



Photo: Island St Stefan © RLC Montenegro

Integrated Coastal Zone Management Strategy in Montenegro

AT A GLANCE

The Strategic Partnership for the Mediterranean Sea Large Marine Ecosystem (MedPartnership) is a collective effort of leading environmental institutions and organizations together with countries sharing the Mediterranean Sea to address environmental challenges that Mediterranean marine and coastal ecosystems face. The project's 78 demonstration and the promotion and replication of good practices will maximize impact and ensure the sustainability of the project beyond its lifespan.

Total budget: 48 millions USD.
 13 million USD: Global Environment Facility
 35 million USD: Participating countries, executing agencies, and donors.

ABSTRACT

Preparation of the Integrated Coastal Zone Management (ICZM) Strategy for Montenegro was undertaken in parallel with the preparation of the Coastal Area Spatial Plan, the most important planning document for coastal areas in Montenegro.

Having in mind the fact that the Montenegrin coastline is only 300 km long, but with high pressure from coastal urbanization, as well as that a specific spatial plan for this same coastal zone is being prepared in parallel, the ICZM Strategy for Montenegro was designed to incorporate elements of the management plan as a guide for the preparation and implementation of the Coastal Area Spatial Plan, in line with the requirements of the ICZM Protocol.

Specific recommendations for the plan were based on the results of a vulnerability assessment adapted for use within coastal management strategies and plans. The main recommendations include criteria and guidelines for determining future land uses, the key instruments enabling their implementation, and proposing an appropriate mechanism for coordinated planning and management.

ACTIVITY DESCRIPTION

The Montenegrin coastal zone is one of the country's most valuable national resources, with high development potential and exceptional natural and cultural values. However, it is subjected to intense pressures from human activities. To ensure preservation of the development potential and to restrain growing pressures on coastal resources, implementation of the Strategy started in 2013 to establish an efficient, responsible and adaptable system for managing the coastal zone.

THE EXPERIENCE

One of the key threats to sustainable coastal development in Montenegro is rapidly growing linear coastal urbanization, which degrades natural, cultural and landscape values and reduces future development opportunities. In addition, significant new construction zones are being planned in current spatial plans, resulting in 46% of the coastline being planned for urbanization, often in valuable and fragile coastal ecosystems.

Methodology

To provide a decision-making tool to guide the coastal development process toward sustainability, the first step in developing the ICZM Strategy was the preparation of a vulnerability assessment. It is a method used to determine the more vulnerable coastal areas that should be protected from future degradation.

The vulnerability assessment was based on the analysis of selected environmental segments and on the preparation of vulnerability and pollution models. It covered six coastal municipalities – Herceg Novi, Kotor, Tivat, Budva, Bar and Ulcinj. The environmental segments considered in the assessment were selected in line with the Law on Strategic Environmental Assessment. They include:

- environment and human health (noise, air, and soil pollution at hot spots);
- flora and fauna – biodiversity (flora and fauna, nature protected areas, marine biodiversity);
- soil (erosion, agriculture and agricultural land, seismic hazards);
- water (terrestrial surface waters, terrestrial groundwater, sea water);
- air/climate, climate change (droughts, forest fires, heavy rains, storm winds, joint vulnerability model for climate change), and
- landscape.

Vulnerability to climate change and the extent to which the marine and land environments and human health are endangered, were also assessed. The assessment determined the most valuable spatial units in which intense development should be limited. In addition, the results were used to identify "conflict" zones between areas of high vulnerability and areas in which construction is already planned (vulnerability model figure).



*Ulcinj coastline
Photo: RLC Montenegro*

RESULTS

The results of the vulnerability assessment clearly show exceptional vulnerability of the environment in the coastal zone of Montenegro where **35% of the area are highly vulnerable**. These results became inputs for the ICZM Strategy and the Coastal Area Spatial Plan, and were used to:

- develop **criteria and guidelines** to determine land uses in the Coastal Area Spatial Plan so as to direct construction to the least vulnerable areas. They included the introduction of a coastal setback zone and preservation of valuable inland areas suitable for rural development.
- propose key **instruments** within the ICZM Strategy to enable implementation of the above criteria and to guide changes in the desired direction. They include land-use and fiscal policy instruments, as well as those for monitoring and evaluating progress.
- propose an appropriate **coordination mechanism** to improve integration and convergence of sectoral management, with the overall responsibility for the coastal zone development.

