale sanctuaries to marine protected areas*, Hoyt outlines his approach and highlights the importance of MPAs for ecosystem protection. In boxes and tables the current status of MPAs, biosphere reserves and ocean sanctuaries are explained, concepts such as 'ecosystem-based management' or the 'precautionary approach' briefly, but concisely outlined while maps and figures illustrate geographical components of the issue. But already in the introduction a contradiction seemingly emerges as Hoyt writes: 'Still, it must be kept in mind that single species or exclusively cetacean-oriented approaches are generally of limited value. The best conservation projects consider the entire ecosystem, monitoring and protecting animals, plants and microorganisms, as well as considering people' (page 6). Inevitably the question emerges: by publishing a book on cetacean MPA management and planning, is this not exactly what Hoyt does? Singling out a group of species?

The answer is both a yes and a no but throughout the book I was not able to shake off this contradiction. For a more comprehensive assessment of MPAs in the Arctic, I can suggest Koivurova's and Molenaar's report, commissioned by the World Wildlife Fund (WWF) (Koivurova and Molenaar 2009). Although Hoyt highlights the value of cetaceans for wider ecosystem protection through awareness raising (and therefore exposing the WDCS agenda) with slogans such as 'homes for whales and dolphins' (page 62), his cetacean-based approach is nevertheless omnipresent without paying sufficient attention to the complex (socio-)ecological systems of marine habitats. It did not go unnoticed that Hoyt ascribes cetaceans an 'intrinsic value as species in themselves' (page 39), ultimately singling them out from an ecosystem-based planning structure by dealing with them in the context of *The value of cetaceans for place-based conservation*, as the title of the second chapter states. This reflects furthermore in statements that ascribes whales a 'right to life', but which create another contradiction: Hoyt notes that 'whales are good biological indicators of the status of the environment' as they 'accumulate man-made polluting substances [...] which have implications not only for cetacean and human health, but for the underlying health of the ocean's ecosystems' (page 43). At the same time he opposes lethal scientific whaling, as carried out by the Japanese in the Southern Ocean (see page 124). I cannot but wonder how measurement of pollutants in, say, a whale's liver can be conducted without lethal methods.

This being said, Hoyt provides very well thought-through guidance for the nomination of new MPAs for cetaceans in the third chapter, *Planning effective protected areas: steps towards the design, establishment and management of protected areas for cetaceans,* heavily building on a report for the International Union for the Conservation of Nature (IUCN) from the early 1990s (Kelleher and Kenchington 1992), but adapting the propositions to a cetacean-based MPA-approach. Here, a 9-page table depicts 'international and regional treaties [...] with a bearing on MPAs and the conservation of cetaceans' (page 63). For researchers, ecosystem management stakeholders and policy-makers alike this table is certainly very enlightening as it gives basic data on the respective agreement itself in conjunction with its area of coverage.

In the fourth chapter, *The big picture for cetacean habitat: planning for ecosystem management, networks and ocean zoning*, Hoyt engages in a threat-based argumentation for the establishment of MPAs, with regard to climate change and sonic pollution of cetacean habitats. Especially Arctic resident and migrating cetaceans are mentioned here and with regard to a warming climate, Hoyt states: 'As Arctic temperatures rise and ice melts, some of these whales may at first appear to have an expanded range, but, in fact, the ice edge will be contracting and ultimately they may have nowhere left to retreat' (page 80). While seemingly a logical cause-and-effect process, the Arctic Biodiversity Assessment notes: 'Very few populations of marine mammals have been studies anywhere in the Arctic for long enough to allow a comprehensive assessment of the possible effects of long-term climate warming on population size and demographic parameters' (CAFF 2013: 113). Notwithstanding the difficulties in predicting population changes of cetaceans, Hoyt presents a grappling insight into the effects of sonic pollution on whales and how whale demography is significantly affected by noisy oceans. Taking into consideration these threats, Hoyt convincingly argues for interconnected MPAs, also taking into consideration the different legal frameworks applicable in different parts of the world. Especially with regard to noise, Hoyt shows that no clear-cut provisions exist in the already existing whale sanctuaries, such as in the Southern Ocean.

Following several pages of beautiful whale photographs and tables of the world's cetaceans, the book turns to its core by presenting *Habitat protection for cetaceans around the world: status and prospects in the 18 marine regions*, following the IUCN World Commission on Protected Areas' division of the worlds' oceans and presenting the regions' whale species, the status of current MPAs and proposals for possible MPAs. It goes

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beyond the scope of this review to delve into the content of all (sub-)polar marine regions (as being most relevant to readers of *Polar Record*), thus I will focus on Marine Region I and II, Antarctic and Arctic. It needs mentioning, however, that for a more legal analysis of these two regions, the reader is advised to refer to the respective chapters in Molenaar's and others work, which take a less cetacean-oriented approach, but which deal with MPAs in the (Ant)Arctic and marine mammals in general in the respective legal frameworks (Molenaar and others 2013).

In his analysis of the Antarctic, Hoyt considers the elements of the Antarctic Treaty System (ATS), but notes that within the ATS 'the overall marine habitat conservation effort has been disappointing' (page 124), however recognising the existence of MPAs outside the scope of the Convention for the Conservation of Antarctic Marine Living Resources (CCAMLR). One proposed MPA is the Ross Shelf MPA as being the 'largest remaining minimally changed continental shelf ecosystem on Earth' (page 126). Given the elevated scientific interest in the Ross Shelf and Ross Sea and the NGO call for full protection from human exploitation of any kind, using relevant provisions of the ATS and embedding the potential Ross Shelf MPA into the network of other Antarctic MPAs. These Hoyt presents with all key data on the subsequent pages.

The Arctic is home to a large number of MPAs, the largest of which is situated in Russia, while Hoyt presents the complex regime of protection on Svalbard . The Arctic Council's CAFF(Conservation of Arctic Flora and Fauna) and PAME (Protection of the Arctic Marine Environment) working groups are mentioned to be those working most on conservation efforts. Hoyt wrongly claims that CAFF's Circumpolar Protected Area Network (CPAN) has been working since 1998, linking national MPAs of the Arctic countries (page 134). CPAN, however, has been dormant since 2005 (Lalonde 2013: 101). Despite this factual error, Hoyt nicely depicts how MPAs are governed in Russia. This is truly important information as, to my knowledge, in English literature environmental governance in Russia is sparsely covered.

Hoyt's and the WDSC's non-use and 'right to life' agenda for cetaceans is an obvious trait that spans throughout the book and ecosystem-based management for him is a misused concept 'by those seeking to justify the culling of predators' (page 3). This is a difficult claim to make and may deter one or the other to ascribe this book the seriousness it aims to achieve. But leaving the contradictions and rather simplistic claims aside, I found this book an incredibly rich resource for a better understanding of the world's MPAs and cetacean protection. It is very well illustrated, holds a wealth of information on MPAs and environmental governance in general and, apart from the content, is written in a style that makes complex information easily accessible. I am certain that on many future occasions I will take this book in my hands again as it serves as a well-structured compendium for marine mammal and habitat protection. (Nikolas Sellheim, Faculty of Law, University of Lapland, PO Box 122, 96101 Rovaniemi, Finland (nikolas.sellheim@ulapland.fi)).

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