National strategy for integrated coastal zone management

CAMP Montenegro

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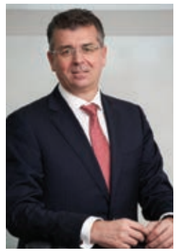
Ministry of Sustainable Development and Tourism of Montenegro

UNEP MAP

PAP/RAC

Strategic Partnership for the Mediterranean Sea Large Marine Ecosystem — Together for the Mediterranean Sea
MedPartnership



The National Strategy for Integrated Coastal Zone Management for Montenegro was drafted as a part of the Coastal Area Management Programme for Montenegro (CAMP MNE). The Strategy was prepared by the Ministry of Sustainable Development and Tourism in cooperation with the Mediterranean Action Plan (MAP) of the United Nations Environment Programme (UNEP) and its Priority Actions Programme Regional Activity Centre (PAP/RAC). By virtue of that, Montenegro has joined the family of Mediterranean states that strive to preserve their specific values and outstanding quality of their coastal areas by means of Integrated Coastal Zone Management (ICZM).

With its natural resources, the Montenegrin coast is a specific and unique area that deserves decisive management and decision making today for its sustainable future. Led by that commitment, we have made extremely important baseline analyses within the CAMP programme by which we have prepared a comprehensive and detailed overview of the status and transformations of the coastal area, as well as the projections of sustainable development trends. Expert and data bases are there to underpin control and help abate pressure on the space and environment and to support the integration of patterns of sustainable valorisation of space into sectoral policies.

Through the integration of spatial and development solutions aimed at advancing economic, social and environmental performances of coastal area, the National Strategy for Integrated Coastal Zone Management has defined a strategic framework for sustainable development of our coast. Besides that, by defining a set of concrete measures and actions in the Action plan for the Strategy, we have created a dynamic framework to support the implementation of the Special Purpose Spatial Plan for Coastal Area of Montenegro (SPSP CA MNE) and the reform of the coastal resources management system. Particularly important fact is that the commitments ensuing from the ICZM Protocol will entail improvement in the institutional organization in the coastal area of Montenegro through the introduction of the ICZM coordinating mechanism, and through the operation of the Council and Coordination Body for the Integrated Coastal Zone Management.

By the same token, on the basis of CAMP expert analyses and recommendations we are introducing a reformist approach to the new SPSP CA MNE. New SPSP CA MNE becomes a regional spatial and development plan for the coastal area. In this context, the priorities are: objectivization of the spatial planning system, correlating spatial, regional/developmental and protection planning, developing a planning base for the introduction of substantially important implementation tools: instruments of land and tax policy, urban replotting, real estate tax or tax on undeveloped land, tax on land conversion, drafting and implementation of sectoral basis and analytical inputs into the system planning, use of measurable indicators for land degradation in all planning stages and the use of GIS technology.

In this way, in synergy between the CAMP team and the SPSP CA MNE developers, we managed to eliminate conflicting land use in the most valuable patches of coastal area and thus opened up prospects of developing high-end tourism in narrow coastal strip and sustainable tourism in the hinterland. To that end, we have defined combined coastal development measures and rural development measures in the hinterland. This approach will at the same time result in diversification of economic activities and correlation of potentials in hinterland with those in the narrowest coastal strip.

The CAMP MNE results made way for the inauguration of the new policy of integral management and legal regulation of the land use through developing the regional spatial plan but also through considerable amendment of some major national legislation such as the laws regulating spatial management, environmental protection, coastal resource management and administrative capacity building and institutional capacity building. The process becomes an added value for its participatory character and openness towards the exchange of information, taking stock of accomplishments and getting stakeholders on board of the process.

We are grateful to UNEP/MAP, headed by its Coordinator, Gaetano Leone, and to the PAP/RAC from Split, Croatia, headed by Željka Škaričić, for their dedication, understanding and support from 2011 on. We are particularly grateful to the PAP/RAC expert team and their eminent experts who have successfully dealt with a whole string of limiting factors and despite that came up with optimal solutions based on the EU best practices and, for us particularly comprehensible - spatial planning systems in Croatia and Slovenia.

I do expect that we will keep improving such a quality platform for sustainable development and efficient integrated management in the coastal area in the coming period, i.e. in the post-CAMP period, and that the CAMP MNE results will serve as the quality benchmark for strengthening the implementation of the Barcelona Convention and the ICZM Protocol all across the Mediterranean region.

Branimir Gvozdenović,
Minister of Sustainable Development and Tourism

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INTRODUCTION

Mogren beach SOURCE: CAMP

1.1 Coastal zone of Montenegro

The coastal zone of Montenegro is one of the most valuable national resources. The area has a high development potential which is of vital importance for the development of Montenegrin society. However, it is also characterised by complex relations between human activities and natural environment that often result in pronounced pressures on natural resources.

In geographic sense, extent of the coastal zone has been determined in line with requirements of the ICZM Protocol. Under the proposal of changes to the Law on spatial planning and construction of objects, coastal zone of Montenegro is defined as the area within administrative boundaries of Herceg Novi, Kotor, Tivat, Budva, Bar and Ulcinj municipalities (with the exception of the areas designated as national parks[1]), as well as the stretch of sea extending to the outer border of the territorial sea. Several other terms are commonly used for the land part of the coastal zone including coastal or southern region, and Montenegrin coast.

Geographic scope of the coastal zone is defined in accordance with requirements of the Protocol on Integrated Coastal Zone Management in the Mediterranean (ICZM Protocol). Even though the coastal zone has a treatment of special purpose area in the spatial planning system, it is largely integrated with other parts of the country when functional, economic, cultural and environmental aspects are considered. This fact to a large extent determines character of the National strategy on integrated management of the coastal zone of Montenegro (NS ICZM MNE).

1.2 Importance of establishing integrated management of the coastal zone of Montenegro

Based on a comprehensive analysis of the state and processes in the coastal zone of Montenegro, including their consequences[2], the coastal zone's characteristics can be assessed in the following way:

- the entire coastal zone, and especially the narrow coastal belt, with its natural, cultural and landscape values, is the key development resource of Montenegro;
- at the same time, pressures from urbanisation, especially from development of real estate for secondary housing, endanger the environment as well as natural, landscape and cultural values in numerous ways, and represent the most important threat to sustainable development of the coastal zone;
- in addition to intensified use of natural resources, impacts of climate change and of other natural and anthropogenic hazards create additional pressures on resources in the land and marine parts of the coastal zone.

In order to preserve development potential of the coastal zone of Montenegro and limit growing pressures on its resources, it is necessary to establish an efficient, accountable and adaptable management system that will enable:

- **protection of productivity and diversity of coastal ecosystems,**
- **improvement in economic efficiency and sustainable use of coastal zone resources, and**
- **improvement in integration and alignment of sectoral management.**

Integrated coastal zone management (ICZM) is in

1 / Mapped depictions of spatial vulnerability also cover national parks areas within the scope of coastal municipalities in order to provide for consistent overviews of conditions in space.

2 / Assessment of general vulnerability of the coastal zone of MNE, CAMP MNE (2012); Vulnerability assessment of the narrow coastal zone, CAMP MNE (2013); Application of selected indicators for monitoring and evaluating sustainability of spatial development of the coastal zone of MNE, CAMP MNE (2013); Analysis of socio-economic development of the coastal zone of MNE, CAMP MNE (2013); Assessment of attractiveness and suitability for agriculture, CAMP MNE (2013); Analysis of institutional and legal framework for integrated management of the coastal zone of MNE, CAMP MNE (2014).

fact such a long-term, dynamic, multi-disciplinary and iterative process of managing coastal zone resources that has sustainable development of coastal zones as its ultimate goal. It refers to the entire cycle of collection of data, planning, organisation, managing and following up on the implementation of measures and activities. ICZM is based on well informed participation and involvement of all the stakeholders in setting objectives and undertaking actions to reach them. Integrated management aims to balance the environmental protection, economic, social and cultural goals in the long run, within the boundaries set by natural environment. Integrated coastal zone management yields numerous benefits and the most important ones are shown in box 1-1.

The word "integrated" in the ICZM concept refers to multi-sectoral setting of objectives and integration of instruments needed for their accomplishment, as well as to integration of relevant policies, sectors and levels of administration i.e. management. It also denotes integration of land and marine parts of the coastal zone. The key aspect of ICZM refers to development and application of appropriate management mechanisms. It is also important to point out that "integration" does not mean "comprehensiveness" in the range of themes the ICZM deals with as it is predominantly an operational concepts that aims for prioritisation of coastal zone problems and challenges as well as for proposals of proactive measures to resolve problems in order to achieve sustainable development of the coastal zone.

Box 1-1: Benefits from integrated coastal zone management (according to the Guidelines for the Preparation of National ICZM Strategies, PAP/RAC)

- A more successful resolution of problems where involvement of more sectors is required;
- Promotion of management culture based on obligation to achieve measurable results;
- Reduction of damages (and related costs) caused to the coast due to natural processes (such as erosion and flooding) and human activities;
- Mitigating pollution and reducing the costs it generates (for economy, human health);
- Mitigating the over-exploitation of natural resources in the coastal zone;
- Enhancing results of economic sectors in the coastal zone;
- Preserving unique coastal ecosystems along with their habitats and species;
- Preserving cultural heritage, landscapes and geomorphology of coastal zones;
- Maximising coastal ecosystem services (such as climate regulation, water conservation, erosion and pollution prevention, food and raw material security and production, etc.);
- Maximising economic efficiency (by improving environmental performance of coastal industries, reducing spatial conflicts , preserving coastal landscapes and attractions, maximising benefits from investments and tourism);
- Promoting social cohesion and improving the quality of life for coastal communities.

1.3 Importance of the Strategy

The ICZM Protocol specifies that National ICZM strategy, based on the analysis of existing situation, "...shall set objectives, identify relevant actors and processes, enumerate the measures to be taken and their cost as well as the institutional instruments and legal and financial means available, and set an implementation schedule".

Analysis of the existing management and planning system for the coastal zone shows that Montenegro has a relatively developed legal framework. Moreover, the analysis shows development goals for the coastal zone are set in an appropriate manner but also that to a significant extent, they remain on the level of declarations. It is not only the insufficient level of harmonisation between regulations that obstructs elimination of unsustainable development patterns, but first and foremost the unsatisfactory results of their implementation in practice. Given the complexity of registered pressures as well as complementarity and inter-dependencies of natural, social and economic factors of the coastal zone's development, several administrative sectors have competencies for the management of the coastal zone of Montenegro. These include institutions responsible for the spatial planning system, environmental and nature protection, protection of cultural heritage, as well as those responsible for rural development and agriculture, fisheries, tourism and other economic activities in the coastal zone. Lack of efficiently coordinated cooperation between sectors and insufficiently developed capacities of public administration when it comes to support for development and implementation of demanding public policies also represent and obstacle for achievement of effective development goals.

One of the most significant challenges for the National ICZM Strategy is to offer efficient solutions that will not complicate the system additionally i.e. that will not lead to further complexities of procedures and inefficiency of public administration instead of rationalisation.

This strategy is therefore important in the sense of establishing strategic framework for integration of different sectors in an attempt to harmonise development priorities, aspirations and interests with measures for protection and sustainable use of coastal zone resources, primarily through:

- harmonisation of the national regulatory framework with the ICZM Protocol and relevant EU policies;
- setting up of a competent coordination mechanism with a political legitimacy, executive coordination mandate and integral responsibility for the state of the coastal zone; this body needs to define scope of participation of other sectors, including definition of their practical tasks;
- identification of necessary preconditions and instruments for the achievement of sustainable development t goals in the coastal zone.

Importance of the Strategy is also reflected in the need to set up operational and management patterns that lead to achievement of measurable results.

Since the spatial planning system has the highest responsibility for unsustainable use of space in the coastal zone and the level of control it has is limited and does not extend to all the sectors whose contributions are important for sustainability of spatial planning, the Strategy is also important in the context of improvements in the spatial planning system as the future core of the ICZM.

In line with the ICZM Protocol requirements, National ICZM strategy is based on the following principles:

- preservation of coastal zone resources is one of priority national interests;
- conditions are provided for harmonisation and realisation of complex spatial and development plans;
- diversification and competitiveness of coastal zone economy are continuously incentivised;
- improvement in the quality of life of the coastal zone population is continuously stimulated;
- development and management decision making is based on inter-sectoral harmonisation and coordination, scientifically and professionally determined facts, application of relevant international and European norms and standards, accountability and monitoring of achieved results;
- appropriate and timely participation of informed local population and all the stakeholders is provided in a transparent decision making process.

Even though the NS ICZM encompasses a wide spectrum of issues, it does not have a mandate to address all important issues of significance for the coastal zone of Montenegro. NS IZCM priorities are themes and more complex problems that necessitate integrated, multi-sectoral approach and coordinated harmonisation of priorities. The strategy does not address the themes that are successfully resolved within sectoral policies. Nevertheless, some themes that are primarily addressed through sectoral policies, such as for example communal waste and wastewater management, have their place in this Strategy due to the fact that entire spatial, economic and social development of the coast zone depends on the extent to which they are prioritised and successfully resolved.

1.4 Legal context for adopting the Strategy

Legal basis for establishing integrated management of the coastal zone of Montenegro and preparation of the National ICZM strategy is the Law on ratification of the ICZM Protocol (Official Gazette MNE – International treaties, 16/11). Through the adoption of this law, the Protocol became a constituent part of the internal legal system of the country.

In line with Article 9 of the Montenegrin Constitution, the ICZM Protocol, as an international legal act, has precedence over national legislation and is directly applied in case it regulates certain matters differently compared to national regulations.

The contracting parties to the ICZM Protocol are, through article 18, obliged to strengthen the existing or formulate "... national strategy for integrated coastal zone management and coastal implementation plans and programmes... in line with goals and principles of integrated management", as well as to report to the competent international body (Secretariat of the Barcelona Convention) on the coordination mechanisms that will be established to implement the national strategy.

The basis for preparation of the National strategy on integrated management of the coastal zone of Montenegro (NS ICZM MNE) can be found in several national strategic documents and policies, including first of all the National sustainable development strategy, as well as other policies and strategies that aim for sustainable development and integrated management of natural resources.

As the accession to the European Union is a strategic priority for Montenegro, common polices of the EU are also

significant. The aim of the EU policy on coastal zone is provision of healthy and stable environment as well as protection of natural resources as a basis for conducting numerous coastal activities in the long run.

The EU ICZM Recommendation from 2002 emphasises the need to base the coastal zone planning on expert knowledge and information as well as on long-term and inter-sectoral perspective, and to involve all stakeholders through proactive approach while taking nto account land and sea components of the coastal zones. In the process of revising the ICZM Recommendation it was stressed that more attention needed to be paid to climate change and other hazards in the coastal zone.

The aim of the Marine Strategy Framework Directive (2008/56/EC) is to achieve good environmental status of the EU's marine waters by 2020 and to protect the resource base upon which marine-related economic and social activities depend. The Directive introduces ecosystem approach to managing human activities in the EU legal system.

Integrated Maritime Policy (IMP) from 2008 addresses issues such as blue growth, marine data and knowledge, maritime spatial planning, integrated maritime surveillance and sea basin strategies. IMP's intention is to co-ordinate and not to replace policies in specific maritime sectors (such as marine environment, research, maritime transport, energy, regional policy, enterprise and industry/ shipbuilding, and others).

Formulation of the EU policy on maritime spatial planning was in a legal sense rounded up with adoption of the Directive 2014/89/EU establishing a framework for maritime spatial planning. The purpose of this Directive is to promote sustainable growth of activities linked to coasts and seas and sustainable use of coastal and marine resources through establishment of a framework for effective application of maritime spatial planning and integrated coastal zone management.

Recently adopted EU Strategy for the Adriatic and Ionian region (2014), identifying potential and needs for smart, sustainable and inclusive growth in the region, is also a foundation upon which the National ICZM strategy rests. Priority areas addressed by the Strategy for Adriatic and Ionian region are blue growth, connecting the region, environmental quality and sustainable tourism.

1.5 Time horizon

The time horizon of the Strategy is 15 years. Therefore, its strategic goals and measures refer to the period of up to 2030. Due to a proactive character of the Strategy, the Action plan also defines a first set of priority actions that is aligned with long-term strategic goals and measures. The intention is to implement these priority actions in the five year implementation period by 2020. After that and in order to provide for continuous alignment of Strategy with achieved results and with other strategic documents, a new set of priority actions will be defined for the subsequent five-year implementation period. Periodic five-year alignment of Strategy's measures and actions will be performed in relation to the:

- achieved functionality of the coordinating system for Montenegrin coastal zone management;
- results achieved in preservation of coastal ecosystems, mitigation of linear coastal urbanisation and stimulation of rural areas development in the coastal hinterland;
- need for alignment with sectoral strategies and policies having in mind progress that will be achieved with their implementation.

Following completion of this implementation period it will be also necessary to integrate measures of sig-

Lustica SOURCE: National Tourism Organisation

nificance for implementation of the Marine Strategy Framework Directive (2008/56/EC).

1.6 Importance of spatial planning for Strategy implementation

In parallel to preparation of the National ICZM strategy, process of preparing the CASP was underway. This Plan was introduced to the spatial planning system as a planning document of regional character addressing the entire coastal zone of Montenegro. It is therefore expected this Plan will make a concrete contribution to implementation of the ICZM Protocol and constitute a basic framework for practical regulation of processes unfolding in the coastal zone space. The two documents have a two-ways relation. The Strategy proposes methodological approach and basic guidelines for the SPSPCZ preparation in line with the Protocol requirements. Moreover and importantly, the Strategy proposes systemic improvements intended to create preconditions for a more efficient implementation of the CASP. On the other side, it is necessary for the SPSPCZ MNE to elaborate specific spatial planning solutions on the basis of selected scenario of optimal development. Having in mind the so far pronounced problems in implementation of spatial planning documents and their overall recommendations, it is rather unlikely that the CASP alone can be sufficient for changing the state in the physical space of the coastal zone. That is why one of the most important tasks for the Strategy is to propose a sequence of measures that will, among other things, strengthen spatial planning and enable a more sustainable spatial development.

1.7 Process of preparing the Strategy

Preparation of the National ICZM Strategy is supported through the Coastal Area Management Programme Montenegro (CAMP MNE), in the framework of execution of the Memorandum of Understanding between the Government of Montenegro and the United Nations Environment Programme Mediterranean Action Plan (UNEP/MAP), as well as through activities implemented under the Strategic Partnership for the Mediterranean Sea Large Ecosystem (GEF MedPartnership). Steering and Advisory Project Committees supervised the process and provided political and expert support.

The Strategy preparation process unfolded through engagement of an expert team and a consultative process, while as analyses conducted within the CAMP project[3] were used as the principal source. In addition to the analysis of existing state, transformation processes in the coastal zone were analysed in detail, primarily through targeted analysis of socio-economic processes and development, especially in agriculture and tourism sectors (including methodology for calculation of tourism carrying capacity). Furthermore, institutional and legal framework was analysed and key sources of pressures determined. In the preparation of the NS IZMS, analysis of compatibility of national and local policies, plans and strategies with the ICZM Protocol goals was also used. Another important source was a set of proposals the expert public made during the consultation process. Findings of the Position paper, sectoral policies, available literature and documentation were also used, and the draft ICZM Strategy from 2008 (not adopted) was consulted too.

Results of the expert team's work were discussed in the framework of consultative process and vice versa. As a part of extensive consultations, several workshops were held with participation of various stakeholders. The themes addressed at the workshops included identification of problems and their causes, identification of gaps and deficiencies in the institutional and legal frameworks, selection of priorities, proposal of solutions for management/ coordination mechanisms and others. Recommendations from the consultative process (workshop conclusions and recommendations, replies to ques-

3 / Especially analyses mentioned in footnote 1, as well as targeted sectoral studies on coastal zone vulnerability: biodiversity and nature protection study; study on hydrology, geology and water quantity and quality; and analysis of anthropogenic impacts on environment and human health.

tionnaires) have been taken into account to the greatest possible extent, with a certain level of processing (systematisation, consistency checks) by the expert team. Identification of drivers, pressures, state and impacts (DPSIR method) was mainly applied for determination of problems and their causes, i.e. for determination of gaps and needs for integrated coastal zone management. It was also used for formulation of adequate responses for overcoming the problems and gaps identified in the course of NS ICZM preparation.

Based on the analysis of existing state as well as on the identified problems and their deeper causes, a set of key problems, weaknesses and needs in the system of coastal zone management has been determined. With these in mind, strategic goals have been set and measures and priority actions developed in the framework of the NS ICZM Action plan. Frequency of appearance and urgency in solving the recorded problems were taken into account in deciding on priorities, alongside with their impacts on the perspective of long-term preservation of the coastal zone ecosystem stability and socio-economic development. Cause-effect linkages and the need to address the deepest causes in solving the problems were also taken into account.

1.8 Structure of the document

The context in which the NS ICZM is prepared, its role and information on the preparatory process, as well as structure of the document itself are presented in chapter 1.

Assessment of the existing state of the coastal zone is provided in chapter 2 and it refers to natural and cultural heritage, coastal resources, natural and anthropogenic hazards, economy, and social development and governance. This chapter contains description for each of the mentioned areas, pointing out characteristics, positive trends and advantages of the coastal zone, as well as vulnerability of certain environmental and spatial segments, occurrences of excessive pollution and unsustainable use of resources, economic inefficiencies, governance weaknesses, etc.

Based on the assessment of the existing state, pressures and impacts, chapter 3 presents identified key problems, weaknesses and needs for integrated management related to protection of natural and cultural heritage, regulation of coastal activities and application of management instruments and mechanisms.

In chapter 4, vision of coastal zone development is formulated.

Systematisation of problems and gaps and their gravity/weight served as a basis to define priority thematic areas with strategic goals in chapter 5.

Proposal of principles and strategic ICZM guidelines relevant for implementation of the Coastal zone spatial plan is contained in chapter 6.

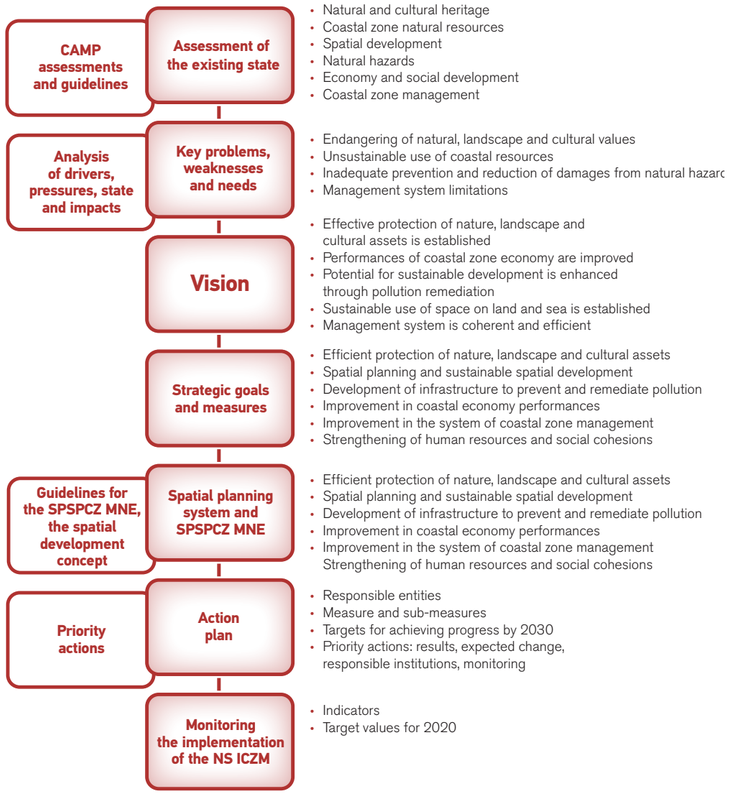
Action plan defining measures with sub-measures and targets over the NS ICZM time span is presented in chapter 7. In relation to determined sub-measures, a list of priority actions has been elaborated with implementation deadline by 2020.

The last chapter 8 deals with monitoring and evaluation of the NS ICZM implementation, including the set of main indicators.

Key results of the analysis of problems (state) and causes (drivers) conducted in the process of assessing the existing state, which have served as a basis for identification of the key problems, gaps and needs, are presented in annex 1.

Structure of the document with key elements of individual chapters is shown in figure 1-1.

Figure 1-1: Structure of the document



02

ASSESSMENT OF THE EXISTING STATE

Our Lady of the Rocks (Gospa od Škrpjela) and Sveti Đorđe Island (Sv. Đorđe) SOURCE: National Tourism Organisation

2.1 Natural and cultural heritage

Diversity of geologic base, landscape, climate and land, as well as geographic position of Montenegro in the Balkan peninsula provided for development of high-value biological diversity. This categorises Montenegro into biological "hot-spot" locations of importance both in Europe and worldwide. The coastal zone of Montenegro is also characterised by a high degree of diversity and specific habitats and species.

Due to favourable geomorphologic and geographical characteristics, human presence at the Montenegrin coast dates back to younger stone age. Millennia-long presence of human communities, coupled with specificities of the natural position and influences of different cultures have been turned into a rich cultural heritage of the Montenegrin coastal zone.

2.1.1 Biodiversity and specific ecosystems

Typical coastal and seaside habitats are found on the rocky coast (cliffs), numerous natural sand beaches, as well as on (eight) small isles. On the southern slopes of coastal mountains, typical Mediterranean vegetation of macchia and garrigue has developed, and on lower terrains and the coast itself – halophyte vegetation, as well as cultivated terrains with olive and fruit groves. Coastal mountains Orjen, Lovćen and Rumija (with the surrounding hills and mountainous areas) are considered diversity centres of vascular flora.

Coastal zone sites where greatest number of habitats of international importance occurs (including marshy habitats) are: Ulcinj region including its hinterland, in particular Velika beach and Ada Bojana; Buljarica; and certain still preserved parts of the Boka Kotorska Bay. Confluences of rivers (Bojana, Sutorina and other small water flows) also make a part of coastal habitats important for biodiversity preservation. On the sand dunes of Velika beach, unique halophytic vegetation is found. Tivat Salinas and Ulcinj salt works are localities of great importance with halophytic vegetation on muddy-clay grounds. This type of vegetation has almost disappeared from the eastern coast of the Adriatic, and in Montenegro it can only be found on said localities. Specific fauna, particularly rich birdlife, is also typical for this vegetation.

In addition to algae flora, seaweed meadows of Posidonia oceanica and Cymodocea nodosa can be found in the marine ecosystem. A substantial number of animal species is linked to their life cycle. The Adriatic Sea fauna has still not been completely explored, however recent data has shown that more than 40 species of sponge, 150 crustacean species, 340 molluscs, over 400 fish species, three sea turtle species, and four dolphin species live in the Montenegrin part of the Adriatic.

In the land part of the coastal zone there are locations with vulnerable biodiversity which should be protected from negative impacts, particularly by preserving their completeness, and these are: Orjen, Boka Kotorska Bay, Vrmac, Buljarica, Rumija, Šasko jezero, Velika beach, as well as parts of natural preserved coast. Based on a detailed mapping of terrestrial habitats, by applying multi-criteria approach, the habitats on Velika beach, Tivat Salinas, Buljarica and Platamuni[4] have been assessed as particularly valuable. Zones of high vulnerability are shown on map 2-1. In the marine part of the coastal zone, habitats of Posedonia oceanica, as well as underwater caves have been assessed as vulnerable.

Zones of vulnerable or valuable biodiversity to a significant extent coincide with the network of the exist-

4 / Dr Danka Petrović: Detailed habitats mapping by applying GIS on 4 ecological priority sites, CAMP MNE (2012).

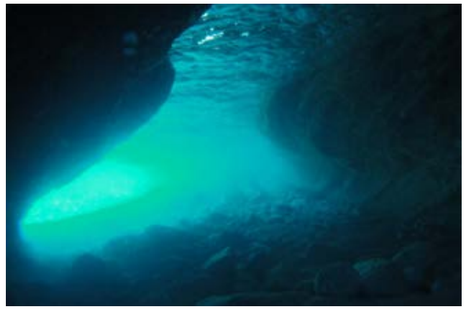
Evergreen oak, holm oak – Quercus ilex

Oriental Hornbeam – Carpinus orientalis

Olive – Olea europae

Pistacia lenthiscus

Figure 2-1: Examples of vascular flora
Source: Institute for Nature Protection of Montenegro)



Pećin – sea cave

Posidonia Oceanica

Figure 2-2: Marine habitats (Source: MPA Katič Project)

ing and planned protected natural assets. The existing spatial planning documentation contains proposals for placing under protection new protected natural assets in the terrestrial part of the coastal zone as follows: national park Orjen, regional parks Rumija and Vrmac, monuments of nature (terrestrial) Ulcinj salt works, Šasko Lake and Ada Bojana[5].

There were no new designations of protected areas at the coast over the last couple of decades (with the exemption of Tivat Salinas). Even though strategic and planning documents envisage proclamation of marine protected, they have not been established yet, whereas basic surveys have been carried out for a significant number of marine sites[6].

The existing protected natural assets[7] include parts of the national parks Skadar Lake and Lovćen, special nature reserve (Tivat Salinas), several monuments of nature (including around 20 beaches and other sites), several landscapes with special natural characteristics, as well as the area of Kotor-Risan Bay with the town of Kotor (which is protected under a municipal regulation and is on the UNESCO list of natural and cultural heritage). Due to their importance for coastal zone biodiversity, several individual dendrologic objects have also been protected[8]. In a situation where boundaries of the existing protected natural assets are not defined precisely and where the zones of potential protected natural assets (which have been recognised as valuable in the valid spatial planning documentation) have been approximately defined, the available data has been analysed by using GIS[9]. Based on the results obtained, it has been established that the share of terrestrial protected natural assets in the overall surface of six coastal municipalities amounts to 8.6% (including land part of UNESCO's protected area of the Kotor-Risan Bay), while the share of potential protected natural assets amounts to 18.8%. Zones of the potential marine protected areas have also been approximately defined, taking into account sites recognised by the

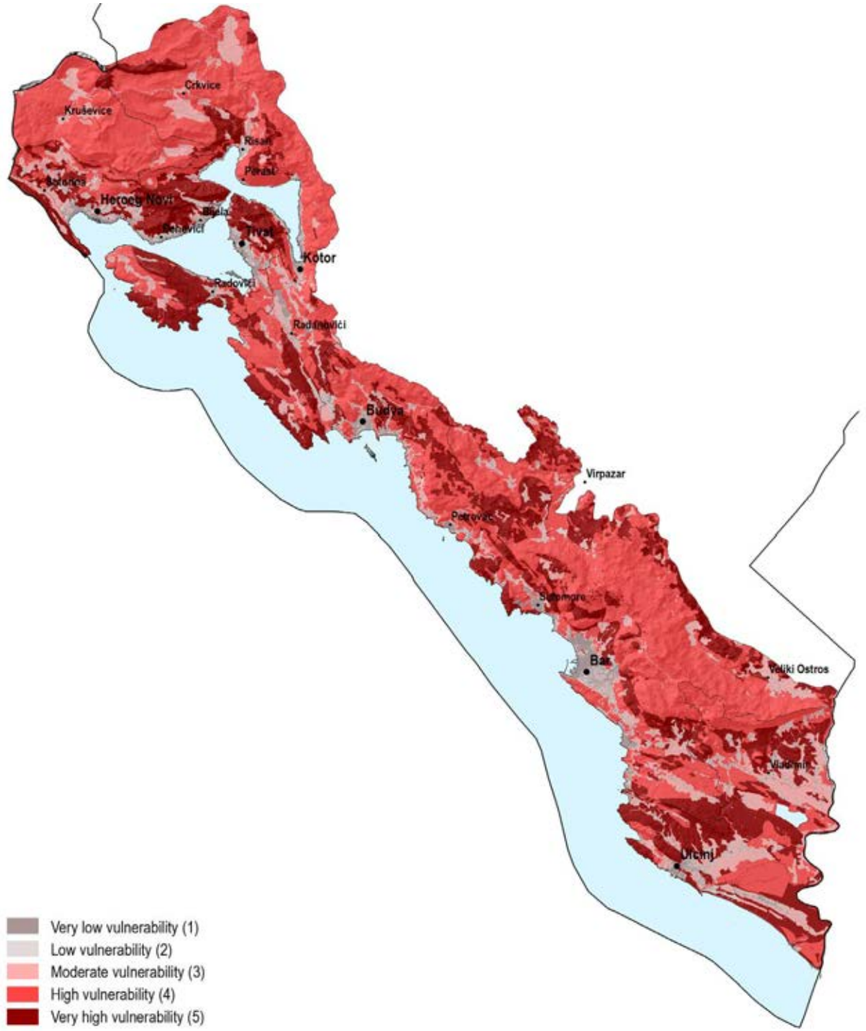
5 / A review of potentially protected natural areas is proposed in the NS ICZM MNE on the basis of previous valuation of natural habitats and ecosystems of the coastal zone..

6 / Potential sites are: 1) Luštica (from Mamula to Mačak cape); 2) zone from Trašta cape to Platamun (with a narrow zone of strict protection from Žukovac cape to Kostovica cape); 3) wider zone of Katič isle; 4) zone from Volujica cape to Dobre vode; 5) zone from Komina cape to cape by Stari Ulcinj isle; 6) Valdanos cove zone to Velika cove; and 7) Seka Đerane with the southern part of the zone in front of Velika beach to Bojana river mouth.

7 / In accordance with the provisions of the Law on nature protection.

8 / Under the Decision on protection of natural objects (Official Gazette of Montenegro no. 76/06) several species of oak trees located at different sites have been protected, as well as the old olive tree on Mirovica in Bar.

9 / Within the Assessment of general vulnerability of the coastal zone of MNE, CAMP MNE (2012) and the Vulnerability assessment of the narrow coastal zone, CAMP MNE (2013).



Map 2-1: Biodiversity vulnerabilities

SP MNE and SPSP for the public maritime domain, as well as sites identified through implemented research projects. The overall surface of these areas amounts to 9,000 ha (including marine areas and corresponding coastal belts). The zones of the existing and planned protected natural assets are shown on map 2-2.

The existing system of protected natural assets management has shown numerous deficiencies and does not provide for preservation of completeness and integrity of coastal ecosystems (on land and at sea). Results of the analysis of drivers, pressures, state and impacts, and of the key problems and weaknesses are described in chapter 3, section 3.1. Regarding the existing state, the following assessments can be singled out due by their importance:

- Managers of protected natural assets in the coastal zone have not been established in the period 1968 – 2014, nor were measures of active caretaking implemented. The national parks represent an exception, and the same applies to Tivat Salinas since 2014 when its manager has been designated. Amendments to the Law on nature protection from 2013 place responsibility for management of other protected natural assets in the public maritime domain zone on the Public Enterprise for Public Maritime Domain Management.

- Protection measures for valuable ecosystems outside nature protected areas are rarely planned and implemented, which results in frequent examples of degradation of specific coastal habitats and species. Sand dunes on Velika beach[10] with remaining fragments of the Skadar oak Quercus robur scutariensis forests in its hinterland have been recognised as the most endangered coastal habitats. Bird fauna linked to these habitats is endangered due to hunting[11].

- Even though accurate data is missing, it is obvious that an important part of the existing protected natural assets has lost a part of or all the characteristics due to which they were placed under protection in the first place. Such examples include parts of Bečići and Slovenska beaches, hills Spas, beach Pržno and other locations.

- Identification and establishment of the national Ecologic Network[12] has not been finalised. The network should include all the areas with specific coastal habitats whose protection is mandatory in line with the ICZM Protocol requirements. The list of Emerald sites was defined in 2008 and verified by the Standing Committee of the Bern Convention in 2012, and it encompasses 13 areas in the coastal zone[13].

- Development and spatial plans envisage a number of interventions the implementation of which could endanger natural values of particular sites, whereas stability and resilience of important coastal ecosystems would become uncertain. The Assessment of general vulnerability of the coastal zone identified geographic areas[14] in which, due to high value of biodiversity, conflicts in the existing use of space should be eliminated or mitigated (through land use optimisation).

10 / Rare and endangered psammophytes and halophytes at this location are: Cakile maritima, Xantium italicu, Salsola kali, Euphorbia peplis, Euphorbia paralias, Polygonum maritimum, Atriplex hastate, Echinophora spinosa, sea holly Eryngium maritimum, Agropyrum junceum, Medicago marina, Inula crithmoides, Lagurus ovatus, Cuscuta sp.

11 / National Biodiversity Strategy with the Action Plan 2010-2015

12 / According to the provisions of Articles 30 – 34 of the Law on nature protection

13 / Emerald sites in the coastal zone are: 1) Kotor-Risan Bay; 2) Platamuni; 3) isles Katič, Donkova and Velja Seka; 4) Tivat Salinas; 5) Buljarica; 6) hill Spas; 7) beach Pečin; 8) Orjen; 9) Lovćen; 10) Rumija; 11) Velika beech and Ulcinj saltworks; 12) Šasko Lake, river Bojana, Knete, Ada; 13) the Skadar Lake.

14 / This refers to the following zones: Vrbanja; Kruševice (south from the settlement) and Mokrine – Kameno; Prijevor – Mojdež and Ratiševina – Trebišinj; Žlijebi and Podi - Šašovići – Kudi; Kuti; Bijelske Kruševice; Biljela – Jošice and Đurići; Pobori i Ostrog; Prijevor; Kuljače; Buljarica; Velika beach.

Valdanos SOURCE: CAMP

Map 2-2: The existing and planned protected natural assets

2.1.2 Cultural heritage

Cultural heritage of the Montenegrin coast is characterised by a high degree of diversity considering both style and chronological characteristics and cultural and historic values, and its basic functions.

