Good afternoon everyone and welcome to this webinar co-convened by six Horizon Europe projects that all have in common that they deal with blue forests.

Blue forests refer to productive coastal ecosystems, and include mangrove forests, seagrass meadows, tidal salt marshes, and kelp forests, all crucial for maintaining marine biodiversity, supporting fisheries, filtering water, and protecting shorelines from erosion and storm surges.
They are also highly efficient in storing and sequestering atmospheric carbon, known as "blue carbon," which makes them vital for addressing climate change.

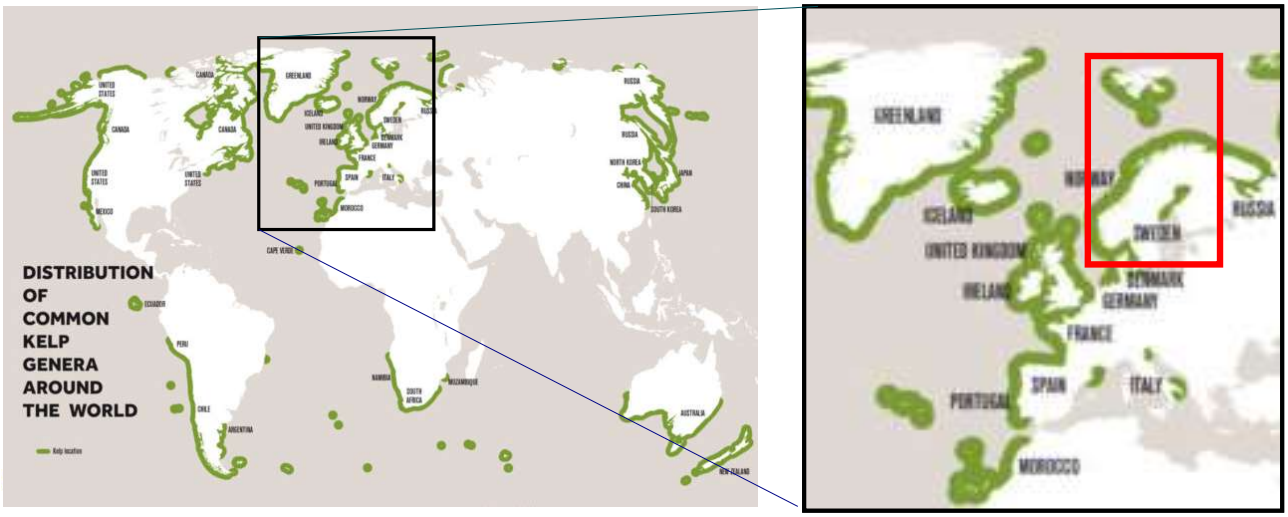
Beyond the six projects, the Norwegian Blue Forests Network is also a co-convener.

My name is Sindre Langaas. I am a Chief Development Officer at the Norwegian Institute for Water Research and has the pleasure of being the moderator. The webinar is technically managed by the coordinator of the BlueMissionAA project, the AIR Center in Portugal, and their Catarina Duarte.

The webinar is one in the BlueMissionAA webinar series “Atlantic & Arctic Lighthouse Weekly Hour”.

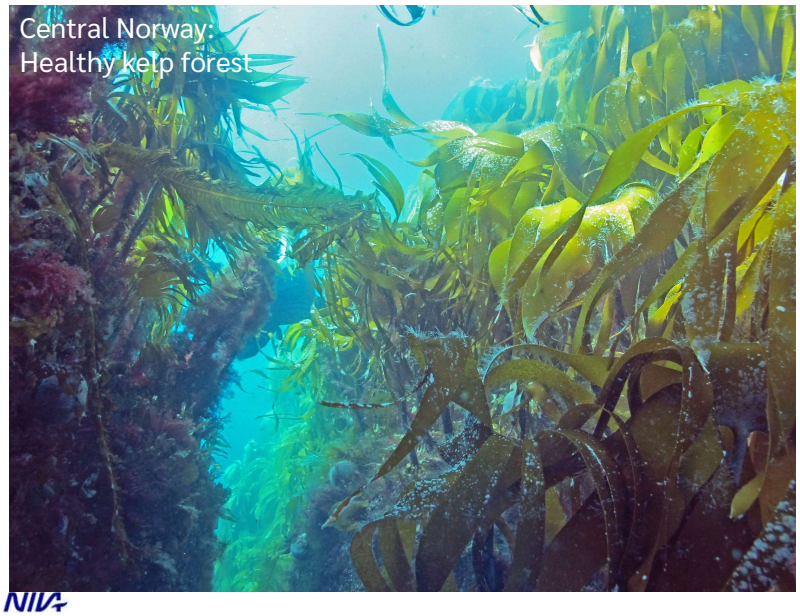
Kelp forests – geographical distribution

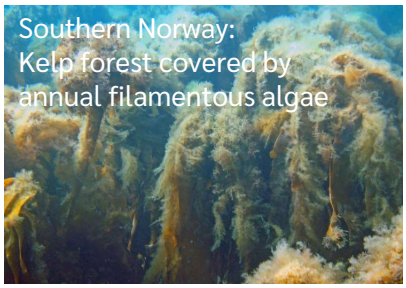
United Nations Environment Programme & Norwegian Blue Forests Network (2023):
Into the Blue: Securing a Sustainable Future for Kelp Forests.
https://wedocs.unep.org/20.500.11822/42255.



One of our speakers today, Ivan Conesa Alcolea, will in his presentation cover all four major blue forest ecosystems when specifically adressing the blue carbon dimension of the blue forest ecosystems. Yet, the rest of the webinar will focus upon kelp forests only. And in Norway only.

