

2024 OCEAN DECADE CONFERENCE

RECOMMENDATIONS

URBAN COASTAL ECOSYSTEM RESTORATION IN THE MEDITERRANEAN SEA

Resilience of urban marine
ecosystems, a dialogue
between two decades



2021
2030 United Nations Decade
of Ocean Science
for Sustainable Development

Content

1. Background.....	3
2. The Ocean Cities Network	3
3. The Mediterranean Cities workshops	4
4. Mediterranean cities recommendations about coastal ecosystems restoration initiatives in the Mediterranean Sea	6
5. References.....	9
6. Contributors.....	10

1. Background

The United Nations has issued important impulses for taking action mobilising stakeholders in joint initiatives to address the current environmental crisis the planet is facing. Specifically, in the last years the IOC-UNESCO Resolution XXIX-1(1)^[1], adopted in June 2017, and the UN General Assembly Resolution 73/284^[2], in March 2019, promoting two calls to action: the **UN Decade of Ocean Science for Sustainable Development (2021-2030)**, under the slogan *The Science We Need for the Ocean We Want*, and the **United Nations Decade on Ecosystem Restoration (2021-2030)** to revive the natural world by 2030. Under the **Ocean Decade**, stakeholders are committed to a **cleaner and healthier ocean by 2030**, based on: improving knowledge of sustainability and sustainable use of resources; building capacity for comprehensive knowledge of the ocean; and promoting new evidence for sustainability. While under the **Ecosystem restoration** for the next decade, the community seeks to generate the knowledge and mobilise the resources to restore degraded or destroyed ecosystems and conserve pristine areas. Healthier ecosystems with richer biodiversity provide greater benefits and services to humanity.

The **European Commission** committed to supporting the quality and recovery of coastal areas through the **Marine Strategy Framework Directive** and the **Water Framework Directive**. Improved by the **EU Biodiversity Strategy for 2030** subsequent **Nature Restoration Law** approval in 2023, in accordance with the international requirements and civil society demand. Supporting the Member States commitments adopted during the biodiversity COP15 the **Kunming-Montréal Global Biodiversity Framework**^[3], the Nature Restoration Law, although recently slowing down, is fostering the **progressive and sustainable recovery of nature** across the EU's land and seas. The deployment of these agenda requires a firm commitment of local authorities and the generation of the required environment to allow the upcoming actions.

2. The Ocean Cities Network

The 8th of June 2021 the **Ocean Cities Network (OC-NET)**^[4] programme received the endorsement by IOC-UNESCO under the Ocean Decade. The ten years programme promotes the dialogue between public administrations, research centres with the support of civil society to get evidence- based policy for the coastal cities of the future.

Under the slogan “**we are one ocean, one health, many culture and global justice**”, the OC-NET’s activities are carried out in the framework of three areas of study:

- **Health.** Monitoring and assessment of coastal ecosystems and sustainable use of marine assets within a One Health perspective promoting research and innovation.

- **Culture.** Promoting citizens' relationship with the ocean through ocean literacy and strengthening the linkage with the territory enhancing traditional ecological knowledge.
- **Justice.** Building a just and sustainable social and economic transition in coastal areas within a fair, equitable and coherent policy framework fostering dialogues, recommendations and guidelines for and with decision-makers.

The network's partners, currently more than 20 institutions from around the world, are the driving force in co-designing actions and identifying opportunities and strategies at regional and global levels. The partners' activities are supported by civil society organisations that have signed a commitment with OC-NET.

3. The Mediterranean Cities workshops

The UN Ocean Decade 2021-2030 fosters **synergies** through **research community, decision-makers, private sector** and **civil society** towards effective solutions facing the urgent crisis enhancing innovation, dialogue and public awareness on marine ecosystems focusing on the environment and human health.