According to data of the Administration for the Protection of Cultural Heritage, within the area of coastal municipalities there are in total 735 immovable cultural assets; distribution by municipalities is the following: Ulcinj 15, Bar 57, Budva 51, Tivat 26, Kotor 459, and Herceg Novi 127. For another 290 assets it has been determined they possess potential cultural values, and these are distributed by municipalities as follows: Ulcinj 27, Bar 62, Budva 27, Kotor 62, Tivat 41 and Herceg Novi 71. As for submerged archaeological sites, 28 cultural assets have been registered.A com-

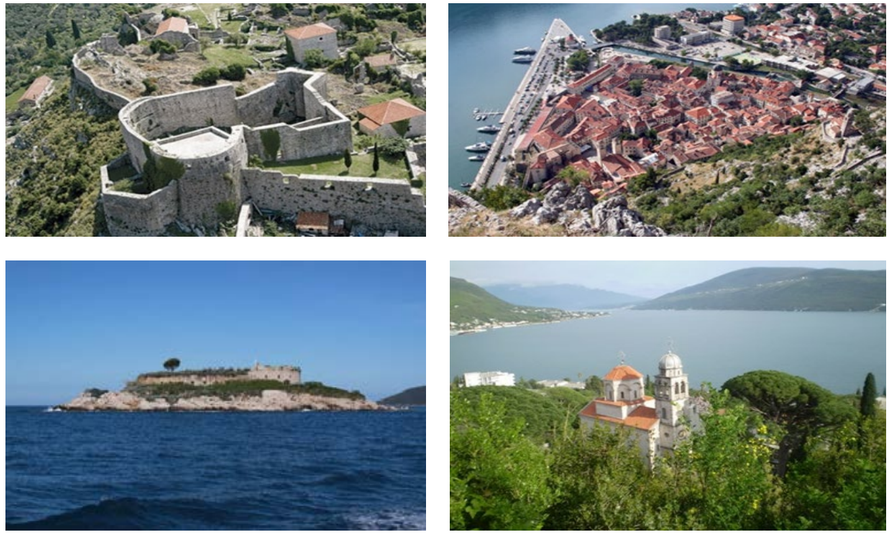
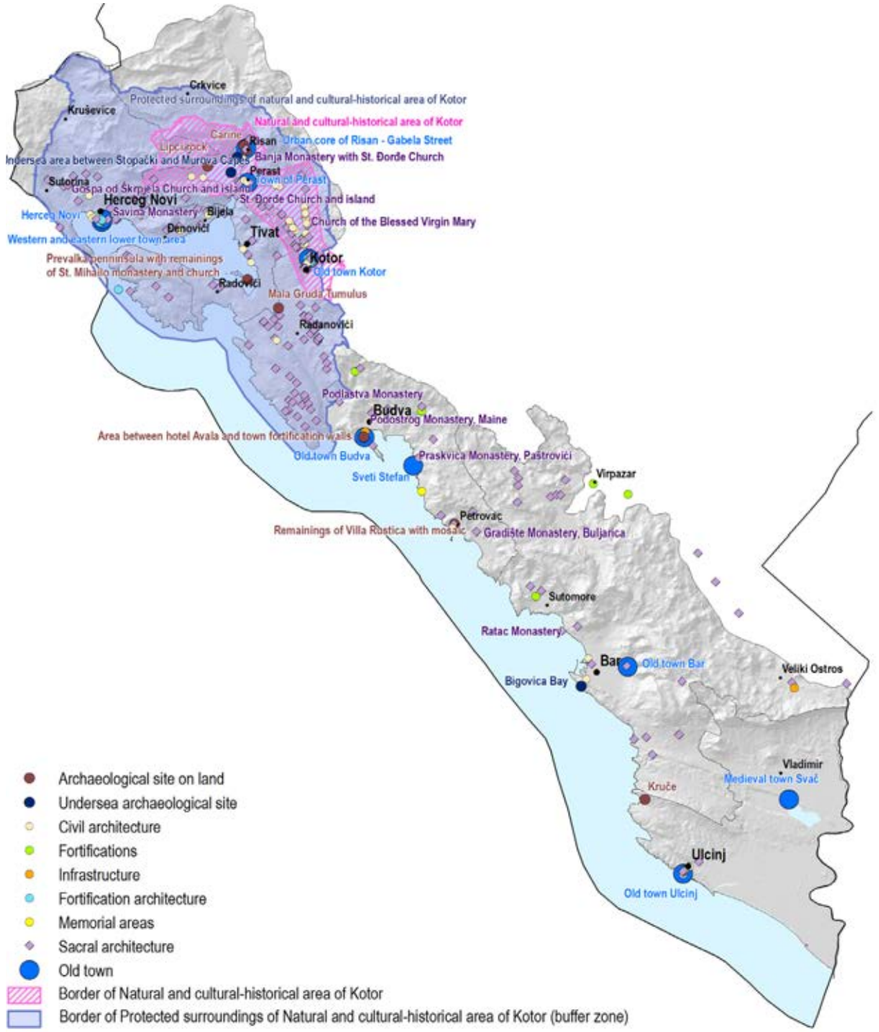


Figure 2-3: Cultural heritage (old towns, fortifications, sacral objects)
Source: Special purpose spatial plan for the coastal zone of Montenegro (SPSPCZ MNE, Planplus d.o.o., December 2013)



Map 2-3: Immovable cultural assets

15 / http://whc.unesco.org/en/decisions/6016

16 / http://whc.unesco.org/en/list/125/documents/

17 / Official Gazette of Montenegro, no. 56/13

prehensive strategy of Montenegrin cultural heritage protection is still missing. Management plan for natural and cultural-historic area of Kotor was adopted in 2011. This document, as well as decisions of the UNESCO World Heritage Committee[15] and other relevant reports[16] identified problems and recommendations of importance for protection of natural, cultural and historic Kotor area as UNESCO world heritage. A special Law on protection of natural, cultural and historic area of Kotor has also been adopted[17].

Irrespective of the fact that its protection has been regulated by legal norms, submerged cultural heritage has not been protected in a physical sense. This part of cultural heritage is not adequately mapped even though it has been identified and its specific locations have been registered in individual studies.

The value of cultural assets has been gravely diminished by years-long neglect of the cultural heritage in development plans, low priority of maintenance, conservation and remediation measures, at times uncontrolled construction and lack of compliance with regulations. Beside urban units, rural and old settlements located along the coast have been affected by negative impacts of construction. Problems are particularly pronounced with archaeological sites which are threatened by unplanned construction, while as submerged archaeological sites, particularly those containing amphorae, have been exposed to devastation due to illegal trade.

Protection of cultural assets is implemented on the basis of annual and long-term plans and programmes which, with the exception of solutions for conservation and restoration works, envisage interdisciplinary research. A certain degree of protection is also performed through spatial planning documents. A re-assessment project aiming to confirm the value of movable and immovable cultural assets in Montenegro, and define measures to improve the state of the cultural assets whose value is endangered, is in its final stages.

2.1.3 Landscape values of the coastal zone

Landscape diversity of the coastal zone represents natural wealth and a significant resource which contributes to tourist recognisability and attractiveness. Cultural patterns as an element of cultural identity and heritage have been created through the influence of human activities on landscapes. Based on valuation of types of landscape character in the coastal zone, three categories of exceptionally valuable landscapes important for preservation of authenticity and beauty of the coastal zone of Montenegro stand out:

- Natural and semi-natural landscapes: marine water area; coast (low and steep – reef and rocky coast); forests, brushwood and forest land (natural forests, brushwood, meadows and pastures); water surfaces (water flows/standing water, torrent flows, wetlands and salinas).
- Cultural landscapes: ambience units and architectural heritage – old towns, sacral objects, fortifications etc., landscaping objects.
- Special agricultural landscapes: flattened fields of alluvial and alluvial-colluvial soil; terraces and plateaus on flysch and karst terrain; special agricultural areas, important for preservation of cultural heritage and landscape characteristics, developed as a result of application of traditional procedures in cultivation and maintenance of agricultural soil (arranged olive groves, terraced areas, etc.).

Figure 2-4: Selected types of landscape characters
(Source: CAMP, 2013-2014)

Queen's Beach (Kraljičina plaža) – Čanj SOURCE: National Tourism Organisation

Landscapes are exposed to the impacts of accelerated transformations that often lead to negative changes. Processes that have the most significant impact on landscape include urbanisation and infrastructure development that undermine the system of linkages and lead to landscape fragmentation. Inadequate siting of tourist and recreational attractions in the most valuable parts of the coastal zone leads to disappearance of natural habitats and homogenisation of landscapes. Depopulation of rural areas and abandonment of the traditional way of land cultivation lead to changes in and disappearance of landscape character as a basis of cultural identity of the coastal zone.

2.2 Coastal zone resources

Intensified and often uncoordinated use of coastal and marine resources which we are seeing both in Montenegro and internationally has resulted in competition between different (often conflicting) uses of the sea and the coast, and unsustainable use of coastal zone resources. Beside intensification of resources use, the effects of anthropogenic and natural hazards create additional pressure on coastal and marine resources. In order to provide for sustainable growth and preservation of natural, landscape and cultural values, it is necessary to ensure sustainable, integral and coherent management of Montenegrin coastal zone resources including:

- natural – the sea, water, land, and space;
- economic – primarily in agriculture, fishery and aquaculture sectors, maritime transport and ship building;
- social capital – interconnections and cooperation between social actors; and
- human resources – knowledge and abilities.

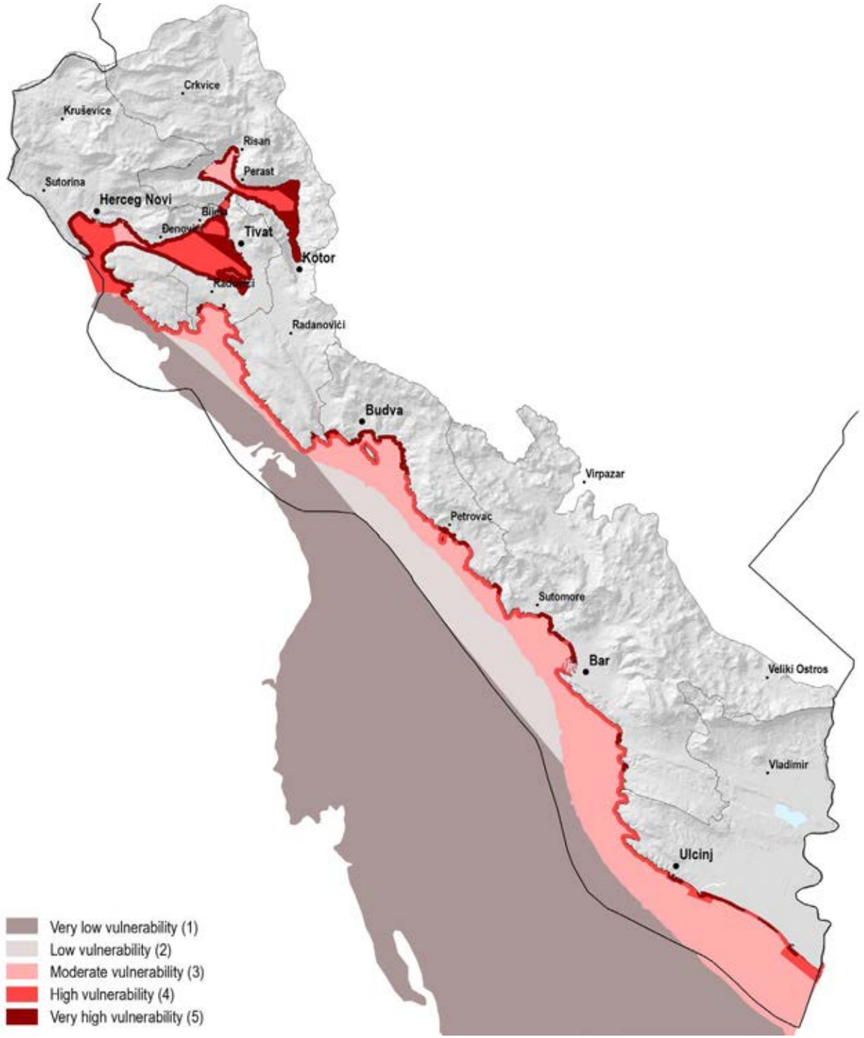
2.2.1 The sea

Montenegrin sea consists of two substantially different areas judging by their geographic, hydrographic and oceanographic characteristics: the Boka Kotorska Bay and the open sea extending from the coastal line[18]. The total surface of the marine water area is 6,347 km2, and of the territorial sea around 2,100 km2 (of which 89 km2 in the Boka Kotorska Bay). Maximum registered amplitude of change in the sea level due to tide is 131 cm.

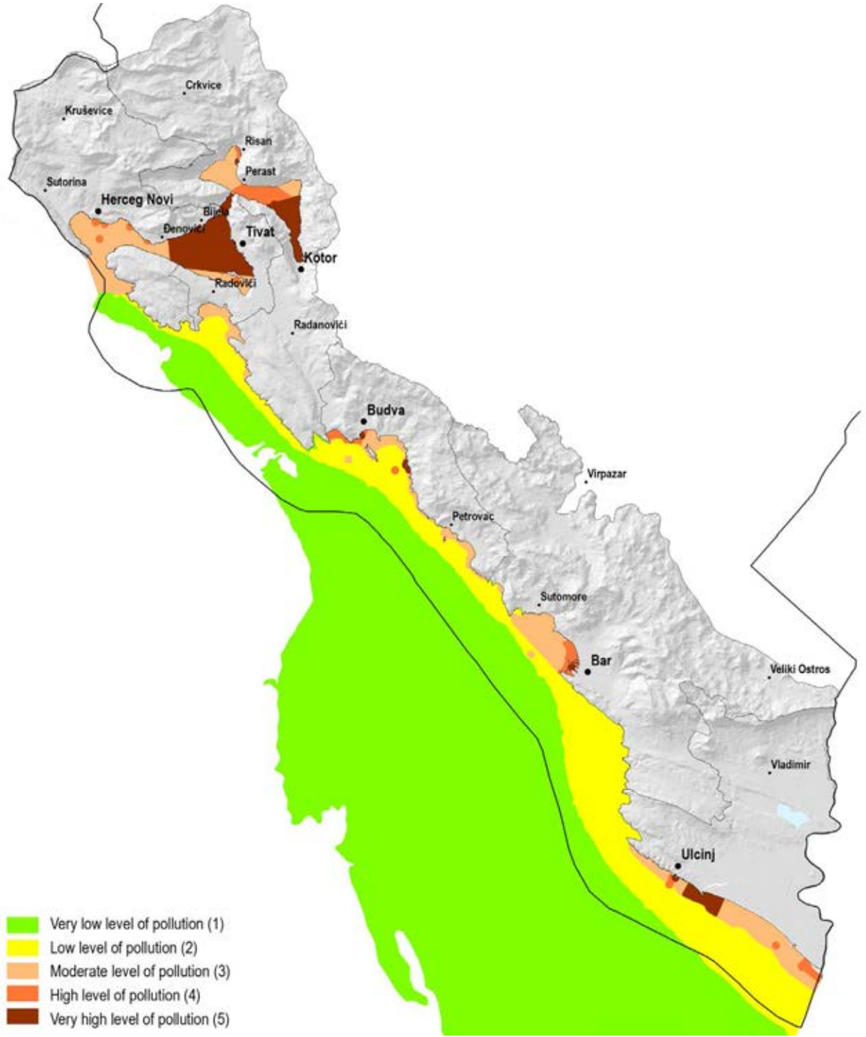
The sea is one of the most important resources and basis of development of economic activities such as bathing and nautical tourism, maritime transport, ship building, fishery and aquaculture. Other than these, the sea offers possibilities for economic activities which are currently not developed in Montenegro – biotechnology, exploitation of living and inanimate components of marine environment for pharmaceutical purposes, exploitation of minerals, oil and gas, energy, and other. Marine ecosystems provide a series of services (production, cultural, and other) which are of utmost importance for economy and wellbeing of people. The overall value of benefits from services provided by marine ecosystems in the Mediterranean basin in 2005 was, for example, estimated to over 26 billion € (Blue Plan, 2010).

Montenegrin marine resources are exposed to numerous and diverse pressures which primarily include impacts of pollution from untreated communal waste water, solid waste, ship building/ repair, from ports and marinas (which as a rule are not adequately equipped to accept waste from vessels and minimise negative impacts on the marine environment), as well as from vessels and industry. Vulnerability Assess-

18 / Article 14 of the Law on the sea (Official Gazette of Montenegro no. 17/07 dated 31.12.2007, 06/08 dated 25.01.2008, 40/11 dated 08.08.2011), territorial sea of Montenegro is defined as 12 nautical miles wide marine belt, counting from the basic line towards the sea.



Map 2-4: Cumulative vulnerability of the sea (average value)



Map 2-5: Total pollution/ the extent to which the sea is endangered (maximum value)

ment (based on data from the Monitoring programme on the state of Montenegrin coastal sea ecosystems which was carried out in the period 2008-2011) has shown a high vulnerability of the sea in Boka Kotorska, at certain locations in Budva, Petrovac, Sutomore, Bar, and Ulcinj, as well as at the open sea (map 2-3). The following were singled out as exceptionally vulnerable: narrow part of the Boka Kotorska Bay, part between Bijela shipyard Porto Montenegro port, the Bay of Igalo and the narrow shallow belt from Valdanos to the Bojana river mouth. The narrow coastal belt of the open sea and the Boka Kotorska Bay are also very vulnerable to pollution from possible accidents at the sea.

The map on total level of marine pollution (map 2-4) shows a high degree of vulnerability of the Boka Kotorska Bay and the Bay of Tivat, ports in Budva and Bar, and stretches from Ulcinj to Port Milena. Water and sediment pollution is particularly pronounced in the immediate vicinity of Bijela shipyard and within a short reach from the site of former ship overhaul institute "Arsenal" where high concentrations of heavy metals and organic pollutants have been registered. The level of pollution at the open sea is lower due to relatively big depth and good mixing of waters.

Communal waste water is the main source of sea pollution in the entire coastal zone. Efforts to improve waste water collection, treatment and discharge system are on-going, whereas a significant improvement has been achieved due to enhancement of sewage network (connections with main collectors and expansions). A treatment plant with the capacity of 110,000 PE (with two small plants in Jaz settlement) has been constructed in Budva. Other five municipalities do not have waste water treatment plants, but activities to develop project documentation for their construction are under way. The aim is to increase the level of connection of population to sewage systems to 85% by 2020, and to build first phase treatment systems in all municipalities.

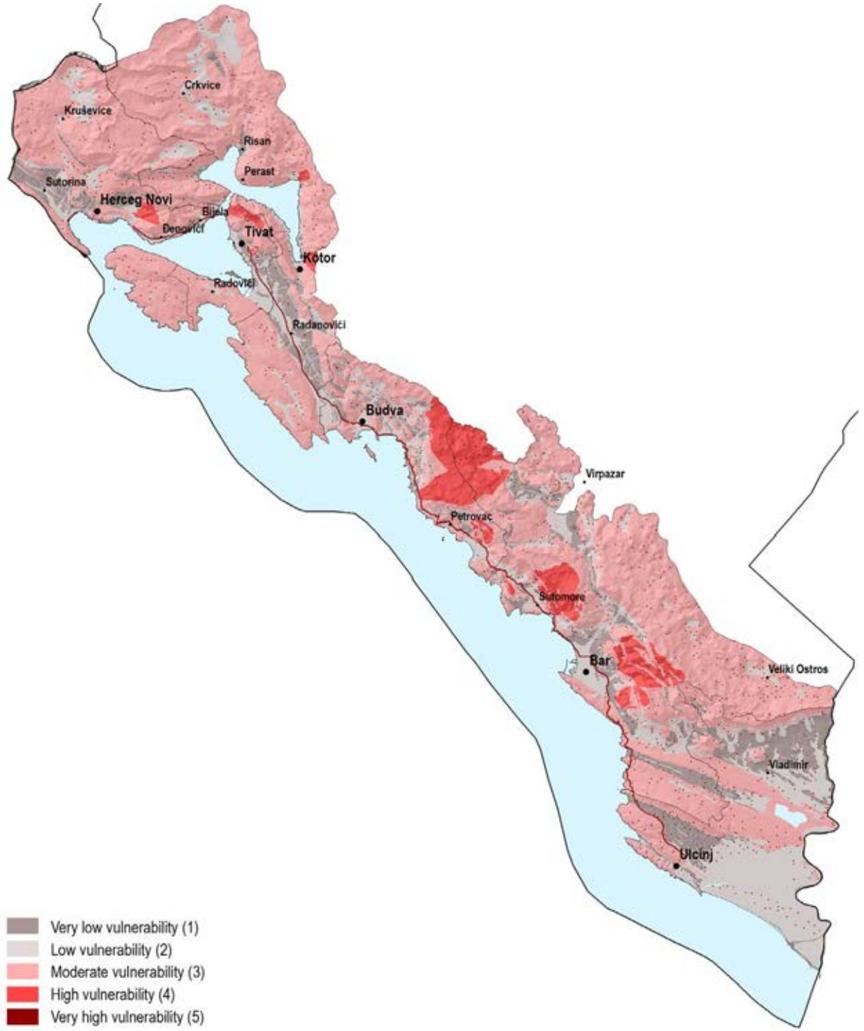
2.2.2 Waters

Montenegrin coastal zone as well as the southern Adriatic marine water area are characterised by a high level of precipitation (with unfavourable seasonal oscillations), but also a high runoff. Due to relatively fast infiltration through the porous surface, water balance is unfavourable, and there is a lack of water in critical periods (vegetative and tourist season periods). Except for the river Bojana, all rivers have fast and short courses with major fluctuations in the flow, and are often of torrential character. Hydrologic observations and continuous measurements over a longer period of time (around 20 years) exist only for the rivers Bojana, Željeznica and Sutorina, as well as for the Reževića river (for the latter the latest observation of water level has been carried out only over a period of 16 years). As for standing waters, there is only Šasko lake in this area. Skadar Lake does not physically belong to the coastal zone, but it is important because of its influence on the upper flow of the Bojana river.

Groundwater sources occur in the form of karst and condensed aquifers and aquifers which are formed in specific conditions of the three main hydro-geologic units in the coastal zone (coastal belt, Cukali zone and high karst). Even though drinking water reserves of karst aquifers are significant, they are insufficient for water supply, mostly due to unfavourable precipitation pattern and a steep increase in water demand during the summer period. Salt water intrusion also contributes to problems with using local groundwater springs for water supply[19]. Mineral waters occur in

19 / The most important springs are: Brca, Bunar, Kajnak, Zaljevo, Čanj, Dobra voda, Škurta, Crvanj, Bijela skala, Salč, Gač, Klezna I and II, Lisna-Bori, Mide I and II, Reževića river spring, Podgorska vrela, Sjenokos, Zagradac, Merkur, Plavda, Topliš, Škurda, spring in the Vrmac tunnel, springs Opačica and Sutorinsko polje. Regional water supply system for the Montenegrin coastal zone uses spring Bolje sestre from Skadar Lake (minimum flow of about 2.5m3/s).

Map 2-6: Vulnerability of surface waters



Map 2-7: Groundwater vulnerability

the coastal zone of Njivice and Ulcinj. Beside mineral waters, there are also mud deposits significant for balneological purposes.

The existing state of exploitable reserves in the groundwater deposits during dry period as well as a poor state of hydro-technical infrastructure point to the need to optimise use of the existing deposits, discover new ones and level the annual flow of the most significant karst springs. Systematic observations of changes in the abundance of either permanent or occasional springs in their outflow zones, changes in chemical traits, salt water intrusion and other important parameters do not exist. Another point of concern is that protection zones have not been defined for all the springs used to supply the coastal region with water.

Permanent and significant intermittent water flows are characterised by a very high vulnerability[20]. Šasko Lake is extraordinarily valuable and it is also characterised by a high vulnerability; Skadar Lake is highly vulnerable too. Zones of smaller torrential flows across the entire coastal region can be categorised as medium vulnerable. Areas already exposed to exceptionally high and diverse impacts given the extent to which they are developed and numerous pollution sources have relatively low vulnerability. Surface waters vulnerability[21] is shown on map 2-6. Vulnerability related to the impacts of flooding will be discussed in more detail in the section on natural hazards.

As for groundwater, the areas of highest vulnerability (map 2-7) are the zones of carbonate rocks of cavernous-cracked porosity and good karstification. Zones of sanitary protection of springs, sanitary protection belt around the Montenegrin coast Regional water supply system pipeline, zones in the immediate surroundings of mineral springs, zones with peloid deposits as well as zones around springs, water occurrences and water objects have been also singled out exceptionally vulnerable.

Pollution above the allowable limits (in reference to the prescribed quality classes) has been registered in Bojana and Sutorina rivers. Pollution load in Bojana river is already high at the very source[22], but due to a large amount of water its quality parameters remain within the prescribed limits (class A2,C,II) until the lower part of its flow where (at Fraskanjel station) excess concentrations of some pollutants have been recorded. Slowed flow and closing up of the riverbed profile at the very mouth of the river (due to sediment deposits and relatively shallow depth) amplify pollution effects.

As for the Sutorina river water, majority of measured parameters exceeds the prescribed quality class (A1,S,I). Pollution of the river Sutorina[23] has a special weight due to the fact that peloid deposits accumulated at its mouth are used for health purposes.

There is no water quality data for intermittent surface watercourses, but the nature of numerous pollution sources to which they are exposed has been identified. Small quantity of water in river beds for major part of the year exacerbates their susceptibility to pollution. Data on groundwater pollution is incomplete, but the available ones allow for conclusion that groundwater sources are in principle not endangered by the existing waste disposal sites (with the exception of Pode near Herceg Novi which can have an impacts on Morinjski springs).

2.2.3 Soil

Highly diversified and complex petrographic and lithologic composition of the coastal belt made occur-

20 / Areas that have been assessed as the ones exhibiting very high vulnerability are those where changes of surface water regimes are unacceptable.

21 / Assessment of general vulnerability of the coastal zone of MNE (2012).

22 / The river Bojana receives pollution from the entire catchment area (waste water of the town of Skadar has a direct impact, as do settlements along the banks on both Montenegrin and Albanian side; agriculture and catering and tourism activities at the very confluence also have direct impacts – the latter are situated on the right river branch which belongs to Montenegro; industrial sources and communal waste water from the wider catchment area of the river on Montenegrin territory have indirect impacts). Due to pollution, the river Bojana's water occasionally exceeds the prescribed quality class for suspended matter, nitrites, ammonium, COD, Fe, Mn, Hg, and mineral oils.

23 / Significant pollution sources include agriculture, slaughterhouse at Debeli brijeg, petrol stations, car servicing shops, and household waste water. The majority of measured parameters, except for organic contaminants and some metals, exceed the prescribed quality class; deviations are especially high for the following parameters: colour, turbidity, COD, BOD5, oxygen saturation, NO2, NH4, Hg.

24 / Proposal of Montenegro's Action Plan to Combat Soil Degradation and Mitigate Consequences of Droughts from 2014

rence of different types of soil in the coastal zone possible[24]. Terra rossa and chernozem dominate on karst soil, and to a lesser degree calcic cambisol. On flysch and other silicate bases there are eutric and distric cambisol, and in the coastal fields and coves alluvial – colluvial soil. Coastal zone soil is an important resource in economic and ecological sense – as a basis for development of agriculture and an element that allows for preservation of ecosystems stability and numerous services they provide (including erosion prevention).

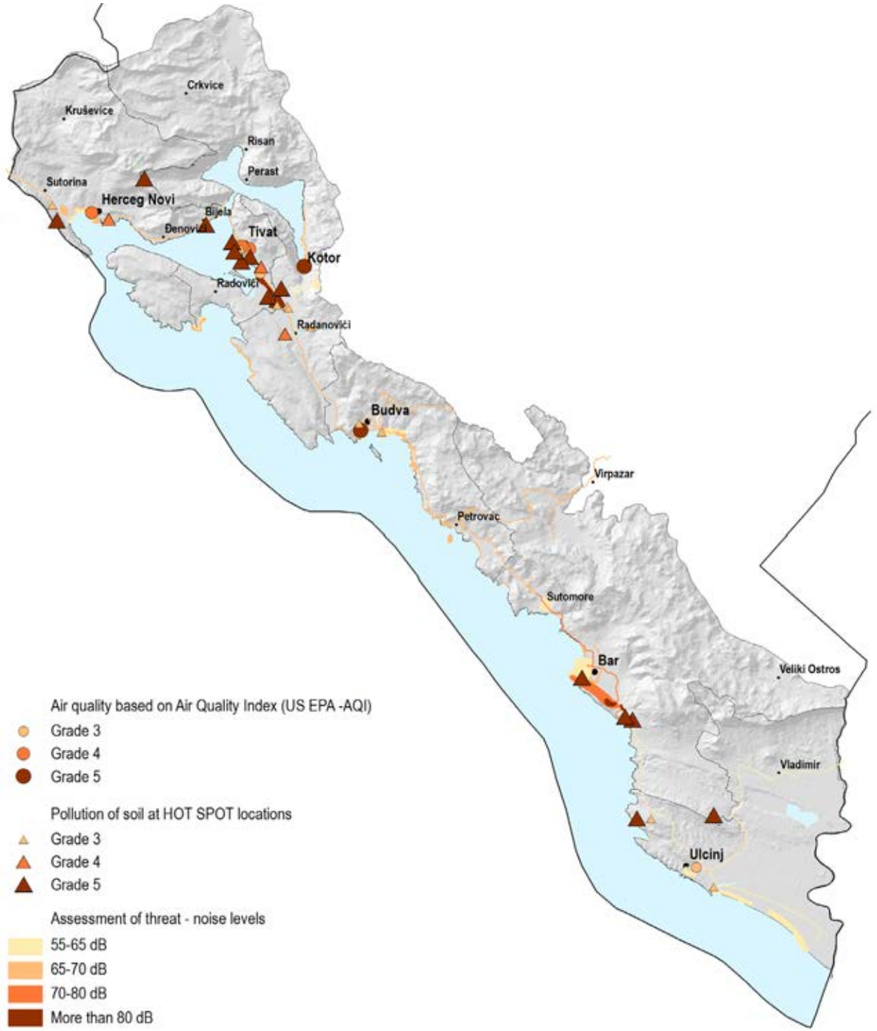
The largest areas highly suitable for agriculture (map 2-12) are found in the municipality of Ulcinj. These are flat alluvial and colluvial soils – Ulcinjsko field, Štoj, Šasko and Anamalsko fields. In the municipality of Bar, in addition to smaller complexes at the northern part of the municipality, Barsko field is particularly suitable. However, the field has already been urbanised to a large extent and intersected with infrastructure. In other municipalities, areas of high suitability are smaller but still important (Sutorinsko, Kutsko, Tivatsko, Mrkovsko and Mrčevo fields stand out).

Smaller complexes of agricultural land where conversion and pollution i.e. degradation of soil would have unacceptable impacts and where future interventions should be avoided to the greatest possible extent are also of major significance. It is important to mention that various documents present substantially different assessments of the existing areas of agricultural land that should be preserved, and also that there is no unique map with quality classes of agricultural land.

Processes and phenomena that have the biggest impact on the loss of important soil characteristics are conversion of agricultural land into construction areas (discussed also in section 2.3 on spatial planning), pollution and erosion (elaborated in section 2.4 on natural hazards). Improper waste disposal stands out as one of the main pressures on soil. As far as possible soil contamination due to improper waste disposal and conversion of agricultural into construction land are concerned, the most vulnerable are areas in Sukobinsko, Grbaljsko Barsko, Grahovsko, Ulcinjsko and Anamalsko fields, as well as areas in Kaliman and Štoj and arable areas in Luštica. The coastal soils (including beaches) are particularly sensitive to any kind of pollution from land or the sea.

Locations polluted by harmful and hazardous inorganic and organic matter that have a negative impact on the sea (due to pollution wash off) include land parts of Bijela shipyard and location of the old waste disposal site Kruče near Ucinj. Other than these, soil pollution hot-spot sites also include old waste disposal sites (that have not been remediated) for the towns of Herceg Novi, Bar, Kotor and Ulcinj. Map 2-8 shows total pollution/ the extent to which land is endangered and it covers air and noise in addition to soil pollution.

Pressures generated by improper waste disposal have been significantly reduced since the start of operation of the sanitary landfill Možura that currently accepts around 62,000 tons of communal waste from Bar, Ulcinj, Kotor, Budva, and Tivat on an annual basis. The municipality of Herceg Novi disposes of 14,500 t of communal waste at the temporary disposal site Tisove grede (while construction of a sanitary landfill Duboki do is planned). Around 16,000 t of construction waste and 45,000 t of biodegradable waste are generated in the coastal zone annually.



Map 2-8: Total pollution of the land: grades 3 (high impact), 4 (very high impact) and 5 (inadmissible/ unacceptable impact)

2.2.4 Spatial development

Spatial development refers to man-induced changes in space aiming at protection, improvement, use, and management of space[25]. Coastal zone area represents a key development resource of Montenegro. However, even a superficial assessment reveals that pressures from unsustainable urbanisation, especially linked to real estate business, have resulted in numerous examples of endangering the environment and the natural, landscape, and cultural values of the coastal zone.

Use of indicators of spatial development's sustainability is of exceptional importance for enabling efficient monitoring of the transformation of space in the coastal zone. The first indicator of intensity of urbanisation pressures has been developed by analysing valid spatial planning documents and the real level of development based on orthophoto images from 2011. The analysis[26] has shown that construction areas in the coastal zone are largely oversized in relation to the number of inhabitants and tourist capacities. The share of construction areas in the total surface of six coastal municipalities in Montenegro is 15.5%, whereas only 18.5% have been actually built. The remaining 81.5% or 19,042 ha comprise non-developed construction areas. The same indicators for the 1 km wide belt from the coastline shows that as much as 46% of the territory is planned for construction, out of which less than a third (30%) has been developed. For the sake of comparison, share of construction areas in the overall territory of Croatian coastal counties (which have population density similar to that of the Montenegrin coast) amounts to 5-7%, while the same indicator for the coastal self-government units is 8-10%. If the share of planned construction areas in the coastal belt extending for 1 km from the coastline is compared with the situation in the coastal zones of Italy, France, and Spain, it can be seen that these states, with substantially higher population density than the one in the Montenegrin coastal zone have a lower share of planned construction areas (on average around 30%, as compared to 46%). The surface of planned construction areas which has not been built yet (19,042 ha) is sufficient to accommodate housing capacities where additional 600,000–800,000 inhabitants could live (in line with the existing construction density) and tourist capacities for at least 270,000 new beds. These facts clearly indicate the scale of oversizing the construction areas.

Planning of construction areas several times larger than necessary represents an unsound use of valuable and non-renewable spatial resources, but also has numerous additional negative consequences such as:

- dispersed construction with significantly higher costs of communal arrangements;
- unnecessary consumption of other valuable resources, especially agricultural and forest land and areas with valuable biodiversity;
- higher energy supply costs and higher consumption of fuel;
- higher environmental pressures; as well as
- loss of the traditional physiognomy of settlements and diminished original landscape values.

In economic sense and with long-term perspective, such a trend leads to decreased attractiveness of the tourist area, downgrading of destination rating, and ultimately to a decrease of income earned by tourism. Conversion of agricultural land does not inflict damage only to agriculture; it generates other negative consequences such as soil erosion, environmental pollution, deterioration of cultural heritage, etc.

The second indicator of sustainability of spatial development is the existence of conflicts between the impacts of urbanisation processes on the space and its vulnerability. Out of the total surface of undeveloped construction areas, 80% is on locations of high or very high vulnerability. Comparative analysis of the areas of high vulnerability, planned construction areas and the extent to which the space has been built so far has revealed 35 zones where there are conflicts between non-built construction areas (with surfaces of more than 50 ha) and areas assessed as the most vulnerable ones. These conflict areas are shown on map 2-8. An additional risk with hypertrophic construction areas is initiation of numerous dispersed, small and non-harmonised interventions outside the settlements that irrevocably devastate the space and diminish development potential of the coastal zone.

In addition to conflicting land uses on land, there are conflicts in the use of marine areas too. Use of the sea generates impacts on the marine environment, while the characteristics of marine environment enable (alleviate or aggravate) the use of sea resources. Different activities taking place in the sea make an impact on the state of the environment, giving occasionally rise to pollution levels that lead to degradation of marine environment. When characteristics of the degraded environment cease to meet the needs for development of an activity, the latter cannot function or it functions with decreased efficiency. Very often, the activity itself adversely affects the state of the environment, and once the state of the environment deteriorates, the activity becomes a "victim" of such a state. Fishery represents a good example, as well as uncontrolled development of tourism which is not accompanied with development of quality communal infrastructure.

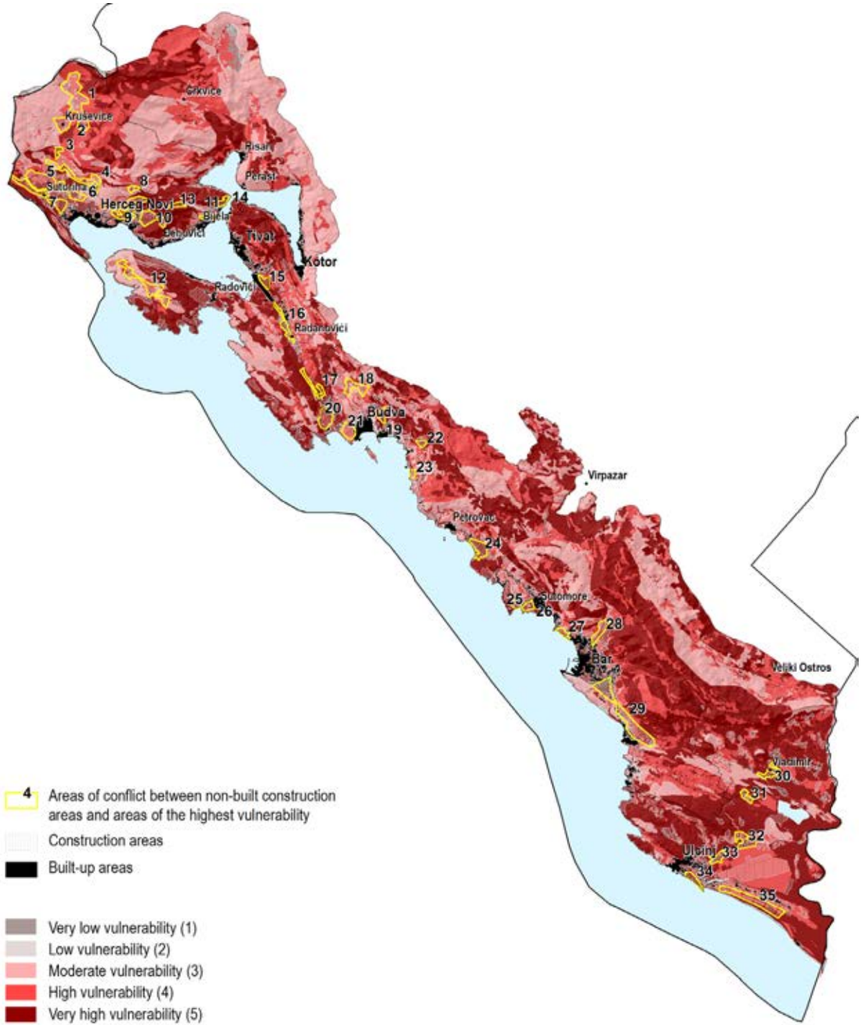
The third indicator of sustainability of spatial development is quality and the extent to which the built space is arranged. It refers to functional and physiognomic-morphologic characteristics of the built environment and the level to which it is equipped with communal infrastructure. Physiognomic-morphologic characteristics refer to the quality of design, morphology and composition values of the matrix of settlements, respect of the original landscape values and of valuable elements of local traditional typology of settlements. Beside communal infrastructure, an important element of settlements' functionality, which is often missing in the coastal region settlements, is the system of public surfaces and public amenities. Green areas, in particular public ones, are also an important element of functional arrangement, good design and environmental protection of settlements. Architectural shaping of certain buildings and their immediate surroundings is important for the assessment of quality of built environment too. In the coastal zone there are numerous examples of construction that does not contribute to preservation and increase in the quality of built environment. Some of them are shown in figure 2-5.

Even though it is not easy to give an objective assessment of the quality of built space, a simple field visit provides an insight on the state in space and proportions of the existing problems along the Montenegrin coast. Quality, authenticity and identity of the built environment should be particularly important for destinations that have potential and ambition to develop high quality tourism, such as the coastal zone of Montenegro. Although the main attraction factors of the coastal tourism in Montenegro are nature, sea, attractive landscapes and cultural heritage, for an overall positive experience it is necessary to ensure that urbanised areas and accommodation compounds through which the visitors move and in which they stay are comfortable to the maximum possible extent, creatively designed, integrated into the

25 / Definition from the Law on spatial planning and construction of objects (Official Gazette of Montenegro, no. 51/08, 40/10, 34/11, 47/11, 35/13, 39/13).

26 / Application of selected indicators for monitoring and evaluating sustainability of spatial development of the coastal zone of Montenegro, CAMP MNE (2013).

National strategy on integrated coastal zone management for Montenegro



Map 2-9: Areas of conflict between non-built construction areas and areas of the highest vulnerability

Figure 2-5: Negative examples of the quality of built environment in valuable coastal areas

environment and respectful to it. This is understandable since the desirable tourist emitting markets are developed countries of the European Union with high standard of living and developed environmental and spatial planning criteria.

2.2.5 Natural and anthropogenic hazards

One of the objectives of the ICZM Protocol refers to mitigation of effects of natural hazards. Although the level of available data and risk assessments substantially differ depending on the type of hazard, a general assessment is that risks from seismic activities in the coastal zone of Montenegro are very high, that risks from erosion and forest fires are significant, and that the whole area is prone to climate change impacts (including sea level rise, frequency and severity of floods, droughts and stormy winds)[27].

The largest areas of high seismic vulnerability (or zones with expected ground accelerations between 0.35 g[28] and 0.60 g) are found in Bar and Ulcinj municipalities (in particular wider surroundings of Ulcinj, the area around Gornja Klezna, the area of southern slopes of Rumija and Možura mountains, i.e. the area between the river Bojana and Bar). Areas of high seismic impacts are also found in the vicinity of Sutomore, Petrovac, Budva, Radanovići, Kotor, Risan and Herceg Novi settlements. All the so far research of seismic risks, including the CAMP analyses, pointed out there was a strong need for studious determination of damageability functions of all the typical objects and infrastructural systems. The question of how much new spatial plans and construction activities respect recommendations of micro-seismic zoning and safety standards has been opened from various levels.

