Call for action

ONE OCEAN SUMMIT UNIVERSITY

When the One Ocean Summit came out, the University of Brest (UBO) mobilized its partner networks to initiate a joint effort from early career researchers for the One Ocean Summit.

Since January, about fifty PhD students and postdoctoral researchers from various nationalities and disciplines have been working together to propose a common view of the challenges and opportunities of research and research training in the context of the United Nations Decade of Ocean Sciences for Sustainable Development. Their common objective is to produce a Call for Action which can appear as a milestone. Based on the dynamics launched during the One Ocean Summit, the early career researchers are proposing their peers to join their effort to enrich the initiated work and will present this Call for Action to the United Nations Conference on the Oceans, organized in Lisbon at the end of June 2022.

A l'annonce du One Ocean Summit, l'Université de Bretagne Occidentale (UBO) a pris l'initiative de mobiliser ses réseaux de coopération pour initier une contribution des jeunes chercheurs au One Ocean Summit.
Depuis janvier, une cinquantaine de doctorants et post doctorants de diverses nationalités et disciplines ont travaillé de façon conjointe pour fédérer les expertises et dynamiques en présence afin de proposer un regard commun sur les enjeux de la recherche et de la formation à la recherche dans le contexte de la Décennie des Nations Unies pour les sciences océaniques au service du développement durable. Ils @visent à produire un Call for Action. La version présentée ci-dessous est un point d'étape. Sur la base de la dynamique lancée pendant le One Ocean Summit, les jeunes chercheurs impliqués appellent leurs pairs à venir les rejoindre pour enrichir le travail initié et porter le Call for Action vers la Conférence des Nations Unies sur les océans qui se tiendra à Lisbonne fin juin 2022.

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#1 OCEAN GOVERNANCE RESPONDING TO CHANGE

1.1 Reinforce integrated approaches; horizontally (between all the maritime stakeholders) and vertically (between local, regional and international scales)

Ocean governance must be established between different actors (such as NGOs, government agencies, communities, industries), sectors (such as fisheries, marine renewable energy, shipping), and between local, regional and international scales.

- Encourage polycentric governance to ensure the participation of civil society and private stakeholders
- Apply participatory modeling and the use of serious games for example, to boost these interactions and foster integrated approaches in different scales

1.2 Develop an international platform to integrate research in ocean governance, in order to define the good ecological status of the Ocean and systematically apply the precautionary principle

A strong science-policy interface is needed to support evidence-based approaches to governance:

- Encourage research involvement in international ocean governance in all its fields
- Focus on experimental sciences to define the good ecological status of the Ocean and rely on social sciences to assess the feasibility and social acceptance of ocean public policies
- Create International Panel on Ocean Change

#2 SUSTAINABLE TOURISM IN THE BLUE ECONOMY

2.1 Shaping the new tourism in coastal Ocean

To sustain blue tourism, these following recommendations could secure healthy Ocean:

- Prevent their degradation by restricting tourism carrying capacities of tourists in sensitive areas (*e.g.* MPAs)
- Manage the overall touristic flow in coastal areas
- Implement eco-friendly practices for boating activities (including leisure boats and cruise ships) such as ecological moorings, speed limits (*i.e.* no-noise zones) and cruise limitation
- Encourage marine resorts to promote sustainable activities

2.2 Raising awareness and establishing financial compensation for damages

The compassion and connection of tourists towards the Ocean will be raised through their education by local communities.

- Promote beach cleanup as a touristic activity and implement a set of measures to tackle pollution from tourism
- Implement a score on travels reflecting a comprehensive carbon footprint content
- Applying the principle "You harm, you pay" by local stakeholders as well as establishing penalization of harmful practices through green taxes to be reinjected into restoration activities
- Ban facilities exploiting marine life for entertainment

#3 POLAR OCEANS

3.1 Ensure an optimal state of the polar Oceans

- Agree on an international definition of the state of the poles in the pre-industrial era in terms of physical boundaries and biodiversity status
- Engage in more process-oriented research in the polar regions to act according to the current state of deterioration to better preserve the well-being of this unique region, its biodiversity and its ecosystem services

3.2 Expand Marine Protected Areas in polar regions

- In the Arctic, convert high seas areas into marine protected areas so that legislation applies to all states equally
- In the Southern Ocean, implement new and expand marine protected areas

These measures will also limit ship movements related to fishing, tourism, research, seabed mining, etc.

#4 WHAT AND WHOM ARE WE PROTECTING

4.1 Reinforce representative protection and sustainable management of all the Ocean in face of a changing environment

- Define protection using internationally-agreed, evidence-based criteria
- Secure the conservation of all ecosystem types (including corridors) in a representative manner
- Ensure adaptive marine spatial planning anchored in ecosystem-based approaches, allowing dynamic management tools (*e.g.* mobile MPAs) and integrating the land-sea interface (*e.g.* to address land-based pollution)
- Secure transparent integrated impact assessments and monitoring strategies (with coercion and rewarding of best practices)
- Transition towards non-destructive practices and restore degraded ecosystems

4.2 Strengthen the science-policy-society interface to build resilient societies protecting ecosystem services

- Transition towards sustainable socio-ecosystems to preserve resilient ecosystem services and cultural heritage for all generations
- Ground decision-making processes onto scientific evidence
- Ensure collaborative management of marine resources, with all stakeholders at all levels and time-scales
- Align tools, treaties and institutions to secure coherence in ocean management
- Allocate sufficient funding for effective management

#5 MEDITERRANEAN 2030

5.1 Reach and exceed the commitment to protect 30% of the Mediterranean Sea

The Mediterranean Sea is under tremendous pressure and needs immediate reinforced protection actions such as:

- Increase the number of MPAs and their protection level to achieve a good ecological status
- Set up a pollution index (*e.g.* PollutoScore) to encourage urban areas to reduce pollution along their coasts
- Launch a joint monitoring program between Mediterranean countries to implement ecological restoration actions for ecosystem engineer species, controlling invasive species and considering genetic diversity
- Use current scientific knowledge to implement nature-based solutions commonly supported by scientists and stakeholders

5.2 Implement a transboundary program to foster a mutual interest for the protection of the Mediterranean Sea

To protect the Mediterranean Sea, a joint effort must be implemented throughout the whole basin. Within existing networks (MEdECC, UfMED), a transboundary program should support the creation of:

- A common training for local youth to raise their connection to the Mediterranean Sea
- Mentorship in coastal laboratories to promote joint activities between scientists from the northern and the southern countries
- A common funding tool to boost measures against pollution, particularly in the southern countries

#6 THE SCIENCE WE NEED FOR THE OCEAN WE WANT

6.1 Encourage a more collaborative and open science that is co-designed with stakeholders for a better management and protection of the Ocean

Due to ecosystem differences in distinct environmental regions, local and indigenous populations, scientists, NGOs, and other marine actors often provide complementary knowledge. The sharing and distribution of this locally generated knowledge is paramount:

- Facilitate the mobility and exchanges of scientists, including Early Career Researchers, with local marine actors
- Set up dedicated platforms for scientist-policy interactions to establish evidence-based policy action plans
- Increase funding of marine sciences and distribute financial resources equitably across disciplines and geographies for the development of concrete solutions to help local populations adapt to ocean changes and to ensure its protection

6.2 Support transdisciplinary and holistic research focused on integrating, valorizing and improving data from different fields in order to better understand the Ocean in the face of changes

Over the last decades, ocean data of different types have been widely collected to understand different aspects of the Ocean at different scales. We recommend to:

- Develop new data management and analysis tools to facilitate ocean monitoring surveillance
- Enhance sustainable research practices that resemble and respect nature
- Integrate the new knowledge coming from the different fields of ocean sciences

- Encourage cross-disciplinary projects to make major advances in the ocean sciences

#7 THE OCEAN PROVIDER in 2030

7.1 Implement sustainable uses and practices of the Ocean and its resources

The Ocean is facing multiple anthropogenic pressures challenging its sustainability and provision of nutrition and health. We can act now to preserve its ecosystem services by:

- Developing ecosystem approaches to fisheries management and integrated multi-trophic aquaculture systems to secure food provision
- Promoting seafood by-products recycling and consumption of new food resources such as algae, to release pressure on heavily exploited stocks
- Defining eco-scores for all seafood products based on environmental impacts and ensuring equal access to high nutritional values
- Exploring living resources (invertebrates, algae, …) and biomimicry towards innovative therapeutic applications

7.2 Promote integrated and fair spatial management for all provisioning services

The Ocean is getting crowded (offshore aquaculture, increase in trade and shipping, marine energy, increasing coastal populations) putting pressure on coastal waters. There is a need to:

- Manage these maritime activities all together and consider all human-environment interactions in a holistic approach
- Promote synergies between activities and territories such as integrating marine renewable energy development with fisheries activities while considering coastal communities' acceptance
- Safeguard cultural heritage and recreational uses within the expanding blue economy

#8 INVESTING IN BLUE, PUBLIC-PRIVATE PARTNERSHIPS FOR THE OCEAN

8.1 End harmful subsidies and scale up sustainable blue finance

- Redirect financial flows from harmful subsidies to protection
- Scale up blue investments, considering both biodiversity and climate
- Use innovative finance tools (*e.g.* public-private partnerships following sustainability guidelines, carbon markets, include "do not harm" for the Ocean into the EU taxonomy)
- Strengthen capacity of ocean managers and finance partners so they can work together
- Improve corporate responsibility
- Secure fair and equitable sharing of benefit from marine resources' exploitation (Ocean as common)
- Expand funding for assessment, management and monitoring

#9 EDUCATE TO THE SEA, OCEAN FOR YOUTH

9.1 Make the Ocean an integral part of an environmental education program

Educational structures are a powerful solution to promote Ocean literacy and raise the awareness of the global threats. Councils in charge of building school's educational programs

should implement an environmental curriculum including the Ocean to enhance familiarity in children to the oceanic world. Such programs should include projects related to the Ocean for each level, structured around science-based interactive and in-person experiences to learn the goods and services the Ocean provides.

#10 WHICH EUROPE OF THE SEA?

10.1 Make the protection of the environment a systematic award criterion for EU funds in maritime sector

- Ensure that projects supported by EU funds fulfill precisely defined environmental and social criteria at each level (European, national and subnational), for example in the EMFAF (European Maritime, Fisheries and Aquaculture Fund) funding processes
- Pay particular attention to ensure that social equity and ecological issues do not vanish in front of economic priorities
- Allocate specific funds to research on ecological and health status of maritime and ocean world

10.2 Strengthen the EU's technical expertise and its competences in the maritime and ocean sectors by establishing a Sea European Agency

Enforcement powers of EU maritime policies are shared between member States and various agencies (especially **European Environment Agency, European Maritime Safety Agency, European Fisheries Control Agency, Frontex**). Given the multiplicity of issues concerning the maritime sector, we recommend to create a single European agency that would:

- Develop a more integrated view of these issues
- Provide a strong expertise to monitor compliance with EU maritime law
- Give technical support to member States
- Facilitate public involvement and participation of all stakeholders concerning EU maritime and ocean policies