Geographically speaking, the kelp forests are found in temperate and arctic regions of the world oceans, as depicted in this simplified global map taken from the autoritative kelp report «Into the Blue: Securing a Sustainable Future for Kelp Forests» published jointly by the United Nations Environment Programme and the Norwegian Blue Forests Network in 2023. When looking at the clip-out of European part of the global map it is evident that kelp forests predominantly are found in the Atlantic Arctic Lighthouse Area when considering the Mission Ocean geography, yet with some limited kelp areas in the Baltic Sea, the North Sea and the Mediterrean sea.





All photos: Norwegian Blue Forests Network

Norway with all its fjords has the world's second longest coastline, only beaten by Canada. Bioclimatically kelp is found along the entire coast making Norway a global kelp superpower. However, in the southern parts and the northern parts the kelp forests experience serious problems. In north the main direct cause is the excessive grazing by sea urchins. In south the main cause is the excessive nutrient loads, eutrophication and annual filamentous algae.

These major problems have led the Norwegian Parliament request the Government to prepare a national plan for restoration of its degraded kelp forests. The work to prepare this national kelp restoration plan is starting up just now. A major national conference was organised late last year, and the three presentations by Norderhaug, Rinde and Sander draws upon presentations given at this national conference.

Today's agenda

Time	Title		Speaker	Affiliation
14:05	European research and innovation in support of marine coastal blue carbon ecosystems		Ivan Conesa-Alcolea, Policy Officer	DG Research & Innovation
14:15	Loss of kelp forests in Northern Norway		Kjell Magnus Norderhaug, Principal Scientist	Institute for Marine Research Norway (IMR)
14:25	Different methods for restoring kelp forests in Northern Norway		Eli Rinde, Senior Researcher	Norwegian Institute for Water Research (NIVA)
14:35	Norwegian kelp governance and management, from harvesting to restoration		Gunnar Sander, Senior Researcher	Norwegian Institute for Water Research (NIVA)
14:50	Question & answers, discussion		All	

Here you see today's agenda. Some of the speakers have slightly different titles than announced earlier as we decided to focus primarily on the kelp forests in Northern Norway. While many of you probably will have to leave at 3 o'clock we will continue the discussion until quarter past three for those who can continue a bit more.

How to interact with speakers in today's webinar

Quick questions to speakers for clarification:

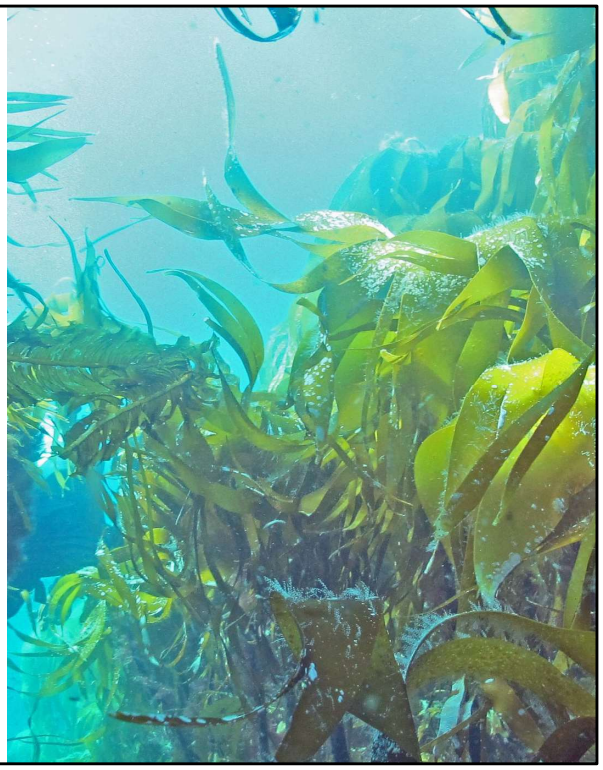
➢ Use the **chat** in Zoom

Answers directly after presentation (orally) or in the chat afterwards.

More extensive questions or discussion points to be addressed **after** all presentations:

➢ Use the **Q&A** in Zoom throughout

➢ Use **raised hand** in the final Q&A part



Here you see how you can interact with the speakers. If you have quick questions to speakers for clarification, please pose them in the chat. If you have bigger questions or discussion points, please post them in the Q&A part of Zooms. In the final discussion part of the webinar, you can also use the "raised hand" and pose your question orally.

Without further ado, I am pleased to welcome our first speaker:
Ivan Conesa-Alcolea is a Policy Officer at the European Commission's DG for Research & Innovation, focusing on marine biodiversity and ecosystems. He manages research and innovation policies, collaborative projects, and EU funding programs related to these areas. His work supports key EU initiatives, including the Mission to Restore our Ocean and Waters by 2030.

Kjell Magnus Norderhaug is a Principal scientist at the Institute of Marine Research IMR Norway. His main field of interest is dynamics of coastal ecosystems with particular focus on kelp forest ecology and trophic interactions. He is also appointed by IMR to lead the the follow-up of the Parliamentary decision on developing a national plan to restore Norways kelp forests, a task commisioned by the Ministry of Trade, Industry and Fisheries.

Eli Rinde is a marine biologist and works as a senior researcher at Norwegian Institute for Water Research. She has a PhD in kelp forest ecology, and more than 30

years of experience from ecological studies of kelp forests and seagrass meadows.

Gunnar Sander is a Senior Researcher at the Norwegian Institute for Water Research (NIVA). He holds a PhD in social science and has extensive experience in marine science and management, including environmental monitoring and ecosystem-based management. His background includes work at the Norwegian Polar Institute and the European Environment Agency prior to his current position in NIVA.