Despite limited data, it can be concluded that erosion is quite pronounced in the coastal zone. Karst erosion has turned significant surfaces into barren areas with scarce and thinned vegetation cover. In the zone of flysch and other classtic sediments, surface and deep erosion was at work as manifested through furrows, gullies, ravines, torrents, landslips and landslides. Beside soil's vulnerability to the activity of torrents which regularly occur after precipitation of strong intensity and longer duration, a typical form of water erosion is abrasion that occurs under the influence of sea waves. As a result of cumulative impact of waves and interrupted or decreased nourishment of beaches with materials deposited by watercourses that are now obstructed due to unsustainable construction, decrease in the surface of certain beaches is becoming ever more evident. However, it is not possible to assess intensity of the impact on beaches due to a lack of systematic observation of coastal processes.

The coastal zone is also threatened by water erosion which is manifested through different forms: surface, mixed and deep, as well as through landslips, landslides and alluvions. Water erosion is most evident in catchment areas of bigger water courses, especially torrents[29]. Areas outside these catchments, consisting of flat and terraced terrains, salt basins, areas of macchia and preserved forest, are not threatened by erosion. Soil vulnerability to erosion is shown on map 2-9.

2.2.5.1 Climate change

Due to increase in GHG concentrations, consequences of climate change have been observed both on global and European level. The most obvious manifestation is increase in air temperature, followed by changes in the quantity of precipitation, temperature of the sea and its level, glacier melt, decrease of snow cover, and changes in extreme weather and climate events.

The observed climate change in Montenegro and in the coastal zone indicate an increase in air temperature, but also in the number of very warm days and nights, while the number of cold days and nights has decreased. On average, heat waves are more common and they last longer. On the other side, extreme precipitation indicators (e.g. the number of days with heavy precipitation, maximum number of dry days and share of extreme precipitation in the overall annual precipitation volume) have statistically insignificant trends, but pronounced annual variability. Results of certain researches[30] show an increase in surface sea temperature of around 10 C is expected in the period 2015-2020 compared to the period 2003-2008, together with faster surface sea currents, primarily in the central Adriatic. In the same period a decrease in the flow of Bojana river is expected[31].

As for the strength and scope of the impacts of storms, research has shown their increase is expected due to global warming which provides energy for intensification of storms. Because of this, coastal areas will be faced with an increase in the level of flooding, acceleration of coastal erosion, mixing of sea and fresh water and loss of wetlands, i.e. with consequences that will affect economy, the environment, production of food and energy. Along the Montenegrin coast, high waves are the main threat as they cause flooding of a wide area along the shoreline, cause damage on nearby objects, beach equipment, docks, etc. This is particularly pronounced in autumn and winter, since this is a period of intensive cyclone activity[32]. Storms have become more frequent and more intense in Montenegro since 1998 (the year of strong El Nino) bringing, particularly to the coast, heavy precipitation, stormy and hurricane-like wind gusts, high waves and flooding of a wide area along the coast. These changes coincide with the increase in sea surface temperature which follows the global increase of temperature and corresponds to the results of satellite observations according to which every year since 1997 has been warmer than the climatological average.

Results of vulnerability assessment of the Montenegrin coast to "meteorological" hazards (i.e. weather-related hazards) are as follows: total impacts of drought, forest fires, heavy rains and stormy winds (in comparison to climatological average 1961-1990) confirm that vulnerability is within the domain of medium to very high values (map 2-10). Available data on winds show that the greatest vulnerability to stormy winds is in the municipality of Herceg Novi and along north-eastern slopes of Rumija. Vulnerability to forest fires is very high in the region of Prevlaka and a part of Luštica, as well as in the wider area of southern coast (from sun-exposed slopes of Rumija towards the coastal area and the Bojana valley). The largest area of very high vulnerability to droughts is in the southern part of the coast and it encompasses the region from Sutomore towards Bar, Vladimir, upper flow of the river Bojana (toward Skadar Lake) and Ulcinj hinterland.

In addition to the assessment of existing state by using a joint model of vulnerability to drought, forest fires, heavy rains, and stormy winds, projections of climate change impacts according to scenarios developed by the Intergovernmental Panel on Climate Change – A1B and A2[33] for periods 2001-2030 and 2071-2100 and spring, summer, autumn and winter seasons – have been made by using projections of the Regional Climate Model EBU-POM for temperatures at 2 m height and accumulated precipitation[34]. Obtained results have shown that vulnerability of the Montenegrin coastal region increases due to expected impacts of climate change:

- Under scenario A1B/2001-2030, average annual grades show that droughts, fires and stormy winds in the area of Herceg Novi, Budva and southern part of the coast have the highest im-

27 / In the framework of the Assessment of general vulnerability of the coastal zone of MNE, CAMP MNE (2012) and Vulnerability assessment of the narrow coastal zone, CAMP MNE (2013), vulnerability of the coastal zone to certain types of coastal erosion, seismic hazard and climate change has been assessed; projection of sea level rise has been made too.

28 / Unit of gravitational acceleration: 1 g = 9.81 m/s2

29 / Bečička river, Bojana, Bratički stream, Gradiošnica, Grđevica, Jaška river, Kološun, Ljeskovački stream, Vodolježnica, Rikavac, Sutorina, Vještica and Željeznica

30 / Projections from AdriCosmStar project.

31 / Compared to average observed flow of 646.78 m3/s, the projected one is 482.30 m3/s.

32 / A typical example is the big flood that struck Montenegro in the period from the end of December 2009 to the beginning of January 2010, when stormy wind accompanied by strong rains, high temperatures and high water level of the river Bojana caused an increase of the sea level.

33 / In relation to greenhouse gas concentration the scenario A1B is "medium", and A2 "high" with approximately two times greater concentration of C02 compared to the currently observed value of 385 ppm (IPCC Special Report on Emission Scenarios ((SRES; Nakićenović and Swart, 2000)).

34 / The First National Communication of Montenegro to the United Nations Framework Convention on Climate Change

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pact. Heavy rains have the highest impact in the parts of the municipality of Kotor and in Budva hinterland.

- Under scenario A1B/2071-2100, average annual grades show that vulnerability of the region to drought will increase compared to the period 2001-2030. On average, the coastal region will be an area where droughts, forest fires and stormy winds will have the highest impact during the year (with the exception of Kotor, Budva and Tivat).

- Under scenario A2/2071-2100, average annual grades show that droughts, forest fires, stormy winds and heavy rains will have the highest impacts in the coastal region. Heavy rains will have the highest impact in the hinterland of the Boka Kotorska Bay and hilly-mountainous area towards Budva municipality.

As for the vulnerability to floods, the southern rim of Skadar Lake, the river Bojana, Vladimirsko-sukobinsko field, wider area of Šasko Lake and Ulcinj field are the areas of very high vulnerability (map 2-11). Two groups of characteristics of floods and their consequences can be distinguished in the zones of river courses in the coastal region of Montenegro:

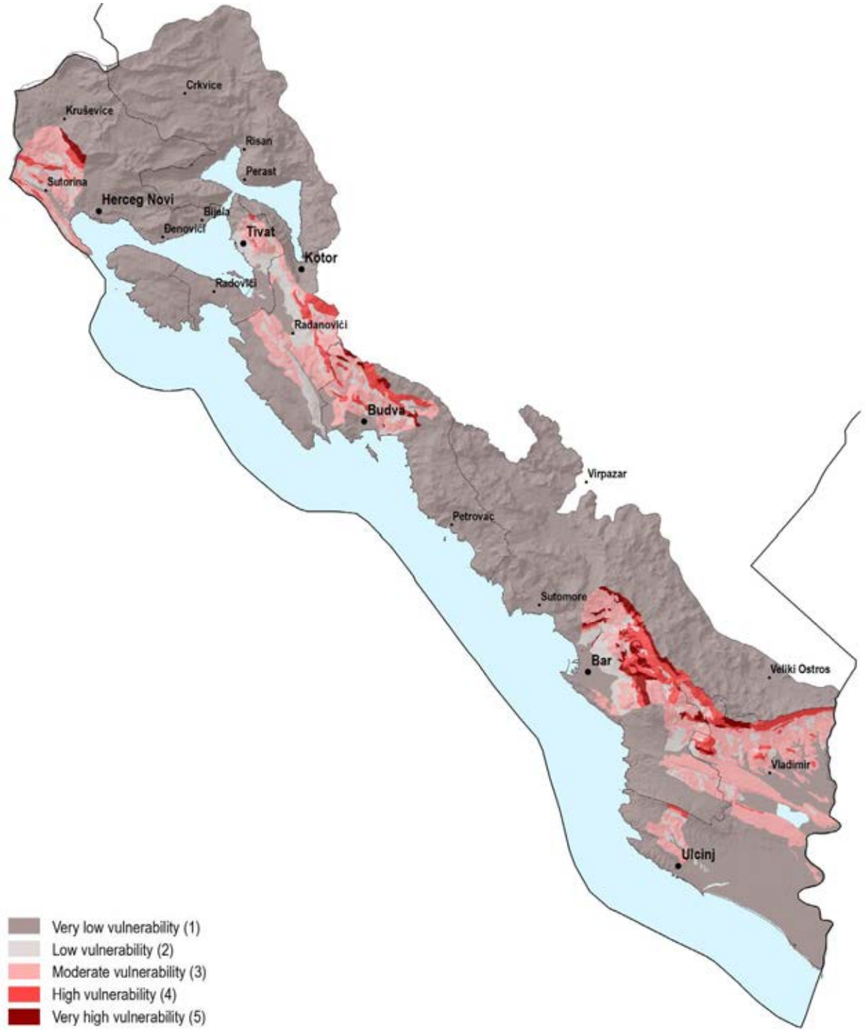
- Floods caused by extremely high water of the river Bojana as a transboundary river between Montenegro and Albania, significantly impacted by waters from the Albanian territory. In cases of major floods regardless of defence embankments, large areas in Ulcinj hinterland, the Ulcinj field and the zone of Bojana's outflow into the sea (the area around Ada Bojana) will be under water. Among others things, this is due to the fact that defence embankment is not continuous as it enables small watercourses to discharge into the river Bojana. Therefore, in the event of a break in the defence line, significant areas on a relatively long distance from the breaking point can be endangered by floods.

- Floods in the zones of smaller torrential watercourses in the entire region of Montenegrin coast where flow regime is characterised by large amplitudes in the flows and water levels, as manifested in long periods of low flow and occasional drying up, as well as in short periods of large flows due to abundant precipitation. Extreme precipitation causes these watercourses to flow out of their beds and trigger floods of local character. These floods fall into the category of flash floods, and they are characterised by a fast flood wave occurring in the period of up to six hours from the time of intensive precipitation.

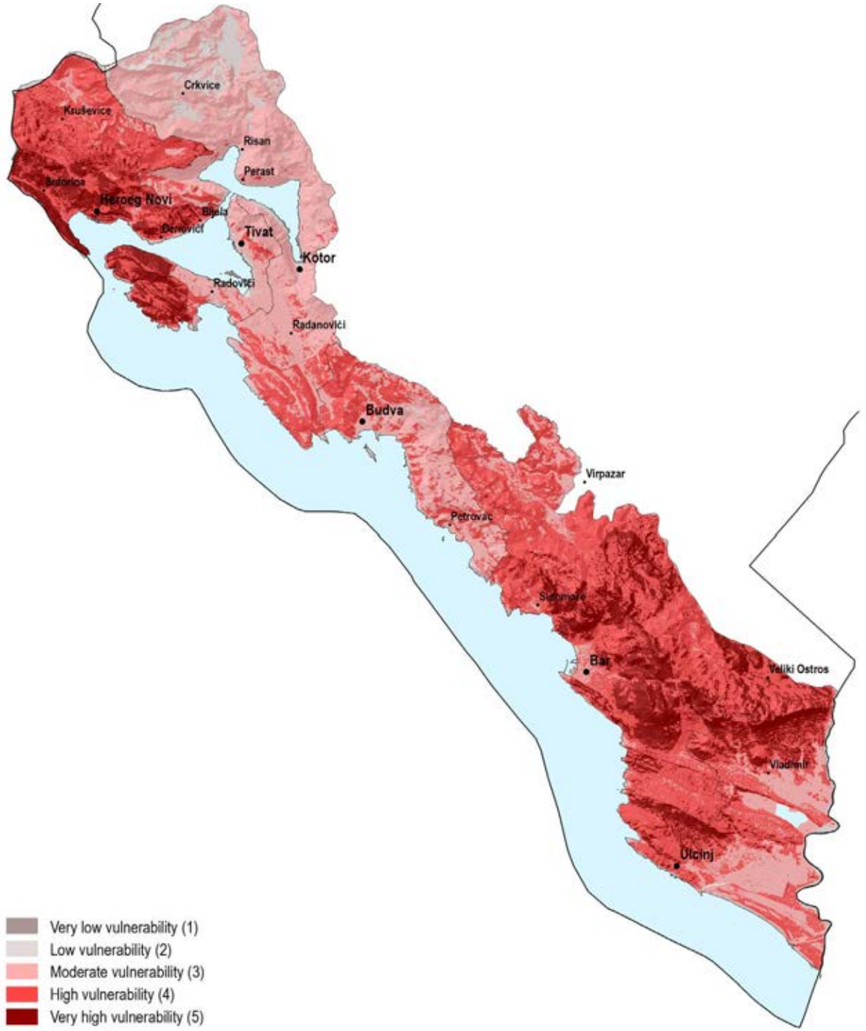
Risk from flooding in the Bojana estuary has been increasing due to the influences of sea level rise which is now clearly manifested under specific meteorological and hydrologic conditions. As for vulnerability of the narrow coastal zone due to the impacts of sea level rise, the scenario based on projections of the Intergovernmental Panel on Climate Change (IPCC) has been assessed as the most realistic and probable. This scenario foresees an increase (in relation to the median sea level in the Adriatic basin) of 0.62 m in the digital terrain model of the Montenegrin coastal zone[35]. It is recommended to also apply (now and in the near future) the second scenario of the sea level rise which projects the increase of 0.96 m in the digital terrain model. This recommendation should be applied in all the spatial plans, including short-term planning.

Generally speaking, it is necessary to decrease exposure or sensitivity of the coastal zone by applying special measures or increasing adaptive capacities through activities which are tightly linked with development priorities in order to lower its vulnerability.

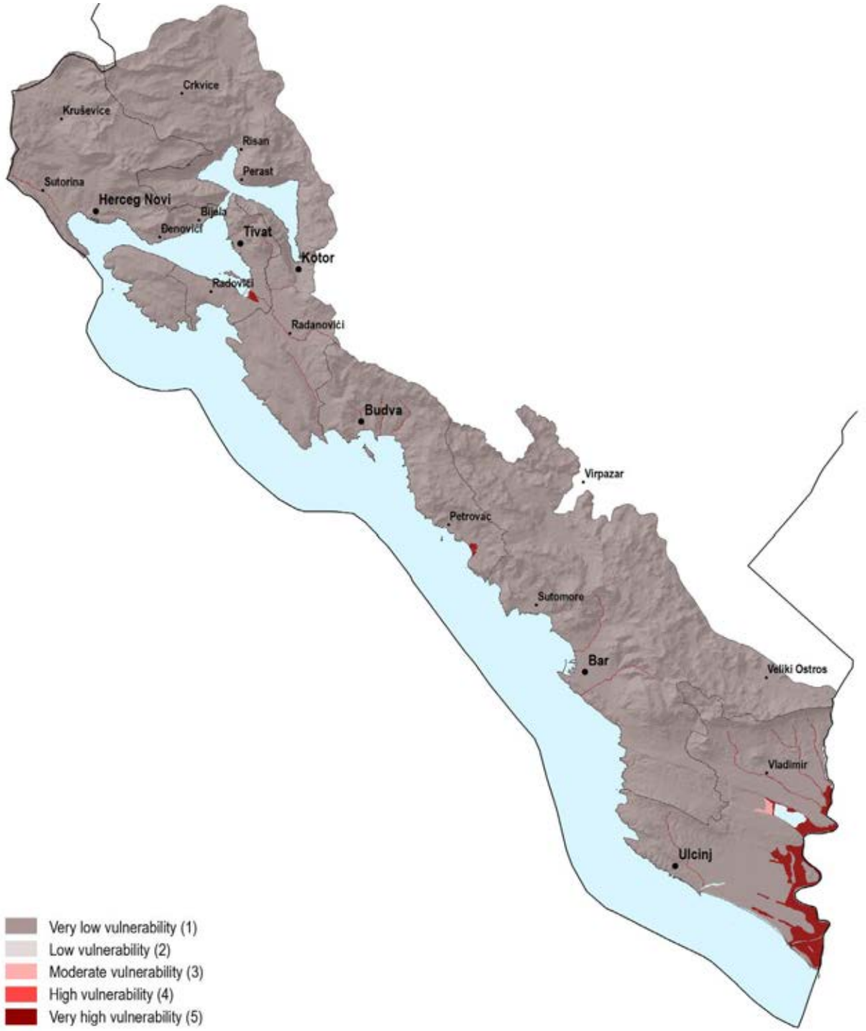
35 / Based on global projections, transposition of projected sea level rise to the space of Montenegrin coastal zone was carried out by applying Digital Terrain Model (DTM), without downscaling of the global model to the regional level, and by taking into account sea level changes in the Adriatic basin. The analysis does not take into account the effects caused by stormy winds and sea waves. The basis for the analysis of the scope of areas that will be affected by sea level rise was obtained by applying the latest LiDAR set of DTM data for Montenegrin coastal zone with data provided in relation to Trieste vertical datum as a reference point for measuring heights at land. In order to calibrate projections of sea level rise in relation to Trieste vertical datum, a height of 0.27 m was added to projected sea level rise values as a value of height expressed in the national system.



Map 2-10: Vulnerability of soil to erosion
(analysis done for catchments of significant watercourses)



Map 2-11: Vulnerability to climate change – existing state (average value)



Map 2-12: Vulnerability to the impacts of floods

2.2.6 Economic and social development

Economy of the coastal region makes a significant share of the national economy. As for the tourism sector, the share is predominant. Around 40% of the total number of active companies in the country operates in the coastal zone[36], while the share of employment is at the level of around 28%[37]. The economic sectors which stand out by their importance for sustainable use of the coastal zone resources are tourism, agriculture (including fishery and aquaculture) and shipping industry (with ship building). Other activities which by their scope have an important place in the coastal zone economy are trade, construction, road transport and processing industry (small capacities in metals processing, food and chemical industry).

As for the number of companies in different sectors, wholesale and retail sale companies are the most numerous ones in the coastal zone (35% of all the active companies in 2011), followed by companies in accommodation and food services sector (15%) and construction (10%)[38]. A similar structure applies to employment: the largest number of employed works in the services sector – over 83%. Non-agricultural sectors[39] employ 13.5% while 2.7% of population of the coastal zone is engaged in agriculture[40]. Structure of enterprises and employment indicates a relatively low level of economy's diversification which, along with a pronounced seasonal character of tourism (more details under 2.5.3) has significant implications for balanced and sustainable use of natural resources.

The coastal zone is economically the most developed part of Montenegro. A somewhat higher activity rate[41] (51.6% or 1.5 percentage points above the national average) and a lower unemployment rate (8.4% or 11 percentage points below the national average) are in correlation with a higher degree of economic development of the region compared to the rest of the country. In the period from 2006 to the end of the decade, the region annually attracted about one third to a half of direct foreign investment[42]. A major share of investment (particularly in the period 2006 – 2009) was linked to real estate transactions. Beside economic effects, this generated important pressures on space and other coastal zone resources and has (together with the negative trends from 1990s) to a certain extent diminished potential for sustainable tourism development with more substantial and longer term economic and social benefits.

From the aspect of sustainable use of natural resources, insufficient support to rural development and small and medium-sized enterprises represents a problem. Incentives for new technologies, innovation and research, as well as for cluster development, are also insufficient to ensure efficient and balanced use of resources, with better economic and social effects and lower negative impacts on the environment.

2.2.6.1 Agriculture

Due to favourable natural conditions, agriculture represents a significant development potential of the coastal zone with good conditions for production of Mediterranean fruits, olives and vegetables. Mountainous terrains in the coastal hinterland are suitable for ruminants breeding, and they are rich in honey, aromatic and medicinal herbs, as well as in wild fruits.

Official statistical data, however, shows that only 24%[43] of the total agricultural land in coastal municipalities is cultivated (51,017 ha is available, including pastures)[44] on some 4,800 agricultural estates where, in addition to owners, around 3,800 persons works[45]. To many of them, agriculture is an additional or temporary activity, and the number of those formally employed in the agricultural sector, forestry and fishery is 364[46]. It is necessary to mention that expert analysis of the coastal zone's attractiveness and suitability[47] for agriculture indicted that available areas with agricultural potential are greater than those listed in the official statistics (map 2-12). As many as 90.5% of agricultural holdings in the coastal zone are smaller than 2 ha, while more than 55% of holdings use a surface of less than 0.5 ha of agricultural land[48]. Total irrigated area in the coastal zones amounts to 721 ha[49] only. Present policies highlight the important role of agriculture and its potential to contribute to tourism development and preservation of traditional Mediterranean agricultural practices, as well as to increase of household income. The fact that agriculture, forestry and fishery make 8% of the national GDP[50] also confirms the sector's importance.

Considering spatial specificities, tradition and market demands, the three key agricultural sectors (important also for economic development on the national level) in the coastal zone are olive and citruses growing and viniculture. Analysis of the coastal zone from the aspect of its suitability for agricultural development has determined that total area of suitable agricultural land amounts to around 44,600 ha. Out of this amount, the area which is suitable for all the three key cultures (olives, citruses and grapevine) amounts to 21,200 ha, whereas total surface of the optimal area for their cultivation is around 18,800 ha.

Areas with the potential for development of more intensive agriculture are flat fields with alluvial-colluvial land spreading from Herceg Novi to Ulcinj (Sutorinsko, Kutsko, Tivatsko, Mrkovsko, Crmničko, Mrčevo, Barsko, Ulcinjsko and Zoganjsko fields, Štoj, Šasko and Anamalsko fields, with the total area of around 8,300 ha[51]). They offer possibilities for development of a series of agricultural sectors – from intensive vegetables production, to perennial plantations (citrus fruits, grapevine, olives and other kinds of fruit) and animal husbandry. These are at the same time areas where irrigation is possible, which additionally increases agricultural potential.

Other than these, there are numerous areas with lower potential for agriculture development or with certain natural limitations. They are mainly situated in border areas of the coastal fields and at terraces and plateaus on flysch and karst terrain. Such areas can be found in the stretch between Bar and Ulcinj (Velje selo and nearby fields, Mala and Velika Gorana, Pečurice), in Grbalj (Zagora, Krimovica, Kovači, Bigova) and Luštica (Klinci and its surrounding, Gošići, Radovanići, Merdari). They are characterised by traditional organisation of space – both living and agricultural. In these areas agriculture is still important despite somewhat more difficult conditions for using the agricultural land, however it overlaps with other activities i.e. land uses.

Assessments of attractiveness and suitability of the coastal zone for agriculture have helped to identify and single out agricultural zones that are recognisable and specific also for their significance for protection of cultural heritage and landscape character, precisely because they developed as a result of applying traditional practices in cultivating and maintaining agricultural surfaces (arranged olive groves, terraced areas, etc.). Olive groves in Valdanos and on Luštica as well as traditional agricultural surfaces in the areas of Kruševice, Ubli, Mirac, Mačuge - Bukovik – Gornji and Donji Brčeli - Utrg, Kravari- Bojke – Mide can be included in this category.

Despite large potential for agricultural production,

36 / Source: Analysis of socio-economic development of the coastal zone of MNE, CEED Consulting, CAMP MNE (assessment was made on the basis of MONSTAT data on the number of active business entities from the Analysis of the number and structure of business entities for 2011).

37 / Source: Analysis of socio-economic development of the coastal zone of MNE, CEED Consulting, CAMP MNE (assessment was made on the basis of MONSTAT data on the number of the employed by municipalities, and the number of the employed in Montenegro from the Census of population, households and apartments, 2011 – table N8-4).

38 / Source: Analysis of socio-economic development of the coastal zone of MNE, CEED Consulting, CAMP MNE (assessment was made on the basis of MONSTAT data on the number of active business entities from the Analysis of the number and structure of business entities for 2011).

39 / Non-agricultural activities include: ore and stone extraction, processing industry, electricity, gas and steam supply and air conditioning, water supply, waste water management, and construction.

40 / Source: Labour force survey 2013, MONSTAT, Information 107/2014

41 / Source: Labour force survey 2013, MONSTAT, Information 107/2014

42 / Source: Labour force survey 2013, MONSTAT, Information 107/2014

43 / Source: Assessment of attractiveness and suitability for agriculture, CAMP MNE (derived from MONSTAT data from Statistical Yearbook for 2012)

44 / Source: Statistical Yearbook 2012, MONSTAT

45 / Source: Agriculture Census 2010, MONSTAT

46 / Source: Population, Households and Apartments Census 2011 - Table 032.

47 / Assessment of attractiveness and suitability for agriculture, CAMP MNE

48 / Source: Statistical Yearbook 2012, MONSTAT

49 / Source: Agriculture Census 2010, MONSTAT

50 / Source: Information 251/2014 – Gross domestic product of Montenegro for 2013, MONSTAT

51 / Source: Assessment of attractiveness and suitability for agriculture, CAMP MNE

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Map 2-13: Overview of areas with potential for agriculture development

Montenegro is a net importer of food. In 2013, the share of agricultural products in total imports was 25.7%, while their share in total export was 16.8%[52]. In comparison with the EU countries, Montenegrin products mainly belong to the category of highly priced products[53]. Still, some products have relatively lower prices (wine for example), and thus greater competitiveness. Data about import of large quantities of products which can be produced in Montenegro is worrying (e.g. water). Imports of olive oil as a traditional product exceed exports by 10 times[54]. Another problem lies in the fact that potential for placing domestic products on the tourist market is not used to a significant extent.

Particularly important for sustainable development of the coastal zone of Montenegro is integration of valuable parts of the coast with the surrounding rural areas in their hinterland (rural open spaces) which due to their natural, landscape and other values should remain in their natural state. Rural areas are especially valuable spaces both in economic and ecological sense. They need to provide for the overall production of food and other renewable natural resources for meeting the needs of population, while also having an important role in preserving the quality of natural environment. At the same time, they are irreplaceable oases of social and cultural diversity and have a special importance and value in the overall development of the country. Rural areas and their population maintain diversity and ingenuity of millennium long tradition of co-existence of man and the nature. They live slowly, remember long, maintain tradition, keep homeland symbols and develop a feeling of belonging to a place[55].

Potential of rural development in the coastal zone can be clearly seen from the data on at least 10,000 ha of cultivable agricultural land which is not used, more than 10,000 officially unemployed in the coastal zone and imports of agricultural products where around 3 million € are used annually for imports of olive oil and citruses only[56].

2.2.6.2 Fishery and aquaculture

Fishing is one of the traditional sectors of Montenegrin economy which is currently exercised in fishing areas of the coastal zone and the Skadar Lake. Total value of the fishery sector is 7.4 million €. Not counting aquaculture and fish processing, the sector employs around 400 people (on permanent and fixed-term basis). Although the share of fishery in the national GDP amounts to not more than 0.5%, it has an important sociological and cultural role.[57]

Scientific assessments of marine fish stocks are carried out within the framework of the National monitoring programme of the state of demersal and pelagic resources, as well as within international projects (FAO Adriamed, Meditas and Medias). Based on these estimates, annual number of permits for commercial marine fishing is proposed.

Generally speaking, fish stocks in the Mediterranean and in the Adriatic alike are near the point of overfishing, and greater attention should be paid to their preservation. Registered catch of sea fish in Montenegro over the last couple of years was rather modest and amounted to 700 - 800 t per year[58]. Due to a lack of comprehensive supervision and control at sea, non-allowed entries of foreign fishing boats into territorial sea of Montenegro have been evidenced, and the same applies to cases of illegal and unregistered fishing on the national level.

Shell fish production amounts to some 200 t annually (it takes place at 17 location in the Boka Kotorska Bay), while production on fish farms is around 120 t.

52 / Ministry of Agriculture and Rural Development

53 / Source: Montenegrin agriculture and EU – Strategy for development of food production and rural areas of Montenegro (2006)

54 / Source: Assessment of attractiveness and suitability for agriculture, CAMP MNE (derived from export and import data from Statistical Yearbook for 2011, MONSTAT)

55 / Source: Guidelines for encouraging sustainable rural development of Dalmacija, UNDP in Croatia (2013)

56 / Source: Assessment of attractiveness and suitability for agriculture, CAMP MNE (2013), evaluations derived based on Statistical Yearbook for 2011, MONSTAT, and 2011 Census, MONSTAT

57 / Source: Fishery Development Strategy of Montenegro 2006 – 2016

58 / Source: Statistical Yearbook 2012, MONSTAT

SOURCE: National Tourism Organisation

Even though official data show that fish and shell catches and farming are at a rather low level, examples of unsustainable fishing and increased environmental pressures are nevertheless present[59].

Fish consumption in Montenegro is among the lowest in Europe (around 4 kg per capita). Fish prices are high and substantially higher than in countries of the region and other parts of Europe. Almost 13 million euros are spent annually on imports of fish and fish products[60]. Causes to such situation lie, among others, in a relatively small size (101 vessels in total[61]) and old age of fishing fleet (on average older than 30 years), as well as in a lack of organised buying out and processing of fish. A lack of a fishing harbour or separate space for fishermen within the existing harbours represents a major problem. Port taxes in certain harbours are quite high, and in the summer months there is not enough space due to a large number of yachts and luxury boats, so fishermen are forced to keep their vessels at anchor. This is why development of fishing harbour(s) is a priority, as is establishment of places of the first disembarkation and first sale (all municipalities in the coastal zone should have designated places of first disembarkation and first sale). Lack of such places additionally impedes performance of inspection supervision and control of catches.

To overcome the existing state in marine fishery and aquaculture, support to strengthening and modernisation of fishing fleet, and improvement of competitiveness and efficiency of aquaculture while preserving fish and other marine organisms resources, is envisaged under the current plans. Adequate siting of fish and shell farms is an important precondition for sustainable use of coastal zone resources and in that sense the importance of maritime spatial planning (which is for the time being only applied at the level of certain pilot activities) stands out. Open sea is not used for fish farming at all, and locations suitable for such and activity have not been identified so far (it is expected that the new SPSPCZ MNE will determine 10 locations in the open sea[62] suitable for this kind of activity).

2.2.6.3 Tourism

The coastal zone, known for its natural values and cultural heritage, is of special importance for tourism development. Over the last couple of years, more than 95% of the total tourist turnover in Montenegro (measured by overnight stays) took place in the coastal zone[63]. At the height of the season, the monthly number of visitors exceeds 450.000 (which is three times more than the number of inhabitants of the coastal municipalities)[64].

Total contribution (direct and indirect) of tourism to Montenegrin GDP is around 20%, and to employment 18% (or, applied to the total number of the employed, around 30,500 people). Some of the key characteristics of the season 2013 were an increase in the number of tourists in the period before and after the main season, as well as the increase in the number of tourists from the European Union by 4% compared to 2012. Investments in tourism amounted to around 208 million € in 2013 comprising 28% of total investments[65]. The World Travel and Tourism Council (WTTC) optimistically predicts that revenues from tourism will grow at an average real annual rate of 8.6% over the next ten-year period, while employment (directly or indirectly) generated by tourism will grow at a rate of 5.8%. This ranks Montenegro as the first among 184 world countries based on indicators of the speed of tourism development by 2024.

Total revenues from tourism in 2013 amounted to

59 / Source: Towards resource-efficient economy: keeping promise of Montenegro to become an ecological state, UNDP (2014); data of the Ministry of Agriculture and Rural Development

60 / Source: Information 86/2014 – Foreign trade exchange of Montenegro January - December 2013, MONSTAT

61 / Source: Agriculture and fishery, fishery data for 2012, MONSTAT

62 / Rose, Dobreč cove, Miriš̌ta cape, Vučja vala, Zlatna luka, Dobra luka, Drobni pijesak, Crni cape, Valdanos cove and Bojana river mouth

63 / The assessment derived based on the MONSTAT data for 2013 (overnight stays by municipalities and municipal shares in the total number of registered overnights)

64 / The assessment derived based on Central Bank of Montenegro data, real sector, table 6.5-tourism

65 / Source: World Travel and Tourism Council (WTTC) Report for Montenegro for 2014

721 million €, which is 3% more compared to 2012. In the first eight months of 2014 the revenues were 634 million €, which makes an increase of 2.2% compared to the same observed period of the previous year[66].

Positive developments have been recorded for other parameters of tourism turnover as well, which represents continuation of the stable growth trend.

Nautical tourism and cruise ships visits are also on the increase. The number of foreign vessels visiting Montenegro substantially increased in 2013 in comparison to 2012 – from around 3,000 to 3,800 (with around 15,000 visitors)[67], almost a half of the vessels being motor yachts. The number of visitors on round-trip cruise ships increased from a bit more than 244,000 to 315,000 (from 409 cruise ships)[68]. Tourists from round-trip cruise ships create significant pressures on the sea and port infrastructure of Kotor (where these ships dock) and its surrounding. Although they are considered important, there are no precise estimates of economic benefits of this kind of tourism for local and national economy.

Coastal zone tourism is characterised by high seasonality. Average occupancy of accommodation capacities is small and amounts to around 16%, which translated into number of days means that the bulk of tourism turnover takes place within 58 days. Average occupancy of hotels with 4 and more * rarely exceeds 45% which can be considered as a limit value for sufficient investment return[69]. Although a trend of slight increase in occupancy rates is evident, it can be concluded that the growth in the volume of tourism is completely a result of accumulation of capacities which operate solely during the main season. Accommodation capacities of the coastal zone in the last 10 years have doubled to more than 160.000 beds[70]. Out of this number, 74% goes to private accommodation (121.222 beds)[71]. Number of beds in private accommodation has increased by around six times over the last decade.

Very illustrative (and also worrying) is the fact that in the best years of Montenegrin tourism (period 1985 – 1988), when the level to which the coastal zone was developed was several times lower, higher numbers of overnight stays were recorded as compared to today. In 1986, for example, there were 10.9[72] and in 2013 9.4 million overnights[73]. Beside the physical appearance of the coast and structure of accommodation capacities (faster growth of private accommodation and of the so called residential tourism than hotel capacities), the structure of guests has also changed. Number of overnight stays of tourists from Western Europe, for example, was three times higher in 1986 than in 2013. When it comes to employment, estimates indicate that in the period 1985 – 1989 around 50.000 people were employed in and worked for the tourism sector in Montenegro, which is somewhat higher than the total number of employed persons in the coastal municipalities today. Based on this data it could be concluded that economic effects of tourism (data on income are not readily available/ comparable) have remained on approximately the same level, while as pressures on the coastal zone resources and quality of life of local population have increased substantially (due to high crowds and short duration of the season). Considerable efforts invested in tourist product diversification (including a large number of campaigns, actions and projects aimed at recognising Montenegro as a unique and year-round tourist destination) have not given major results, and for the time being the sun and the sea still remain dominant tourist products which participate with more than 90% in the total offer.

66 / Source: Ministry of Sustainable Development and Tourism

67 / Source: Information 72/2014 – Nautical tourism in 2013, MONSTAT

68 / Source: Information 73/2014 – Round trips of foreign ships in Montenegro in 2013, MONSTAT

69 / Source: Extracts from documentation for development of IV stage of the SPSPCZ MNE, thematic notebook 12 – tourism, Assessment of the existing state: Horwath and Horwath Consulting, 2012

70 / Source: Accommodation capacities by objects types and categories, as of 31.8.2013, MONSTAT

71 / Source: Accommodation capacities by objects types and categories, as of 31.8.2013, MONSTAT

72 / Source: Master plan for the development of tourism from 2001

73 / Sources: Master plan for the development of tourism from 2001, Monstat and the Central Bank

2.2.6.4 Maritime transport and ship building

In the area of maritime transport (short-sea shipping, including ro-ro), services are provided by two big national companies – Barska plovidba ad and Crnogorska plovidba ad Kotor – and around a hundred of small companies that provide local transport services. Transport of goods and passengers on overseas lines has been on the decrease over the last years. In 2012, around 109,000 t of cargo and around 53,000 passengers were transported[75]. Maritime fleet was enlarged with two new ships (with the capacity of 35,000 DWT each) in 2012, but it still has a modest capacity.

The most important port is Bar with around 3,500 m of operating coast, and capacity of around 5 million tonnes of freight, while other ports[76] have substantially lower capacity. The port of Bar is a transit centre of regional importance. It is not equipped with infrastructure required for ports of international importance. The ports of Zelenika and Kotor have for years represented important maritime centres in the Boka Kotorska Bay. Recently built berth for mega yachts Porto Montenegro has become a new tourist symbol of the country. Shipyard Bijela is equipped for reparation and reconstruction of all kinds of vessels with the capacity up to 120,000 DWT. The shipyard is also equipped for construction of smaller navigation objects such as different-purpose barges, pontoons, work platforms and similar.

Ports do not have equipment for reception and treatment of oily water and solid waste from ships. Due to insufficient equipment and inadequate environmental management procedures, ports and Bijela shipyard generate significant pressures on the coastal sea and sediments.

2.2.6.5 Developmental and demographic characteristics of the coastal zone

Measured by development index[77], five municipalities of the coastal region (Budva, Kotor, Herceg Novi,Tivat and Bar) belong to the group of the most developed municipalities in Montenegro, with the development index of more than 125% of the national average, while the development index of the municipality of Ulcinji is 75% of the national average[78].

The coastal zone is considered an attractive area for life and work which is why over the last 50+ years constant migration has been registered from the north and central parts of the country towards the coast. Over the last couple of years, influx of foreign citizens has also been recorded. According to the Population Census from 2011, the number of inhabitants in the coastal zone was 148,683 (close to a quarter of the total number of inhabitants in the country), which means that the average population density was 93 inhabitants per km2. Population projections by 2020 from the Spatial Plan of Montenegro foresee an increase of around 7%, which would bring the total number of inhabitants in the coastal zone to around 160,000. According to population projections for the Mediterranean, growth rates are higher (over 20% until 2025 compared to 2005)[79].

Population density in certain coastal settlements (map 2-13) in the municipalities of Herceg Novi Tivat, Kotor, Budva and Bar exceeds 1,000 inhabitants per square kilometre. Data on migrations within the coastal zone itself shows a pronounced trend of depopulation of rural areas and concentration of population in the settlements on the sea coast.

