Norwegian Blue Forests Network

GRID ARENDAL
A UNEP Partner

NIVA
Norsk institutt for vannforskning


Fritthjof Moy (IMR)

Healthy versus collapsed kelp forest ecosystem in Norway


Janne K. Gitmark (NIVA)

Protecting and Restoring Blue Forests

An important solution to reduce biodiversity decline

Blue forests are not just highly effective carbon sinks. They are biodiversity rich coastal habitats that feed, shelter and protect ecologically and economically important species. Protecting and restoring blue forests can therefore contribute to reducing biodiversity decline. This solution should be fully recognised in both national and international biodiversity commitments and plans.

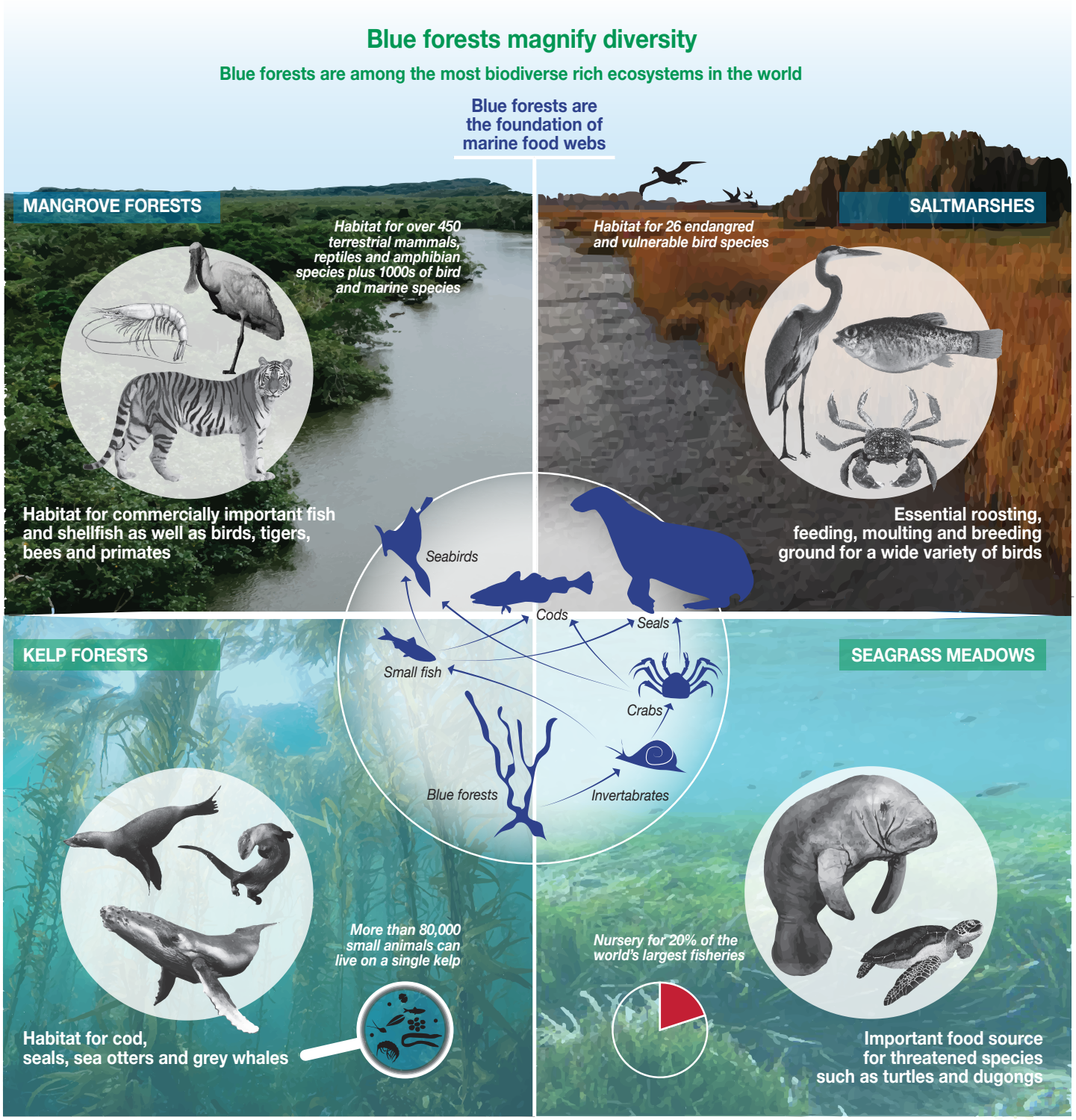
Blue forests are vegetated coastal ecosystems such as kelp forests, seagrass meadows, salt marshes and mangrove forests. These habitats are increasingly recognised for their capacity to provide nature-based solutions to the climate and environmental crisis. They provide important ecosystem services such as capturing and sequestering carbon, producing oxygen, improving water quality, and protecting coastal communities from erosion, storms and flooding. In so doing, blue forests not only mitigate against climate change – they help local communities adapt. These high-value natural capital assets also contribute to tourism and our well-being, serve as a home and food source for fish and other commercially important species, and magnify coastal biodiversity.

