



»Governing the oceans of tomorrow: How ocean monitoring delivers on the blue arm of the Green Deal«

As main climate regulator, provider of 4.5 million direct jobs and origin of energy, oxygen, food and raw materials, the oceans, seas and coastal areas are the fundamental source of our livelihood and well-being. Yet, human activities expose these extremely vulnerable ecosystems to tremendous pressures.

The European Commission highlighted in the [New approach for Sustainable Blue Economy](#) how the greening of economic activities, clean energy harvesting, circular economy practices, biodiversity restoration and preservation, nature-based solutions and sustainable food systems can establish a resilient and competitive blue economy. There is no green without blue, and there are no solutions without research and innovation.

»Developing innovative sustainable sea and ocean technologies is a huge effort. It is impossible to develop them single-handedly. International collaboration is one of the most promising approaches.«

Carlos Jahn, Head of Fraunhofer CML

The [Innovation Platform Sustainable Sea and Ocean solutions ISSS](#) unites ten Research and Technology Organisations from nine European countries to provide knowledge and develop intelligent technologies as well as materials for a sustainable blue economy.

»The vision of ISSS is also the mission of the EU - to work on a sustainable blue and green world. Science of course is key. We need to have evidence-based policy making based on reliable data and scientific research. Sometimes I think politics should follow the knowledge we get out of research much more than what politics actually is doing.«

Rasmus Andresen, Member of the European Parliament and Patron of the webinar

Our first edition of the ISSS Talking Blue Sustainability Series focused on innovative ocean monitoring technologies for cutting-edge solutions to deliver data needed for evidence-based policy making.

The [+ATLANTIC CoLAB](#) (Portugal) supports the preservation and sustainable harness of the Atlantic Ocean by creating knowledge following an Earth system approach and integrating information from deep sea to space. In the Portuguese project [ASTRIIS](#), knowledge gaps are filled by combining various data sources like remote sensing data, in-situ monitoring data and modelling data, harmonising it, and making it available on one platform to make informed and efficient decisions.

To ensure the efficient enforcement of regulations on ship emissions, [TNO](#) (Netherlands) and [Fraunhofer](#) (Germany) work together with their partners in the H2020-project [SCIPPER](#). The project enables the monitoring and controlling of ship emissions and air quality as well as the assessment of



different regulatory enforcement scenarios and their impact, thereby contributing to the [International Convention for the Prevention of Pollution from Ships](#).

Our experts from +ATLANTIC, Fraunhofer and TNO left no doubt that innovative technologies, international collaboration, and shared infrastructures are key to the sustainable use of the oceans and sea. More than that, they emphasised the need to manage the complexity of the challenges and ocean data by first integrating multiple technologies and, subsequently, translating research results into policy-making that can deal with grand challenges and societal well-being, as TNO is doing with its Wise Cube.

»Making complexity manageable does not mean that you make it simple. It gives insight in what the dialog should be about. So, what values do we prioritise given the context and the circumstances.«

Josephine Sassen, Senior Integrating Scientist, TNO

A common understanding requires extended monitoring activities and political support for the development of innovative applications to close the massive knowledge gaps about water, marine and maritime ecosystems. Establishing monitoring as integral part of legislation will enable efficient and fitting measures. Research and Technology Organisations can create a bridge between various societal actors, whereas politics should appreciate that there are no quick fixes to the hyper-connected and complex ocean environment.

»Big societal issues of the blue economy are very complex, highly interconnected and have many negative effects. We need to approach this in a very systemic way.«

Nuno Loureiro, Head of Data Science and Development, +ATLANTIC CoLAB

We need empowering frameworks to access reliable data, upscale integrative monitoring technologies, and establish a persistent dialogue.

Our joint endeavours will facilitate impactful policy making and the transformation of the blue economy value chains to sustainability, competitiveness, and resilience.

ISSS will realise this goal together with partners from research, industry, politics, and society by sharing knowledge to create perspectives and spark solutions all over Europe and beyond.