Index of demographic resources[80] of the coastal zone is shown on map 2-14. The index is derived from

74 / Source: Master plan for the development of tourism of Montenegro from 2001

75 / Source: Statistical Yearbook 2013, MONSTAT

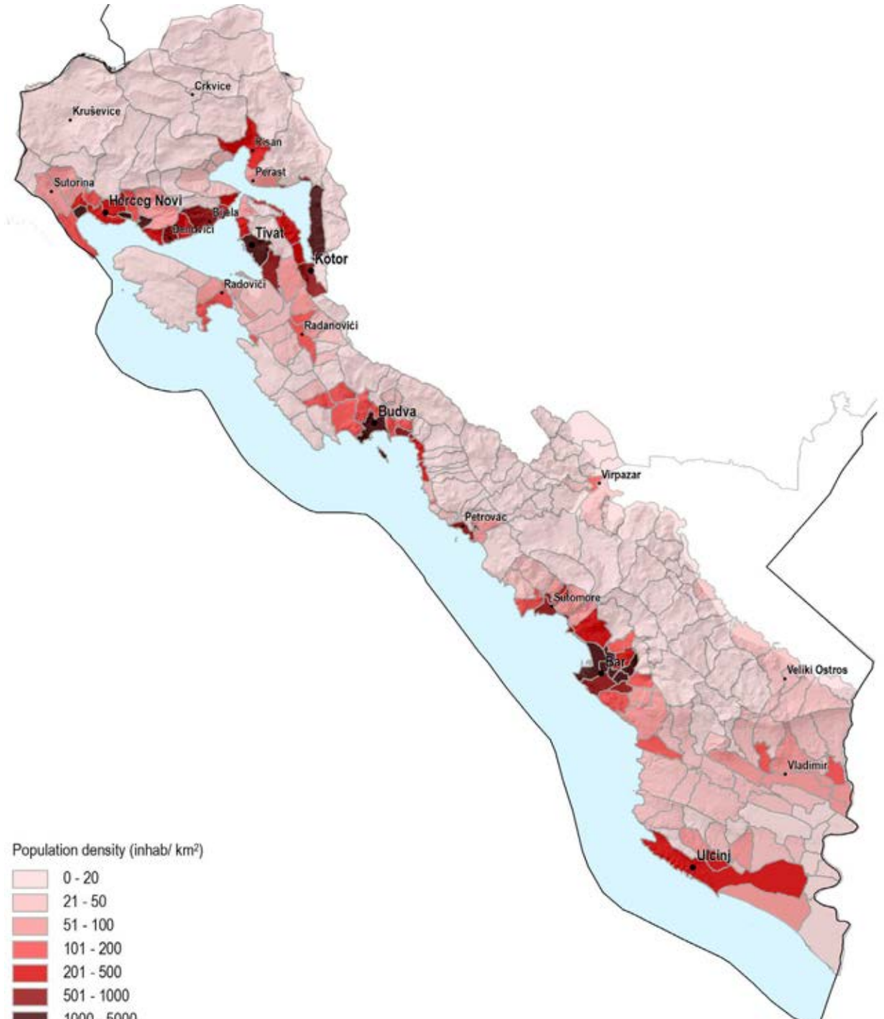
76 / According to the data of the Port Administration, beside the Port of Bar, ports of national importance are the Port of Kotor, marina Bar and shipyard Bijela. Other ports are Zelenika, Budva, Risan and Tivat.

77 / Index is a composite indicator of the level of development of local self-government units calculated as a weighted average of unemployment rate, income per capita, budgetary income of local self-government units per capita, general migrations of population and educational levels.

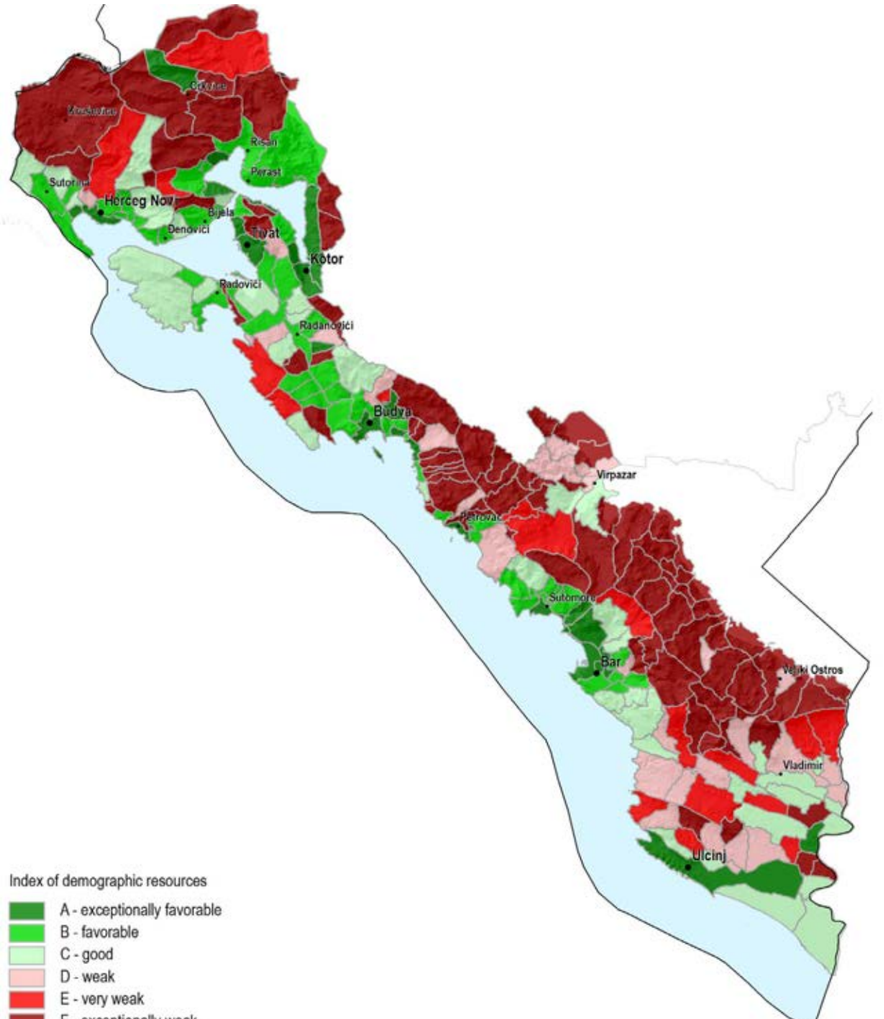
78 / Source: Regional Development Strategy of Montenegro 2014–2020, calculation of development index for the period 2010-2012, p.22

79 / According to scenarios of the Blue Plan from 2005, population of the Mediterranean coastal regions will increase from 143 to 174 million inhabitants by 2025.

80 / Source: Analysis of socio-economic development of the coastal zone of MNE, CEED Consulting, CAMP MNE



Map 2-14: Population distribution by settlements



Map 2-15: Index of demographic resources
(Source: CAMP 2013, Socio-economic analysis)

demographic (including population growth, migrations and age structure) and parameters that refer to the achieved educational level. To calculate the index, data from 2011 Census (by settlements) was used. Based on the values obtained an assessment of spatial units of the coastal zone was made. The units were then categorised in one of the six categories of demographic resources index – from exceptionally favourable to exceptionally weak. Age of population, educational level and other parameters which define available human resources are exceptionally unfavourable in almost all the rural area of the coastal zone, particularly in the municipalities of Bar, Ulcinj, Herceg Novi and Budva.

Index of demographic resources speaks about capacities of a community (in this case about capacity of settlements in the coastal municipalities) for endogenous development i.e. development based on local initiatives and internal social potentials of the given community. Generally speaking, endogenous development is considered more sustainable and socio-culturally more acceptable. However, in the situation of weak demographic resources, improvements are less probable without external incentives, be it from public, civil or private sector through new investments. Such mainly exogenous development brings problems which should be considered in both development as well as in spatial planning.

Involvement of social actors in decision-making processes and public administration efficiency also represent important social development factors. Over the last couple of years, an improvement in these areas is noticeable, but there is still significant room for improvement, particularly when it comes to public participation and access to information, balancing of different interests, public administration capacities and similar.

2.3 Coastal zone management

"Management" and "coastal zone" are central topics of the NS ICZM MNE. Improving efficiency of public administration and management is a lasting objective. Striving toward management efficiency leads to specialisation, and specialisation develops different sectors which as a rule deal with a set of their sectoral problems individually. However, a characteristic of the coastal zones is a pronounced complexity of natural and social processes within a relatively limited space. Management of these processes that often lead to various problems and conflicts is a necessity. Traditional public administration systems, with their pronounced sectoral approach, are resolving such problems with a limited success.

Coastal zone management of Montenegro is in the stage when intensity and complexity of the problems exceed capacities of predominantly sectoral organisation of public administration. Spatial planning and development sector has a sole task and obligation to consider and resolve numerous problems of importance for achieving sustainable spatial development in an integrated manner. Nevertheless, the practice has shown that this sector does not have at its disposal a systemic set of instruments and does not have competences to be able to face the challenges posed by the coastal zone problems.

In addition to the assessment of the existing sate and coastal zone processes provided in the previous sections of this chapter, a brief overview of the systemic dimension of managing coastal processes is provided below. Different management systems and administration levels (state and local) which participate in the management with different responsibilities, as well as their basic "products" – public policies, strategies and regulations – have been analysed. Particular attention has been paid to the issue of coordination of sectors and administrative levels as a precondition for resolving all the more complex problems of the coastal zone.

2.3.1 Policies and strategies

Policy coordination and integration has been a subject of interest in numerous analyses. Nevertheless, there are no precisely formulated objectives and guidelines for their improvement.

National policies do not have clearly defined goals significant for a number of ICZM topics, as is the case in the area of climate change and culture. Other questions of significance for the ICZM Protocol are addressed by a large number of horizontal and sectoral policies, strategies, plans and programmes, on national and local level. Although tasks and objectives defined by these documents are compatible with the provisions of the ICZM Protocol, there are certain conflicts and deficiencies. The most significant conflicts in relation to the ICZM Protocol as well as among different sectoral documents include:

- Preservation of natural and cultural heritage and coastal resources as opposed to further urbanisation, real estate projects, construction of tourist capacities and infrastructure; some of the planned development projects in the coastal zone contain elements which are opposed to the Protocol's requirements to provide for a balanced distribution of costal activities, minimise the use of resources, avoid linear coastal urbanisation, establish open areas and similar.
- Conflicts between the goals of climate documents (The Second National Communication, Technological Needs Assessment) and the guidelines of certain sectoral and spatial plans which foresee construction of tourist, infrastructure and other capacities in the zones prone to climate change impacts and important for adaptation.

Ecosystem approach is recommended only in the draft new strategies for biodiversity and forestry (it is also mentioned in the Water Resources Basis, but it has not been consistently integrated in all measures of this document). When it comes to protection of natural values, protected areas are in the centre of attention in all documents, while objectives and protection measures for ecosystems outside protected areas are missing. Protection goals for coastal landscapes exist, however further elaboration of measures for their achievement is as a rule weak. Cultural heritage (particularly submerged) is not adequately protected and is exposed to negative impacts. There are almost no documents which identify specific coastal ecosystems in the manner required by the ICZM Protocol and propose measures to protect their characteristics. To a certain extent, SAP BIO and the Local Plan for Biodiversity Protection of the Municipality of Tivat represent exceptions, the latter paying special attention to coastal wetlands and forests within the territory of the municipality.

The concept of the coastal setback is addressed only in the National Sustainable Development Strategy and climate documents. Deficiencies are also evident concerning the treatment of natural and anthropogenic hazards, particularly coastal erosion, while seismic hazards and (to a certain extent) climate change are addressed. A lack of integrated approaches in addressing the hazards is also evident (the focus is on improvement of organisational and technical solutions to respond to natural disasters rather than on planning and management of activities to avoid the risks).

Enabling free access to the sea and public use of coastal zone space, prevention of linear coastal urbanisation and planning of activities in line with environmental needs are the principles which national and local strategic and planning documents consider to a limited extent only. The exception is The Spatial Plan of Montenegro (SP MNE) which confirms some of the mentioned principles as the key postulates of spatial planning. Nevertheless, without clearly defined implementation measures, provisions of the planning document of the highest order are not sufficiently integrated into concrete planning solutions.

Decision making on the basis of scientific facts is another requirement of the ICZM Protocol which has not been adequately integrated into national policies. This approach is mentioned in a number of documents, but carefully formulated goals and elaborated set of measures needed for their achievement have not been incorporated.

Other ICZM Protocol requirements are mainly integrated in the goals set under national and local documents.

Assessments of the level of implementation of strategic documents have been made in the NS ICZM preparation process in the framework of analysis of national policies' compatibility[81] with the ICZM Protocol on the basis of available information and expert opinion. These have shown that main incompatibilities of national and local policies, strategies and plans in relation to the ICZM Protocol lie in the process of their implementation rather than in the way their goals are set. Progress in the achievement of goals of different sectors and horizontal strategies and plans has been mainly evaluated as weak or modest, while as progress with the achievement of a small number of goals has been evaluated as good. According to evaluations contained in this assessment, there are no goals that have been fully achieved in the manner defined by the document itself (within the defined deadline and in the defined scope). A general acceptance of sustainability goals is pronounced, without creation of necessary conditions and coordinated efforts for their achievement. Declarative character of a significant number of documents leads to various interpretations of their goals and contributes to non-implementation.

A lack of technical and financial resources and capacities for implementation of the adopted strategies, programmes and plans contributes significantly to an unsatisfactory level of implementation of public policies. Long-term planning is difficult and unreliable, often resulting in unrealistic or overambitious plans and strategies.

2.3.2 Regulations

Issues important for coastal zone management are regulated by a large number of national laws. A number of relevant laws is being amended, while others have recently been adopted in the process of harmonising national with the EU legislation. Although it can be assessed that Montenegrin legislation is to a large extent harmonised with the ICZM Protocol requirements, certain important provisions have not been transposed (fully or partially)[82] yet.

Preservation of coastal ecosystems has been prescribed by the Law on nature protection and a set of other regulations that recommend application of the ecosystem approach. Preservation and conditions for protection of marine habitats and wetlands are regulated by the Law on nature protection, while the new Proposal of the Law on public maritime domain stipulates that protection of public maritime domain is based on the principles which, among other, refer to the protection of specific coastal ecosystems (wetlands, marine habitats, forests, dunes and islands) and that the future Agency for Coastal Zone Management is responsible for their protection. Spatial development regulations contain guidelines for natural and landscape values and cultural heritage protection. Obligations from these regulations are reiterated in the planning documentation, at least declaratively, and as a rule without more detailed elaboration of guidelines for specific ecosystems and valuable areas.

Preservation of cultural heritage is primarily regulated by the Law on cultural assets preservation and the Convention on the Protection of the Underwater Cultural Heritage. Nevertheless, in relation to the key requirements of the ICZM Protocol (implementation of appropriate measures for protection of cultural assets, particularly archaeological and historic; protection of findings of submerged cultural heritage), a lack of a provision on in situ protection of coastal zone cultural heritage which represents first choice before any other kind of intervention particularly stands out.

One of the key requirements of the ICZM Protocol refers to introduction of the construction setback line at a minimum of 100 metres from the shore. This requirement is partially integrated into national regulations through the Rulebook on closer content and form of planning documents[83]. However, conditions for implementation have not been elaborated for the entire coastal zone (only for the areas outside settlements), and cases when adaptation is possible have not been defined. For determination of the setback, provisions of the Law on hydrographical activity are also important. They define obligations to undertake hydrographic measurements at sea and for internal navigation routes, as well as to survey objects in the coastal zone. However, the Law does not define detailed criteria for determination of the shoreline and of the border of public maritime domain.

There is a difference in the manner in which the ICZM Protocol and Montenegrin regulations regulate the issue of public interest. The Protocol requires that public services and activities are given priority, whereas projects of public interest are also important when adaptation cases in applying the coastal setback are determined. Objects of general interest as defined by the Law on spatial planning and construction of objects mainly refer to objects for provision of public services, but also to production systems that employ 50 and more workers. This is in not in line with the specific requirement of the ICZM Protocol in the context of defining conditions for coastal setback adaptation.

In relation to the requirements of the ICZM Protocol on restricting the coastal zone activities, limitations in the movement of vehicles and anchoring of vessels are important, as envisaged under the new Proposal of the Law on public maritime domain. The proposal however does not define respective penalty provisions. In the Rulebook on conditions which must be met for arranged and built bathing areas[84], the obligation to ensure access paths to the sea has been prescribed. However, the Rulebook also prescribes limited access to hotel beaches for hotel guests only, which is opposed to the ICZM Protocol requirement on ensuring free access to the sea. At the same time, the current Law on public maritime domain prescribes that public maritime domain is an asset in public use. The new Proposal of the Law on public maritime domain contains provisions on free and free-of-charge access to the sea coast, beaches and bathing areas.

81 / Analizirano je trideset nacionalnih i deset lokalnih strategija, politika i planova; predmet analize bio je i Prostorni plan Crne Gore.

82 / Assessments are based on the analyses (from 2010 and 2011) carried out in the framework of procedures for the adoption of the Law on Ratification of the ICZM Protocol (Official Gazette of Montenegro no.16/11) as well as on the more recent Analysis of the national institutional and legislative framework for integrated coastal zone conducted in the process of development of this Strategy (from July 2014). Analyses carried out in the process of amending the Law on spatial planning and construction of objects have been also taken into account.

83 / Rulebook on closer contents and form of planning documents, land use criteria, elements of urban regulation and unique graphic symbols prescribes for example that new accommodation units and accompanying amenities in tourist zones (including camps and golf terrains) outside the settlements must be built at least 100 m far from the shoreline.

84 / The Rulebook on conditions which must be met for arranged and built bathing areas (Official Gazette of Montenegro, no. 20/08, 20/09, 25/09, 4/10, 61/10, 26/11)

Harmonisation of coastal activities with the aim of ensuring sustainable use of resources is one of the important requirements of the ICZM Protocol which is partially integrated into national legislation through the principles of the Law on spatial planning and construction of objects (Article 5 on balanced development). Responsible use of resources is addressed through legal acts regulating environmental protection (Law on strategic environmental assessment and Law on environmental impact assessment[85]). However, methodologies for preparing SEAs are often rather formal and quite general. As a rule, they do not include identification of spatial sub-units in terms of their vulnerability to the planned interventions and do not apply quantitative indicators in the assessment of environmental impacts. As for EIAs, specificity of impacts of certain interventions which have or can have significant impacts on the on the coastal zone environment is not recognised (or at least not adequately). This especially refers to interventions that have impacts on mutual relations between the sea and land parts of the coastal zone (navigation routes, exploitation of all kinds of architectonic, construction and technical-construction stone, sea salt exploitation, gravel and sand exploitation, deposition of materials into the sea and aquaculture).

Current regulations on economic activities of importance for the coastal zone (tourism, agriculture and rural development, maritime and land transport, mineral raw materials exploitation) are deficient from the aspect of defining environmental protection measures, including reduction of pollution in the coastal zone, as well as prevention and minimisation of damages due to hazards. Most of the time, they do not go further than recognising environmental vulnerability at the level of principles and postulates i.e. they do not elaborate instruments for assessing sensitivity of marine and coastal ecosystems, and do not prescribe pollution prevention and/ or elimination instruments (with the exception of marine fishery regulations[86]). The new Law on liability for environmental damage[87] represents a significant improvement as it prescribes the obligation to compensate for the damage done to the environment, i.e. the obligation to restore to the original state ecosystem functions and services affected by the damage.

Montenegrin legislation is also deficient in relation to the requirements of the ICZM Protocol on minimising the impacts of hazards. Prediction of possible effects/ risks and planning of measures to prevent harmful effects, to adapt and to mitigate the impacts of hazards is only based on implementing the obligations from the ratified international agreements (e.g. UN Framework Convention on Climate Change).

Among other things, coastal zone management comprises application of appropriate land policy instruments and measures. Certain elements of land policy can be found in different laws, as is for example the case with real estate tax. Also, certain elements are contained in regulations on provision of communal services. However, the obligation of urban comassation (re-arrangement of plots) is not defined. This instrument is very important for ensuring quality of the built environment and in particular availability of public spaces, as well as fair distribution of construction rights through the spatial planning documents.

The obligation to monitor coastal processes defined in the ICZM Protocol corresponds to the legal solutions prescribed in several areas (spatial planning, environmental protection) which regulate monitoring of certain parameters. Still, national regulations have not been sufficiently elaborated in the context of

85 / The Law on strategic environmental assessment (Official Gazette of Montenegro no. 80/05, 73/10, 40/11, 59/11) and the Law on environmental Impact Assessment (Official Gazette of Montenegro no. 80/05, 40/10, 73/10, 40/11, 27/13)

86 / The Law on maritime fishing aquaculture (Official Gazette of Montenegro, no. 56/09, 40/11)

87 / Official Gazette of Montenegro no. 27/2014

ensuring comprehensive and coordinated monitoring of coastal processes in the spirit of the ICZM Protocol.

Public participation and access to information have foundation in several laws. However, improvements of provisions relating to public participation are needed for a number of regulations (with the exception of SEA and EIA laws). Deadlines, rights of the public and public debate procedures need to be precisely defined, and the same applies for notification procedures, all in order to ensure more effective stakeholder involvement.

In addition to identified inconsistencies and gaps in the legal framework, a very important shortcoming (perhaps the most important one) affecting the achievement of the goals of the ICZM Protocol is poor implementation of regulations, and this is quite similar to the situation found in the area of policies. Control of the activities at sea, for example, is not on a satisfactory level, and the same goes for the measures on protecting the sea against pollution from vessels. It is also important to point out weaknesses in implementing regulations on environmental assessments including formalised processes, lack of necessary data, lack of monitoring of the implementation of measures to mitigate negative impacts that are foreseen in the assessment reports, etc.

2.3.3 Institutions and coordination

Organisation of the institutional system in Montenegro shows that the coastal zone is considered to be an especially significant area. The Public Enterprise for Public Maritime Domain Management is responsible for managing the public maritime domain as the most important part of the coastal zone since 1992. A large number of departments, public administration bodies, institutions and local self-government bodies have responsibilities in managing the coastal zone of Montenegro. The Ministry of Sustainable Development and Tourism which is responsible for environmental protection, spatial planning and management of space, construction, tourism and sustainable development can be singled out as the key department. The Ministry of Agriculture and Rural Development, Ministry of Transport and Maritime Affairs, and Ministry of Culture (with the Administration for Cultural Assets Protection) also stand out in terms of their importance for the coastal zone issues. In addition to the Public Enterprise for Public Maritime Domain Management (future Agency for Coastal Zone Management), other important institutions include the Environmental Protection Agency, Institute of Hydrometeorology and Seismology, Centre for Eco-Toxicological Research, Port Administration and Harbour Master Offices, Marine Biology Institute and Biotechnical Faculty. Particularly important institutions for marine part of the coastal zone are those for navigation safety and security and protection of the sea against pollution from vessels.

Local self-government has an important role in coastal zone management too. Local self-government responsibilities are exercised through the work of different bodies including secretariats for development (and development agencies in some municipalities), secretariats for planning, urbanism and construction, secretariats for communal affairs, environmental protection and public communal services (for water supply, waste, sewage, etc.), and many other authorities and bodies. Almost all the municipalities in the coastal zone have an environmental department or staff (one or more civil servants) responsible for environmental matters. Communal inspection operates at the local level.

As regards sectoral (horizontal) coordination, several examples of unclear and overlapping competencies and inefficient functioning have been registered in the previous period. Besides weaknesses in inter-sectoral coordination, problems also exist with vertical (from local to national level) coordination.

Administrative-coordinating bodies established with the aim to improve institutional cooperation and coordination are of special importance. A part of these bodies is also important for the coastal zone too, namely:

- National Council for Sustainable Development and Climate Change comprising President of the state, ministers and representatives of the ministries of sustainable development and tourism, economy, labour and social welfare, agriculture and rural development, transport and maritime affairs, and finance, as well as presidents of local self-governments, representatives of the Institute for Hydrometeorology and Seismology, universities, employers' associations, trade unions and NGOs, and independent experts. The basic tasks of the National Council are to ensure harmonisation of public policies with the sustainable development policy, to encourage cooperation of the responsible national and local bodies and enable greater participation of business and NGO sector in developing and implementing policies. The activities of the National Council have led to the achievement of significant progress in raising awareness on the importance of sustainable development and integration of sustainability requirements into sectoral policies and activities, as well as a to good progress in creation of institutional capacities for sustainable development. However, the necessary level of harmonisation of sectoral policies, programmes and plans with sustainable development goals has still not been reached, and the same applies to harmonisation of development programmes and projects at national and local level. Insufficient technical capacities for implementation of the National Council's decisions, a lack of scientific research component and insufficient financial support to sustainable development policy implementation have by large affected the fact that the planned and politically supported process of halting or reversing unsustainable development trends in Montenegro has not taken place.
- The Prime Minister chairs the Coordination Body for Preparation and Follow-up of Tourism Seasons and tourism development in general, which includes representatives of Government departments, administrative authorities and institutions (among others Public Enterprise for Public Maritime Domain Management), local self-governments, tourism industry, technical high schools and tourism faculties, as well as representatives of the media and experts for tourism, NGO sector, etc. The aim of the Coordination Body is to ensure efficient implementation of strategies and action plans in the tourism sector.
- The Council for Spatial Development is a technical and advisory body of the minister of sustainable development and tourism comprising spatial planning and development experts. The aim of the Council is to consider and assess relevant policies, plans and regulations, including the extent to which spatial planning and other documents and regulations of significance for spatial development are founded on technical and scientific standards.

In the implementation of various projects, it is a common practice to establish steering and coordinating bodies with the aim to ensure inter-sectoral involvement in project activities. The Steering and Advisory Project Committees thus provided political and technical support to the implementation of CAMP MNE and to the NS ICZM preparation. Representatives of the responsible ministries, Public Enterprise for Public Maritime Domain Management and coastal municipalities participated in the work of the Steering Committee. The Advisory Committee comprised representatives of relevant expert institutions at national level and of expert services of local self-governments from the coastal zone. Although practical experiences show these steering and coordinating bodies do not continue to function in the phase of implementing the project results, based on positive contributions of the Steering and Advisory Committees to the CAMP and NS ICZM, this strategy proposes establishment of a permanent coordinating mechanism for integrated management of the coastal zone of Montenegro.

The Association of Municipalities of Montenegro is important for strengthening the role of local self-governments in the process of adopting and implementing policies and for improvement of coordination. Its mission is to contribute to decentralisation and democratisation of local self-government through provision of services to its members, advocating their interests, and establishing cooperation with state authorities, other national associations and international organisations.

Potentially important coordination mechanism within spatial development system functions in the process of planning documents preparation, in particular in the stage of preparing the draft plan. Promoter of preparatory works in the plan's development collects available data, as well as proposals and opinions of institutions and administrative bodies necessary for the development of the planning document. This stage in the plan's development is called "submission of data, proposals and opinions"[88]. The name and the organisation of this stage are somewhat inappropriate as they imply one-way communication in which the sector submits its proposals to the promoter of preparatory works. In this way, an opportunity to emphasise more strongly joint work i.e. partner cooperation and coordination of representatives of all responsible and interested sectors in the development of planning solutions is missed. The same repeats in the next stage when planning solutions are delivered by the responsible ministry to certain sectors for opinion.

Despite considerable efforts invested in establishing and encouraging functioning of multidisciplinary bodies for harmonisation of public policies between sectors, there is still an insufficient level of harmonisation of their goals and measures. At the same time, activities of the state administration bodies are to a great extent characterised by a lack of preparedness to act in accordance with set goals, a lack of continued monitoring of the level of achievement of expected results, as well as with a lack of responsibility in case they are not achieved. Low capacities, lack of experience and technical knowledge important for application of a coordinated approach to management are other characteristic of the existing institutional system, especially pronounced on local level.

88 / According to Article 38 of the Law on spatial planning and construction of objects

03

KEY PROBLEMS, WEAKNESSES AND NEEDS


SOURCE: CAMP

Problematic areas defined in regard to the ICZM Protocol are:

- assessment of the state of natural and cultural heritage, landscapes and resources of the coastal zone;
- assessment of the state of key economic activities and existing coastal zone management system, and assessment of the state of impact of natural hazards;
- identification of major pressures on the elements of natural and man-made environment and impacts caused by such pressures.

From such an overview of problematic areas, selection of the priority ones was made on the basis of assessment of the relevance of their impact on:

- endangering natural, landscape and cultural values;
- unsustainable use of coastal resources;
- inadequate prevention and reduction of damages from natural hazards;
- manifestation of the management system deficiencies with regard to the needs in the context of application of functional coordination mechanism for ICZM, use of results-oriented management practices and efficient continuous monitoring of coastal processes.

Further analysis led to determination of the cause and effect links and identification of driving forces that generate unfavourable processes and phenomena. Overview of the key driving forces, pressures, state and impacts, based on DPSIR method, is presented in Table 3-1. Certain causes refer to several problems and vice versa – certain problems have their roots in several indicated causes. A broader list of identified problems and causes is presented in tables in Annex 1.

Systematisation of problems and causes, assessment of the level at which certain groups of problems and causes make it difficult to achieve goals set out by the ICZM Protocol and worsen prospects for the long-term sustainable development of the coastal zone led to identification of the key problems, weaknesses and related needs, as presented in points 3.1 – 3.4.

Table 3-1: Key findings of the Driving Forces, Pressures, State and Impacts analysis

ELEMENTS OF NATURAL AND MAN-MADE ENVI-RONMENT	CAUSES/ DRIVING FORCES	PRESSURES	STATE	IMPACTS
Biodiversity	– high demand and profitability in real estate business – inefficient control of building processes and investors` preferences – lack of expert baselines on the distribution and state of habitats and species – limited capacities (especially managerial ones) in nature conservation system – inefficient control and supervision of activities endangering values of ecosystems and protected natural resources in the coastal zone – lack of awareness about significance of natural values and importance of their preservation – abandoning of agriculture and homogenisation of landscapes	– urbanisation processes – land use conversion – development of tourism, dining and recreational facilities in valuable areas – pollution caused by wastewater – unsustainable tourism activities and increased level of visits – excessive and illegal hunting (of birds) and fishing – disturbance of wildlife	– Out of the total surface of the coastal zone, terrestrial protected natural areas account for only 8.6%, and marine protected areas for 0% (estimated surface of potentially valuable terrestrial natural areas to be protected amounts to 18.8% in relation to the total surface of the coastal zone, and there are approximately 9,000 ha to be designated as marine protected areas) – excessive land and marine pollution at certain locations – fragmentation and conversion of land and marine habitats – lost properties of protected areas and areas planned to be protected (e.g. Slovenska and Bečićka beaches, Spas hill, dunes on Velika beach) – reduced hunting game population – reduced fish population	– biodiversity loss – loss of valuable, rare and endemic habitats and species inland and in the sea – increased number of endangered species – reduced functionality and stability of ecosystems, particularly of aquatic ecosystems – loss of agro-biodiversity (local varieties and breeds)

ELEMENTS OF NATURAL AND MAN-MADE ENVI-RONMENT	CAUSES/ DRIVING FORCES	PRESSURES	STATE	IMPACTS
Cultural assets	– unfinished systematic mapping and insufficient availability of expert baselines on the state of and conditions for conservation of cultural assets – inefficient system for cultural assets management and conservation, insufficient capacities	– urbanisation processes – illegal acquirement of cultural assets	– degradation of cultural assets, particularly of the submarine ones	– endangering authenticity, integrity and degree of preservation of cultural assets – loss of core functions of cultural assets
Landscape values	– unsustainable spatial and tourism development – depopulation of rural areas – lack of instruments (legal ones, integration etc.) and capacities for landscape conservation – lack of awareness about importance of landscape values and the need to preserve them	– expansion of construction activity, urban sprawl – construction of infrastructural corridors – neglecting (traditional	– high share of dispersed urban areas – overgrowing of cultural landscapes with vegetation	– loss of environmental and cultural values of landscapes – loss of recognisability of landscapes, homogenisation of natural, cultural and agricultural landscapes – visual quality of landscapes impaired

ELEMENTS OF NATURAL AND MAN-MADE ENVI-RONMENT	CAUSES/ DRIVING FORCES	PRESSURES	STATE	IMPACTS
Sea	– urbanisation which is not aligned with sensitivity of surface water and ground-water and is not ac-companied by proper utility infrastructure – out-dated technolo-gies in shipbuilding and industry – pronounced season-ality of tourism – inadequate pollution control and preven-tion system, lack of capacities – incomplete emer-gency interventions system	– land-based sources of pollution –waste-water, waste, phy-to-pharmaceutical products – pollution from marine activities (from ports and vessels) – shipbuilding/ over-haul, industrial ac-tivities – overburdened com-munal infrastructure during summer months – inadequate siting of aquaculture (Boka Kotorska Bay) – marine accidents – high water consump-tion	– excessive pollution at some locations (Boka Kotorska Bay, Ulcinj; and Budva and Bar to a lesser extent); – eutrophication of the sea	– endangering the state of marine ecosystem – reducing sanitary quality of bathing water – endangering state of the environment and change of hydrologi-cal properties of river water flows – reducing sanitary quality of potable water – loss of peloids and quality of thermal mineral water – change of chemical and physical proper-ties of groundwater
Water			– occasional deviation in the quality of water of Bojana and Sutori-na rivers compared to statutory norms – impaired quality of certain water sources, deposits of peloids and sources of ther-mal mineral water – reducing quantity and salinisation of groundwater	

ELEMENTS OF NATURAL AND MAN-MADE ENVI-RONMENT	CAUSES/ DRIVING FORCES	PRESSURES	STATE	IMPACTS
Soil	– insufficient invest-ment and institution-al-technical support to agriculture – unfavourable age and qualification structures of rural population – lack of efficient sup-port to sustainable agricultural practices – inefficient system for control, prevention and mitigation of pollution	– urbanisation and development of infra-structure – land use which is not aligned with land vulnerability and land quality – erosion caused by torrential flows – illegal waste disposal	– zderelict agricultural land – conversion of agricul-tural land – soil pollution at cer-tain locations – inconsistent data on soil quality and agri-cultural areas	– loss of valuable ag-ricultural land and ecosystems connect-ed with agricultural and forest land – deteriorated prop-erties of agricultural land – impairment of sanitary quality of groundwater
Natural hazards	– climate variability/ change – insufficient regula-tions – lack of technical ca-pacities – insufficient applica-tion of building stan-dards – construction land in the zones with high seismic risk – insufficient inter-min-isterial cooperation in harmonisation of environmental goals with other sectoral goals	– sea level rise – storms, heavy rains, drought, fires – seismic hazard	– floods, particularly in the Bojana river area – beach areas reduced due to erosion – lack of maintenance of torrential flows	– endangering human life and health – endangering material resources – high rehabilitation costs – loss of resource basis for tourism

ELEMENTS OF NATURAL AND MAN-MADE ENVI-RONMENT	CAUSES/ DRIVING FORCES	PRESSURES	STATE	IMPACTS
Space	– lack of economic activity and unem-ployment – lack of preparedness and incentives for economic diversifi-cation – attractiveness of the coastal zone for secondary housing or what is referred to as 'residential tourism' – profitability of real estate business – lack of fiscal policy in-struments to discour-age over-planning – inefficient instru-ments for adequate arrangement of con-struction land – lack of implementa-tion of planning doc-uments, and particu-larly of the declared planning goals – lack of quality sectoral input data for spatial plans – unsatisfactory level of coordination within state administration – inefficient and non-transparent operation of public administration	– demand growth, high prices and profit-ability of real estate businesses – pressures to con-stantly expand con-struction areas – planning and siting of inacceptable struc-tures in highly vulner-able areas – inefficient control and inefficient sanctioning of illegal and un-planned construction	– oversized construc-tion areas (CA) – planned CA cover 46.3% of the surface of the 1 km coastal strip – share of CA in the total surface of the coastal zone amounts to 15.5%; only 18.5% of all CA are devel-oped – 31.9% of the coastline are built-up areas – 80% of all the unde-veloped construction areas is on the loca-tions of high and very high vulnerability – area with illegally built structures is estimat-ed at around 560 ha – considerable areas are devastated by illegal and unplanned construction of low quality – disproportionate settlements, poor architecture	– impairment and deg-radation of original landscape and natu-ral values – linear coastal urban-isation – increased costs of provision of commu-nal infrastructure due to dispersed con-struction – increased pollution due to the lack of communal infrastruc-ture – on average, low qual-ity of built environ-ment – loss of tourism poten-tial and of attractive-ness for development of quality tourism

3.1 Endangering of natural, landscape and cultural values

In this group of problems, weaknesses and needs the crucial ones are the following:

– Ecosystem approach is not applied in planning the coastal zone activities even though it is prescribed by legislation and to some extent integrated in national and local policies and plans. Assessment of acceptability of actions and economic activities in the context of preserving ecological network's integrity and ecologically significant sites is also envisaged under the Law on nature protection, but its implementation has not begun yet. Due to the lack of data on certain natural assets and areas, implementation of the regulation on conditions for nature protection has also not begun yet.

– One of the reasons significantly contributing such a situation is the lack of systematic mapping and expert baselines on the distribution and state of habitats and species. Combined with insufficient capacity, these deficiencies lead to public administration not responding properly to the pressures from high real estate demand (particularly in the most attractive locations), i.e. to pressures from intensive urbanisation and construction not adapted to the natural surroundings.

– Knowledge and information about values of ecosystem services are not sufficiently developed. Incentives for development of green economy activities which contribute to the preservation of ecosystem stability are not developed either, which is why resource intensive activities continue to prevail (be that through pollution or consumption/ take up of resources).

– Particularly important group of deficiencies is related to the protected natural areas. In accordance with the obligation laid down by law, the Public Enterprise for Public Maritime Domain Management formally took over management of protected areas in the narrow coastal strip. However, practical application of this solution is made difficult by a number of problems including incomplete information about boundaries and status of protected natural areas, incompatibility of earlier procedures for designation of protected natural areas with the newly prescribed protection categories, etc. This model of protected areas management is questionable from the perspective of preservation of integrity of protected areas that expand or will expand beyond boundaries of the public maritime domain. Particular concern is raised due to the fact that the existing protected areas system is not representative, i.e. it was not established in a way to include all the valuable ecosystems (for example, marine protected areas are not designated) and that goals concerning designation of new protected areas are not achieved within the set time-limit. Protection measures for valuable ecosystems outside of protected areas are hardly ever implemented.

– Implementation of the European Landscape Convention is not satisfactory, while related harmonisation of legislation in the areas of spatial planning, nature protection and cultural heritage has not been finalised. Moreover, landscape policy has not been adopted. There is a lack of landscape typology which serves to identify types of landscapes in the territory of Montenegro and to create basis for legal protection of outstanding landscapes. As a result of the lack of awareness, deficient regulations and inadequate expert baselines combined with urbanisation impacts, the quality of coastal

landscape and, consequently, attractiveness and identity of the Montenegrin coast have been considerably impaired.

- Deficiencies in the system for protection of cultural assets are primarily due to weaknesses in implementation of legal provisions. For example, re-assessment[89] of movable and immovable cultural assets in Montenegro has not been finalised, digital database on cultural heritage has not been set up, nor has monitoring of the state of cultural heritage been put in place. This is a prerequisite for its protection in the context of realisation of development and spatial planning documents.

- Underwater cultural heritage is not properly physically protected nor mapped (except for three sites). Measures for in situ protection of cultural assets on land and in the sea have not been elaborated yet.

- Sufficient funding is not allocated for protection of cultural assets.

If the problems of degradation of natural, landscape and cultural values identified above persist over longer period of time, they might lead to considerable instability of ecosystems compared to the existing state and undermine development potentials of the coastal zone.

3.2 Unsustainable use of coastal zone resources

Economy of the coastal zone is not adjusted to its sensitivity and vulnerability which has negative impact on the state of environment and sustainable use of natural resources. At the same time, lack of balance between economic activities and need to improve economic performance are evident. Moreover, use of the coastal zone resources is a responsibility shared between several ministries i.e. administrative systems. Besides spatial planning system that has a pronounced integrative role, other administrative systems also have important functions.

3.2.1 Unsustainable trends in spatial planning and natural resource management

In addition to sectoral regulations and policies, the most important practical regulators of the use of coastal resources are spatial plans. In terms of integration of other ministries and sectors into the spatial planning process and facilitation of their coordination, the spatial planning system has primary responsibility. Ministries responsible for environmental protection and natural and cultural heritage are the most important sectors when it comes to sustainability of coastal zone's development. Nonetheless the spatial planning system, exposed to continuous pressures for land use conversions, failed to produce adequate responses to the existing unsustainable development patterns.

Among key problems and weaknesses of the spatial planning system predominantly caused by external factors, the following ones can be singled out:

- National economies in the region, affected by transition difficulties, after the expansion period in the previous decade were exposed to global recession. Even though they are on a recovery path now, a range of problems they faced in the period of transition of their social and economic systems is broad, and consequences are numerous, including decline in economic activity and consequent loss of jobs, revenues and tax base for public expenditure financing.

- In absence of efficient national economic policies, such processes led to dependence on foreign investments with valuable national resources being offered to foreign investors. Coastal zone, with its potential for tourism development, but also for real estate business, primarily for secondary housing, was treated in this way.

- Under conditions of insufficiently successful economic policy, criteria for preservation of natural, cultural, landscape and environmental values that should be met for all investments are invalidated.

- Spatial planning system, which regulates spatial development and sets out requirements from the preservation perspective, is increasingly perceived as an administrative barrier to development. At the same time, it is less and less seen as an important regulation mechanism which should ensure long-term sustainable development and create conditions for shifting towards development that will give opportunity to future generations to enjoy and use values of natural, cultural and landscape heritage similar to those the current generation inherited from the previous ones.