With strong political support and commitment, these findings and the overall participatory process of the ICZM Strategy preparation resulted in:

- construction areas reduced by 45%;
- construction areas within one kilometre of the coast-line reduced by 27%;
- the areas of conflict between highly vulnerable, open areas and construction areas reduced by 45%;
- introduced 100-meter coastal setback, applicable to almost 50% of the coastline; and
- initiated establishment of an ICZM coordination mechanism.

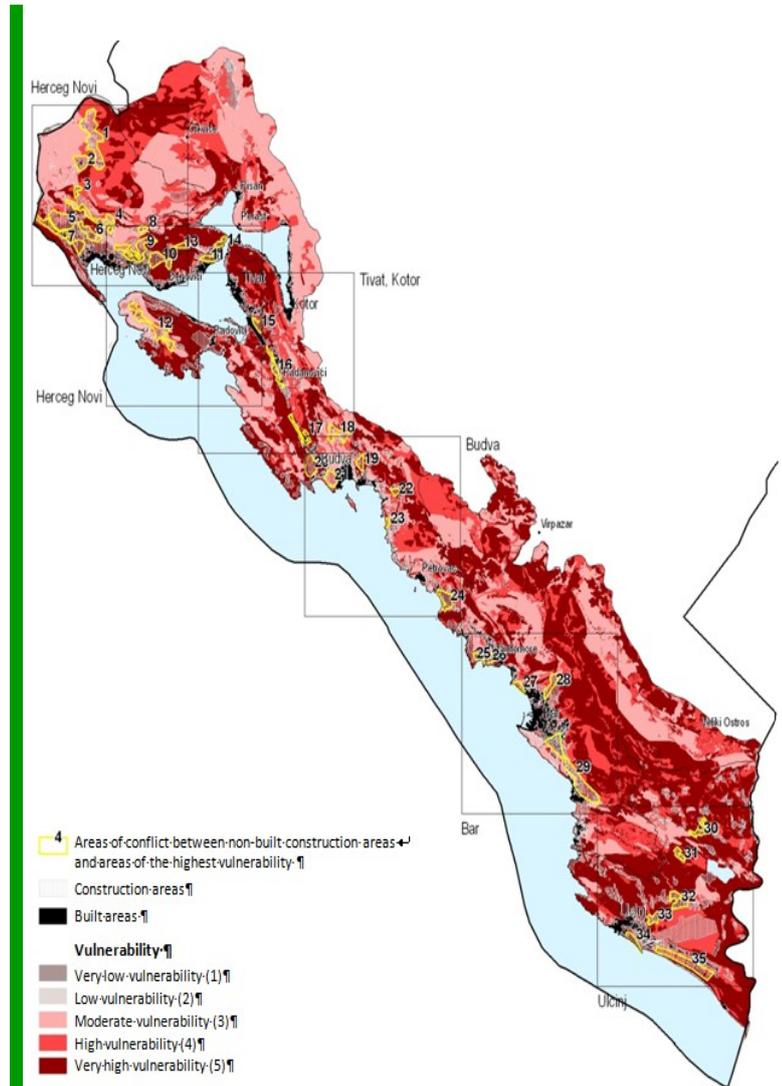
LESSONS LEARNED

Preparation of the ICZM Strategy was expert based but highly participatory. However, without high-level policy support this approach would have not been as nearly successful.

Replication: The approach used to prepare the ICZM Strategy with a vulnerability assessment and a strong emphasis on coastal construction can be replicated in other areas with heavy urbanization pressures. However, the principal strength of this process was the opportunity and political mandate given for integrating the assessment's findings into the Coastal Area Spatial Plan.

Effectiveness/efficiency: The approach was very effective in pragmatically and visually identifying problem areas. However, to be cost effective and efficient, it is recommended to carefully select assessment themes based on the availability of information and their overall usability.

