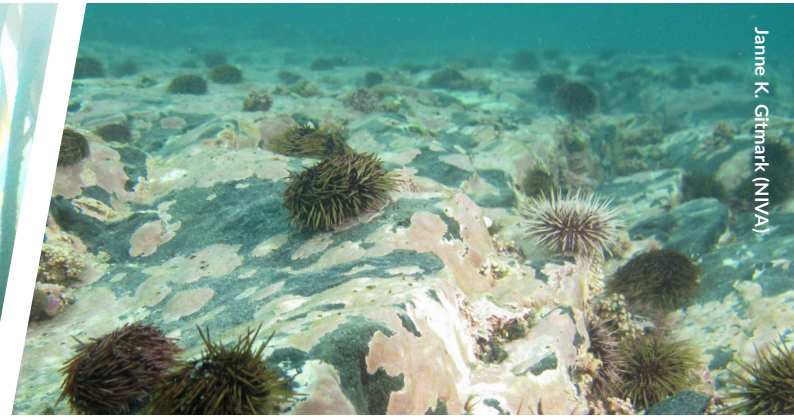


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Protecting and Restoring Blue Forests

An important solution to reduce biodiversity decline

List of sources used to inform the policy brief available here: nbf.no/policy_brief21

Data used in the policy brief and infographics were taken from the following sources:

- A square meter of blue forest bed can be home to over 100,000 small animals: NBFN generalised from “macrofaunal densities frequently exceed 100 000 individuals m⁻² in macrophyte beds” (Christie, et al. 2009).
- Over 80,000 small animals can live on a single kelp plant: Christie, et al. (2003).
- Seagrass meadows are a nursery for over 20% of the world’s largest fisheries: Unsworth et al. (2019).
- Saltmarshes are a habitat for 26 endangered and vulnerable bird species: NBFN analysis of IUCN red list, filtering by ‘CR’, ‘EN’, ‘VU’, ‘Aves’, and habitat (accessed 2 May 2021).
- Mangroves are used by over 450 terrestrial mammals, reptiles and amphibian species: Rog, Clarke and Cook (2016) found 464 species.
- Approximately 40-60% of the world’s kelp forests have been in decline over the past decades: Wernberg et al. (2019).
- 29% seagrass area lost since 19th century: Waycott et al (2009).
- Rate of seagrass decline accelerated to 7% a year: Waycott et al (2009).
- Approximately 25-50% saltmarsh coverage lost the last century: Giuliani and Bellucci (2019); Mcowen et al. (2017); Crooks et al. (2011) and United Nations (2021).
- More than 25% of mangroves lost since 1980: The “over a quarter” statistic has been cited by UNEP (2014) and the United Nations (2021). MA (2005) and Valiela et al. (2001) estimate 35% loss. FAO (2007) estimate a 20% loss between 1980 and 2005.

The policy brief makes the following claim: “While the importance of blue forests is increasingly appreciated, they often receive less focus than terrestrial forests or coral reefs. When blue forests are recognised, the emphasis is primarily on mangroves, to a lesser extent seagrass and rarely kelp forests or saltmarshes.” This statement is based on an analysis of the following documents:

- The Aichi biodiversity targets: The term ‘coastal ecosystem’ is used in target 11. However, specific ecosystems (such as blue forests) are not mentioned. In contrast, target 10 specifically mentions coral reefs and target 5 specifically mentions terrestrial forests.

- Global Biodiversity Outlook 5: The report mentions coral reefs in 29 paragraphs (as well as in tables), mangroves in 8 paragraphs, kelp and seaweed in 3 paragraphs (2 of which are on aquaculture), and seagrass in 2 paragraphs. No reference is made to saltmarshes.
- The Economics of Biodiversity: The Dasgupta Review: The report mentions rainforests in 48 paragraphs, mangroves in 24 paragraphs, coral reefs in 22 paragraphs (including its own box), seagrass in 6 paragraphs, saltmarsh (or salt-marsh) in 5 paragraphs, and kelp (or seaweed) in 4 paragraphs.
- Update of the zero draft of the post-2020 Global Biodiversity Framework: The term 'coastal ecosystem' is not used. However, it is implied with the broader term 'marine ecosystem'. In contrast, coastal ecosystems are explicitly mentioned in the outgoing Aichi targets and the complementary SDG targets 14.2 and 14.5.
- The Norwegian government's Meld. St. 29 (2020-2021): This white paper exclusively focuses on marine ecosystems. The term 'blue forests' is used in two paragraphs. In addition, the document mentions specific blue forest ecosystems and has a box on kelp forests and climate change.

The statement is supported by the conclusions and data presented in Boon (2012), Duarte et al. (2008), UNEP and GRID-Arendal (2020), UNESCO (2020), Wernberg et al. (2015), and Duarte et al. (2020)..

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