- In the absence of other economic opportunities at the local level individuals tried to seize the ones offered by land trading. Big earnings were possible due to increased value of areas converted into construction land, oftentimes ten times higher than the actual land value. Therefore, purchase of cheap agricultural and other types of land at attractive locations and their conversion into construction land emerged as a significant form of generating profit.

- The problem is also reflected in the efforts of local governments which, in good faith, tried to accommodate for citizens' needs by enabling them to build on the properties inherited from their ancestors.

- Unfortunately, both of these lead to uncontrolled and dispersed expansion of construction areas where financing of the costs of communal infrastructure becomes impossible. The process of "atomised" consumption of space is characterised by interventions and investments in hundreds of sites and zones. Without anticipating negative cumulative effects of a large number of such interventions along the entire coastal zone, when each such location is considered individually, it seems they will not cause serious disturbances and will generate certain economic benefits.

Besides the problems mentioned above, there is a whole range of general problems and weaknesses within the spatial planning system which additionally slow down sustainable development of the coastal zone. Among these, the following are pronounced:

- It is evident there is insufficient compliance with and inadequate implementation of regulations and planning documents. Illegal construction contributed considerably to spatial degradation in the coastal zone. This has still not been stopped entirely, nor were measures for mitigation of negative impacts of illegally built structures implemented.

- There is an evident declarative nature of planning where planning directions and goals are not elaborated into graphically and normatively clear, specific, measurable and, where possible, quantified provisions for implementation of planning solutions.

- Declarative nature of planning, without establishment of a more rigorous control of spatial processes, did not come about spontaneously, instead it resulted from the lack of determination to adequately organise spatial planning system.

Besides these, other deficiencies and weaknesses leading to unsatisfactory conditions in space may be also identified and they include:

89 / The project Re-assessment of cultural assets and related implementation action plan is underway.

- insufficiently objective analysis of the state and processes in space and lack of use of measurable indicators;
- limited cooperation and coordination between sectors in the planning process;
- lack of quality sectoral baselines;
- insufficient application of technical criteria and methods when making decisions on the use of space (primarily environmental ones);
- inadequate understanding of the participatory process.

Ultimately, the state described above has considerable impact on the quality of planning documents.

There are also evident deficiencies of regulations in terms of detailing norms for certain instruments whose application is important for putting an end to unsustainable forms of spatial development of the coastal zone:

- Linear coastal urbanisation is not explicitly regulated to a sufficient extent, even though recommendations to avoid linear urbanisation are sporadically incorporated into certain planning documents.
- Harmonisation of current regulations with the aim of determining coastal setback as the zone of restricted future construction is in progress. Still, having in mind the existing spatial planning weaknesses, application of this instrument will pose a major challenge.
- There is no regulation on special zones with significant natural, landscape and agricultural values and on their protection from intensive urbanisation, i.e. the "open areas" concept is not implemented. Despite its importance for sustainable use of space in the coastal zone, this concept has so far not been sufficiently recognised in legislation and spatial planning documents.

Significant deficiency is the fact that current spatial planning documents fail to sufficiently address conflicts i.e. incompatibilities between various forms of using marine resources and marine space. Characteristics of marine and coastal environments are substantially different. Crucial difference is that marine areas, as a part of the public maritime domain, are defined as a public resource characterised in particular by the right of common use, i.e. non-ownership regime. That is why ownership boundaries are not an important element in maritime spatial planning as is the case with land. Major difficulty in maritime spatial planning and management is linked to continuity of marine environment and size of marine ecosystems. It is more difficult to apply the concept of boundaries on the sea than it is on the land, particularly due to the three-dimensional nature of sea. Even though there are physical boundaries of the phenomena such as sea currents, sea temperature and salinity, these are not obvious to the observer as are boundaries on land. It is easier to define them on paper than in reality. Lack of physical boundaries enables free movement of both users and resources within the system. Openness of the marine system enables better connectivity compared to the land, while relatively unknown nature of marine environment makes its research more difficult and bio-geographical complexity makes marine system quite unpredictable. Even though maritime planning is necessary and required under the Directive of the European Union establishing framework for maritime spatial planning 2014/89/EU, legislation and practical instructions have

not been adopted yet, nor was capacity for application of that concept developed.

Besides the spatial planning system that has a pronounced integrative role, other administrative systems also have important function for usage of coastal resources. Especially concerning are numerous weaknesses and deficiencies demonstrated by the systems for natural resource management and pollution control, whereas the following ones stand out:

- Degradation and excessive pollution of the sea, surface water and groundwater, soil and forests, as well as inefficient use of resources (e.g. of potable water, agricultural land etc.) have occurred at some locations. Waste and municipal waste water, maritime activities and out-dated polluting technologies that were used in shipbuilding and overhaul are main causes of the current pollution for which proper prevention, reduction and/ or control measures are not implemented.
- When adopting development plans and approving new projects sufficient attention is not paid to sensitivity and vulnerability of the coastal zone environment and to the regulation and prohibition of certain activities.
- Weaknesses in the concessions granting system may gain in importance in the context of planned geological surveys in the coastal zone and intensification of existing activities based on exploitation of raw materials and use of natural resources.
- One of significant deficiencies is inadequate integration of environmental protection into sectoral policies. Laws regulating economic activities (tourism, agriculture, geological surveys, exploration and use of natural resources in the epicontinental belt, port activities) mainly contain provisions which in the forms of principles require that measures be undertaken to eliminate and/or mitigate negative environmental impacts; however, details on how to provide for efficient implementation of these principles are not elaborated.
- Responsible use of natural resources is also partly regulated in the form of general principles which are mainly characterised by inadequate implementation.
- A similar situation is found with requirements to minimise consumption of natural resources which is not a responsibility of resource "consumers" only, but also of entities in charge of their preservation. Importance of such shared responsibility is particularly relevant in situations when efficient safeguard measures are not taken in a timely manner or when some competent entities fail to provide technical baseline necessary for the preparation of planning documents.
- Exceptionally important group of deficiencies is caused by weaknesses in implementing environmental impact assessments (strategic or project based) which include: lack of information needed to undertake assessment, unsatisfactory capacity of entities undertaking assessments and administration bodies carrying out evaluation, undertaking assessments as purely formal procedures in preparing and adopting planning documents and in obtaining permits for implementation of project activities, insufficient consideration of objections raised by public (and sometimes by institutions that must be consulted) and others. These weaknesses have impact on the quality of planning solutions and success in implementation of specific

measures for mitigation or elimination of negative impacts of programmes and projects that are subject to environmental impact assessment.

- There is no monitoring of implementation of the measures for elimination and mitigation of negative environmental impacts that are identified in studies and reports from strategic and project level environmental impact assessments, while competences of the Environmental Protection Agency and Administration for Inspection Affairs (environmental inspection) are not precisely defined. Such a state implies the need to establish monitoring on successfulness and consistency in implementing the measures set out in impact assessments studies and reports. In this context, an important recommendation came from the participatory process conducted in the framework of preparation of this strategy. It refers to the need to eliminate deficiencies in monitoring cumulative environmental impacts of interventions in accordance with requirements set out by the Environmental Protection Agency in the impact assessment procedure, as well as deficiencies in monitoring state of the environment against the reference (baseline) state by environmental inspection.

- After several years of implementation of environmental impact assessments, there is no critical evaluation of the use of these instruments that would serve as a basis to modify the existing practice and overcome current weaknesses.

3.2.2 Unsustainable trends in the coastal zone economy

The following problems and weaknesses characterise economy of the coastal zone, primarily tourism and maritime affairs and, to a lesser extent, fisheries and aquaculture:

- Economic activities are not adjusted to sensitivity and vulnerability of the coastal zone. In that regard, agriculture (from the perspective of pollution and resource use) is not a source of strong pressures, but on the other hand it does not make sufficient contribution to the balance of economic activities and improvement of the overall economic performance.

- There is a lack of efficient support to the diversification of economy, particularly through development of rural areas and use of clean and efficient technologies, and to development of green and blue economic activities.

- Insufficient quality of harmonising public and private interests is present to a certain extent (be that due to the lack of instruments or their inefficient use).

- There is evidently insufficient commitment to the proclaimed goals and lack of established indicators to monitor progress in achieving results; to a certain extent, prioritisation of short-term benefits over long-term sustainable development opportunities is present, as well as the conflict of interest.

- Despite the fact that the principle of pollution prevention is set out, either directly or indirectly, in a number of national regulations, implementation instruments (in cases when they are envisaged) are more of reactive than of preventive nature. Even though legal basis for internalising costs incurred by environmental pollution and use of natural resources exist, environmental pollution and use charges are ineffective. Their administration and collection are not efficient, nor are they established in a manner that reflects actual costs and damages caused by pollution, and stimulate change in polluters` behaviour. In case of damages caused to the environment, polluter's liability used to be determined through misdemeanour and criminal procedures, while specific measures for restoring environment to the original condition and to compensate for the damaged natural resource were mainly not taken. The new Law on liability for environmental damage entered into force in 2015 and its application should ensure efficient rehabilitation and restoration of polluted sites to their original condition. However, implementation of this regulation will present a significant challenge.

3.3 Inadequate prevention and reduction of damages from natural hazards

Problems resulting from inadequate treatment and management of natural hazards in the coastal zone often become visible only after they reach certain cumulative proportions (for example, erosion on the road Cetinje-Budva in February 2015) or in the event of natural disasters such as earthquakes or floods. Such attitude towards natural hazards often increases the damage they cause.

In this group of problems, weaknesses and needs, the following are singled out as the key ones:

- There is a tendency to neglect potential damage from natural hazards or to omit measures for risk management of natural hazards in implementation of development and infrastructure projects and preparation of spatial plans. This is particularly pronounced due to the fact that these are not immediate and daily impacts.

- There is a lack of regulations and appropriate technical capacity to manage risk from natural hazards.

- Weaknesses regarding reduction of damages from natural hazards principally include lack of reliable data on the magnitude of risks and sensitivity to potential impacts, but also lack of awareness on how important it is to take these impacts into account. This is particularly relevant for coastal erosion and climate change, as well as for combined influence of several hazards (e.g. impact of storms and sea level rise on floods in the Bojana river basin).[90] Climate change risk assessment is not integrated into spatial and development plans, which is particularly worrying.

- As for seismic risk (for which there are detailed assessments and categorisation of space for the entire coastal zone), weaknesses include insufficient control of application of the building standards related to seismic risk and designation of construction areas in highly risky zones.

- Maintenance of torrential flows is not satisfactory, which contributes to the occurrence of local floods on one, and on the other hand, in cases when water courses are modified or interrupted, it exacerbates problem with beach erosion.

- Fire protection is also not developed to the necessary level.

3.4 Limitations of the coastal zone management system

Necessary outcomes of adopted public policies are still not achieved due to, amongst other things, lack of

90 / Preliminary estimates and vulnerability mapping in the areas subject to climate change impact were carried out in Assessment of general vulnerability of the coastal zone of MNE, CAMP MNE (2012) and Vulnerability assessment of the narrow coastal zone, CAMP MNE (2013).

harmonisation between goals and measures set out in sectoral policies, as well as due to insufficient focus of the public administration system on the achievement of results.

In the context of this strategy, public administration system includes ministries, administrative and autonomous administrative bodies[91] competent for the implementation of sectoral policies relevant for coastal zone management and for conducting related administrative supervision, administrative procedures and functions of national importance, which are at the same time recipients of the budgetary funds. Public administration also includes public enterprises and companies founded by the Government of Montenegro, as well as local government authorities and public enterprises operating at the local level.

The most important limitations of the coastal zone management system are elaborated below.

3.4.1 Coordination mechanisms

The existing public administration system is complex in terms of both levels of administration (national and local) and sectoral competences assigned to numerous ministries and administrative bodies they coordinate, as wells to the local government authorities. Despite a significant number of established coordination bodies at horizontal, but also on vertical (top down) level, inter-ministerial cooperation is not integrated into all processes and activities that are relevant for coastal zone management. Such a complex management system carries a risk from excessively complicated procedures, along with the lack of harmonised action and practical implementation of sustainability principles.

Current practice of coordinating public policies development often does not include timely essential consultations on the contents of public policies that would be held early enough to avoid potential misunderstandings, contradicted goals and overlapping between competences. Consultations are most often held regarding final policy draft, immediately before adoption, which has negative impact on motivation of employees and technical persons to make a quality technical contribution.

Moreover, public policies are often implemented without sufficient inter-sectoral coordination which results in a lack of harmonisation between them or in insufficiently harmonised implementation.

Insufficient degree of integration of economic, social, cultural and environmental goals in an effort to generate quick economic effects, together with insufficiently clear identification of implications for environment and social development, is another significant deficiency when integrated and coordinated responses to the challenges faced in coastal zone management are considered.

3.4.2 Management that is insufficiently results-oriented

The management system is characterised by unsatisfactory level of specificity of goals and expected results of public policies, as well as by the lack of commitment to pursue the set goals. Goals of public policies are often not accompanied with clear indicators for measuring achieved results and outcomes, nor with responsibility for (non)achieved outcomes.

Actions of public administration are often characterised by insufficient transparency in the process of adoption and implementation of public policies. Regulations on how to conduct procedures are often unsatisfactory and are moreover subject to frequent adaptations on a case by case basis. The above-mentioned results in insufficiently informed and, consequently, insufficiently involved public. Active and effective public involvement in the processes of making decisions on the coastal zone is more an exception than a rule.

Without adequate capacity of the public sector to efficiently conduct affairs falling within its competence, development of institutions and organisational restructuring cannot have a sustainable outcome. As a matter of fact, lack of capacity, primarily in human resources, has been recognised as a deficiency by several institutions in the consultation process during the NS ICZM development, despite the fact that certain segments of public administration in Montenegro are already oversized.

Working conditions in the public administration system and related procedures for promotion and evaluation of achieved results are not based on valuation of outstanding abilities. As a result, staff with outstanding professional potentials is not motivated sufficiently and they either leave or do not start working in public administration at all. That is why the management system in fact does not have the opportunity to strengthen integrity and professionalism.

3.4.3 Monitoring of coastal processes

Integrated coastal zone management is a long-lasting process that requires the use of specific instruments. The system for monitoring coastal processes is one of essential ICZM instruments, while as creation of the coastal zone database is one of important requirements set out by the ICZM Protocol.

Information system weaknesses, in particular lack of and/ or unavailability of functional data and lack of their use for the assessment of state, monitoring of changes, setting of goals and evaluation of results of implementing certain measures in the coastal zone are among the most significant deficiencies of the coastal zone management system. Besides, there is an evident lack of knowledge and experience in using modern decision-making mechanisms with elaborated and objective criteria.

Scientific research is rare since it requires considerable technical and financial resources, and its results are even more rarely used in decision-making. Moreover, the scope of research in the context of monitoring the state of coastal and marine environments and coastal processes is insufficient. This weakness results in a lack of systematically gathered and comparable time series of data on important parameters of the state of environment, space, coastal processes and natural and anthropogenic hazards, thus complicating management and increasing risks of making wrong decisions. Besides, data are often not prepared and adjusted to be used in other sectors as well (e.g. in spatial planning). This reduces considerably their practical value.

Main shortcomings of this area also include mutual incompatibility between the existing databases and unsatisfactory communication and data exchange between numerous entities competent for coastal zone management. This refers primarily to the data at the disposal of public administration and scientific and professional institutions. There are still cases of data witholding and insufficient cooperation.

Causes that have led to such a situation include, first of all, lack of interest to devote more attention to this matter and insufficent capacities (technical, human, financial) of institutions responsible for data collection and keeping.

91 / As defined under the Law on state administration (Official Gazette of MNE 22/08 and 42/11)

National strategy on integrated coastal zone management for Montenegro

04

VISION

Veslo bay, Lucice, SOURCE: CAMP

COASTAL ZONE OF MONTENEGRO IS RESILIENT AND HEALTHY, WITH RECOGNIZABLE IDENTITY AND AUTHENTICITY, PROVIDING FOR PRODUCTIVITY AND BENEFITS FOR CURRENT POPULATION AS WELL AS FOR FUTURE GENERATIONS

RESILIENT AND HEALTHY

- Areas with prominent landscape and cultural values are protected.
- Environment is healthy and preserved for future generations.
- Ecosystem services and amenities of nature protected and areas with preserved natural, cultural and landscape values are recognised and utilised in a sustainable way.
- Coastal area development is adapted to the needs of its natural resources protection.
- Coastal area is resilient to the impacts of natural hazards.

WITH RECOGNIZABLE IDENTITY AND AUTHENTICITY

- Natural specificities and physiognomy of traditional settlements and landscapes are preserved.
- Elements of natural and cultural heritage, as a basis of attractiveness, serve the purpose of coastal zone's sustainable development.

PRODUCTIVE

- Coastal area has sustainable tourist offer based on a year-round tourist product with developed traditional rural component and preserved attractiveness basis.
- A satisfactory positioning of the Montenegrin coast as a tourist destination on the global market has been achieved, generating positive economic effects.
- Agricultural land and forests are key resources of rural areas that are utilised through ecological and autochthonous production; they represent an important segment in diversification of high quality tourism offer in the coastal area.
- Entrepreneurship based on protection of natural, landscape and cultural values is being developed.

FOR THE BENEFIT OF CURRENT POPULATION AND FUTURE GENERATIONS

- Best available knowledge and standards are applied.
- State and processes in the coastal zone are monitored to assess progress in achieving desired results.
- Participation of local population in making and implementing important socio-economic decisions is improved.

05

STRATEGIC GOALS

Herceg Novi SOURCE: National Tourism Organisation

Strategic goals of the NS ICZM, with corresponding measures and sub-measures, are defined in response to identified problems and weaknesses and with the overall aim to fulfil vision of integrated management of the coastal zone of Montenegro.

The approach taken in defining the NS ICZM goals was that implementation of the concept of integrated coastal zone management:

- takes into account, to the greatest possible extent, existing conditions and management structures in the country, while trying to improve them and avoid further complexities;
- does not require usage of complex problem solving mechanisms in cases when they can be successfully solved in individual sectors i.e. departments through application of their internal capacities and instruments;
- points out, by considering things in an integral manner, interdependencies and possible synergies to make sectoral strategies more effective and efficient;
- enables recognition of strategic themes that are (currently) neglected or are not given appropriate significance.

The NS ICZM strategic goals are focused on problems which require the following issues to be resolved:

- strategic and normative harmonisation of public policies and regulations;
- formulation of complex public policies by applying mechanism of inter-sectoral cooperation, i.e. implementation of public policies through fulfilment of strategic tasks by considering problems in an integral manner;
- coordinated cooperation of different departments and achievement of synergistic effects;
- acting on a priority basis given the fact that economic and social development of the coastal zone depend on the success in solving the problems;
- application of coordination mechanisms in resolving inter-sectoral conflicts on strategic (plans, programmes) and operational (project) levels;
- improvements in the spatial planning system as a markedly integrative department that will become a core of the future ICZM structure;
- higher efficiency, effectiveness and transparency in the governance system.

Having in mind vision and multi-sectoral nature of integrated management of the coastal zone of Montenegro, the strategic goals are structured within the following thematic areas:

Preservation of nature, landscape and cultural assets
Development of infrastructure for pollution prevention and remediation
Spatial planning and sustainable spatial development
Achievement of satisfactory performances of the coastal zone economic development
Functioning of the coastal zone management system

Strengthening of human resources and social cohesion is, as a multi-sectoral theme, addressed in each thematic area of the NS ICZM.

Strategic goals are set for the NS ICZM thematic areas for the period of up to 2030, which is the time horizon to which the Strategy applies. They are presented in points 5.1 to 5.5.

5.1 Preservation of nature, landscape and cultural assets

Issues related to preservation of natural, landscape and cultural values are among the most important strategic issues for managing the coastal zone of Montenegro. Low level of attention that has been paid to protection of these values so far, obligations from the process of Montenegro's accession to the European Union and international standards accepted in the national context all require significant changes in behaviour patterns where protection of valuable ecosystems, cultural values and landscapes has been marginalised for the sake of ambitious, often unsustainable (but also not implemented) plans and activities.

Natural, landscape and cultural values of the coastal zone are a foundation upon which preservation of spatial identity and of way of living of population on Montenegrin coast depends. That is why it is necessary that their preservation becomes a key and lasting element of development policies in order to provide for stability of ecosystems and services they provide, preservation of attractiveness of the coastal zone, welfare of people (population and tourists), as well as for preservation of abilities of society and nature to adapt to natural disasters and processes. Development difficulties that may be affecting national economy should not question strategic approach to Montenegrin coastal zone management defined in this way.

In line with previous assessments, the NS ICZM strategic goals for the thematic area "Preservation of nature, landscape and cultural assets" are:

- **Protect nature, landscape and cultural assets efficiently;**
- **Manage protected natural assets, ecologically valuable habitats and ecosystems of the coastal zone sustainably.**

5.2 Development of infrastructure for pollution prevention and remediation

Existing level of development of environmental infrastructure (outfalls and treatment of wastewater, (lack of) adequate port facilities to accept wastes from vessels, waste disposal and other) is not sufficient for preservation of sea, water, soil and air quality. Consequently, excessive environmental pollution occurs. Moreover, insufficiently developed infrastructure limits potentials for socio-economic development.

That is why it is necessary to improve capacities and quality of the existing infrastructure with significant investments for development of infrastructural projects on land and minimisation of negative environmental impacts due to infrastructure development. In such a context, priorities are: remediation of existing locations with high pollution loads ("hot spot" locations), prevention of further increase in pollution loads as well as adequate siting of future infrastructure as to ensure it will not endanger sensitive ecosystems at sea and on land.

Under conditions of pronounced climate variability and climate change, coastal zones are directly exposed to natural hazards and their impacts. It is therefore necessary to provide reliable data on risks that might arise due to natural hazards impacts for spatial and development plans in order to enable optimal siting of infrastructure in space.

In line with previous assessments, the NS ICZM strategic goals for the thematic area "Development of infrastructure for pollution prevention and remediation" are:

- **Achieve good environmental status of marine ecosystems;**
- **Contribute to safe arrangement, re-vitalisation and reclamation of areas polluted due to inadequate disposal and treatment of waste;**

- **Stimulate development of green infrastructure;**
- **Establish risk management system for natural and anthropogenic hazards.**

5.3 Spatial planning and sustainable spatial development

Pressures on spatial and marine resources are pronounced, while adequate responses aimed at achievement of visible improvements in the existing spatial conditions are lacking.

A wide range of responsibilities of pertinent department for the overall sustainability of spatial and socio-economic development of the coastal zone stems from the very breadth of tasks and character of the spatial planning system. That is why it is necessary to analyse and resolve in and integrated manner issues related to unsatisfactory results in the area of spatial planning and in the area of sustainability of the coastal zone development. In this way, rapprochement of the spatial planning system to the ICZM tasks and goals should be provided, in particular as application of the ICZM concept stresses importance of good planning and arrangement of space. In other words, the ICZM concept recognizes problems faced by spatial planners in their work and enables them to apply specific instruments that require strengthened powers the spatial planning department is currently not entrusted with (at least not to a necessary extent). Spatial planning system has to be strengthened through the application of instruments from the domain of other departments too, especially those from the areas of fiscal and land policies.

Key problems and weaknesses of the spatial development are partly caused by external factors. However, they to a large extent belong to a group of systemic problems in the area of spatial planning. In such a context, endeavours aimed at improvement and implementation of the existing laws that regulate spatial planning system are important as they should allow for integration of sectoral needs and aspirations, unconditional protection of the most significant natural, cultural and landscape values, rational consumption and use of space, minimisation of conflicts between urbanisation and valuable vulnerable areas, and quality of the built environment. It will be also necessary to additionally regulate (through adequate norms) tasks of the spatial planning system that refer to provision of balance between activities on land and sea through maritime spatial planning and strengthening of resilience of coastal structures to climate change.

Under the stated circumstances, strong political will and development of efficient and accountable public administration are of crucial importance for sustainable future of the coastal zone of Montenegro. That is why the NS ICZM strategic goals for the thematic area "Spatial planning and sustainable spatial development" are:

- **Develop a system of sustainable spatial planning;**
- **Provide wider preconditions for the spatial planning system functioning.**

5.4 Achievement of satisfactory performances of the coastal zone economic development

A striving to improve performances of economic development is at the core of integrated management of the coastal zone of Montenegro. It is based on the needs related to overcoming of numerous weaknesses characterising existing state of the socio-economic development of the coastal zone, primarily of those caused by low level of diversification of economic activities and their negative impacts on the environmental quality.

Natural and landscape values of the coastal zone with

agricultural and forest land (especially in the hinterland) represent significant resources of the coastal zone with economic potential to improve the offer of high quality and diversified tourism as well as of autochthonous ecological agricultural production. At the same time, numerous negative environmental impacts of the development of economic activities are evident.

Coastal zone economy encompasses a small number of sectors. In other words, it is characterised by a low level of diversification of activities. As one of the most important sectors for economic development of the coastal zone and the entire country, tourism is characterised by a short summer season with bathing tourism as the most significant part of the offer. Positive changes are evident regarding the growth of foreign investments for development of tourist capacities. At the same time, real estate business played an important role in the coastal zone economy over the course of several years.

That is why priority needs in the context of attaining sustainable economic development of the coastal zone require, among other things, incentives for development of sustainable tourism, development of agriculture and utilisation of currently neglected rural areas as well as incentives for other activities that may contribute to preservation of the coastal zone resources and be labelled as a green or blue economy. Rural development is not just significant as an economic sector, but also because rural areas make a significant part of the overall tourism attractiveness and an important segment of the high quality tourism offer that contribute to creation of a year-round tourist product. Only tourist regions with developed traditional rural offer can put forward autochthonous events and experiences (gastronomic, oenologic, cultural, educational and adventurous) expected by modern tourists. Integration of rural hinterland and differentiation of tourist product based on local resources generate significant opportunities for improvement of the overall tourist offer of the Montenegrin coast. In the sectors of organic and traditional agriculture, rural and adventure tourism with accompanying services alone there is a realistic potential for creation of around 2,000 new jobs and for revenues of around 50 million euros annually. Out of these, 12 million would be directly linked to rural tourism. Utilisation of this potential would mean an increase in employment in the coastal region of around 4% and estimated contribution to GDP growth from 3 to 4%.

Such a form of development has a strong support from the EU pre-accession funds. Financial allocation for Montenegro through IPA component V for rural development (IPARD) for 2012 and 2013 was around 11 million euros. These funds will grow in the forthcoming period, and following Montenegro's accession to the EU, they will be several times higher. Development of absorption capacity for the usage of these funds is a long-lasting process.

Diversification of the coastal zone economy should provide for attainment of goals that are significant both from the aspect of integrated coastal zone management and in the context of contributing to some of the key priorities of socio-economic development of Montenegro – increase in employment, living standards and others. Furthermore, it is necessary to stimulate balanced development within the coastal zone i.e. within the region of Montenegrin coast where two municipalities with significant potentials lag behind the national averages (Ulcinj significantly, Bar slightly).

In line with previous assessments, the NS ICZM strategic goals for the thematic area "Achievement of satisfactory performances of the coastal zone economic development" are:

- **Manage coastal zone resources sustainably;**
- **"Green" the development of the coastal zone.**

5.5 Functioning of the coastal zone management system

Efficient coordination and strengthening of institutional capacities represents an urgent need of the existing management system. An important contribution to achieving sustainability of society's development should be made through strengthening of cooperation and coordination between stakeholders , efficient inclusion of public into the decision-making processes and use of available knowledge.

That is why the NS ICZM priorities include public administration reform and establishment of a functional governance structure. Even though the NS ICZM focuses on the coastal zone, coastal zone management system does not function in isolation from the rest of the public administration system in Montenegro. Reform of the coastal zone management system may thus represent a demonstration case for reform in other segments of public administration. In this context, it is necessary to create preconditions for fulfilment of the ICZM Protocol's objective on achieving coherence in decisions from national and local levels as well as between public and private initiatives pertaining to the use of coastal zone resources.

Based on the assessments of national institutional and legal framework of significance for integrated coastal zone management[92] and recommendations from the consultative process carried out in the framework of NS ICZM preparation, the NS ICZM goals for the thematic area "Functioning of the coastal zone management system" are:

- **Establish functional coordination mechanism for integrated management of the coastal zone;**
- **Strengthen public administration capacities;**
- **Establish monitoring of the coastal processes**

5.6 Strengthening of human resources and social cohesion

Societies which value knowledge and skills, which manage to mobilise potentials of various social groups and provide for development benefits to reach all their members, are societies that are on the sustainable development path. Available human resources – knowledge, skills and social capital (mutual links and cooperation among stakeholders) – represent one of the most significant development factors. Strengthening of human resources cannot be done in a good way without appropriate organisational restructuring and capacity building within public administration institutions. Accordingly, improvements of the (coastal zone) management (institutional) system are not possible without investing at the same time into development of capacities of civil servants and experts to perform assigned tasks efficiently and effectively.

That is why strategic NS ICZM goals pertinent to strengthening of human resources and social cohesion are:

- Implementation of capacity building programme;
- Increasing awareness on the need to preserve and enhance coastal zone resources.

Due to the fact that capacity strengthening and public awareness raising on the importance of mobilising social potential are of high priority, capacity building has been paid special attention. However, due to the importance of targeted capacity strengthening and awareness raising activities, specific measures and sub-measures to implement them are identified under the other NS IZCM strategic goals.

92 / Analysis of institutional and legal framework for integrated managment of the coastal zone of Montenegro, CAMP MNE (2014)

06

SPATIAL PLANNING SYSTEM AND SPECIAL PURPOSE SPATIAL PLAN FOR THE COASTAL ZONE

SOURCE: CAMP

Protection of nature, landscapes and cultural assets is strategically important for sustainable management of the coastal zone of Montenegro. Despite the fact these values constitute a basis for preserving spatial identity and the way of living of the coastal zone population as well as the most important economic resource in the long run, they are endangered by spatial problems manifested through continuous expansion of construction areas. In addition to degradation of ecosystem value, landscapes and agricultural land, they also contribute to increasing pollution, as well as to transport and other types of problems, while contradicting very clear goals and directions set out in the SP MNE.

Current problems with the use of space are, amongst other things, a consequence of the fact that spatial planning system as an integrative platform failed to meet expectations. Among the factors causing these problems and reducing prospects for long-term sustainable development of certain parts of the coastal zone, the following ones stand out: limited implementation of spatial plans, particularly of strategic ones such as the SP MNE, and insufficiently controlled urbanisation processes, i.e. illegal and unplanned construction. While the capacities of the spatial planning system were exhausted in the development of numerous planning documents, their quality and importance of their efficient implementation were neglected. Planning solutions deviated from adopted directions which, despite being properly set, were not achieved.

A part of problems with the spatial planning system is caused by social and economic transition. The set of instruments for spatial planning and development that had existed in the earlier system was not replaced by an integral and functional model that would suit the newly established circumstances. Transition restored authority of private ownership, while spatial plans became means for changing the economic value of land. Under such circumstances, the spatial planning system was often criticised as a relic of socialism that contradicts the principles of market economy.

On the basis of the problems with spatial development mentioned above, the following can be singled out as the key needs: sustainable planning of capacities in space in line with actual needs in terms of quantity and quality of built environment and establishment of the maritime spatial planning.

Even though the spatial planning system has major responsibility, it is worthwhile emphasising that the level of control it exercises is limited and does not include all the sectors whose contribution is important for the quality of planning documents and sustainability of spatial development. This is due to the fact that spatial plan, as a product of planners` work, is implemented directly and makes planners directly responsible, as noted in introduction to the SP MNE:

"In development of the Spatial Plan, the problem of defining the boundary of competence between spatial planning as an inter-sectoral integrated approach and sectoral policies has been identified. The question is to what extent spatial planning may replace or even substitute sectoral policy if it does not exist or is deemed inadequate from the perspective of the principles and goals set out by the Spatial Plan."

A part of response to the spatial development problems is provided through measures and sub-measures within strategic goals of the thematic area Spatial planning and sustainable spatial development presented in section 7.1.3. They emphasise and elaborate the role and potential of the spatial planning system as a core of the future ICZM structure. However, in addition to nec-

essary systemic solutions, importance of the SPSPCZ MNE as a strategic planning document also stands out. The Plan should set out clear directions for implementation of planning postulates that are important for sustainable development of the coastal zone. Moreover, it has to be aligned with obligations arising from the ICZM Protocol and implementation of the NS ICZM, as well as with the SP MNE as a planning document of higher order. That is why guidelines for the SPSPCZ MNE are elaborated in this chapter, based on the ICZM Protocol requirements and results from implementing CAMP activities.

6.1 Role and task of the SPSPCZ MNE

It is not possible to perform an in-depth analysis of the entire spatial planning system in any of the planning documents, including the SPSPCZ MNE, in addition to definition of specific planning solutions. It is rightfully said that a spatial plan defines a desired picture of space within a specific time horizon, whereas management strategy elaborates operational process for establishing such desired picture of space and for its successful achievement. The SPSPCZ MNE is a spatial plan for an extremely valuable part of the Montenegrin territory which sets out how the most valuable land and marine resources will be used in the context of needs of economic and other activities. The NS ICZM considers more broadly and in more detail the entirety of complex processes occurring in the coastal zone and related competences of the relevant state authorities. Based on the assessemnet of exisitng state in this document, mutually harmonised systemic measures for strengthening structures for integrated coastal zone management are proposed, and specific guidelines for sustainable spatial development defined. These guidelines also refer to the SPSPCZ MNE and are presented in section 6.2 of this chapter.

The fact that the SPSPCZ MNE was introduced into the system of planning documents and that it was developed represents the most concrete practical contribution to the implementation of the ICZM Protocol. Its implementation also requires considerable amendments to the current legal framework, including the Law on spatial planning and construction of objects and Rulebook with more precise content and form of a planning document, land use criteria, urban regulation elements and unique graphic symbols (the Rulebook). Still, this is a less demanding step compared to development of a planning document which has both strategic and operational tasks to undertake. Strategic tasks include balancing and harmonisation of development and environmental protection interests. In a specific situation, this means reducing construction areas to realistic extent, while taking into account all the spatial values to be preserved in the long run and enabling implementation of important development projects at the same time. Operational tasks include development of mechanisms for implementation of the SPSPCZ MNE which should lay down clear and unambiguous obligations for the plans of lower order.

The fact that implementation of CAMP activities leading to adoption of the NS ICZM as the final CAMP outcome coincided with development of the SPSPCZ MNE enabled cooperation between expert teams tasked with preparation of these documents. CAMP activities were practically oriented, while transposition of requirements set out in the ICZM Protocol was aligned with needs of certain phases in development of the CASP. At the same time, the Plan's developer informed CAMP team about the state in space, available data and baseline documents, as well as about results of the performed analysis. In the framework of its activities, CAMP team insisted on coordination and consequently it set up some kind of an informal, temporary coordination mechanism for the ICZM. Links between various sectors were established through the vulnerability and suitability assessments. At the same time, sectoral and synthesised (joined) databases were prepared serving also as baselines in the CASP development.

That is why one of the goals of the NS ICZM is to provide response to the question on how the temporary situation established during CAMP project may be transformed into a permanent ICZM mechanism on the basis of which spatial planning methods and standards applied in CAMP activities and used in development of the SPSPCZ MNE may be formally incorporated into the spatial planning system and into legislation. Since some of the taken approaches are innovative and partly more demanding in technical terms compared to the previous practices (e.g. use of GIS technology and spatial databases), such methods and techniques should be incorporated into continuous professional development programmes.

6.1.1 The ICZM Protocol requirements

Regulation of spatial planning systems is a competence of national legislators in the European Union, while as numerous sectoral policies such as those on environment, nature, water and sea, and fisheries are set out through the EU legislation which is then transposed into the national. The ICZM Protocol as a "regional' i.e. international legal act enters the system for spatial arrangement i.e. the areas of spatial and urban planning notwithstanding the fact that regulation of majority of elements of these areas fall within national competences.

The ICZM Protocol requirements[93] related to the spatial planning and spatial development system may be grouped in two main categories:

- spatial-physical requirements related to specific ways of and criteria for sustainable development, including all forms of protection;
- methodological-process requirements related to the process and methods used in the development of planning documents.

The main spatial-physical and protection requirements set out by the ICZM Protocol which refer to CASP are:

- protection of coastal ecosystems,
- preservation of coastal landscapes,
- preservation of cultural heritage,
- sustainable use of the coastal zone,
- responsible use of resources,
- prevention and reduction of damage from natural hazards.

The most important methodological-process requirements set out by the ICZM Protocol for the entire planning process, from preparatory and analytical phases to implementation of the planning documents, are:

- creation of the coastal zone database (coastal observatory),
- application of specific instruments and measures,
- access to information,
- encouraging public participation,

93 / For the sake of simplicity, the term "Protocol requirements" is used even though a detailed analysis of individual provisions shows there is a gradation in the degree to which they are mandatory

- coordination and integration mechanisms,
- use of indicators to assess implementation of strategies and plans.

In parallel to the development of the NS ICZM, the process of changing and amending he most important laws was taking place including, amongst other things, their harmonisation with the ICZM Protocol requirements. Most of the necessary amendments are related to the Law on spatial planning and construction of objects and to the Rulebook.

6.1.2 Spatial Plan of Montenegro

Under the Law on spatial planning and construction of objects, the SP MNE is defined as a strategic document and a general basis for spatial organisation and planning in Montenegro. As for the nature of the SP MNE, it is sad that: Spatial Plan cannot and should not replace sectoral strategies. In the period of rapid transition, Spatial Plan can only provide strategic framework and must ensure compliance of spatial planning with constitutional provisions and sustainable development. This may be achieved by formulating and setting goals, principles and guidelines which are strict enough as to guide and organise spatial planning. In that regard, SP MNE sets out targets and measures of spatial development that are aligned with the overall economic, social, environmental and cultural-historical development of Montenegro.

Even though the SP MNE covers the entire territory of the country, three basic spatial units - coastal, central and northern regions, are addressed throughout the plan - from analytical part to the formulation of guidelines and measures for implementation. Coastal region as treated in the SP MNE almost coincides with the coverage of the SPSPCZ MNE (except for NP Lake Skadar and NP Lovćen). SP MNE sets out that spatial planning of the coastal zone should be based on the following basic guidelines:

- Construction and arrangement of space should be planned and carried out in a manner which ensures conservation of natural, cultural and traditional values of the coastal landscape, while measures for rehabilitation and restoration of endangered and valuable areas of natural and built heritage should be implemented;
- When necessary to expand construction areas of the cities and settlements located along the sea coast, this should as a rule be done in space which is more distant from the coastline and only exceptionally alongside the coast in a way as to avoid creation of uninterrupted construction zones;
- It is also necessary to ensure access to the coastline and public interest in using near-shore space; recreation and maritime activities should be provided for as priority uses of this space, while appropriate regimes for preservation and use of natural beaches should be introduced;
- "Green corridors" connecting mountainous hinterland to the coast should be protected against construction and intensive land use.

Some of the general principles (GP) and general goals (GG) of the SP MNE that are particularly relevant for the coastal zone are set out in Annex 2. Principles, goals and measures set out by the SP MNE indicate high level of awareness about spatial development problems and weaknesses in functioning of the spatial planning system. Moreover, development goals that have been set and guidelines for implementation

of the SP MNE clearly show compliance with the contemporary principles of sustainable spatial planning. Despite difference in coverage between the SP MNE and the NS ICZM, there is an evident close link between their content and thematic coverage, as well as between important goals and the majority of measures. Nevertheless, two important conclusions may be drawn:

- Since the adoption of the SP MNE, the state in space has not improved, while in some segments it has even deteriorated despite clear directions and goals set out by the SP MNE (an example is continuous expansion of construction areas that are often in conflict with the existing natural and landscape values);
- All the so far barriers that have stood in a way to better functioning of the spatial planning system and achievement of directions and goals set out by the SP MNE in the coastal zone will also constitute barriers in implementation of the ICZM principles and mechanisms proposed by the NS ICZM.