Sustainability: Although the vulnerability assessment was not invented by this process, its methodological approach was adapted for use within coastal management strategies and plans. Along with the target analysis of land use (the state and transformation of the coastal zone) the vulnerability assessment was developed and used as a decision-making tool to identify (in)compatibility between human activities and the land on which they occur and to propose remedial measures. Therefore it is recommended to use as a starting point in similar processes.



Vulnerability model with conflict zones

IMPACTS

The coordinated preparation of the ICZM Strategy and the Coastal Area Spatial Plan and their mutual integration initiated the reformed approach for coastal planning and management. It enabled the adoption of a new integrated management policy and initiated significant changes in important national legislation. Built capacities of public administration and professional institutions, especially those in the spatial planning sector, were among the most important effects of the process. Particular value of this process was its participatory character, the openness to the exchange of information and main findings, and the mutual respect for comments and suggestions among all of the parties involved.

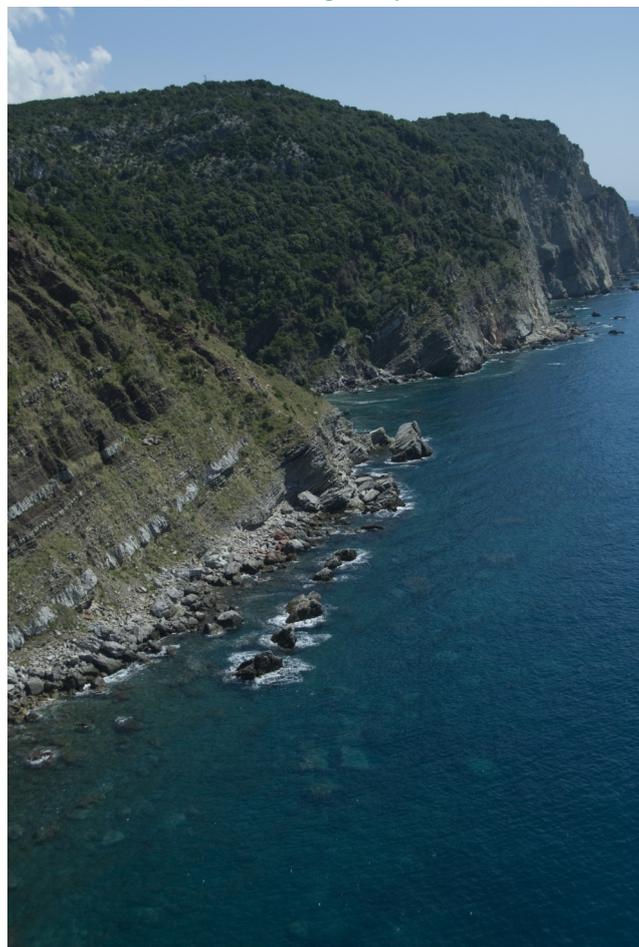
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Montenegro's coast
Photo: RLC Montenegro

KEYWORDS

ICZM strategy; vulnerability assessment

EXECUTING PARTNER

PAP/RAC was established in 1977 in Split, Croatia, as part of the Mediterranean Action Plan (MAP) of the United Nations Environment Programme (UNEP). PAP/RAC's mandate is to provide support to Mediterranean countries in the implementation of the Barcelona Convention and its Protocols, and in particular of the Protocol on Integrated Coastal Zone Management. PAP/RAC is oriented towards carrying out activities contributing to the sustainable development of coastal zones and strengthening capacities for their implementation. Thereby, it cooperates with national, regional and local authorities, as well as with a large number of international organisations and institutions



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Strategic Partnership for the Mediterranean Sea Large Marine Ecosystem

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Executing partners: FAO, UNESCO/IHP, UNIDO, GWP-Med, MIO-ECSDE, WWF MedPO, UNEP/MAP's MEDPOL programme and regional activity centres (SCP/RAC, SPA/RAC and PAP/RAC).

Participating countries: Albania, Algeria, Bosnia and Herzegovina, Croatia, Egypt, Lebanon, Libya, Morocco, Montenegro, Palestine, Syria, Tunisia and Turkey.