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Agenda Item: CEP 7a, CEP 9a,
CEP 10c
Presented by: SCAR, Monaco,
Belgium
Original: English
Submitted: 05/04/2017

Antarctica and the Strategic Plan for Biodiversity 2011-2020

Antarctica and the Strategic Plan for Biodiversity 2011 to 2020

Working Paper submitted by SCAR, Monaco and Belgium

Summary

The Strategic Plan for Biodiversity 2011 to 2020 and its associated Aichi Biodiversity Targets were developed under the aegis of the Convention on Biological Diversity to provide an overarching global framework for the assessment and protection of biodiversity. Antarctica and the Southern Ocean have, to date, not been adequately represented in associated global biodiversity assessments. In June 2015, SCAR, the government of the Principality of Monaco, and several others, held a meeting of experts to assess Antarctic and Southern Ocean biodiversity and its conservation status in the context of the Strategic Plan and Aichi Targets. The outcomes of this assessment have now been made fully available. The evidence suggests that in many cases Antarctic and Southern Ocean biodiversity conservation is ahead of global trends. No case of anthropogenic extinction has yet been recorded from the region, the impacts of invasive alien species are being well addressed, and local pollution has seen significant declines. By contrast, in other areas, biodiversity conservation is lagging global trends – in protected area establishment and management, and in the regulation of bioprospecting. This paper provides access to and a summary of the outcomes of the Monaco Assessment and recommendations emerging from it.

Background

- 1) The Protocol on Environmental Protection to the Antarctic Treaty commits the Parties to the comprehensive protection of the Antarctic environment. This commitment includes the conservation of Antarctic Fauna and Flora, as Annexes II and V to the Protocol, and several subsequent ATCM Measures and Resolutions [e.g. 1, 2] make clear. The field of Conservation Biology recognizes the conservation of fauna and flora under the broader rubric of *the conservation of biological diversity*, or biodiversity [3].
- 2) In response to evidence showing ongoing global declines in biodiversity, the Strategic Plan for Biodiversity 2011-2020, supported by a suite of 20 Aichi Biodiversity Targets [4], was established under the aegis of the Convention on Biological Diversity. The specific aim of the Strategic Plan is to take effective and urgent action to halt biodiversity loss, to ensure that, by 2020, ecosystems are resilient and continue to provide essential services, thus securing the variety of Earth's life and contributing to human well-being and poverty eradication. Its stated intent is to provide an overarching global framework for the assessment and protection of biodiversity.
- 3) Despite the richness of Antarctic and Southern Ocean biodiversity [5], reviews of the state of global biodiversity typically incorporate limited information from the region [6]. Thus, despite the significance of the region's biodiversity, and broad recognition of the general efficacy of the Protocol on Environmental Protection for the conservation of biodiversity (formally as Fauna and Flora) [7], it has, until now, been likely that a report on the state of global biodiversity at the end of the decade would not adequately represent understanding of both Antarctic biodiversity and the efforts being made to conserve it through the Antarctic Treaty System (ATS). Such a situation would be a lost opportunity globally.

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- 4) To address this potential underrepresentation, SCAR, in partnership with the government of the Principality of Monaco, and several others, held a meeting of biodiversity, legal and policy experts, in June 2015, to assess Antarctic and Southern Ocean biodiversity and its conservation status in the context of the Strategic Plan and its Aichi Targets. The initial outcomes of this meeting were presented by SCAR and the Principality of Monaco at ATCM XXXIX-CEP XXIX as IP 38.