As part of this scenario, the coastal cities of **Barcelona** (ES), **Ancona** (IT) and **Mersin** (TR) organised **Mediterranean roundtables** across the three coastal cities to facilitate the exchange of knowledge and experiences among stakeholders on the **restoration urban coastal ecosystems** as a contribution to achieving the **SDGs by 2030** maintaining the sustainability and well-being of cities. The multi-stakeholders discussion promoted sustainable development in its three dimensions—economic, social, and ecological—to provide tools to face climate change, end poverty, and build peaceful societies respecting human rights. The three local administrations with the support of the Institut de Ciències del Mar CISC, the Polytechnic University of Marche, MedCities and the Middle East Technical University (METU) Institute of Marine Sciences, have created an open hub on the quintuple helix in urban coastal areas.

- **Barcelona workshop. Marine Urban Ecosystem Restoration with Nature-Based Solutions**, 13th of June 2023, hosted by Institut de Ciències del Mar CSIC in collaboration with the Barcelona City Council, the BlueNetCat network, the Professional Association of Biologists of Catalonia, and the Generalitat of Catalonia, Barcelona (ES)
- **Ancona workshop. Sea in cities**, 15th of February 2024, hosted by Polytechnic University of the Marche in collaboration with the Municipality of Ancona (IT)
- **Mersin workshop. Restoration of Urban Coastal Ecosystems with Nature-Based Solutions**, 1st of March 2024, hosted by the Mersin Metropolitan Municipality with the contributions of METU Institute of Marine Sciences,

MedCities, MESKi, Mersin Chamber of Shipping, Turkey Mediterranean Hub,
Mersin (TR)

In the framework round table called **Innovative initiatives for integrated coastal management** representatives of the three cities have presented the following **recommendations for urban coastal ecosystems restoration** activities in the Mediterranean area at the **Ocean Decade Conference 2024** (Barcelona). The workshops in the Mediterranean region were developed as part of the Justice axis of OC-NET with the direct participation of the above quoted Mediterranean members. Support was provided by the EU project ANERIS^[5], which included the promotion of citizen participation through the engagement of communities of practice. The Spanish government provided funding through the accreditation of the 'Severo Ochoa Centre of Excellence' (CEX2019-000928-S).

4. Mediterranean cities recommendations about coastal ecosystems restoration initiatives in the Mediterranean Sea

Recommendations for urban coastal ecosystems restoration initiatives in the Mediterranean Sea at the Ocean Decade Conference 2024 (Barcelona). These recommendations take into account the results of dialogues between practitioners and scientists that were held in the context of the Decade of the Ocean, with a focus on coastal resilience^[6].

1. **Dedicated research programmes.** Coastal cities and urban areas have grown dramatically in recent decades and are often perceived as stressors, particularly as sources of pollution to the marine environment. Coastal cities and urban areas also face threats like climate change, pollution, coastal erosion, habitat loss and overexploitation of marine resources. However, coastal research in urban areas is still scarce^[7] to understand urban coastal ecosystems and their resilience to stressors. Coastal urban ecology encompasses, according to Pickett's complexity of urban ecology paradigms^[8] ecology for the city with perspective of knowledge of ecology in and ecology of the city.

Encourage research programmes in coastal urban ecology to foster the study of urban coastal ecosystems, including marine ecosystem restoration.

2. **Unified tools definitions.** There are on-going debates within the scientific community on the concepts and application of the terminology **restoration**, **recovery** and **resilience** in coastal areas. A further discussion on how to integrate the passive and active restoration by means of key functional species in the management measures is in progress. Thus the promotion of a commonly accepted vocabulary producing accessible, understanding and standardised tools for decision making processes.

Advocate for a participatory discussion with stakeholders on the principles of biological conservation and the theoretical debates surrounding restoration in coastal areas, with the aim of reaching a consensus on the definitions for a better

3. **Accorded procedure.** The regulatory framework in coastal areas is complex due to the overlap of jurisdictions at different levels, from international to local. This multi-layered system affects the development of urban coastal ecosystem restoration initiatives due to duplication and/or overlapping requirements. Therefore, standardisation of permitting and authorisation protocols could overcome barriers through administrative simplification without affecting regulations and control systems such as EIA[9].

