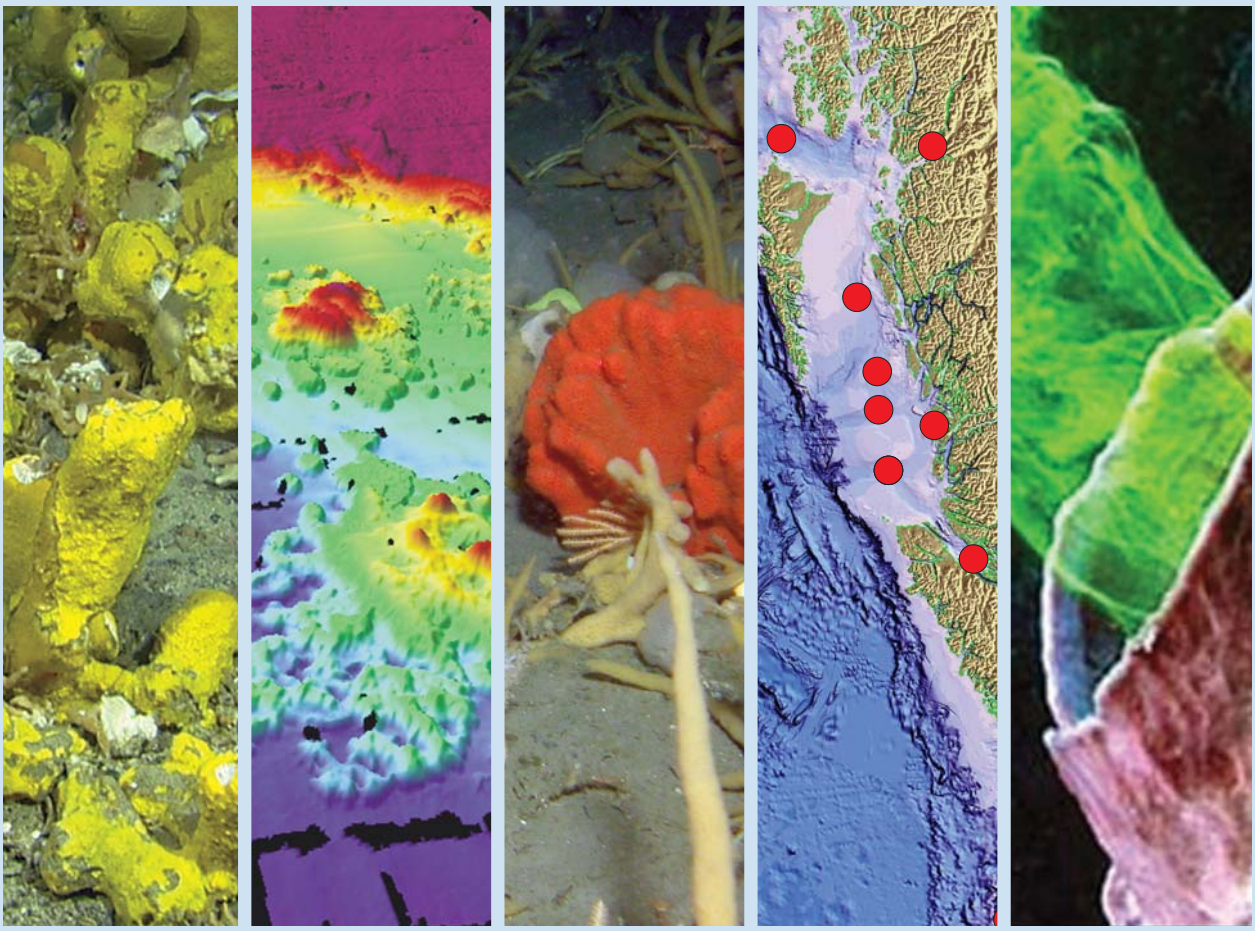
Deep-sea sponge grounds



Reservoirs of biodiversity

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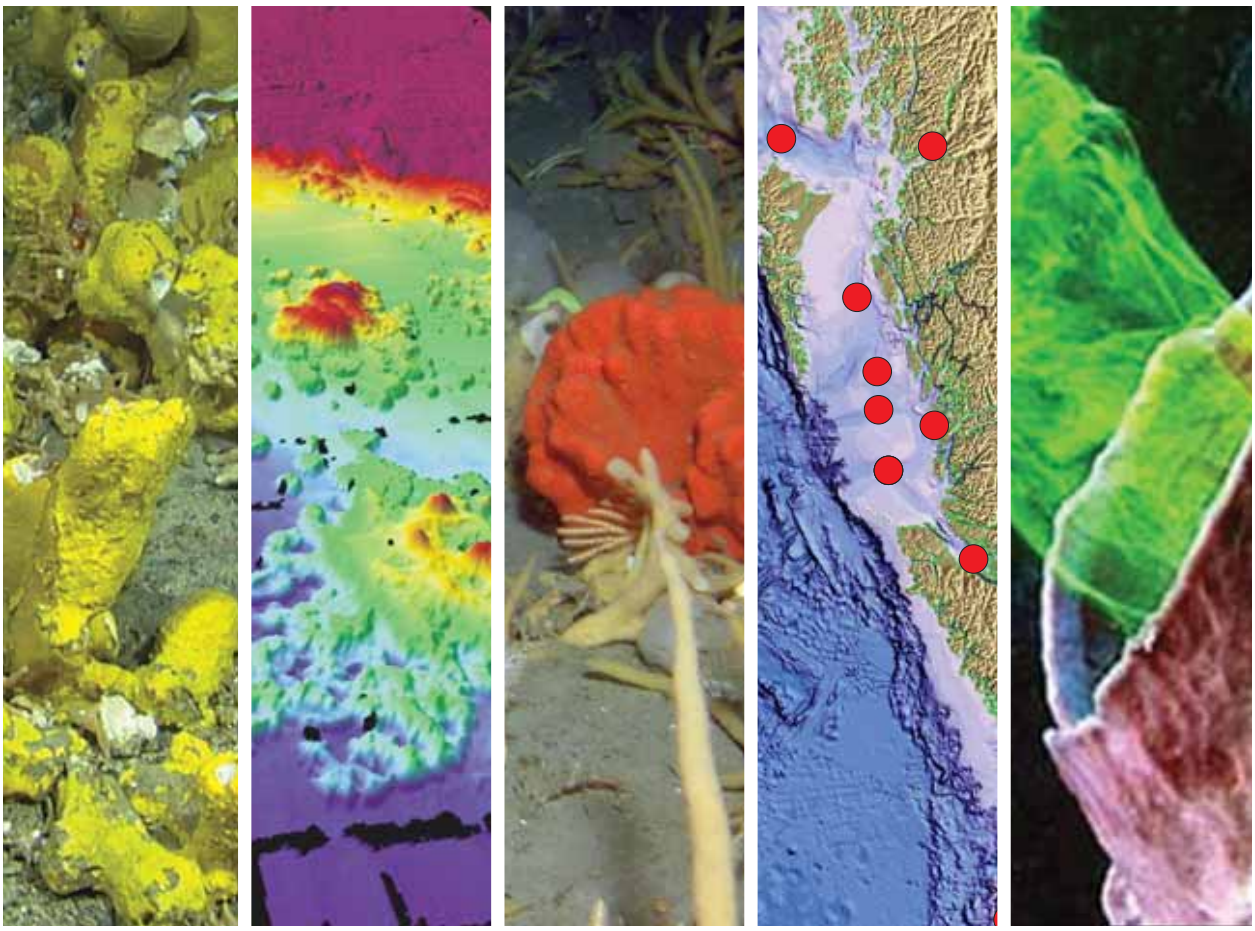
Regional Seas

Deep-sea sponge grounds



Reservoirs of biodiversity

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IMAGES

Front cover and title page (left to right): see pages 11, 35, 42, 33, 20. Back cover: see page 41. Page 8, top to bottom, left: see pages 14, 35, 34, 41, 48; right: see pages 21, 65, 43, 15, 29.

Preface

Long overlooked, deep-water sponge grounds are now emerging as a key component of deep-sea ecosystems, creating complex habitats hosting many other species. They are an important refuge in the deep ocean and they are also reservoirs of great species diversity, including commercially important fish. Playing a similar role to that of cold-water coral reefs with which they often co-occur, sponge grounds are even more ecologically and geographically diverse, consisting of many individual species and occurring in many places around the world.

The rapid development of sophisticated technology has provided opportunities to observe and study deep-water sponges in a way that has never been previously possible. This report highlights what is currently known about deep-water sponge grounds in terms of their distribution, biology, ecology and present-day uses in biotechnology and drug discovery, and introduces case studies of particular deep-water sponge habitats from around the world.

Worrying findings are presented on the impacts of human activities, in particular bottom trawling used by commercial fisheries, and gaps in knowledge are also brought to our attention. We do not yet know the full global distribution of deep-water sponges, or fully understand their biological processes and ecological roles. Furthermore, there is limited scientific understanding of the ramifications of climate change and ocean acidification on the health and continued function of these important and fragile deep-water habitats.

This report highlights the need to minimize the risk of damage to deep-sea sponge grounds through appropriate conservation and careful management, and presents further evidence of the need to improve awareness and understanding to ensure that future generations have the opportunity to explore, study and benefit from these vulnerable deep-water habitats. I therefore welcome the recommendations made by the authors. As a result of their work, deep-water sponge grounds – for so long out of sight – will no longer be out of mind.

Chris Elliott
Executive Director, Conservation
WWF International

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Contents