6.2 Strategic guidelines on sustainable spatial development

Strategic guidelines on sustainable spatial development are defined by taking into account requirements of the ICZM Protocol and of the SP MNE as a planning document of higher order which the CASP must be harmonised with.

6.2.1 Guidelines on the CASP

Guidelines for the SPSPCZ MNE are structured into four groups on the basis of the planning tasks arising from the ICZM Protocol and SP MNE requirements, as follows:

- **Regulating over-consumption of space;**
- **Providing for optimal land uses by minimising conflicts between use and vulnerability of space;**
- **Regulating construction in the narrow coastal strip – coastal setback;**
- **Preservation and development of open rural areas.**

The planning tasks mentioned above are the usual themes found in any regional spatial plan. That is why the set of instruments for addressing these planning tasks is mainly familiar and verified.

Nevertheless, it should be emphasised that quality of the built-up space is a particularly relevant planning theme for the coastal zone of Montenegro. The theme itself, and in particular restoration and rehabilitation of inadequately urbanised areas, goes however beyond the tasks of the regional plan, except for the level of general goals.

The fact that planning of the development of infrastructural systems requires concrete and specialised baselines should be also pointed out. That is why this important segment is addressed by the NS ICZM to the extent needed for identification of possibilities for safe rehabilitation and arrangement of space through elimination or mitigation of the pollution load which was assessed in detail and considered from spatial perspective on the basis of the coastal zone pollution and vulnerability model developed within CAMP. Accordingly, chapters 5 and 7 set out strategic goals and measures which address environmental infrastructure in line with this approach. Broader context of significant infrastructural solutions that consider the coastal zone as an integral part of national infrastructural systems is defined in the SP MNE and the CASP.

6.2.1.1 Regulating over-consumption of space

One of the most important tasks of spatial planning is to determine land uses and siting of various human activities and functions in space. Any conversion of land for the purpose of anthropogenic uses means additional consumption of natural space which is a non-renewable resource. Due to that, consumption of space is one of the best indicators of the sustainability of spatial development. Several quantitative indicators were developed in the framework of CAMP pointing in an objective manner to a highly pronounced over-planning of space in the coastal zone of Montenegro and excessive size of construction areas, particularly in the 1 km wide coastal belt. As a consequence of the over-planning, the degree to which the construction areas are developed i.e. utilised is quite low, which increases considerably costs of urbanisation and generates negative impacts on the environment, natural and landscape values.

In that regard, guidelines relevant for the CASP are:

- Spatial and development priorities should be primarily accommodated for through the improved utilisation of already built-up areas;
- The trend of quantitative growth in consuming the space should be shifted towards increasing the value and quality of built-up areas and environment.
- Through the SPSPCZ MNE, technical baselines for a more precise legal regulation of the size of construction areas should be established based on the stated surfaces of developed and undeveloped parts of construction areas in the territory of different municipalities in line with the type of construction area (particularly for urban, rural and semi-urban construction areas in the settlements and for detached construction areas located outside of settlements).

Different land uses are compromises between various social and economic needs and environmental protection requirements. Decisions on land use are long-term comittments and giving up on them is difficult and costly. However, decisions are often made without proper prior analyses of their impact. Reforms of the EU agricultural, energy, transport and cohesion policies are expected to create framework and incentives for public administrations and land owners to overcome this deficiency. By 2020, EU policies are expected to be taking into account direct and indirect impacts on land uses, while as for the land conversion goal, it is maintained that there should be no net land take beyond 2050; (European Commission Communication (2011) 571, Roadmap to a Resource Efficient Europe).

6.2.1.2 Providing for optimal land uses by minimising conflicts between use and vulnerability of space

Conflicts between use and vulnerability of space constitute an important indicator of sustainability of spatial development. One of the main spatial planning goals is harmonisation between environmental protection goals and development interests. Knowledge of the overall vulnerability of space is an important tool in that endeavour. In order to provide for optimal selection of areas that will be developed, urbanisation processes are, based on vulnerability assessments, directed to areas that are the least vulnerable i.e. to those where negative impacts will be the lowest.[94]

Optimising land uses is complementary with restricting consumption of space. The concept of consumption of space has exclusively quantitative dimension

94 / In line with the results of CAMP analysis Application of selected indicators on monitoring and evaluation of the sustainability of spatial development of the coastal zone, 36 areas were identified with the total surface of 6,247 ha (each exceeding 50 ha) in which there is a significant conflict between high vulnerability and planned land uses (undeveloped parts of construction areas).

and it does not address in detail potential conflicting uses of converted land and its vulnerability. Low consumption of space does not necessarily mean there are no conflicts between planned land uses and vulnerability. Similarly, high consumption does not necessarily mean there is a high level of conflicting land uses in relation to vulnerability.

That is why both conditions – low and responsible consumption of space harmonised with real development needs, and minimisation of conflicts between anthropogenic uses and vulnerability of space must be met in order to ensure sustainable spatial development.

Issues with currently valid construction areas, as designated in older plans, are partly related to limitations of technologies used in their preparation and available analogue baselines which were not precise enough. In order to compenaste for this lack of precision, larger construction areas were designated with rough or schematic boundaries. On the other hand, more recent plans were created in the time of economic boom and high real estate demand which put additional pressure on spatial planners. This is exactly why planners need tools and methods promoted in the framework of CAMP activities, which to the extent possible make decison-making process objective by presenting rational and convincing arguments to all stakeholders in the planning process.

Related to this, guidelines relevant for the CASP are:

- It is necessary to optimise land uses designated under the existing planning documents by reducing the size of highly vulnerable areas located within the scope of undeveloped parts of the construction areas for which detailed planning documents have not been developed.
- Planning of the new construction areas should be shifted towards lower vulnerability areas in accordance with the vulnerability map.

6.2.1.3 Regulating construction in the narrow coastal strip – coastal setback

Coastal setback is one of the ICZM Protocol requirements whose application demands dealing with matters which are competence of the national spatial planning system. In the framework of CAMP MNE, vulnerability of the narrow coastal zone was determined with regard to certain environmental elements and integrated vulnerability assessment was carried out for various segments of the coastline. This made it possible to identify areas in which conditions are in place for extension of the setback. The ICZM Protocol also provides for adaptations (exemptions from application) of the coastal setback (to less than 100 m) in the areas having particular geographical and other constraints and for projects of public interest which must be specified through a national legal act in accordance with the Protocol's principles and goals.

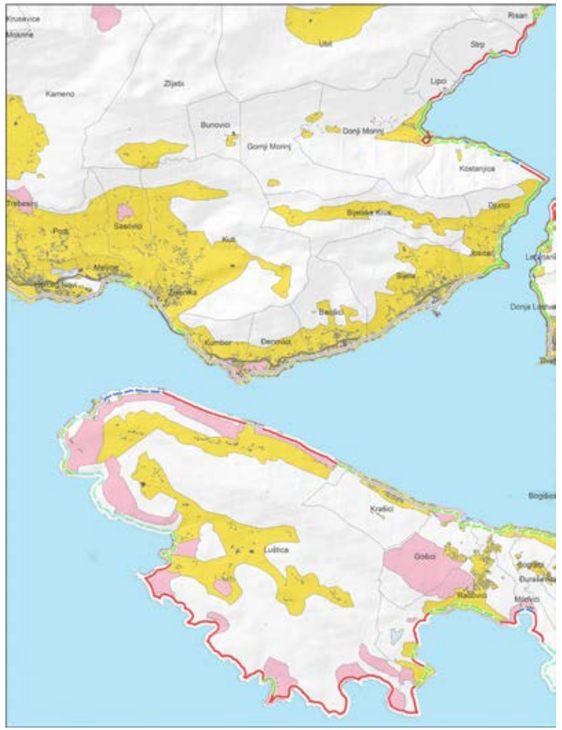
Two groups of criteria were designed in order to ensure objective and uniform determination of the setback and conditions for its adaptation or extension. The first group includes anthropogenic criteria – land uses planned in the existing spatial planning documents and the state of built-up areas. The second group includes criteria dependent on natural and physical properties of the coastal zone which are grouped into four degrees of vulnerability. The matrix for consistent action in various typical situations was proposed on the basis of these criteria (Annex 3). Their application led to identification of high vulnerability areas (including vulnerability to cli-

mate change impacts) in which conditions are in place, in accordance with the ICZM Protocol, to extend the setback zone.

It is important to accept the fact that setback in large planned tourism zones does not constitute a barrier to, nor restriction for investing. It is precisley these comprehensive tourism projects of higher standard that require the setback zone which should be free for development of public, green, recreational, beach and other similar amenities, while accomodation capacities should be built behind the coastback line. As a rule, establisment of the setback is not favourable to businesses dealing with real estate (apartments, villas) for temporary housing. That is why criticism of the setback is a good indicator of investors` intentions –whether they are interested in actual commercial tourism or in trading with real estate for temporary housing. A good principle of sustainable planning of the coastal zone entails siting of the zones for temporary housing within or next to settlements, but under no circumstances as exclusive land uses in valuable detached zones.

Related guidelines relevant for the CASP are:

- Define types of setback with the possibilities of adaptation and present them on a proper map together with the guidelines for application, as an obligation for lower level plans.
- Define zones for the extension of setback as an obligation for lower level plans.
- Criteria developed under the CAMP and confirmed by expert and concerned public should serve as a basis for implementation of the guidelines mentioned above (Map 6-1 and Table 6-1).



Map 6-1: Example of how the setback can be defined

Table 6-1: Total length and share of various setback types according to the state of detailed planning documents from August 2013

SETBACK TYPE	LENGTH (m)	SHARE %	DESCRIPTION OF THE SETBACK TYPE
1	70 018	29,2	Built-up coast - setback cannot be applied
2	51 862	21,6	No setback due to inherited rights – SLS, LLS, DUP and UP
3	7 795	3,2	Adaptation in partly developed CA – urban planning criteria
4	0	0,0	Adaptation in partly developed CA – urban planning criteria with additional measures
5	23 807	9,9	Adaptation for the projects of public interest
6	718	0,3	Adaptation for the projects of public interest with additional measures
7	3 977	1,7	Adaptation, priority to legalisation and rehabilitation
8	1 536	0,6	Adaptation, priority to legalisation and rehabilitation with additional measures
9	64 244	26,8	No adaptation
10	16 200	6,7	Conditions for extension
TOTAL	240.157	100,0	

6.2.1.4 Preservation and sustainable development of open rural areas

Potentials of rural hinterland of the coastal zone of Montenegro are important from two perspectives. On one hand, rural areas have numerous and diverse resources serving as a basis for rural development that can keep population in rural communities, reduce pressures on urban areas and in the narrow coastal zone, and facilitate achievement of balanced regional development. On the other hand, rural areas indeed have an important role for the intensive tourist development of the narrow coastal zone. A critical yet often forgotten fact is that the potential and the so far development of tourism in the coastal zone of Montenegro (as well as in numerous other regions worldwide) is first and foremost based on the value and the level to which natural environment and landscape are preserved. The sate of preservation of natural environment and space of the coastal zone has direct impact on the quality of tourism development and positioning of Montenegro in the global tourism market. That is why selected parts of the coastal zone should be preserved for intensive tourism development, but at the same time certain significant parts should be protected from such development and their potentials for a different kind of development which is complementary to tourism development should be recognised.

For rural areas, it is especially important to identify open rural spaces in which environmental protection and stimulation of development interests are equally important. These are areas with predominantly rural characteristics in which future construction should be exclusively linked to the existing traditional settle-

ments or activities of agricultural households. A part of the open space system includes areas with fertile soil and valuable traditional cultural landscape whose preservation serves as a basis for multifunctional rural development in which agricultural production is combined with tourism offer (agro-tourism) and various forms of outdoor recreation.

That is why open rural areas should be identified on the basis of a detailed valuation of the resources they offer. The aim of the ICZM Protocol requirements and their intention is to protect these areas from intensive urbanisation that would endanger their values and character. That is why valuable open rural spaces are delineated and protected on a priority basis specifically in the areas that are relatively accessible and potentially exposed to development pressures.

An important task of the CASP is to recognise other opportunities which offer prospects for the development of diversified economy. It is precisely the potentials of rural, open areas and their resources that represent such kind of development opportunities. From the perspective of regulating spatial development of the coastal zone, construction pressures to which the narrow coastal zone is exposed can be at least partly alleviated in this way. Only tourist region with developed traditional rural agricultural offer may provide autochthonous events and experiences (gastronomic, oenologic, cultural ones...) expected by modern tourist.

Related to this, guidelines relevant for the CASP are:

- Spatially define land use categories that constitute rural open areas (Map 6-2 and Figure 6-1):

  1. Agricultural areas

     1.1 1.1. Intensive agricultural areas

     1.2 1.2. Other agricultural areas

  2. 2. Natural areas

     2.1 2.1. Forests

     2.2 2.2. Other natural areas

     2.3 2.3. Water areas

- Spatially identify categories of protection and use conditions that apply to rural open areas (Map 6-2 and Figure 6-1):

  3. 1. Landscape

     3.1 1.1. Valuable cultural landscapes

     3.2 1.2. Valuable natural landscapes

     3.3 1.3. Breaks/ interruptions in landscapes

  4. Biodiversity and nature protected areas

     4.1 2.1. Existing protected areas

     4.2 2.2. Potential protected areas, including marine ones

     4.3 2.3. Coastal forests and macchia, wetlands and river estuaries, dunes[95]

     4.4 2.4. Estuary of the Bojana river

- For all the categories mentioned above it is necessary to define conditions for their use and protection at the level which enables direct implementation.

95 / Protection of wetlands and estuaries, coastal forests and dunes as specific coastal ecosystems is regulated under Article 10 of the ICZM Protocol.

Map 6-2: Concept of sustainable spatial development of the coastal zone of Montenegro

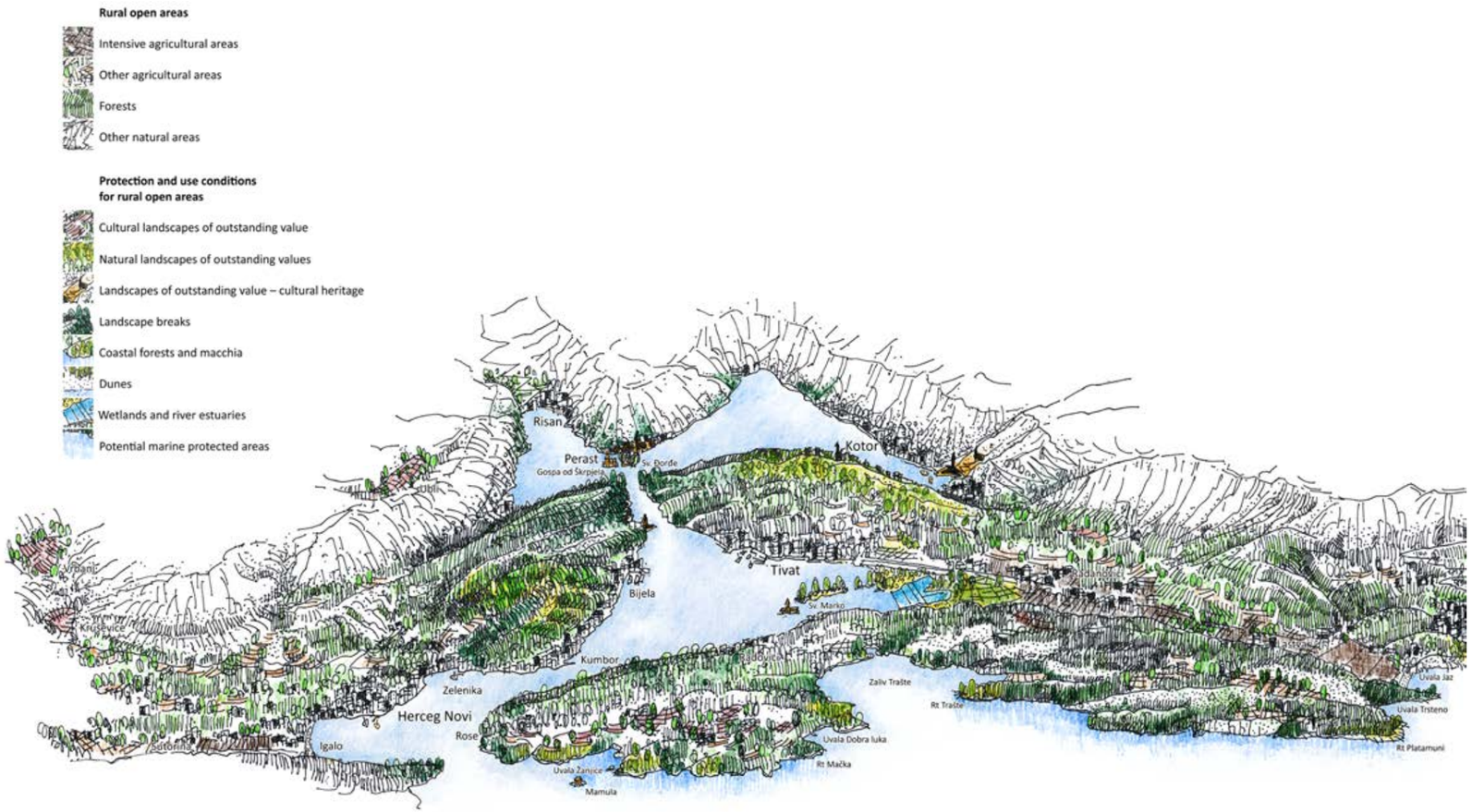
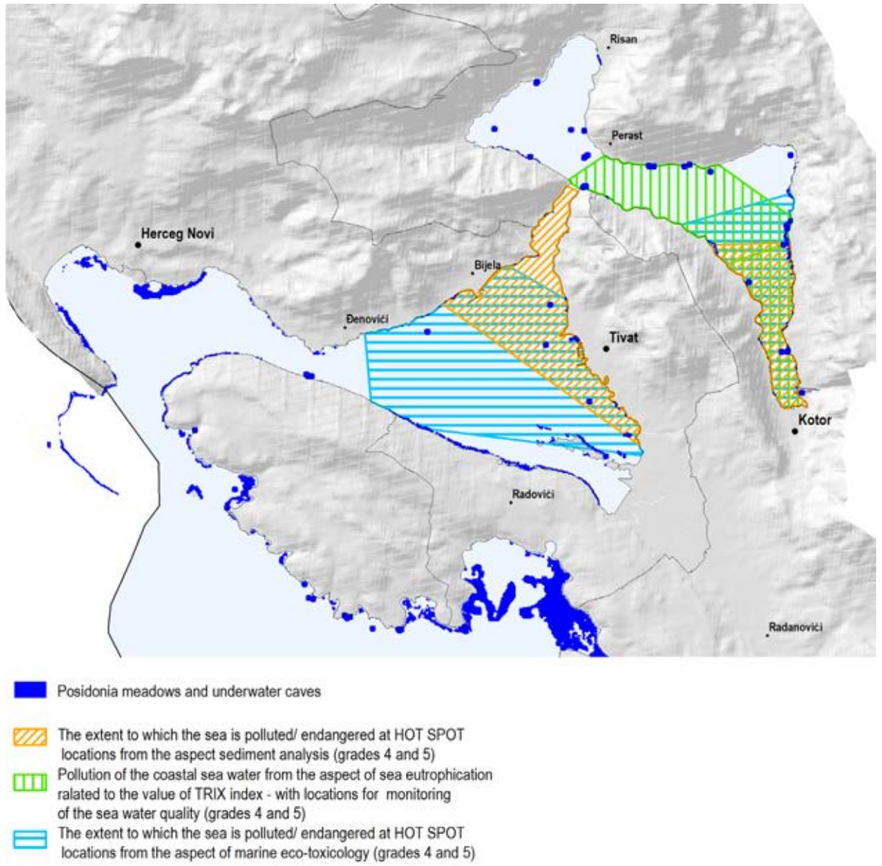


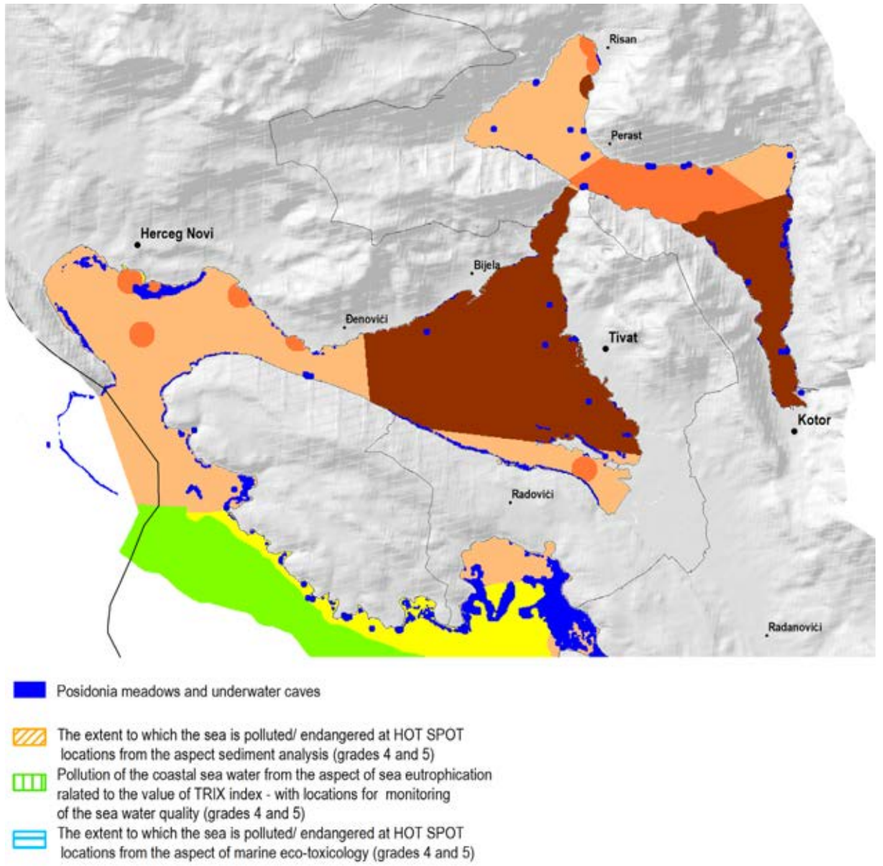
Figure 6-1 : Overview of the land use categories that constitute rural open areas and categories of protection and use conditions that apply to rural open areas

6.2.2 Establishment of a basis for maritime spatial planning

Complementary to the application of vulnerability assessment in determining optimal land uses for the terrestrial part of the coastal zone, application of the ecosystem approach in the analysis of marine environment serves as a basis for optimising various planned uses of the sea. Limitations and possibilities in the application of ecosystem approach in the context of future maritime spatial planning in Montenegro were shown for the Boka Kotorska Bay in the framework of CAMP activities. Conducted analyses show that Boka Kotorska Bay is one the most vulnerable marine parts of the coastal area and that it is strongly affected by anthropogenic factors due to high population density in the narrow coastal zone, tourism development and related urbanisation, and to a lesser degree by industry (shipbuilding), maritime activities and more recently by significant growth of nautical tourism and cruisers sailing in. Map 6-3 shows the most important biodiversity sites and the most polluted areas (hot spots). High concentration of hot spots with high level of pollution in a relatively small area indicates that internal waters of the Bay are the most endangered ones. Map 6-4 with ranking of pollution impacts and distribution of biodiversity components points out to a similar conclusion.



Map 6-3: Integrated overview of the most important biodiversity components and of the most polluted areas



Map 6-4: Ranking of pollution impacts and distribution of biodiversity components

With the above-mentioned in mind, it can be concluded that application of the ecosystem approach in development of the Maritime Spatial Plan for the Boka Kotorska Bay would be justified in order to enable protection of its particularly sensitive parts and rational use of its economic potentials.

Even though an optimal coverage of the maritime spatial plan would be entire marine part of the Montenegrin coastal zone, complementary to the coverage of the CASP, a pragmatic approach would be to develop a plan for a pilot area prior to establishing the overall system of maritime spatial planning. In this way, it would be possible to gain a more detailed understanding about necessary data and its availability, barriers and existing capacities for introduction of the maritime spatial planning. At the same time, a demonstration project could considerably improve planners' knowledge on the principles, measures, methods and other specialised knowledge important for maritime spatial planning. Taking into account relative availability of data on the Boka Kotorska Bay, the first demonstration maritime spatial plan could in fact be developed for the Bay and related part of the open sea.

Such a plan could be developed as a separate plan by the Ministry of Sustainable Development and Tourism in cooperation with municipalities that are located around the planning area of the Bay's marine surface. It would be more detailed than the plan that would be developed at the national level, while as sea uses ('zoning') would be determined for the area of spatial coverage. Close attention should be paid to bio-geographic zones, which requires a comprehensive database. In this context, it is important to note that outer parts of the Montenegrin marine area have not been researched to the extent to which Boka Kotorska Bay has been. At the same time, the open sea is in economic terms significant for potential exploitation of hydrocarbons as well as an area with important fishing zones, maritime transport routes and underwater installations. That is why decision on the scope of the maritime spatial plan should be made through a coordination mechanism for integrated coastal zone management.

6.2.3 Monitoring and evaluation

Evaluation is a complex activity, particularly when it comes to evaluation of implementation of complex planning documents such as the SPSPCZ MNE. Given the comprehensiveness and multi-sectoral nature of the planning goals, as well as a large number of processes affecting achievement of the results, evaluating implementation of the SPSPCZ MNE will be a difficult task that will encompass a broad range of issues.

When evaluating results achieved in the implementation of planning documents it is not easy to separate direct result of implementing the plan and planning solutions from the results of parallel implementation of other systemic measures in the spatial planning system. That is why indicators should be used in order to simplify the process of monitoring and evaluating implementation of the planning documents. These instruments contribute to the efficiency of implementation of planning documents since they help with:

- clear, measurable and comparable description of the state, and
- monitoring of implementation and achievement of results of the plan by measuring progress in achieving the goals.

Indicators are used in all phases of the planning process. They are important in analytical phase as they provide objective picture of the state of space. They are also used in setting the goals of strategic planning documents. Morover, certain indicators are irreplaceable means for monitoring and evaluating progress achieved in the implementation of plans and other public policies. Monitoring of the state of space which includes preparation and update of baseline documents concerning space, preparation of reports on spatial planning, preparation and adoption of the spatial planning programmes and setting up and management of the information system cannot be imagined without the system of indicators.

However, indicators are still not used to a sufficient extent. This too is the case with the process of development of the SPSPCZ MNE. The deficiency was also identified by the SP MNE, which strongly emphasised insufficient use of indicators for monitoring the state and changes in space, as well as for monitoring implementation of planning and relevant legal provisions.

Indicators to monitor implementation of the NS ICZM are described in chapter 8 and they contain specific groups of indicators pertinent to monitoring the implementation of the CASP.

6.2.4 Fiscal policy instruments for achieving the spatial planning goals

Fiscal policy instruments are usually not covered in the content of planning documents and they are also not within formal competence of the spatial planning system. At the same time, planning directions and spatial development goals in the coastal zone are not implemented to a satisfactory extent, with spatial planners facing demands for new land conversions and expansion of construction areas, particularly for development of real estate and related businesses.

That is why traditional spatial planning and spatial development policies and measures should be strengthened by additional instruments, primarily by fiscal policy ones. It is worthwhile emphasising that these instruments must be part of a broader and consistent fiscal policy. That is why this strategy does not set out any specific recommendations and proposals to amend legislation regulating fiscal policy, instead it defines measures which encourage inter-ministerial consultations, the aim of which is to improve the tax system. Certain fiscal instruments are particularly important as ancillary means for achievement of the spatial planning goals.

Real estate (immovable property) tax is customary in the majority of countries, even though the way of collecting it and the tax rates are quite different. In most of the cases, this tax is entirley treated as local government revenue. As a rule, it replaces various communal taxes used to finance maintenance of local infrastructure and public areas and facilities. By imposing this ad valorem tax, the established tax rates are applied to the tax base which consists of the appraised market value of the real estate. Appraisal may be carried out by specialised services on the basis of established criteria or by application of simple formulas (e.g. surface area of the building is multiplied by the reduction coefficient due to age and coefficient of the location, i.e. zone in which the building is situated).

Differentiation of tax rates aims to direct tax burden more precisely in order to mitigate impact exerted on residents compared to that exerted on non-residents. As for residential units, different rates may apply to the first compared to all the next residential

Ulcinj SOURCE: National Tourism Organisation

units, while in terms of construction land rates may be different for the land brought to its planned use etc. Real estate tax rates may also be differentiated with regard to legal status of the building in terms of whether it has been constructed with or without the building permit, whether it has use permit etc. This is yet another model how this tax can be used to make efficient contribution to achievement of the spatial planning goals.

Importance of real estate tax for the spatial planning system is related to several facts:

- some parts of the territory of Montenegro, primarily the coastal zone, are considerably overplanned which is why there are large areas of the construction land that were not brought to their planned use,
- profitability of real estate business led to development of a large number of residential units for occasional use which consume valuable spatial resources on the coast and oftentimes unfairly, and also illegally, compete with commercial tourism.

Real estate tax (e.g. for residential buildings and premises of non-residents) at the rates of 1% and higher reduces demand for this type of real estate at source. In this way, ownership of a real estate becomes more expensive and unprofitable. Demand, i.e. interest to purchase real estate is reduced resulting in lower interest of investors in this type of projects.

The situation is similar with the tax on undeveloped construction land. From the perspective of spatial planning policy and goals, this is the most useful form of the real estate tax. This tax in particular deters demand for land conversion unless backed by a specific investment interest. It also deters land conversions which will, due to location, require a longer period for the provision of communal infrastructure, which is important for the rational use of space. Such distant sites in detached construction areas are the source of major potential threats to the existing natural and landscape values of the coastal zone. For this type of real estate, differentiated and increased tax rates would constitute an important complementary measure in elimination of pressures and preservation of values and potential of the coastal zone. Real estate tax may contribute to the spatial planning and development goals in a different manner as well, by establishing minimum rates or even by exempting agricultural land from taxation.

In this way, real estate tax, besides its fiscal role as the most important local government`s revenue whose significant share is invested into spatial planning, also becomes efficient regulator and instrument for stimulating desired and deterring less desired economic activities.

Real estate tax in Montenegro has existed for several years and falls within competence of local governments, with prescribed tax rates ranging between 0.10% and 1.00%. Under the law, for the construction land which is not brought to a planned use these rates may be increased by 150%. Norms set in this way enable efficient use of this tax for the purposes mentioned above, while decision-making powers on this matter are vested with local governments. Even though this is politically and socially delicate tax, current circumstances point out that in the long run this tax will be introduced with rates that will not be symbolic.

07

ACTION PLAN

Valdanos SOURCE: CAMP

The NS ICZM Action Plan defines strategic measures for all the goals that have been set and structured within thematic areas of this strategy. Besides strategic measures and related sub-measures, priority actions to be taken by 2020 were developed as well. Target outcomes, i.e. expected final results to be achieved through implementation of outlined strategic measures and sub-measures in the time frame of the NS ICZM by 2030 were also identified.

Nevertheless, it should be kept in mind that achievement of the target outcomes of integrated management of the coastal zone of Montenegro requires synergy between implementation of strategic measures set out by the NS ICZM and strategic directions and actions taken in the framework of related sectoral policies. Thus, for example, preservation of attractiveness of the coastal zone for sustainable tourism development (measure 4.1.1) contributes considerably to the improvement of economic performance of tourism industry, diversification of tourism offer and better use of capacities. However, achievement of the desired outcome cannot be expected without synergy between implementation of this measure and investments in all the segments of tourism offer - from accommodation facilities to marketing (which are measures that have already been defined in the Tourism Development Strategy of Montenegro by 2020). That is why inter-sectoral cooperation established through functioning of the ICZM Council is vitally important (measures 5.1 and 5.2).

Successful realisation of goals and related measures, sub-measures and actions as well as attainment of the desired outcomes will to a significant degree depend on whether the following preconditions are met:

- provision of political support to implementation of the proposed reforms and establishment of the integrated coastal zone management;
- continuation of the positive trend of economic growth in Montenegro and absence of significant global changes such as recession or disturbances in the (European) tourism market;
- elimination of possibility that the EU support to rural development is stopped or of other forms of instability;
- positive continuation of pre-accession negotiations between Montenegro and the EU.

7.1 Strategic measures

Strategic measures in the Action Plan are broken down into appropriate sub-measures in order to provide specific response to the identified problems and weaknesses, thus facilitating necessary changes of the existing state of the coastal zone. Measures with accompanying sub-measures, targets and entities responsible for their implementation are grouped around individual strategic goals within thematic areas of the NS ICZM. Structured in this way, they are presented in sections 7.1.1 – 7.1.7 in the form of tables that constitute road maps for the achievement of strategic goals of this strategy.

7.1.1 Measures in thematic area Preservation of nature, landscape and cultural assets

Measures and related sub-measures for the achievement of strategic goals set in this thematic area of the NS ICZM are introduced in sections 7.1.1.1 and 7.1.1.2 and presented in the tables at the end of section 7.1.1.

7.1.1.1 Protect nature, landscape and cultural assets efficiently

The so far practice has shown there are significant weaknesses in applying integrated approach and instruments for protection of ecologically valuable habitats and ecosystems of the coastal zone, even in cases when such tolls are regulated under the law (as is the case with appropriate/acceptability assessment). Tackling the identi-

fied weaknesses and shortcomings requires real integration, instead of declarative, of environmental protection requirements into sectoral policies and plans, as well as the application of ecosystem approach.

That is why it is necessary to harmonise current legislation and programmes with international requirements and EU legislation regulating application of ecosystem approach (besides the Protocol on ICZM, there is also the UN Convention on Biological Diversity, Marine Strategy Framework Directive 93/626/EEC, Habitats Directive 93/626/EEC) and improve conservation, management and planning of landscapes in line with the European Landscape Convention. At the same time, it is necessary to build capacity and improve practice of application of the selected mechanisms which contribute to the sustainable management of the coastal zone, such as appropriate/ acceptability assessment, strategic and environmental impact assessments.

Implementation of the NS ICZM should contribute to restoration of priority cultural assets and creation of conditions for better management of underwater cultural heritage. Priorities include completion of re-assessment of movable and immovable cultural assets, establishment of monitoring of the state of cultural heritage, incentivising cultural activities rooted in cultural heritage, implementation of in situ protection measures and strengthening protection of intangible cultural assets. Improvement of the protection of cultural assets of the coastal zone of Montenegro should also be achieved through preparation of technical baselines for integration of measures on protection of cultural assets into spatial plans, development of the information system and registry of cultural assets and by developing necessary technical and administrative capacities.

It is necessary to create required technical and financial preconditions and facilitate implementation of the activities which demonstrate good practice and enable exchange of experience in order to build capacity for application of the approaches and instruments mentioned above. Moreover, it is important to improve supervision and control of use of the coastal zone resources through enhancement of coordinated actions and development of technical and administrative capacities for performing supervision.

It is necessary to adequately incorporate protection of nature, landscape and cultural assets into planning solutions and planning regulation in order to provide support to the functioning of the spatial planning system which should serve as a regulator of preservation and sustainable use of natural and cultural assets of the coastal zone. In this context it is necessary to improve access to up-to-date data on the state of terrestrial and marine biodiversity and develop quality technical baselines, while also ensuring that they are used in spatial planning documents.

7.1.1.2 Manage protected natural assets, ecologically valuable habitats and ecosystems of the coastal zone sustainably

In the framework of establishment of the future National ecological network it is necessary to identify ecologically valuable habitats and ecosystems of the coastal zone, particularly ecosystems whose protection is mandatory under the Protocol on ICZM: wetlands and estuaries, marine habitats, coastal forests and dunes, as well as to ensure they are protected. At the same time, it is necessary to adequately value ecosystems and services they provide in order to make proper management decisions.

The NS ICZM supports urgent review and, if necessary, re-categorisation of the existing protected natural assets together with establishment of models for their sustainable management. It is also necessary to speed up the process of designation of new protected natural areas, particularly for the marine environment. Ecologically valuable parts of land and sea should be placed under appropriate protection regime in line with international guidelines (e.g. Aichi biodiversity targets, EU Strategy for the Adriatic and Ionian Region). It is also necessary to develop the system of measures and mechanisms for protection outside of the nature protected areas. Furthermore, it is important to work on the development of adequate capacities for management of nature protected areas, particularly marine ones, since Montenegro has no relevant experience in this field.