- 5) The full assessment has now been made available through the peer-reviewed primary literature [8]. Here we present a synopsis of the outcomes (**Figure 1**). The full text of the work is available as an open access online publication [8], along with comprehensive supporting evidence, of which the latter forms, in part, the formal evidence base for SCAR's Antarctic Conservation for the 21st Century Strategy.
- 6) The 20 Aichi Targets are divided among the Strategic Plan's five strategic goals:
 - **Strategic Goal A:** Address the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society,
 - **Strategic Goal B:** Reduce the direct pressures on biodiversity and promote sustainable use,
 - **Strategic Goal C:** Improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity,
 - **Strategic Goal D:** Enhance the benefits to all from biodiversity and ecosystem services,
 - **Strategic Goal E:** Enhance implementation through participatory planning, knowledge management and capacity-building.
- 7) For **Strategic Goal A**, Antarctica and the Southern Ocean are largely on a par with global progress. Nonetheless, much further scope exists especially for addressing negative incentives, harmful to biodiversity.
- 8) Outcomes for **Strategic Goal B** are again aligned with global progress, but habitat degradation and effective management of Invasive Alien Species locally require attention.
- 9) For **Strategic Goal C**, protected area designation and management in terrestrial areas are in need of attention because they lag global trends. Evidence-based assessments of threat for plants and invertebrates, key components of Antarctica's biodiversity, remain limited.
- 10) In the case of **Strategic Goal D**, warming and acidification suggest that ecosystem services from the Southern Ocean will decline, contrary to the situation elsewhere, where no net change is forecast. The regulation of bioprospecting lags the global situation.
- 11) For **Strategic Goal E**, knowledge development is on a par with global progress, but no integrated and comprehensive biodiversity strategy or plan exists for the region.
- 12) In summary, the evidence (**Figure 1**) suggests, surprisingly, for a region so remote and apparently pristine as the Antarctic, that the biodiversity outlook is similar to that for the rest of the planet.

Conclusions

- 13) The five goals of the Strategic Plan for Biodiversity 2011 to 2020 and the Aichi Targets resonate well with the extensive and inclusive work being undertaken through the ATS to ensure comprehensive protection of the Antarctic environment.
- 14) The ATS agreements offer an unparalleled opportunity to improve conservation over the next five years, especially given the Santiago Declaration of ATCM XXXIX-CEP XIX and support for conservation from all organizations involved in the region. Further work will be done by SCAR, the government of Principality of Monaco, and any interested partners, to provide evidence-based tools and approaches to assist with implementation of these opportunities.

Recommendation

Based on the outcomes of this assessment, SCAR and the government of the Principality of Monaco recommend that the CEP:

- 15) Considers the development, in collaboration with its partners, of an integrated biodiversity strategy and action plan for Antarctica and the Southern Ocean that would help give effect to the pledge of the Antarctic Treaty Consultative Parties to further strengthen their efforts to preserve and protect the Antarctic terrestrial and marine environments, and form the basis for an Antarctic and Southern Ocean contribution to a truly global assessment of the state of biodiversity and its management in 2020.