Define administrative procedure simplification in the context of urban ecosystem restoration policies engaging a participatory consultation without compromising the key requirements for impact assessments and related regulations in natural areas.

4. **Integrated Coastal Management.** The coastal cities must be able to redesign their relationship with the sea embracing the multiple aspects from natural, heritageal and cultural. A balanced coastal tourism and blue economy based on the health of marine systems is necessary considering the natural capital approach as an important framework of the socio-economic capital including coastal ecosystem-based management approaches[10]. This should be allied with a consistent and standardised decision-making process for local and national management by means of tools such as guidelines facilitating the participation of stakeholders, as indicated in the Barcelona Statement in terms of adaptive governance and management systems.

Establish specialised departments in coastal cities to improve the integrated coordination of actions aimed at defending, protecting, and restoring coastal areas and their natural capital. Implementing adaptive guidelines for coastal ecosystem restoration initiatives focusing on actionable knowledge.

5. **Transdisciplinary approach.** Collaboration between research institutions, private sectors, public administrations and civil society is essential for an effective management of coastal urban communities emphasising local involvement. Citizen science is a valuable tool for promoting engagement, awareness and active participation in coastal urban systems planning enhancing the regional perspective. Transdisciplinary approach should be considered involving social science and education to support ocean literacy for the promotion of human-ocean connection (Barcelona Statement, 2024).

Promote co-management, strengthening public cooperation enhancing citizens science acting for the implementation of community of practices based on communities-led coastal management

5. References

- [1] <https://unesdoc.unesco.org/ark:/48223/pf0000372713>
- [2] <https://documents.un.org/doc/undoc/gen/n19/060/16/pdf/n1906016.pdf?token=K8SpdykJSzQOLbMriN&fe=true>
- [3] <https://www.cbd.int/gbf>
- [4] <https://ocean-cities.org/>
- [5] *operAtional seNsing lifE technologies for maRIne ecosystemS (ANERIS) -*
<https://aneris.eu/>
- [6] <https://zenodo.org/records/10655533>
- [7] <https://doi.org/10.3389/fmars.2021.617897>
- [8] <https://spj.science.org/doi/10.1002/ehs2.1229>
- [9] https://environment.ec.europa.eu/law-and-governance/environmental-assessments/environmental-impact-assessment_en
- [10] <https://oceandecade.org/es/news/barcelona-statement-identifies-the-priority-areas-of-action-for-the-ocean-decade-in-coming-years/>

6. Contributors

- **Vanessa Sarah Salvo**, EMBIMOS (EnvironMental and sustainaBility participatory InforMatiOn Systems) Institut de Ciències del Mar -CSIC (ES) - Ocean Cities Network
- **Pep Hurtado**, Coastal Area Strategic Office of the of the Municipal Management of the Barcelona City Council (ES) - Ocean Cities Network
- **Josep Canals**, Secretary General, MedCities (ES) – Ocean Cities Network
- **Carolina Perez Valverde**, Head of Policy, MedCities (ES) - Ocean Cities Network
- **Patrícia Giménez**, Beaches Directorate of the Barcelona City Council (ES) - Ocean Cities Network
- **Kemal Zorlu**, Head of Climate Change and Zero Waste department of Mersin Municipality (TR)
- **Stefania Gorbi**, Associated Professor Polytechnic University of the Marche UNIVPM-DiSVA (IT) - Ocean Cities Network
- **Jaume Piera**, Head of Research at EMBIMOS (EnvironMental and sustainaBility participatory InforMatiOn Systems) Institut de Ciències del Mar -CSIC (ES)
- **Berta Companys**, EMBIMOS (EnvironMental and sustainaBility participatory InforMatiOn Systems) Institut de Ciències del Mar -CSIC (ES) - ANERIS project



Acknowledgement to grant CEX2019-000928-S funded by AEI 10.13039/501100011033 and to grant ID: 101094924 funded by the European Union.