THEMATIC AREA	1 Preservation of nature, landscape and cultural assets	
STRATEGIC GOAL	1.1 PROTECT NATURE, LANDSCAPE AND CULTURAL ASSETS EFFICIENTLY	
RESPONSIBLE ENTITIES	Lead entities: Ministry of Sustainable Development and Tourism, Environmental Protection Agency, Administration for the Protection of Cultural Heritage, local governments in the coastal zone Entities involved in implementation: Ministry of Agriculture and Rural Development, Ministry of Culture with Administration for the Protection of Cultural Heritage, Ministry of Transport and Maritime Affairs, Public Enterprise (future Agency) for Coastal Zone Management, scientific institutions (University of Montenegro: Faculty of Natural Sciences and Mathematics, Institute of Marine Biology), civil sector organisations and NGO.	
MEASURES	SUB-MEASURES	TARGET OUTCOMES TO BE ACHIEVED BY 2030
1.1.1 Apply instruments for conservation of natural resources, ecologically valuable habitats and ecosystems	1.1.1.1 Amend the Law on nature protection, Law on forests and regulations governing economic activities in the coastal zone with regard to requirements for biodiversity conservation and application of ecosystem approach set out by the Protocol on ICZM and relevant EU legislation (primarily Habitats Directive 93/626/EEC, Birds Directive 2009/147/EC), UN Convention on Biological Diversity, while ensuring their mutual harmonisation. 1.1.1.2 Integrate environmental protection principles, goals, measures and instruments into sectoral policies and plans. 1.1.1.3 Build capacity for the application of ecosystem approach by: – preparing technical guidelines; – implementing pilot projects; – capacity building of public administration through information exchange, transfer of knowledge and best practices available in the framework of regional cooperation (primarily with UNEP/MAP) and with the EU member states; – encouraging cooperation between science and public administration through active participation in the development of technical baselines for the application of ecosystem approach, monitoring of and reporting on the state of marine ecosystem, preparation of programmes, projects and technical manuals; – encouraging cooperation between business sector and public administration in financing programmes and projects related to the application of ecosystem approach through social responsibility mechanisms.	Based on indicators of good environmental status of the sea and ecosystem approach indicators, status of the marine ecosystem has been assessed as good

MEASURES	SUB-MEASURES	TARGET OUTCOMES TO BE ACHIEVED BY 2030
1.1.1 Apply instruments for conservation of natural resources, ecologically valuable habitats and ecosystems	1.1.1.4 Improve the application of: – strategic assessments of the impacts of spatial and development plans on the environment of protected natural assets, ecologically valuable habitats and ecosystems of the coastal zone, – environmental impact assessment for projects in protected natural assets and potential areas of the National Ecological Network (EMERALD, IBA, IPA), particularly those which include natural habitats and ecosystems of the coastal zone. 1.1.1.5 Facilitate the use of appropriate/ acceptability assessment by: – supporting transfer of knowledge and best practice experiences through development of guides and technical manuals for its implementation; – testing its use at the sites of future Ecological Network in the coastal zone. 1.1.1.6 Improve availability and update of data on the state of terrestrial and marine biodiversity by: – improving monitoring of the state of biodiversity in the terrestrial part of the coastal zone; – establishing inventory of the state of biodiversity of the coastal zone; – development of technical baselines (in GIS format) for spatial planning with regard to presence, state and values of habitats and species; – exchanging data in the framework of cooperation in the Adriatic and Mediterranean and with the European Environmental Protection Agency.	Use of strategic impact assessment and environmental impact assessment is improved, as is the use of appropriate/ acceptability assessment Key habitats in the marine and land parts of the coastal zone are not lost

MEASURES	SUB-MEASURES	TARGET OUTCOMES TO BE ACHIEVED BY 2030
1.1.2 Protect, manage and plan landscapes in accordance with the European Landscape Convention	1.1.2.1 Harmonise legislation in the area of spatial planning, nature, environment and cultural heritage protection with the European Landscape Convention determining, amongst other things, protection of exceptionally valuable landscapes. 1.1.2.2 Adopt landscape policy and ensure the following as a part of its implementation: – develop landscape typology for Montenegro, singling out landscape of the coastal region in the framework of landscape regionalisation; – in the course of development of landscape typology, prepare technical baselines for the protection of outstanding landscapes; – in the course of development of spatial planning documents at all levels, it is mandatory to prepare the landscape plan which is harmonised with the overall planning solution and which should contain the following: clear concept of development and protection of (locally) important/ recognisable landscapes, certain conditions for the development of activities/ interventions, as well as the guidelines on development and protection of landscapes for which there is a need for special (local) landscape protection; – guidelines on development and protection of landscapes are operational and go beyond traditional protection concept, where that is deemed necessary, and take into account the need to create new landscape; – close attention should be devoted to the landscape in the narrow coastal zone (±1000 m from the coast, depending on the characteristics), remediation of degraded areas, planning of green systems and landscape-architectural development of the open space in settlements; – particularly address issues of landscape (landscape-architectural) development of the coastline and hinterlands of beaches, establishment of green protective zones between beaches and urbanised areas, architectural design of the structures on beaches and landscape rehabilitation in degraded areas; – coastal setback should be applied as one of the basic instruments for preservation of the coastal landscape which, in terms of development of tourism capacities, is not a limitation but a potential for establishment of the quality landscape-architectural development; – raise awareness about the importance of landscapes through various forms of promotion and educational curricula.	Landscape is integrated into spatial plans

MEASURES	SUB-MEASURES	TARGET OUTCOMES TO BE ACHIEVED BY 2030
1.1.3 Protect and manage cultural assets	1.1.3.1 Amend the Law on protection of cultural assets by prescribing in situ conservation of cultural assets on land and at sea and by improving the existing norms related to the protection of underwater heritage. 1.1.3.2 Perform re-assessment of movable and immovable cultural assets and establish guidelines on cultural assets in spatial planning documents including: – analysis of the state of cultural heritage in the coastal zone; – definition of functions (way of using, purpose) of individual cultural assets and their relation with the surrounding space; – where necessary, re-definition of the status and of protection measures for cultural assets; – rehabilitation of prioritised cultural assets, with prior preparation of technical baselines for conservation; – preparation of technical baseline for protection of underwater cultural heritage; – incentives for cultural activities rooted in the cultural heritage of Montenegro. 1.1.3.3 Develop information system for the registry of cultural assets taking into account needs of spatial planning in data formatting by: – mapping the state, values, conditions and measures for preservation of cultural assets in GIS format; – setting priorities in development of the registry of cultural assets in accordance with the spatial planning needs and spatial planning programme. 1.1.3.4 In implementing development and spatial planning directions, ensure compliance with recommendations of significance for the protection of natural and cultural-historic area of the Bay of Kotor-Risan, as UNESCO world heritage site, in accordance with the 2011 Management Plan. 1.1.3.5 Incentivise cultural activities based on cultural heritage and preservation of intangible cultural heritage with the aim of preserving specificities and recognisability of the coastal zone of Montenegro.	Conditions for the protection of cultural assets are integrated into spatial and development plans All important cultural monuments are functional and in good condition
1.1.4 Provide for efficient supervision and control of the use of coastal zone resources	1.1.4.1 Priorities include: – improvement of coordination in actions of inspection services responsible for supervision and control of fisheries, maritime activities, sea pollution caused by vessels, environmental protection, water protection, protection of space and construction, as well as coordination of their actions with communal inspection services; – strengthening of technical and administrative capacities of inspection services, particularly from the perspective of preventing the use of prohibited means in fishing, prohibited introduction of invasive species, illegal construction, commercial-tourist utilisation of natural and cultural heritage on land and at sea.	Technical and administrative capacities of inspection services are improved, as is efficiency of their coordinated operation

THEMATIC AREA	1 Preservation of nature, landscape and cultural assets
STRATEGIC GOAL	1.2 MANAGE PROTECTED NATURAL ASSETS, ECOLOGICALLY VALUABLE HABITATS AND ECOSYSTEMS OF THE COASTAL ZONE SUSTAINABLY
RESPONSIBLE ENTITIES	Lead entities: Ministry of Sustainable Development and Tourism, Environmental Protection Agency, Public Enterprise (future Agency) for Coastal Zone Management, local governments in the coastal zone Entities involved in implementation: PE National Parks of Montenegro, scientific institutions (University of Montenegro: Faculty of Natural Sciences and Mathematics, Institute of Marine Biology etc.), civil society organisations and NGO

MEASURES	SUB-MEASURES	TARGET OUTCOMES TO BE ACHIEVED BY 2030
1.2.1 Identify and evaluate ecologically valuable habitats and ecosystems of the coastal zone and review status of the existing protected natural assets	1.2.1.1 Map and evaluate i.e. establish the state of (by using GIS): – the protected natural areas on land and ecologically valuable habitats and ecosystems of the coastal zone which are proposed for protection, first of all monuments of nature, landscapes with outstanding natural characteristics and Bay of Kotor-Risan which is a UNESCO world heritage site; – marine habitats in the territorial sea of Montenegro, as well as in international waters, primarily at seven priority locations: 1. Luštica (from Mamula to the Mačak cape), 2. zone from the cape Trašte to Platamun (with narrow zone of strict protection from the cape Žukovac to the cape Kostovica), 3. broader zone of the Katič island, 4. zone from the cape Volujica to Dobre Vode, 5. zone from the cape Komina to the cape next to the Old Ulcinj island, 6. zone of the cove Valdanos to Velika cove and 7. Seka Đjeran with southern part of the zone in front of Velika beach to the Bojana river estuary. 1.2.1.2 On the basis of the established state: – review status of the existing protected natural assets as well as of potentially protected natural assets; – determine the extent and boundaries of natural assets and of priority marine habitat locations which are proposed for protection; – identify new protected natural assets that should be designated on priority basis by 2020, in accordance with the valid spatial planning guidelines and requirements for establishment of the Ecological Network and other relevant international standards through an open participatory process, with participation of relevant stakeholders (administration at national and local levels, state authorities, scientific and expert institutions, non-governmental and civil society organisations).	Efficient and integrated management of the network of protected natural assets, ecologically valuable habitats and ecosystems on land and in marine environment of the coastal zone is established;

MEASURES	SUB-MEASURES	TARGET OUTCOMES TO BE ACHIEVED BY 2030
1.2.2 Build capacities for integrated management of natural resources, ecologically valuable habitats and ecosystems of the coastal zone	1.2.2.1 Establish efficient management structure for the management of protected natural assets including: – preparation of protection studies and management plans and provision of optimal funding for the management of protected natural resources in accordance with results of evaluation and inventory of terrestrial and marine biodiversity; – application of optimal management practices; – halting the loss of biodiversity value and ecosystem degradation; – implementation of rehabilitation and restoration measures at the sites with endangered habitats; – harmonisation of development-investment plans with the management plans for protected natural assets; – increased benefits from ecosystem services by implementing measures for green and blue growth, primarily through sustainable utilisation of ecosystem services for tourism; – enhancement of the Law on nature protection and Law on public maritime domain through inclusion of norms that enable integrated management of protected natural areas, ecologically valuable habitats and ecosystems of the coastal zone as parts of the future National Ecological Network, including collection of information and reporting on the state of biodiversity of the coastal zone. 1.2.2.2. Improve the existing capacities for the management of protected natural assets through: – implementation of training programmes and training activities (in the context of obligations arising from transposition of the Habitats Directive 93/626/EEC, Birds Directive 2009/147/EC, Marine Strategy Framework Directive 2008/56/EC, establishment of the National Ecological Network, integrated coastal zone management and maritime spatial planning in accordance with the European Union Directive establishing a framework for maritime spatial planning 2014/89/EU, cooperation with UNEP/MAP and GFCM); – transfer of knowledge with the aim to apply the best available practice in the management of natural assets, particularly in the management of protected marine natural assets (by using experience gained in the framework of MEDPAN).	Capacities are developed for the use of best available knowledge and standards on the management of protected natural assets (e.g. IUCN)

7.1.2 Measures in the thematic area Development of infrastructure for pollution prevention and remediation

Measures and related sub-measures for the achievement of strategic goals set in this thematic area of the NS ICZM are introduced in sections 7.1.2.1, 7.1.2.2, 7.1.2.3 and 7.1.2.4 and presented in the tables at the end of section 7.1.2.

7.1.2.1 Achieve good environmental status of marine ecosystems

Considerable progress has been achieved in the past decade in terms of reducing pressures on marine environment through upgrading the capacity of waste water collection and treatment system. Still, it is necessary to continue upgrading the existing capacities in order to reduce impact of the pollution caused by municipal waste water as well as impacts of the pollution caused by industrial waste water and pollution resulting from inadequate treatment of waste and waste water from ships in ports.

Remediation of the "hot spots" within certain parts of Tivat and Kotor bays, areas of Kotor, Budva and Bar ports and within Ulcinj – Port Milena section, which are the most affected by pollution, is a priority. As for the Bojana river as a transboundary watercourse, it is necessary to implement a technically and financially demanding remediation plan which would cover numerous pollution sources in Montenegro and Albania. In that regard, remediation of Port Milena is a priority due to direct impact of the pollution on marine environment and quality of tourism offer. Through replacement of outdated equipment in technological processes in shipbuilding as well as through implementation of green infrastructure projects on land and at sea, further positive outcomes in reducing pressures on marine environment need to be achieved.

All urban centres should be connected to the sewerage system and waste water treatment plants with appropriate capacities should be built in order to reduce direct impact of urbanisation. Further urbanisation without proper provision of communal infrastructure for construction areas must not be allowed. As for remediation of dispersed construction, it is important to build small-scale plants for settlements i.e. at the sites where this represents the best solution (cost-wise and with regard to the environmental effects) and to rehabilitate illegal sewage outfalls. Moreover, it is necessary to remove sewage outfalls that are no longer operational. Infrastructure needs to meet sustainability criteria during both construction and operation phases. That is why, amongst other things, locations suitable from environmental vulnerability perspective should be envisaged for construction of waste water treatment plants and optimal treatment of sludge resulting from waste water treatment provided for.

Investments in the development of infrastructure for reception and treatment of solid and liquid waste in ports, control and treatment of ballast water, as well as investments in the development of port terminals and anchorages needed for fisheries sector pose significant challenges in an endeavour to optimise capacities of the existing port infrastructure. In order to strengthen operational system for pollution prevention and reaction in cases of accidental marine pollution, it is necessary to further improve integration between the system for safety and security of navigation and emergency response system in case of pollution of the sea from vessels. In that regard, use of modern

equipment and staff training on how to use it properly are especially important.

In parallel with infrastructure development, it is necessary to enable the use of instruments for pollution prevention and control (e.g. economic instruments, compensation for damages). Infrastructure development should be accompanied by continuous strengthening of legal framework and of institutional capacity of competent departments and institutions. In that context, it is important to further harmonise regulations with the requirements of the EU law in the area of waste water management, as well as to improve programmes for monitoring marine environment with regard to requirements of the Marine Strategy Framework Directive 2008/56/EC and requirements for application of ecosystem approach (EcAp) in the framework of implementation of the Barcelona Convention. Improvement of legislation in the area of maritime affairs is also a priority, particularly with regard to requirements of the International Maritime Organization on treatment of oily (bilge) water and solid waste from ships in ports, ballast water management and control of impact of invasive species, reduction of pollution from vessels, as well as on participation of competent authorities from the maritime affairs sector in an integrated system of data collection and reporting on the state of the marine ecosystem.

7.1.2.2 Contribute to safe arrangement, re-vitalisation and reclamation of areas polluted due to inadequate disposal and treatment of waste

In order to reduce waste generation, it is necessary to improve the waste collection and disposal system significantly. Implementation of priority projects for remediation of sites with contaminated soil should continue (e.g. within Bijela Shipyard site and at locations of former waste dumps where remediation was not completed – e.g. Kruče near Ulcinj, Herceg-Novi, Bar, Kotor and Ulcinj). Remediation of pollution creates preconditions for safe arrangement, re-vitalisation and reclamation of such areas thus improving quality of life and possibilities of sustainable utilisation of space.

The settlements that were not developed in line with regulations as a rule do not have necessary level of communal infrastructure and oftentimes rely on improvised solutions that produce negative impacts on environment and quality of life. That is why remediation measures need to be implemented for inadequately developed areas (those where urbanisation was legal but communal infrastructure was not developed and for areas where illegal construction has been formalised).

Re-use and recycling of waste is another priority, whereas efforts should be made to use innovative and clean technologies. Moreover, international efforts, particularly in the Mediterranean region, focused on reducing the quantity of marine litter need to be contributed to through the national frameworks.

Implementation of these measures should be accompanied with continuous improvement of the waste management system through more efficient functioning and cooperation between competent entities at both national and local levels. Continuous progress should be made in the development and implementation of regulations and waste management plans and environmental impact assessments should be applied efficiently and effectively in planning and development of the waste management infrastructure.

7.1.2.3 Stimulate development of green infrastructure

Positive effects for environmental quality need to be achieved by incentivising green mobility at land and on the sea. As a priority, possibilities of organising maritime transport by using vessels with reduced emission of pollutants into the marine ecosystem need to be tested, while incentives need to be provided for pilot projects for establishment of integrated sustainable transport system on land (electrical and solar vehicles, cycling etc.).

It is also necessary to provide incentives for implementation of green infrastructure projects in natural or semi-natural (green or blue/ water) areas in order to preserve environmental quality and ecosystem health. This would reduce the need to build conventional or so called 'grey' infrastructure.[96] Introduction of methods and techniques for the development of green infrastructure will contribute to the restoration of nature, natural functions and processes important for the provision of numerous ecosystem services. This will improve understanding of the benefits provided by the nature to the society and investments will be launched to maintain and increase such benefits.

It is important to test implementation of the green infrastructure projects in line with the best available practices in the EU. In that context, it is necessary to consider opportunities arising from implementation of eco-remediation measures that provide for a wide range of interventions during remediation of degraded land and sediments.

7.1.2.4 Establish risk management system for natural and anthropogenic hazards

Plans for infrastructure development must be aligned with analyses of sensitivity of environment and socio-economic activities to the expected harmful impacts of natural and anthropogenic hazards and to the risks from losses occurring due to their impact. Increasing the adaptive capacity to hazards with the most significant effects in the coastal zone of Montenegro is a priority. These hazards are: erosion (torrential flows, soil erosion due to negative impacts of urbanisation), climate variability and climate change generating meteorological hazards and extreme weather events (droughts, forest fires, heavy rain, storm winds, sea level rise) and earthquakes. It is therefore necessary to elaborate further the existing analyses of vulnerability to the natural and anthropogenic hazards, implement prevention, mitigation, adaptation and remediation measures, primarily with a view to improve sustainability of infrastructure.

Adaptation measures need to be made effective through their integration into the spatial planning documents and by enabling efficient implementation of the plans for mitigation of natural disasters and consequences of disasters as well as of land use plans. In addition to hydro-geological conditions and seismic characteristics of the terrain, climate variability, climate change and climate extremes should be taken into account as priorities.

Various options are available to address drought and fire risks including establishment of early warning systems for droughts and fires, remediation measures, and measures to be taken in households and in the most important sectors - tourism, industry and agriculture.

Besides factors such as hydrological conditions, saturation of soil with water, snow cover melting and phys-

96 / EC Communication: Green Infrastructure - enhancing Europe ' s natural capital {SWD(2013) 155 final}

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ical properties of terrain, it is extreme precipitation that is the most important factor causing floods. That is why measures for limitation of risks posed by extreme precipitation are of priority significance. Forms of extreme precipitation include long intensive precipitation caused by a series of cyclones in colder half of the year (October-March) and short precipitation which can, after the long dry period with high temperature, cause various kinds of hazards such as floods and landslides.

Along the Montenegrin coast it is necessary to implement measures for reducing damage caused by storms i.e. heavy rain followed by storm winds, storm tide and floods. These risks lead to flooding of a broad area along the coast, causing damage to the nearby structures, beach equipment, piers etc. Consequences of storm winds resulting from weather events caused by extreme local instability should be also taken into account. These include "ecological erosion" caused by winds with the speed exceeding 10 m/s, damage to power lines, damage to buildings and structures, occurrence of high waves at sea and interruption of maritime transport, damage to ships, coast and coastal infrastructure, as well as damage to agriculture.

As for the impact of storms accompanied by sea level rise, it is necessary to expand the coastal setback, i.e. the zone with restricted or prohibited construction activity along the coast at a number of sites. In doing so, it should be kept in mind that the most important environmental elements the protection of which is regulated under the ICZM Protocol are located in this zone, primarily specific coastal ecosystems such as wetlands and river mouths, marine habitats, coastal forests and dunes.

It is necessary to increase budgetary allocations for financing research programmes on the impacts of natural and anthropogenic hazards, including mapping and monitoring of natural hazards and development of solutions for reducing the damage they cause. Implementation of certain interventions such as rehabilitation of coastal infrastructure and beach capacities in order to mitigate and remediate impacts generated by natural hazards is also a priority.

THEMATIC AREA	2 Development of infrastructure for pollution prevention and remediation
STRATEGIC GOAL	2.1 ACHIEVE GOOD ENVIRONMENTAL STATUS OF MARINE ECOSYSTEMS
RESPONSIBLE ENTITIES	Lead entities: Ministry of Sustainable Development and Tourism, Ministry of Maritime Affairs and Transport, Administration for Inspection Affairs Entities involved in implementation: Ministry of Agriculture and Rural Development, Ministry of Defence, Ministry of Interior, local governments in the coastal zone, Public Enterprise (Agency) for Coastal Zone Management, Environmental Protection Agency, Maritime Safety Administration, port authorities, Institute of Marine Biology, accredited laboratories (Institute of Hydrometeorology and Seismology of Montenegro, Centre for Eco-toxicological Research Ltd. – CETI), Maritime Safety Administration – Emergency Department, Coordination body (Working group) for establishment of integrated system of control, supervision and protection of sea

MEASURES	SUB-MEASURES	TARGET OUTCOMES TO BE ACHIEVED BY 2030
2.1.1 Implement remediation of marine ecosystems at priority sites	2.1.1.1 Improve waste water collection and treatment system, amongst other things, by: – removing sewer outfalls that are not operational and remediating illegal outfalls, as well as by ensuring that they are connected to the main sewage collectors; remediating their surroundings; – transition from combined to separated sewers, particularly for waste water and storm water, while using storm water for grey water and irrigation; – reallocating outfalls for municipal waste water out of the Boka Kotorska Bay given pronounced pollution impacts in the zones with low water exchange. 2.1.1.2 Encourage the use of new materials and bio-technologies in order to reduce pressures on environment caused by technological operations and shipbuilding, ship overhaul and yacht maintenance. 2.1.1.3 Through spatial urban plans: – identify sites for the construction of waste water treatment plants in a way which does not increase environmental pollution; – prevent urbanisation without adequate provision of communal infrastructure (i.e. without connection to the sewage system) to the construction areas.	Sea water quality at hotspot locations and within 1 nm distance from the shore is improved (Shipyard in Bijela, sea water area between the Shipyard in Bijela and Porto Montenegro, port of Bar, port of Kotor, Port Milena and in sea water area of Ulcinj to Port Milena stretch);

MEASURES	SUB-MEASURES	TARGET OUTCOMES TO BE ACHIEVED BY 2030
2.1.2 Prevent occurrence and control pollution from sea-based sources efficiently	2.1.2.1 Complete harmonisation of the existing legislation on prevention and control of pollution from sea-based sources (primarily Law on prevention of pollution from vessels), including adoption of special secondary legislation that regulates sea protection in terms of limiting emission of air pollutants from vessels, control of vessels with coatings and paints containing hazardous substances (antifouling colours), encouraging implementation of low carbon measures in maritime transport etc. 2.1.2.2 Establish integrated system of control, supervision and protection of the sea (as one of the pillars of the coastal zone management) which should ensure efficient performance of maritime missions. 2.1.2.3 Improve response system for accidents at sea in accordance with the Prevention and Emergency Protocol of the Barcelona Convention (pollution from ships and emergency situations), and IMO requirements. 2.1.2.4 Determine environmental carrying capacity in the Boka Kotorska Bay, primarily with regard to capacity of marine ecosystems for reception of large ships that have negative impact on air quality, sea water quality, disturbance of fish stock and noise emission, while recognising the fact this is an activity of significance for growth of income on local level.	Efficient response system in the event of pollution from vessels is established. Reception and treatment of oily (bilge) water, sanitary water and solid waste performed in ports. Ballast water management plan is efficiently implemented. Quantity of marine litter is reduced. Action Plan for marine litter management is implemented in the framework of waste management
2.1.3 Establish the system for reception and treatment of oily (bilge) water, sanitary water, solid waste and control and treatment of ballast water in ports	2.1.3.1 Prepare technical designs and install equipment in the ports of Bar and Kotor for the reception and treatment of oily (bilge) water, sanitary water and solid waste, as well as for the control and treatment of ballast water in ports; ensure that at least one port meets requirements of the port of international importance. 2.1.3.2 Improve legislation and technical capacities for establishment of the ballast water management system and control of impact of invasive species. 2.1.3.3 Improve procedures for keeping records on the reception of oily (bilge) water, sanitary water and solid waste from ships, as well as control of keeping logbooks in accordance with the IMO standard procedures (and integrate data obtained in this way into a comprehensive database on the coastal zone). 2.1.3.4 Organise training courses and educational programmes on conducting appropriate procedures and using equipment in ports, especially through cooperation and establishment of links between port authorities in the regional context.	
2.1.4 Reduce quantity of marine litter	2.1.4.1 Integrate measures for the establishment of monitoring and marine litter management into the waste management policy. 2.1.4.2 Establish cooperation mechanisms (e.g. involve fishermen in monitoring and removal of marine litter) and develop awareness raising programmes about negative effects of marine litter on the marine ecosystem. 2.1.4.3 Initiate activities for removal of floating and submerged litter, their collection and further treatment at the waste management centres, including recycling programmes.	

THEMATIC AREA	2 Development of infrastructure for pollution prevention and remediation
STRATEGIC GOAL	2.2 CONTRIBUTE TO SAFE ARRANGEMENT, RE-VITALISATION AND RECLAMATION OF AREAS POLLUTED DUE TO INADEQUATE DISPOSAL AND TREATMENT OF WASTE
RESPONSIBLE ENTITIES	Lead entities: Ministry of Sustainable Development and Tourism, local governments in the coastal zone Entities involved in implementation: Environmental Protection Agency, Statistical Office of Montenegro (MONSTAT), businesses, Union of Municipalities of Montenegro, accredited laboratories (Institute of Hydrometeorology and Seismology of Montenegro, Centre for Eco-toxicological Research Ltd. – CETI), Administration for Inspection Affairs

MEASURES	SUB-MEASURES	TARGET OUTCOMES TO BE ACHIEVED BY 2030
2.2.1 Implement priority projects for remediation of sites with polluted soil and of inadequately urbanised areas	– 2.2.1.1 Remediation should be carried out for the following on a priority basis: – locations of unregulated municipal dumps used for disposal of collected municipal waste in all the coastal municipalities; – sites with industrial pollution; – areas in Igalo and in Sutorinsko field important for preservation of peloids and mineral water reserves; – areas urbanised in line with spatial plans yet lacking communal infrastructure; – areas in which illegal construction has been formalised; – locations of quarries, where implementation of green infrastructure projects should be encouraged.	Environmental pollution is reduced as a result of closure and remediation of unregulated waste disposal sites in all the coastal municipalities.

MEASURES	SUB-MEASURES	TARGET OUTCOMES TO BE ACHIEVED BY 2030
2.2.2 Improve waste management through efficient functioning and cooperation between competent entities	2.2.2.1 Local government units should, amongst other things: – adopt secondary legislation under their competence on separate collection of municipal waste for the treatment purposes; – adopt local waste management plants that will define collection, transport and treatment of municipal waste, including measures for the prevention or reduction of packaging and bulky wastes; – contribute to the increase in the rate of municipal waste recycling by encouraging separation of different waste fractions and reducing quantity of the municipal waste at source; – raise public awareness about the importance of separate collection of municipal waste. 2.2.2.2 Environmental Protection Agency should improve monitoring of waste flows in Montenegro. 2.2.2.3 It is necessary to improve the use of innovative and clean waste management technologies. 2.2.2.4 When developing spatial planning documents, it is necessary to improve safe planning of the sites for solid waste disposal and treatment through consistent application of the criteria on protection of soil, air, groundwater, watercourses, water sources and the sea. 2.2.2.5 Improve application of penalties and increase efficiency of inspection authorities in implementation of the Law on waste management.	Soil reclamation in the Shipyard in Bijela is completed, including the corresponding sea water area. Revitalisation and re-cultivation of sites with polluted soil has been performed.

THEMATIC AREA	2 Development of infrastructure for pollution prevention and remediation
STRATEGIC GOAL	2.3 STIMULATE DEVELOPMENT OF GREEN INFRASTRUCTURE
RESPONSIBLE ENTITIES	Lead entities: Ministry of Science, Ministry of Sustainable Development and Tourism; Entities involved in implementation: Ministry of Maritime Affairs and Transport, Ministry of Agriculture and Rural Development, local governments in the coastal zone, scientific institutions (University of Montenegro etc.), Environmental Protection Agency, Institute of Marine Biology, accredited laboratories (Institute for Hydrometeorology and Seismology, Centre for Eco-toxicological Research Ltd. – CETI), civil society organisations and NGO

MEASURES	SUB-MEASURES	TARGET OUTCOMES TO BE ACHIEVED BY 2030
2.3.1 Implement selected projects of green mobility at sea	2.3.1.1 Examine the possibilities and test pilot activities related to the use of vessels that reduce impact of pollution on the marine ecosystem (e.g. reduction of the level of noise emission, use of protective coatings which do not contain antifouling paints). 2.3.1.2 Examine the possibilities of organising sustainable transport at sea to meet local needs by establishing "green" links between certain places along the coast on the marine side.	Green infrastructure projects are implemented in municipalities.
2.3.2 Implement selected projects of green mobility on land	2.3.2.1 Encourage pilot projects involving establishment of integrated system of sustainable land transport (using electrical and solar vehicles and building cycling tracks, particularly in the core urban areas; draw on experiences gained in implementation of pilot projects for the development of sustainable transport in Perast and integrated system of organising public transport on bicycles in Tivat). 2.3.2.2 Examine the possibilities of establishing integrated system of sustainable transport in the area surrounding Boka Kotorska Bay.	
2.3.3 Apply best available EU practices in implementing green infrastructure projects	2.3.3.1 Green infrastructure projects should contribute to the reduction of ecosystem fragmentation and to the increase of ecosystem services, particularly in the framework of: – implementation of agro-environmental measures and rehabilitation of rural areas; – prevention of fragmentation of coastal forests and preservation of landscape diversity (e.g. growing of forests and restoration of habitats); – water management, particularly from the aspect of the flood risk management, increasing resistance to droughts, revitalisation of watercourses combined with eco-remediation measures; – reduction of soil pollution (sites degraded by industrial activities, erosion), remediation of waste dumps and resolution of ecological problems in marinas by testing implementation of eco-remediation measures (by e.g. using plants for waste water treatment; using vegetation strips for mitigation of dispersed pollution; drying up and mineralising polluted sediments from the sea and rivers; dewatering and treatment of sewage sludge; it is also important to apply experiences in implementing the on-going eco-remediation project for Port Milena); – mitigation of climate change impacts (e.g. through afforestation and reduced use of carbon intensive materials and fuels, using various biomaterials that absorb CO2, expanding municipal green areas as to mitigate effects of micro-climate events in urban areas, particularly those resulting from the impacts of heat waves). 2.3.3.2 Stimulate implementation of green infrastructure projects in accordance with the guidelines on preservation and development of open rural areas (6.2.1.4) in order to increase efficiency in using these areas and ecosystem services they provide.	

THEMATIC AREA	2 Development of infrastructure for pollution prevention and remediation
STRATEGIC GOAL	2.4 ESTABLISH RISK MANAGEMENT SYSTEM FOR NATURAL AND ANTHROPOGENIC HAZARDS
RESPONSIBLE ENTITIES	Lead entities: Ministry of Sustainable Development and Tourism, Ministry of Interior Entities involved in implementation: Ministry of Science, Ministry of Economy, Ministry of Agriculture and Rural Development, Public Enterprise (Agency) for Coastal Zone Management, local governments in the coastal zone, Environmental Protection Agency, Administration for Inspection Affairs, Institute for Marine Biology, Institute for Hydrometeorology and Seismology, Geological Institute, Faculty for Biotechnical Research, Centre for Eco-toxicological Research Ltd. - CETI

MEASURES	SUB-MEASURES	TARGET OUTCOMES TO BE ACHIEVED BY 2030
2.4.1 Enable prevention, control and remediation of the impacts generated by natural and anthropogenic hazards	2.4.1.1 Provide necessary funding for research programmes, including mapping and monitoring of natural and anthropogenic hazards and design of solutions for reduction of damages they cause, primarily for: – certain aspects of the coastal erosion, especially torrents occurring after heavy precipitation of severe intensity and abrasion resulting from the effects of sea waves (e.g. protection or remediation of the southern parts of the coast on Mamula, St. Stefan and St. Nikola islands which are endangered by erosion – abrasion, as well as on Ada Bojana which is exposed to aeolian erosion); – seismic hazard; – meteorological hazards; and – extreme weather events (sea level rise, impact of droughts, forest fires, heavy rain and storm winds). 2.4.1.2 For prevention and control of the impacts of droughts and fires, it is necessary to carry out detailed vulnerability assessment of the coastal zone, to identify and analyse potential risks and set priority prevention, mitigation, adaptation and remediation measures which, amongst other things, include: – establishment of a functional early warning and notification system for droughts and fires; – improvement of the water supply system; – improvement of irrigation efficiency; – terracing on the slopes in order to slow down water run-off and ensure retention of water in the soil; – use of drought resistant crop varieties; – planting belts of protective forests and protection of agricultural land; – reducing water consumption; – treatment and re-use of waste water;	Reporting on the impact of natural and anthropogenic hazards on the coastal zone is established. Early warning and notification system for meteorological hazards and extreme weather events is established. Measures for prevention and control of risks caused by natural and anthropogenic hazards are implemented.

MEASURES	SUB-MEASURES	TARGET OUTCOMES TO BE ACHIEVED BY 2030
2.4.1 Enable prevention, control and remediation of the impacts generated by natural and anthropogenic hazards	– implementation of the prevention measures for green open areas which run high fire risk (particularly in south-eastern part of the coast); – clean-up of destroyed trees, dry vegetation and waste from forest floor in order to reduce threats of breaking out of ground fires as the most frequent type of fires; – controlled burning of green waste; – use of modern information system for forest health monitoring; – remediation measures (cutting and restoration of burnt forest stands, anti-erosion measures on the burnt soil). 2.4.1.3 In order to limit risks caused by impact of extreme precipitation it is necessary to carry out a detailed vulnerability assessment of the coastal zone as well as to identify and analyse potential risks and determine priority prevention, mitigation, adaptation and remediation measures which, amongst other things, include: – afforestation of low productivity degraded areas, as well as amelioration of degraded forest areas in order to produce anti-erosion effects (combination of biological, bio-technical and technical measures and works); – protection against torrents depending on the watercourse size (in the case of larger torrential flows protection against water is achieved with complex anti-erosion arrangement of the basin, and in the case of smaller torrential flows this is done with traditional measures for arrangement of watercourses and flood protection); – protection against harmful effects of water including: works and measures aimed towards protection against floods, protection against river erosion, protection against erosion caused by water, wind and torrents, drainage and elimination of the consequences of such impacts of water (construction and maintenance of water structures – partitions, sluices, bio-technical structures etc.) and execution of protective works (afforestation, grass planting, terracing, clean-up of the riverbed etc); – preparation of a management plan for the catchment area of the Montenegrin coast, Bojana river and Lake Skadar; – remediation of landslides (e.g. in Mojdež and Pode near Herceg-Novi, Babin Do near Budva and on springs of Midanska river and Brajša in Ulcinj area where, besides landslides, there are also cases of terrain collapses); it is also necessary to provide better protection for the slopes at roads' and Belgrade-Bar railway notches; – prohibitions of: devastation, clearing and logging of forests in eroded areas; denudation of areas; uncontrolled levelling up of non-cultivated land; filling up of springs; exploitation of river sediments from the bottom or from the slopes, except for the purpose of ensuring unobstructed flows for torrential watercourses; construction of structures that might endanger land stability and taking other actions which lead to erosion and occurrence of torrents;	Projects on mitigation of impacts of coastal erosion, seismic hazard, climate change and meteorological hazards are implemented in the coastal zone municipalities. Land use is determined in line with the identified damages from potential impacts of seismic risk, as well as with the risk from soil erosion impacts and risk from meteorological hazards and extreme weather events (sea level rise in particular). Priority interventions for mitigation and remediation of natural and anthropogenic hazards are carried out.

MEASURES	SUB-MEASURES	TARGET OUTCOMES TO BE ACHIEVED BY 2030
2.4.1 Enable prevention, control and remediation of the impacts generated by natural and anthropogenic hazards	2.4.1.4 In order to reduce damage caused by storms and storm winds, it is necessary to carry out a detailed vulnerability assessment of the coastal zone as well as to identify and analyse potential risks and determine priority prevention, mitigation, adaptation and remediation measures which, amongst others, include: – establishment of a more dense network of anemographic and mareographic stations and improvement of the levelling network; – establishment of local meteorological, hydrological and hydrographical observation programme as a basis for risk assessment; – development of maps showing maximum wind speeds by zones; – development of early warning system and setting up of operative services for monitoring the state of coast and waves; – establishment of the correlation between damage and storms, their systematic monitoring, record-keeping and mapping; – improvement of drainage systems; – erecting protective barriers on critical points; – anti-erosion measures (e.g. for Velika beach, Jaz etc.); – introduction of forest belts for wind protection; – reallocation of structures outside the range of waves during the southern quadrant storm winds; – adjustment of the existing infrastructure to be able to bear burdens shown by the latest data on climate extremes and storm waves; – protection of water sources from sea water intrusion, in places where that is possible; – implementation of construction and non-construction related adaptation measures. 2.4.1.5 From the aspect of impacts of storms accompanied by sea level rise, it is necessary to expand coastal setback at the priority sites which are identified in compliance with the ICZM Protocol: Sutorina estuary, Morinjska river estuary, Tivat Salina, Buljarica, Velika beach and Ada Bojana. 2.4.1.6 In the framework of monitoring the coastal processes, it is necessary to establish observation and regular reporting on the impact of natural and anthropogenic hazards in the coastal zone. 2.4.1.7 Spatial and urban planning documents should allow for development (of infrastructure) in line with the identified seismic, soil erosion and risk posed by meteorological hazards and extreme weather events (sea level rise in particular). 2.4.1.8 Carry out priority projects in order to mitigate and remediate impacts of natural and anthropogenic hazards (e.g. restoration of the coastal infrastructure, beach capacities etc.).	

7.1.3 Measures in the thematic area Spatial planning and sustainable spatial development

Measures and related sub-measures for the achievement of strategic goals set in this thematic area of the NS ICZM are introduced in sections 7.1.3.1 and 7.1.3.2 and presented in the tables at the end of section 7.1.3.

7.1.3.1 Develop a system of sustainable spatial planning

Improvement of the spatial planning system requires strengthening of spatial planning analytics at all levels - from national reporting on the state of spatial development and preparation of terms of reference for development of certain planning documents, to the evaluation of planning documents in the approval procedure. In terms of objectivity of spatial planning analytics, the most important is the use of quantified indicators as they enable measurability and exactness of spatial changes and comparability with similar or more developed systems (e.g. with countries in the region and in the EU). Use of indicators is particularly important for identification and monitoring of implementation of the quantified planning goals. In that regard, it is necessary to apply modern information technology support including application of GIS technologies which enable efficient conduct of spatial planning analyses and fast data exchange, as well as establishment of the foundation for efficient control of the processes occurring in space.

Improvement of the quality of planning documents should be enabled by reaffirming methodologies and expert criteria that serve as a basis for decision-making in the planning process. Important methodological issue is how to make the planning process objective and rational. To this end, application of indicators as well as of qualitative-quantitative assessments of vulnerability and suitability is important in the process of determining various land uses. Clearly defined methodology facilitates decision-making based on sound arguments and understanding of planning solutions by those using the space and by other stakeholders. Better understanding of planning decisions and planning solutions restores credibility to the planers` profession which has been diminished due to frequent changes of the planning solutions, application of unclear criteria for the selected solutions, as well as by provision of planning solutions that create "winners and losers".

Improvement of procedures for carrying out strategic and environmental impact assessments also contributes to the quality of a planning document. In that regard, there is a significant need to make certain steps in the assessment procedure more objective by using quantitative instead of almost entirely qualitative methods based on arbitrary evaluation and not backed with arguments. It is necessary to assess whether undertaking strategic environmental assessment is justified for all the categories of spatial documents, including local planning documents where such a procedure might not be appropriate given their size and character of impact.

There is room for improvement of the quality of planning documents in terms of their contents and normative standardisation. Expert assessment of the planning documents' quality i.e. their review is an important instrument for ensuring quality of the planning process. It is also a way of correcting/ improving methodology and its application enables accumulation of valuable experiences for improvement of the spatial planning system. A useful contribution to the implementation of review and content standardisation of the planning document may be made by establishing the obligation to prepare summaries of the basic balances and indicators for different types of planning documents.

High quality of built environment is an ultimate goal of spatial planning and arrangement and one of the criteria for evaluation of sustainability of the spatial development. Amongst other things, quality of built environment is a direct consequence of the quality of urban and architectural design. That is why regulating planning documents should offer urban planning solutions which provide for quality public amenities and areas of public interest. Capacity building through preparation of thematic guidelines and manuals for both design of new developments and restoration and rehabilitation of inadequately or illegally developed areas is also important for the achievement of high quality of built-up parts of space. Another important step is to introduce instruments to validate successfulness of architectural solutions depending on the type and complexity of intervention and value and sensitivity of the site.

Improvement of the spatial planning system also requires management of risks that the coastal areas are exposed to and sustainable use of marine resources with protection of valuable parts of the marine environment. An increase in the number and scope of activities at sea led to an increase in the degree of their impact on the state of marine environment and superposing with impacts from the land. That is why it is necessary to introduce maritime spatial planning. Sustainable use of marine areas cannot be ensured through implementation of sectoral policies with limited participation of the spatial planning sector. It is necessary to establish legal basis for the development of maritime spatial plan, while ensuring use of appropriate techniques and tools and strengthening of planers' capacities and application of specialised knowledge in the next phase. Experiences and methods of spatial planning on land are not entirely applicable to the sea due to specific characteristics of marine areas (three-dimensional nature of marine environment, non-ownership regime, multi-purpose use).

Spatial planning may be implemented at various levels, even though it is mainly national and regional levels that are recommended.

Measures defined in the framework of the strategic goal Develop a System of Sustainable Spatial Planning with related sub-measures, target outcomes and entities responsible for their implementation are outlined in the table below.

7.1.3.2 Provide wider preconditions for the spatial planning system functioning

More efficient implementation of spatial plans is an important prerequisite for ensuring quality of built-up parts of space, whereas the biggest challenge in implementing the planning documents is timely preparation and arrangement of construction land. An irreplaceable instrument, the use of which has been tested in the developed EU and world countries for decades, is re-arrangement or consolidation of urban plots i.e. urban commassation. This instrument:

- provides space of public interest in settlements;
- enables distributional fairness in allocating construction rights among land owners;
- removes the burden of buyout costs for the public use areas from local governments.