Blue forests nurture biodiversity

Blue forests are the foundations of biodiversity rich ecosystems. Thousands of invertebrate, fish, bird and mammal species rely on blue forests for spawning, nursery, habitat, protection and food. Blue forests slow water currents, dampen waves, and offer concealment from predators and shelter from storms. As a result, many marine species spend all, or most, of their lives within and around blue forests. These include crabs, lobsters and prawns, as well as smaller plants and animals such as snails and algae that live directly on the forest-forming marine plants. Indeed, a square meter of blue forest bed can be home to over 100,000 small animals from hundreds of different species.

Many commercially and ecologically important marine species also spend critical periods of their life cycle in these habitats. Cod, seatrout, parrotfish, grouper, octopus, sea otters, sea lions, seals, grey whales, migratory shorebirds, puffins and gulls are amongst those that rely on blue forests for safety and food.

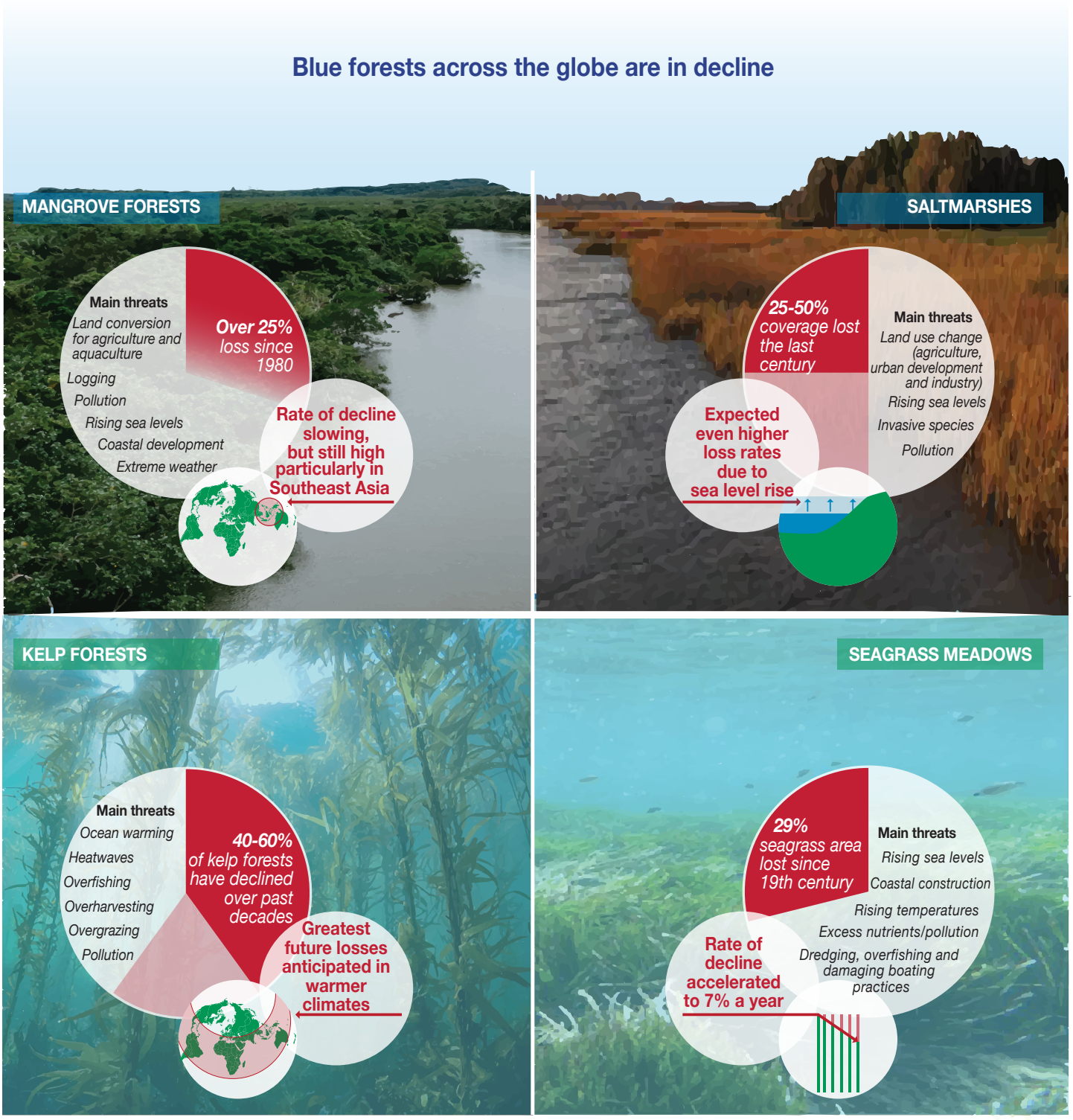
Blue forests' ecological footprint and effects on biodiversity extend far beyond the narrow coastal areas. Kelp, mangrove and seagrass leaves are, for example, transported to beaches, the deep sea and other ecosystems where they enrich and fuel additional food webs where primary production would otherwise be limiting.