References

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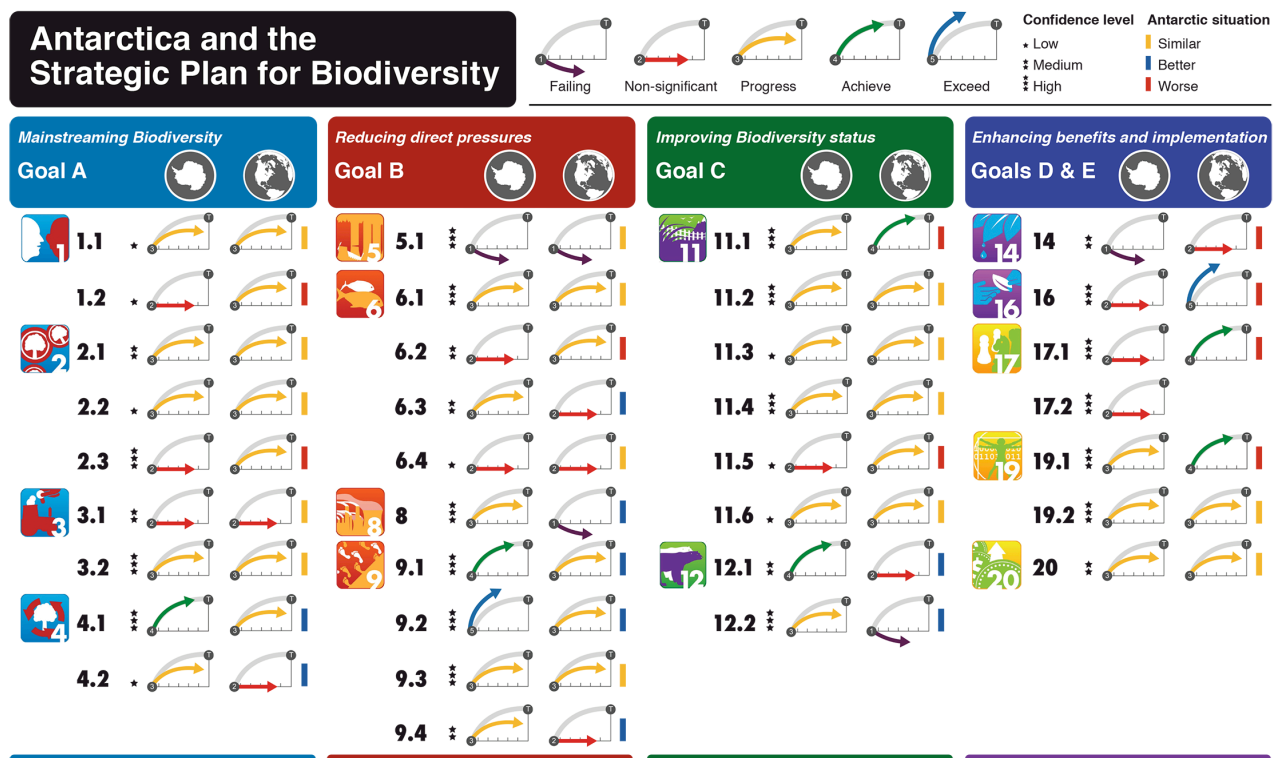


Figure 1. Progress for Antarctica and the Southern Ocean against the Aichi target elements compared with the Global Biodiversity Outlook 4 [6].

Strategic Goal A: 1.1 People are aware of biodiversity values; 1.2 People are aware of steps to conserve biodiversity; 2.1 Biodiversity values integrated into development; 2.2 Biodiversity values integrated into planning; 2.3 Biodiversity values integrated into reporting; 3.1 Incentives harmful to biodiversity reduced; 3.2 Positive conservation incentives applied; 4.1 Plans for sustainable production and consumption; 4.2 Impacts of use within safe ecological limits.

Strategic Goal B: 5.1 Habitat degradation reduced; 6.1 Fish and invertebrate stocks managed sustainably; 6.2 Recovery plans and measures in place; 6.3 No significant fishery impacts on threatened species and vulnerable ecosystems; 6.4 Fisheries within safe ecological limits; 8. Pollutants not detrimental to ecosystem function; 9.1 Invasive alien species identified and prioritized; 9.2 Pathways identified and prioritized; 9.3 Priority species controlled; 9.4 Introduction and establishment of invasive alien species prevented.

Strategic Goal C: 11.1 Seventeen percent of terrestrial and inland water areas conserved; 11.2 Ten percent of coastal and marine areas conserved; 11.3 Important biodiversity areas conserved; 11.4 Protected areas are ecologically representative; 11.5 Protected areas effectively managed; 11.6 Protected areas integrated; 12.1 Extinction of known threatened species prevented; 12.2 Conservation status of threatened species improved.

Strategic Goals D and E: 14. Ecosystem services safeguarded; 16. Agreement on access and benefit sharing for bioprospecting; 17.1 Biodiversity strategy and action plan exists; 17.2 Governments include Antarctica and the Southern Ocean in biodiversity strategy and action plans; 19.1 Biodiversity knowledge base improved; 19.2 Biodiversity knowledge transferred and applied; 20. Financial resources mobilized.

Icons created by the Biodiversity Indicators Partnership/Secretariat for the Conservation of Biological Diversity. Reprinted from Chown *et al.* (2017) *PLoS Biology* 15, e2001656 [8].