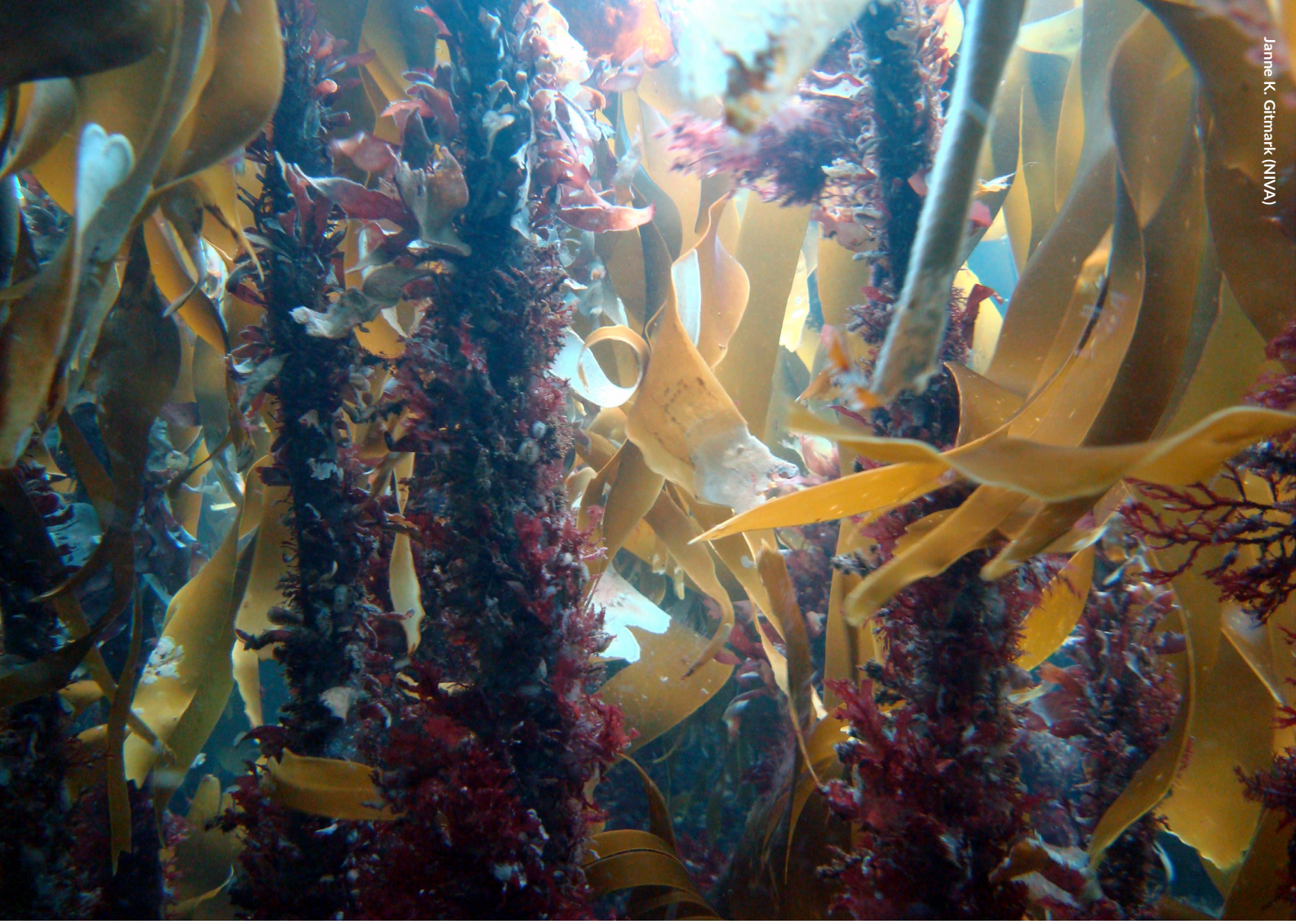


Action is needed to reverse blue forests decline

The scale and pace at which blue forests are declining in many parts of the world is alarming. Further loss of blue forests will have a ripple effect on biodiversity. Scientific studies have found a clear link between the health of coastal habitats and population growth in fish stocks and other commercially and ecologically important species.

Reversing these trends will require identifying and addressing the activities that negatively impact blue forests through ecosystem-based management. Actions addressing large-scale as well as local threats usually require mobilisation across sectors, levels of governance and private-public divides. The range of local solutions includes marine spatial planning, designation of marine protected areas, and restoration. Several promising restoration techniques are currently being tested and rolled out. Like any area-based conservation method, the effectiveness of restoration depends on the larger-scale environmental conditions favouring long-term survival.





Janne K. Gitmark (NIVA)

Blue forests can help us achieve the proposed biodiversity goals

This October, leaders will gather for the UN Biodiversity Conference to negotiate and commit to a post-2020 Global Biodiversity Framework. Unlike the 2011-2020 Aichi targets, the proposed text does not highlight specific ecosystems. However, coastal ecosystems should ideally be specified in phrases such as "freshwater, marine and terrestrial natural ecosystems."* Thriving and sustainably used blue forests are a solution to many of the targets proposed by the draft post-2020 framework. This includes target seven on climate change mitigation, adaption and disaster risk management, and target eight on nutrition, food security and health. The draft framework also aims to protect and conserve at least 30% of the planet, with a focus on "areas particularly important for biodiversity." Blue forests are a clear choice when designating such areas.

Blue forests need to be recognised and prioritised

Blue forests need to be recognised and prioritised when implementing the forthcoming Global Biodiversity Framework – at the global, regional, national, and local level. 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. Yet blue forests are amongst the most productive and dynamic ecosystems in the world. If we want a healthy and biodiverse ocean, we must ensure that blue forests are protected and restored.

*While the draft framework subsumes coastal ecosystems within the term 'marine ecosystems', global frameworks such as Aichi target 11 and SDG targets 14.2 and 14.5 have opted for terms such as 'coastal and marine areas' and 'marine and coastal ecosystems.'

For a list of resources drawn upon to produce this policy brief see ***nbfn.no/policy_brief21***