Several sectors participate in the process of spatial planning and development. That is why an important prerequisite for more successful functioning of the spatial planning process is capacity building of spatial planners and of administrative authorities responsible for adoption and implementation of spatial plans. At the same time, a number of instruments (databases, regulations, standards etc.) has to be in place

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THEMATIC AREA	3 Spatial planning and sustainable spatial development
STRATEGIC GOAL	3.1 DEVELOP A SYSTEM OF SUSTAINABLE SPATIAL PLANNING
RESPONSIBLE ENTITIES	Lead entities: Ministry of Sustainable Development and Tourism Entities involved in implementation: local governments in the coastal zone, Administration for Inspection Affairs, Public Enterprise (future Agency) for Coastal Zone Management

MEASURES	SUB-MEASURES	TARGET OUTCOMES TO BE ACHIEVED BY 2030
3.1.1 Systemically monitor and research state and processes in the space of the coastal zone and develop information system for the spatial planning/ arrangement	– Perform analyses and undertake research to serve as a basis for reporting on the state in space: – monitor implementation of the planning documents; – monitor socioeconomic processes relevant for spatial planning; – analyse needs and interests of other departments and economic sectors with regard to spatial development; – cooperate with information and analytical systems of other departments (environment, nature, cultural heritage, agriculture...); – develop criteria and procedures for objective analysis of proposed planning documents of the local government units and their compliance with the plans of higher order; – establish permanent databases (observatory) for continuous monitoring and evaluation of the state in the coastal zone as a basis for programming of future activities. 3.1.1.2 Develop and use indicators to monitor state of the coastal zone space: – prepare a list of basic indicators by topics (having in mind indicators that are already monitored, i.e. that should be monitored by sectors); – develop methodology to derive indicators; – provide input data for selected indicators, including the baseline data. 3.1.1.3 Establish basic GIS databases on space at the national and local levels: – develop priority layers of spatial data; – harmonise format and parameters of GIS database with requirements of the national infrastructure of spatial data; – prepare initial meta-database.	Database (observatory on the existing state) is established in the coastal zone in the framework of the information system on space with regularly updated GIS database and system of indicators on the state of space. Quality of reporting on space is considerably improved. System of expert evaluation of planning documents is developed.

MEASURES	SUB-MEASURES	TARGET OUTCOMES TO BE ACHIEVED BY 2030
3.1.2 Improve quality of planning documents	3.1.2.1 Improve the planning process methodologically: – define elements for making the planning process more objective and rational through the Rulebook on more detailed content and form of a planning document, land use criteria, urban regulation elements and unique graphic symbols (use of indicators and quantitative analysis with GIS use); – integrate landscape valuation and planning methods into the planning process at all planning levels; – use vulnerability assessments as a basis for establishing spatial protection and use regime, and suitability assessments as a means of optimising land uses in spatial plans; – develop approach for climate change risk analyses (e.g. coast vulnerability index). 3.1.2.2 Improve procedures and methods for environmental impact assessments (strategic and project-based): – make certain steps in the assessment procedure more objective by using quantitative instead of qualitative methods only, particularly for strategic assessment; – assessment and analyses should be linked to specific spatial units and zones of specific impacts within the scope of the planning document; – improve fulfilment of the obligation that planning and impact assessment processes are carried out in parallel and in a cooperative manner. 3.1.2.3 Ensure content and normative standardisation of planning documents: – define mandatory minimum content of the planning documents in terms of both maps and textual part (text structure, headings, subheadings...); – provide "typological" guidelines i.e. models of provisions for implementation which can then be supplemented with specific local elements; – determine and apply criteria for provision of space of public interest in the planning documents, – develop summary of basic balances and indicators for the main types of planning documents. 3.1.2.4 Strengthen instruments and criteria for stimulating and ensuring quality of urban and architectural design: – prepare thematic guidelines and manuals for both the design of new construction and restoration and rehabilitation of inadequately or illegally developed areas; – use competitions as instruments for encouraging creativity and innovation in order to obtain the best preliminary urban and architectural solutions; – adopt national architectural policy and programmes for quality and refined construction.	The system of planning documents is stabilised and successfully meets the needs of efficient spatial planning and arrangement. Strategic environmental assessments contribute to the quality of planning documents, particularly in terms of minimising environmental impacts.

MEASURES	SUB-MEASURES	TARGET OUTCOMES TO BE ACHIEVED BY 2030
3.1.2 Unaprijediti kvalitet planskih dokumenata	3.1.2.5 Provide for expert assessment (review) of the quality of planning documents: – define transparent evaluation methodologies; – besides qualitative assessments, provide for more objective evaluations by using quantitative analyses, indicators and GIS (a way to correct/ improve methodology); – define criteria for determining composition of expert bodies i.e. for certified experts – reviewers. 3.1.2.6 Introduce instruments for testing the architectural successfulness: – set up a body that issues opinion/consent on spatial interventions defined by the regulation or planning document in order to ensure quality of the built environment and refined construction; – envisage conditional application of this requirement depending on the type of intervention, complexity and local conditions, value and sensitivity of the site and its environment, degree to which the offered design complies with planning conditions and guidelines.	Quality of regulatory (urban) plans is improved which creates a basis for increasing the quality of built-up environment. Expert assessment of the planning documents quality is successfully conducted whereas objective criteria and indicators such as GIS analyses and data from the spatial information system are applied.

MEASURES	SUB-MEASURES	TARGET OUTCOMES TO BE ACHIEVED BY 2030
3.1.3 Establish maritime spatial planning	3.1.3.1 Establish legal basis for development of the Maritime Spatial Plan by considering options for changing legislation in order to introduce the norms that regulate maritime spatial planning by: – adopting a separate legal act in accordance with the Directive establishing a framework for maritime spatial planning, partially also in accordance with the ICZM Protocol; or – amending the current legislation in the area of spatial planning. 3.1.3.2 Establish procedure for maritime spatial planning by: – adopting Decision on the development of maritime spatial plan; – establishing which entity is responsible for development, implementation and monitoring of the plan's implementation; – implementing pilot project for development of the maritime spatial plan; – drawing on experiences gained in the implementation of pilot projects and identifying, in accordance with the Directive establishing a framework for maritime spatial planning, the level (or levels) of the plan's preparation – national (for the entire coastal zone of Montenegro), sub-regional (plan for larger and more important marine zones such as, for example, Boka Kotorska Bay) or local level (it does not have to be a self-standing document, but an annex to the existing local spatial planning documents). 3.1.3.3 Create adequate database for applying maritime spatial planning, including expert data for environmental and socioeconomic description of the state of marine ecosystem, quantification of the growing pressures of coastal activities (primarily urbanisation, tourism, maritime affairs, aquaculture and fisheries) on the marine ecosystem and projection of good environmental status. 3.1.3.4 Build planners` capacities for applying maritime planning by: – preparing technical guidelines on maritime planning; – organising training courses for spatial planners and natural sciences experts involved in marine research; – exchanging experience and transferring knowledge and positive practices, involving high-profile experts in development of maritime spatial plans etc.	Marine resources are used in a sustainable manner. Conflicting uses of the marine environment are reduced or eliminated.

THEMATIC AREA	3 Spatial planning and sustainable spatial development
STRATEGIC GOAL	3.2 PROVIDE WIDER PRECONDITIONS FOR THE SPATIAL PLANNING SYSTEM FUNCTIONING
RESPONSIBLE ENTITIES	Lead entities: Ministry of Sustainable Development and Tourism, Administration for Inspection Affairs Entities involved in implementation: local governments in the coastal zone, Public Enterprise (future Agency) for Coastal Zone Management

MEASURES	SUB-MEASURES	TARGET OUTCOMES TO BE ACHIEVED BY 2030
3.2.1 Increase the extent to which the plans are implemented	3.2.1.1 Provide for efficient preparation of construction land – re-arrangement of urban plots (commassation): – make sure there are areas of public interest in settlements; – ensure distributional fairness in allocation of building rights among land owners; – enable local governments not to bear costs of buying out land for public use areas; – secure support for the implementation of pilot projects on (voluntary) urban commassation that will demonstrate advantages of this instrument. 3.2.1.2 Develop more efficient mechanisms for the prevention of illegal construction: – strengthen inspection services; – provide for technical means and broader use of information technologies for monitoring the state in space.	Urban commassation is an important instrument for equitable implementation of detailed planning documents. There is no illegal or unplanned construction outside the construction areas.
3.2.2 Build professional capacities	3.2.2.1 Develop professional development programmes and strengthen competences of spatial planners and architects: – promote methodologies and technical criteria that should guide planners` decisions, particularly quantitative methods as a basis of objectivity; – ensure multidisciplinary consideration of planning themes and inter-sectoral cooperation and coordination; – enable participatory planning, conflict resolution techniques and use of information technologies in the participatory process; – it is desirable to include specialised professional development as a criterion for the extension of consents for performing spatial planning and arrangement affairs. 3.2.2.2 Build capacity of local governments for preparation, development and implementation of planning documents: – introduce regular professional development programmes, particularly with regard to normative novelties; – use information technologies and apply typological formats in all phases of development and implementation of planning documents;	Capacities of all the entities in the spatial planning system are strengthened. Participatory planning is carried out with active involvement of all the stakeholders.

MEASURES	SUB-MEASURES	TARGET OUTCOMES TO BE ACHIEVED BY 2030
3.2.2 Build professional capacities	– develop management system that is based on the quality of public administration; – identify examples of good practice to expand their application through the competence building programmes and formally regulate them, if necessary. 3.2.2.3 Capacity building for participatory planning: – enable participation of stakeholders from the programming phase i.e. from initiation of the planning document; – prepare participatory process for presentation of planning solutions that result from quality and transparent methodological planning procedures; – eliminate situations in which the form of participatory process enables easy acceptance of unsubstantiated demands of certain stakeholders as a substitution for analytical and well-justified planning; – present arguments concerning threats posed by excessive shortening of the planning processes which undermines quality of the participatory process;	
3.2.3 Establish functional inter-sectoral cooperation	3.2.3.1 Enable horizontal (inter-sectoral) and vertical coordination: – enable inter-sectoral coordination in harmonising sectoral and spatial planning system regulations; – improve instruments for coordination with other departments in the procedure for developing planning documents; – strengthen communication and coordination with local government units; – provide for harmonisation with the EU legislation, participation in harmonisation related to departments and procedures that are part of the planning process (impact assessments, Ecological Network, Inspire Directive, ICZM Protocol, maritime spatial planning); 3.2.3.2 Provide necessary sectoral input data: – prepare baselines in a timely and systematic manner, particularly those for protection of natural and cultural heritage, protection of environmental segments, agriculture etc. – avoid superficial ad hoc opinions and studies which fail to promote credibility of reporting and trustworthiness of departmental documents; – harmonise formats of sectoral data and baselines, while also recognising requirements of the spatial planning norms (clear regimes and terms of use). 3.2.3.3 Use fiscal policy instruments to achieve planning goals: – analyse restrictions for applying the existing fiscal policy instruments (real estate tax) for the purpose of achieving planning goals, especially for deterring pressures to convert other land uses into construction land; – prepare a study on possible fiscal policy instruments including tax on undeveloped construction land, with simulations of their application.	Horizontal and vertical coordination between stakeholders in the spatial planning system is improved. Fiscal policy instruments are also used for the purpose of achieving goals of sustainable use of space.

and available to planners in order to enable efficient preparation and implementation of plans. Procedures and practice of cooperation with other sectors and departments and related institutions should be improved. This is the way to avoid sectoral approach and ensure more integrated participation of sectors in resolving multi-sectoral problems. Coordination mechanism, which is at the same time efficient and politically acceptable, will be one of the most demanding challenges in the functioning of integrated management of the coastal zone of Montenegro.

7.1.4 Measures in the thematic area Achievement of satisfactory performances of the coastal zone economic development

Measures and related sub-measures for the achievement of strategic goals set in this thematic area of the NS ICZM are introduced in sections 7.1.4.1 and 7.1.4.2 and presented in the tables at the end of section 7.1.4.

7.1.4.1 Manage coastal zone resources sustainably

Preservation of the coastal zone resources must be a constituent part of the key goals of economic development of the coastal zone. That is why it is necessary to manage resources of the coastal zone sustainably, which also requires creation of the conditions for diversification of the coastal zone's economy.

In that context, it is important to implement measures focused on ending the current practice of fragmentation of agricultural land and permanent damage of natural characteristics of the coastal zone ecosystems, as well as on controlling the spread of existing settlements and ending dispersed construction, reduction of construction areas, and on efficient fiscal and land policy measures. Measures related to construction of the highest category hotels and mixed-use resorts with accompanying amenities are also necessary. The same applies to upgrade of the simplest forms of private accommodation (rooms, apartments) into small family hotels, quality furnishing and development of tourism capacities in line with natural and landscape values, including the use of traditional forms of coastal architecture and quality modern architecture, and similar. In shaping the tourism offer, it is extremely important to take into account proper valorisation of local natural (including beaches), architectural and landscape values. This will contribute to an increase in the quality of offer but also to an extension of the tourism season.

Hinterland and inner part of the coastal municipalities have not been adequately integrated in the tourism value chain of the Montenegrin coastal zone so far. That is why it is necessary to provide incentives for rural development as a means to diversify tourism offer and to further improve position of Montenegro as a tourist destination in the global market. Rural development should also aid linking of interests of local communities, creation of new jobs, preservation and promotion of autochthonous cultural and historic values, while treating nature and environment in a friendly manner. Therefore, it is important to restore and preserve valuable rural areas through sustainable rural development, and create prerequisites for their efficient use.

Besides significant contribution to the enhancement of tourism potential, faster development of rural areas primarily leads to an increase in production of food (particularly fruit – citrus, olives and olive oils) and wine. That is why measures that create conditions for economically efficient agriculture are of priority significance, particularly when they support agricultural products that are of interest for the market and

are profitable. These measures, amongst other things, include: improvement of legislation, discouraging conversion of agricultural land, improvement of characteristics of agricultural areas, introduction of direct green payments to the farmers, implementation of agro-environmental measures, adaptation of agriculture to climate change in the coastal area context, improvement of rural infrastructure, creation of prerequisites for services in the areas with natural disadvantages, encouraging establishment of clusters and other models of producers' associations, introduction of innovative production and sale chains, etc. It is also necessary to increase investment into rural development, strengthen family estates and support innovative approaches which may increase employment and thus keep population, particularly younger one, in the rural areas.

Considerable increase in food production is possible not only in the narrow coastal zone and rural hinterland but also through preservation and utilisation of maritime resources on the basis of multi-sectoral responsible management. To that end, it is necessary to: improve information on the state of fist stock; enhance procedures for the management of negative environmental impacts of aquaculture and fisheries – identification of ecologically acceptable sites for fisheries and aquaculture, development of common principles and standards for regeneration of fishery and aquaculture resources and protection of marine habitats at certain sites, with provision of ecosystem services; improve fisheries infrastructure, etc. Research on potentials of the open sea from the aspect of strengthening the blue economy should be improved. In the context of diversification of economic activities, attention should be paid to activities that enable linking of fisheries with tourism supply.

7.1.4.2 "Green" the development of the coastal zone

In addition to the above-mentioned measures, the platform for preservation of the coastal zone resources and diversification of coastal economy comprises measures that are significant for provision of support for "greening" the coastal development through support for the development of green entrepreneurship - strengthening of local entrepreneurial infrastructure, provision of simulative financing programmes and improvement of the quality of products.

With adequate support, entrepreneurial sector can recognise and use opportunities for green and blue innovation and related green investments and jobs. Entrepreneurial skills for adaptation to the changing market conditions are also developed in this way.

Functioning of clusters and other models of producers' associations is necessary and the same applies for establishment of quality standards for different types of produce, thus contributing to recognisability and credibility of the Montenegrin coastal zone products. In that context, it is necessary to stimulate programmes for certification of the quality of products with protected geographic origin and of traditional and ecological products. Creative branding and marketing of domestic products for the purpose of more successful performance at local and international markets should be also stimulated.

Besides allocations from the national budget, incentives for green activities should be accompanied with the development of green banking and use of relevant EU support programmes. Special grant programmes should be designed for particularly innovative and risky projects, while maximum focus should be placed on absorption of funds from the available EU sources.

THEMATIC AREA	4 Achievement of satisfactory performances of the coastal zone economic development	
STRATEGIC GOAL	4.1 MANAGE COASTAL ZONE RESOURCES SUSTAINABLY	
RESPONSIBLE ENTITIES	Lead entities: Ministry of Sustainable Development and Tourism, Ministry of Agriculture and Rural Development Entities involved in implementation: Ministry of Maritime Affairs and Transport, Agency for Coastal Zone Management, local governments in the coastal zone, associations of small and medium-sized enterprises, agricultural producers, cooperatives, tourist associations and/or clusters in agricultural sector in the coastal zone, Investment and Development Fund, Employment Office, Chamber of Commerce, civil society organisations and NGO	
MEASURES	SUB-MEASURES	TARGET OUTCOMES TO BE ACHIEVED BY 2030
4.1.1 Preserve attractiveness of the coastal zone resources for sustainable tourism development	4.1.1.1 By improving strategic documents and regulations that govern economic activities, developing spatial plans and implementing efficient fiscal and land policies measures, as well as by ensuring coordinated activities in tourism and spatial plans sectors, the following is to be done: – restrict further urbanisation in the narrow coastal zone to allow construction of facilities that are in the function of improving the structure and quality of tourism offer, i.e. ensure that construction of new tourist capacities serves the purpose of generating positive impacts on the tourism offer; – support development of tourism capacities (primary accommodation facilities – hotels, mixed-use resorts with accompanying amenities etc.) that enable extension of the season and raise quality of sustainable tourism offer; – deter further development of secondary accommodation facilities (apartments etc.); – improve tourism activities on the coast itself (organisation of bathing areas, coastal infrastructure, sports and recreational activities etc.). (Link to the goal 3 measures) 4.1.1.2 Utilise local values (architectural, urban, landscape ones etc.) through the spatial planning process to give form to tourism areas. Encourage quality equipping and construction of tourism facilities in line with natural and landscape values (use of the traditional forms of coastal architecture). Moreover, it is necessary to ensure that a small number of natural beaches with their specificities are preserved as permanent values and resource base of the coastal zone. (Link to goal 1 and 2 measures) 4.1.1.3 Encourage integration of the rural hinterland into tourism offer of the coastal zone (offer of tourism centres) through: – inclusion of elements of "traditional " rural way of life (traditional handicrafts and gastronomy, agricultural products) in multiannual and excursion tourist programmes; – enrichment of tourism offer with programmes involving visits to cultural assets and areas with valuable landscapes that have been less available (or hidden in the hinterland of the coastal zone) to the visitors so far; – renovation of the existing facilities in the hinterland of the coastal zone for the provision of accommodation services.	Profitability of tourism is increased. Local values, landscape and natural values, sustainable spatial development and rural development of the hinterland are all in the function of developing recognisability and specificity of tourism offer of the Montenegrin coast.

MEASURES	SUB-MEASURES	TARGET OUTCOMES TO BE ACHIEVED BY 2030
4.1.1 Preserve attractiveness of the coastal zone resources for sustainable tourism development	4.1.1.4 Establish and improve differentiation of the tourism product based on local resources through the development of sustainable forms of tourism, primarily adventure, educational, cultural, gastronomic, ethnological, religious and nature-based tourism, etc.	
4.1.2 Restore and preserve valuable rural areas	4.1.2.1 Create conditions for economically efficient agriculture particularly from the aspect of supporting agricultural products that are of interest for the market and are profitable. This amongst other things includes: – harmonisation of legislation with the EU regulations and standards; – elimination of legal barriers that obstruct performance of tourism activity as a supplementary activity to agriculture in rural areas; – consideration of quotas that will be set for certain agricultural products and activities after opening of negotiations with the EU in agriculture sector; – discouraging conversion of agricultural land i.e. aligning urbanisation with natural conditions and potential for agriculture development through spatial planning solutions, implementation of land and fiscal policy measures of and incentives; – preservation of arranged olive yards and terraced surfaces that make one of the basic elements of recognisability and specificity of distinct agriculture areas important for preservation of cultural heritage (including recognisable rural architecture) and landscape character; application of traditional cultivation techniques is a prerequisite for preserving this type of agricultural areas (olive yards in Valdanos and Luštica; traditional agricultural areas in: Vrbanj, Kruševice, Ubli, Dragalj, Mali Zalazi and Veliki Zalazi, Dub - Trojica -Mirac, Mačuge - Bukovik - Gornji Brčeli and Donji Brčeli - Utrg, Paštrovićka hill, Gluhi do, Kravari - Boje – Mide); – establishment of a unified spatial database on the quality of agricultural land; – continuous improvement of the characteristics of agricultural land (amelioration, dewatering and drainage of wetlands where that is not conflicting the goals of biodiversity preservation, chemical amelioration of salinized parts of the fields, irrigation, joining together fragmented parcels into larger plots when fragmentation hinders effective production etc.); – introduction of direct green payments to the farmers in accordance with the principles of the EU Common Agricultural Policy (2014-2020) with the aim of restoring, preserving and improving coastal ecosystems related to agriculture; – implementation of agro-environmental measures (organic farming, growing autochthonous varieties of crops and livestock breeds, use of mountain pastures etc.) focused on adaptation of agriculture to climate change;	Rural development upholds preservation of valuable agricultural land, nature and landscape, enables linking of the local communities' interests, job creation, preservation and promotion of autochthonous cultural and historic values. Values of agricultural output are increased by 30 – 40%, and employment in rural areas is increased by 10%.

MEASURES	SUB-MEASURES	TARGET OUTCOMES TO BE ACHIEVED BY 2030
4.1.2 Restore and preserve valuable rural areas	– support for the improvement of rural infrastructure – beside basic infrastructure (roads, water and electricity supply), recreation and leisure facilities, access to internet, radio and TV signals, infrastructure for waste management in rural areas and similar should be also covered; – incentives for establishment of clusters and/ or joint models of producers` associations; – incentives for innovative production and sale chains, including improvement of sale of the local food and non-food products. 4.1.2.2 Increase investment in rural development and strengthen family household, while also supporting innovative approaches that increase employment and thus keep population, particularly younger one, in rural areas by providing incentives for: – economic activities other than agriculture in rural areas, first of all enhancement of tourism offer through sustainable tourism programmes in the hinterland based on sustainable utilisation of outstanding landscape values, protected areas, valuable forests; – agricultural activities in the areas with lower potential for agriculture development or with certain natural limitations; these areas are mainly situated on the borders of fields, on terraces and plateaus of the flysch and karst terrain and are found in the zone between Bar and Ulcinj (Velje selo and the surrounding fields, Mala Gorana and Velika Gorana, Pečurice), as well as in Grbalj (Zagora, Krimovica, Kovači, Bigova) and Luštica (Klinci and the surroundings, Gošići, Radovanići, Merdari) zones that at the same time specific for their organisation of space, both for living and agriculture, while also provide possibilities of breeding small ruminants.	
4.1.3 Support sustainable utilisation and preservation of marine resources	4.1.3.1 Identify potentials of the open sea so that they contribute to strengthening of blue economy activities (diversification of activities in aquaculture, research of sea microorganisms – for example their use in pharmaceutical industry). 4.1.3.2 Improve productivity and environmental performance of fisheries and aquaculture through: – implementation of activities which enable integration between fisheries and tourism offer (e.g. fishing organised as part of tourism offer, particularly by using traditional forms of fishing etc.); – identification of sustainable and ecologically acceptable sites for fisheries and aquaculture; – integration of aquaculture and other activities (e.g. protection of marine habitats and provision of ecosystem services) in the framework of diversification of sustainable tourism offer; – development of joint measures and instruments for marine protected areas management (including measures for protection of sensitive marine habitats and certain endangered species) and for regeneration of resources in fisheries and aquaculture sectors.	Activities in fisheries and aquaculture sectors are diversified. Fisheries and aquaculture have satisfactory environmental performances.

THEMATIC AREA	4 Achievement of satisfactory performances of the coastal zone economic development
STRATEGIC GOAL	4.2 „GREEN" THE DEVELOPMENT OF THE COASTAL ZONE
RESPONSIBLE ENTITIES	Lead entities: Ministry of Sustainable Development and Tourism, Ministry of Agriculture and Rural Development, Ministry of Economy Entities involved in implementation: local governments in the coastal zone, associations of small and medium-sized enterprises, agricultural producers, cooperatives, tourist associations and/or clusters in agriculture sectors in the coastal zone, Investment and Development Fund, Employment Office, banking sector, civil society organisations and NGO

MEASURES	SUB-MEASURES	TARGET OUTCOMES TO BE ACHIEVED BY 2030
4.2.1 Strengthen local entrepreneurial infrastructure	4.2.1.1 Strengthen capacities for provision of technical assistance to entrepreneurs and other actors in the coastal zone development in order to encourage innovative, green and rural development projects through: – assessment of capacities of the existing services for provision of technical assistance; – specialisation of advisors; – training on preparation (through the EU support programmes) and monitoring of implementation of development projects. 4.2.1.2 Provide direct assistance to entrepreneurs and other actors of the "green" development of the coastal zone through: – provision of necessary information on the conditions and possibilities for development of business ideas, existing and potential opportunities for financial assistance, as well as on the conditions for obtaining assistance during preparation and implementation of projects; – development of knowledge and skills of project implementing entities for design, preparation and management of projects by preparing guidelines, organising training courses, workshops and other training programmes on the use of innovative approaches, new knowledge and skills; – design and implementation of the programmes for exchange of knowledge and experiences at regional and international levels; – provision of direct technical assistance in project implementation. 4.2.1.3 Support agricultural producers in practical application of new trends and technology (e.g. green and energy efficient construction, sustainable waste management, use of IT technologies, use of environmentally friendly technologies).	Rural and green entrepreneurial projects are implemented and entrepreneurs operate successfully.

MEASURES	SUB-MEASURES	TARGET OUTCOMES TO BE ACHIEVED BY 2030
4.2.2 Initiate and implement favourable financing programmes	4.2.2.1 Create prerequisites for the development of green banking, primarily through: – work with banking services to promote market potential of green entrepreneurship; – partnership and risk sharing between public entrepreneurial infrastructure and banks; – provision of funds for pre-financing of projects where there is a possibility to obtain support from the EU pre-accession funds; – public promotion of socially responsible behaviour of green banks. 4.2.2.2 For particularly innovative and risky projects, it is necessary to provide special grant programmes and focus to the greatest possible extent on the absorption of funds from the available EU sources.	Incentives in the form of financial and technical assistance for implementation of green projects are in place.
4.2.3 Improve the quality of products	4.2.3.1 Introduce quality certification programmes (for products with protected geographical origin and for traditional/ ecological products). 4.2.3.2 Promote successful projects. 4.2.3.3 Encourage creative branding and marketing of local products, particularly of specific, traditional, autochthonous, high quality products (such as, for example, wines produced from local varieties of red – vranac, kratošija – and white – krstač – wine grapes; olive oil produced from autochthonous variety žutica; strawberry tree fruit; carob tree fruit; mushrooms from Orjen; autochthonous borecole variety; wild fruits and leaves – wild pomegranate, medlar, cornelian cherry, žućenica – a local leaf chicory variety, etc.) for the purpose of their successful performance at regional and international markets; the products should be packed in a way which is acceptable to modern consumers and which contributes to recognisability of the Montenegrin coastal zone.	Recognisability of traditional local agricultural products is achieved through establishment of certification systems and promotion of their recognisability and quality.

Sveti Stefan SOURCE: National Tourism Organisation

7.1.5 Measures in the thematic area Functioning of the coastal zone management system

Measures and related sub-measures for the achievement of strategic goals set in this thematic area of the NS ICZM are introduced in sections 7.1.5.1, 7.1.5.2 and 7.1.5.3 and presented in the tables at the end of section 7.1.5.

7.1.5.1 Establish functional coordination mechanism for integrated coastal zone management

Sustainable management of the coastal zone requires coherent action – within and between the sectors. In this way, it is possible to avoid sectoral approaches in the implementation of strategies, programmes and action plans. In order to establish a coordinated system for making decisions of relevance for the coastal zone management as an area of particular interest for Montenegro, it is necessary to have a functioning coordination mechanism at two levels:

- political and
- technical-administrative.

In the course of preparation of the NS ICZM, several possible options (scenarios) of functioning of the ICZM coordination mechanism were considered. Having in mind the existing conditions, problems and assessment of possibilities for overcoming them, the so called realistic scenario for functioning of the ICZM coordination mechanism was assessed to be the optimal one (Figure 7-1), as elaborated below.

The other considered scenarios were:

- Scenario of maintaining the existing state which is not acceptable as it does not entail establishment of the ICZM coordination mechanism i.e. the institutional framework for implementation of the ICZM policy.
- Optimal scenario where (compared to the realistic scenario) technical-administrative level of work would be strengthened through extension of competences of the future Agency for Coastal Zone Management to the entire coastal zone. As necessary institutional capacities for such a context are not established, i.e. as extended competences of the future Agency for Coastal Zone Management are not defined, development of the coordination mechanism for integrated coastal zone management is only possible under the realistic scenario for the time being.

Political level

At the political level, it is necessary to set up the ICZM Council to be appointed by the Government and to have the following functions:

- provide political support and advise the Government of Montenegro on the NS ICZM implementation and functioning of the institutional set-up for ICZM;
- provide support for resolving problems with institutional organisation that are relevant for integrated coastal zone management (complex institutional set-up, partitioned and insufficiently differentiated competences, lack of efficiency and insufficient quality of coordination and integration);
- ensure presence of all the relevant stakeholders (representatives of the Government/ key ministries, coastal municipalities, scientific and tech-

nical institutions, non-governmental and civil, as well as business sectors);

- contribute to harmonisation of sectoral policies with the NS ICZM and to elimination of sectoral panning of the coastal zone development.

In such a framework, the ICZM Council will carry out the following tasks:

- propose changes and amendments to the existing and adoption of new regulations of importance for integrated coastal zone management, as well as creation of conditions for their efficient implementation;
- propose measures for improved integration of sustainability criteria (laid down in this strategy) into the spatial planning documents;
- provide support for harmonisation of economic activities in the coastal zone performed by different sectors;
- provide support for harmonisation of development of the key sectors (particularly tourism) and land use planning, i.e. for the implementation of development plans and programmes in line with the carrying capacity, vulnerability of the environment, and sustainable development goals;
- propose measures in case when goals and measures of integrated coastal zone management are not respected;
- evaluate progress made in implementing the NS ICZM;
- endorse annual activity plans proposed by the unit for integrated coastal zone management referring to implementation of the NS ICZM priority actions;
- provide support, incentives and assistance in securing funds for implementation of the programmes and activities that should contribute to the sustainable development of the coastal zone.

In relation to the proposed functions and tasks of the ICZM Council, its establishment, competences and functioning should be defined through adoption of an appropriate legal act (for example Decision on establishment of the Council for ICZM)[97].

In order to reinforce inter-sectoral functions of the ICZM Council it is necessary to strengthen cooperation with the Council for Privatisation and Capital Projects, Spatial Planning Council, Coordination Body for Preparation and Follow-up of Tourism Seasons as well as with other bodies which aim to improve operation both within and between sectors.

Taking into account complexity of the existing institutional framework in Montenegro, it was concluded that it would be practical to integrate the ICZM Council into the existing institutional structures i.e. into the National Council for Sustainable Development and Climate Change. The concept is based on compatibility in composition and functions of the existing and proposed councils. Expansion of the existing structure of the National Council for Sustainable Development and Climate Change will be necessary to include members from the level of key decision makers in different departments, representatives of administrative bodies and institutions relevant for the ICZM, as well as from local governments in the coastal zone. This means that the National Council

97 / Besides provisions set out in the ICZM Protocol (Article 7, item 1 indent a), legal basis for establishment of the ICZM coordination mechanism can be also found in the existing national legislation. Competences and responsibilities of the Government as an executive power body as well as of the line ministries and other administrative bodies, are prescribed under the Constitution of Montenegro, Law on state administration, Decree on the Government of Montenegro, Decree on organisation and manner of operation of state administration and Rules of procedure of the Government of Montenegro. The Rules of procedure of the Government of Montenegro stipulate that in order to consider different matters and give proposals and opinions related to performance of its constitutional powers, the Government may set up a council or other advisory body whose tasks, composition and manner of operation shall be defined in the establishing act (Article 27, paragraph 1). The Decree on organisation and manner of operation of state administration (Article 53) stipulates that in addition to other possibilities, the council may be established within a ministry as an expert and advisory body to the minister for consideration of matters falling within the ministry's competences. Such a council is appointed by the minister from the pool of prominent scientists and experts.

for Sustainable Development, Climate Change and Integrated Coastal Zone Management should be composed of the following members (the text indicating new members from the ICZM aspect is underlined):

1. President of the National Council is the President of Montenegro.

2. Members of the National Council are:

- minister of sustainable development and tourism;
- minister of economy;
- minister of labour and social welfare;
- minister of agriculture and rural development;
- minister of transport and maritime affairs;
- minister of culture;
- two representatives of the Ministry of Sustainable Development and Tourism (of whom one for integrated coastal zone management);
- one representative of the Ministry of Finance;
- director of the Institute for Hydrometeorology and Seismology;
- director of the Public Enterprise for Public Maritime Domain Management (future Agency for Coastal Zone Management);
- three presidents of local government units (at least one of them is from the coastal zone local governments);
- one representative of the universities licenced in Montenegro;
- three representatives of the registered employers' associations in Montenegro;
- one representative of the most important investors in the coastal zone;
- one representative of the banking sector;
- one representative of trade union organisations;
- two representatives of non-governmental organisations (for sustainable development, integrated coastal zone management and climate change);
- three independent experts (for sustainable development, integrated coastal zone management and climate change).

The National Council for Sustainable Development and Climate Change will thus be expanded to include six new members in order to allow for performance of functions of the Council for Integrated Coastal Zone Management of Montenegro. Besides contributing to the advisory function of the Council from the ICZM perspective, representatives of investors and banking sector may also enhance its operation in the broader context of sustainable development of Montenegro.

Members from local governments, universities, trade unions, banks and investors are appointed for one-year periods on a rotating basis, while other Council members are appointed for three-year periods. The purpose for such an arrangement is to stimulate proactive participation and broader involvement of the social groups that are important for ICZM.

Technical-administrative level

A special unit for integrated management of the coastal zone of Montenegro should be established within the department responsible for sustainable development, environmental protection and spatial planning to monitor implementation of the policy on integrated coastal zone management defined by the NS ICZM, including implementation of necessary measures for overcoming expected difficulties in its implementation. Coordination Body for Integrated Coastal Zone Management should be established as well.

Under the current organisation of state administration, the unit for integrated coastal zone management should be established at the Ministry of Sustainable Development and Tourism. In order to provide for inter-sectoral character of its operation in line with the goals of integrated coastal zone management, this unit should be positioned outside the organisational units that are responsible for implementation of individual sectoral policies. Such a position should enables implementation of ICZM goals, measures, actions, instruments and mechanisms which are inter-sectoral by their nature and require strengthened cooperation and coordination among and within the sectors. Operation of the unit should be under direct supervision of the line minister. This would provide for strong political support and efficient use of complex inter-sectoral coordination mechanisms.

In order to use the existing institutional resources in a rational manner and by applying the same principle as for the ICZM Council, it is possible to integrate this unit into the existing Section for Support to the National Council for Sustainable Development and Climate Change at the Ministry of Sustainable Development of Tourism. The new organisational unit should function as the Section for Sustainable Development and Integrated Coastal Zone Management performing, among others, the following functions:

- provision of technical and administrative assistance to the ICZM Council work (National Council for Sustainable Development, Climate Change and Integrated Coastal Zone Management);
- monitoring and reporting on the implementation of the NS ICZM;
- preparation of proposals of the annual activity plans for implementation of priority actions set out by the NS ICZM in cooperation with key departments (optimally, with representatives of these departments in the Council) and Public Enterprise (Agency) for Coastal Zone Management;
- follow-up on the level of harmonisation of national regulations and institutional framework with the requirements of the ICZM Protocol;
- initiation and implementation of the programme and project activities in cooperation with key departments (optimally, with representatives of these departments in the Council) and Public Enterprise (Agency) for Coastal Zone Management;
- reporting on implementation of the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean (Barcelona Convention) and its protocols, including the ICZM Protocol; cooperation with the Mediterranean Action Plan in the framework of the United Nations Environment Programme (UNEP/MAP) and its regional centres, including the Priority Actions Programme/ Regional Activity Centre (PAP/RAC);

- cooperation with relevant international, European and regional organisations and bodies active in the area of protecting the marine environment and coastal zones as well as in the area of sustainable development of the coastal zones;
- participation in planning and securing financial means for implementation of the policy on integrated coastal zone management in cooperation with key departments (optimally, representatives of these departments in the Council) and Public Enterprise (Agency) for Coastal Zone Management.

In performing the functions mentioned above, it is necessary for the unit for integrated coastal zone management to cooperate closely with relevant departments, Public Enterprise (Agency) for Coastal Zone Management, expert and scientific institutions, and local government bodies in the coastal zone. In this way, efforts will be made to harmonise public policies with the policy on integrated coastal zone management and cooperation will be fostered between competent authorities at the national level and local governments.

In order to further strengthen inter-sectoral coordination and multidisciplinary approach in performing the technical tasks in implementation of the policy on integrated coastal zone management, it is necessary to establish the Coordination Body for Integrated Coastal Zone Management. This body should perform two basic functions:

- serve as an open forum for the discussion on matters pertinent to integrated management of the coastal zone of Montenegro; and
- consider and evaluate from the technical standpoint materials on integrated coastal zone management that are submitted to the ICZM Council (National Council for Sustainable Development, Climate Change and Integrated Coastal Zone Management).

By performing these functions, the Coordination Body for Integrated Coastal Zone Management will provide support to the competent entities in carrying out tasks that are relevant for ICZM, primarily in the following areas:

- spatial planning of the coastal zone, particularly of the public maritime domain;
- management of protected and valuable nature areas on land and at the sea, primarily in the context of preservation of their integrity and completeness;
- monitoring of coastal processes and reporting on the state of the coastal zone, improvement of the existing databases on the state of environment, use of space in the coastal zone and regime of use and management of the coastal zone;
- establishment of a suitable format to exchange data between individual databases;
- provision of support for initiation and implementation of the programme and project activities of significance for integrated coastal zone management;
- provision of support to mobilise resources for implementation of activities that are significant for the policy on integrated coastal zone management.

Simultaneous performance of these functions and tasks will enable the Coordination Body to provide technical support to the ICZM Council (i.e. to the proposed National Council for Sustainable Development, Climate Change and Integrated Coastal Zone Management) thus acting as its permanent working group.

The Coordination Body for Integrated Coastal Zone Management should comprise representatives of all entities relevant for ICZM. Members of this body should be appointed from the line ministries, administrative authorities, institutions and local governments only on the ground of their professional references as defined in a special act on the Coordination Body operation. Such an act should set out the requirement for the appointed representatives to hold necessary professional references and act as a link with departments, bodies, institutions and local governments that appointed them. In order to build technical capacity of the Coordination Body, it is extremely important to ensure that it comprises relevant experts.

Proposed functions and tasks will cause complexity of the structure of the Coordination Body for Integrated Coastal Zone Management, i.e. numerous members. In order to enable the Coordination Body for Integrated Coastal Zone Management to perform its work in an operational manner, it is necessary to provide optimal conditions for its functioning when both narrow and broad composition of the body is convened, depending on the matter that is subject to expert consideration and evaluation.

The following structure applies for the narrow composition of the Coordination Body:

1. Chairperson: minister responsible for sustainable development, environmental protection and spatial planning (i.e. minister of sustainable development and tourism under the current organisation of public administration);

2. Deputy chairperson: representatives of local governments and Public Enterprise for Coastal Zone Management (future Agency for Coastal Zone Management) on a rotating basis;

3. Secretaries: representatives of the organisational units responsible for integrated management of the public maritime domain and for integrated coastal zone management from the Public Enterprise for Coastal Zone Management (future Agency for Coastal Zone Management) and the Ministry of Sustainable Development and Tourism respectively;

4. Members:

- one representative (depending on the subject matter, it is possible to include more) of the Ministry of Sustainable Development and Tourism (different representatives are taking part depending on the matter considered by Coordination Body and on the basis of the competences of various departments for implementation of policies in the areas of spatial planning, construction, tourism, environmental protection and communal infrastructure);

- representative of the Public Enterprise (future Agency) for Coastal Zone Management;

- one representative from the ministries competent for: economy, agriculture and rural development, maritime affairs and transport, and culture;

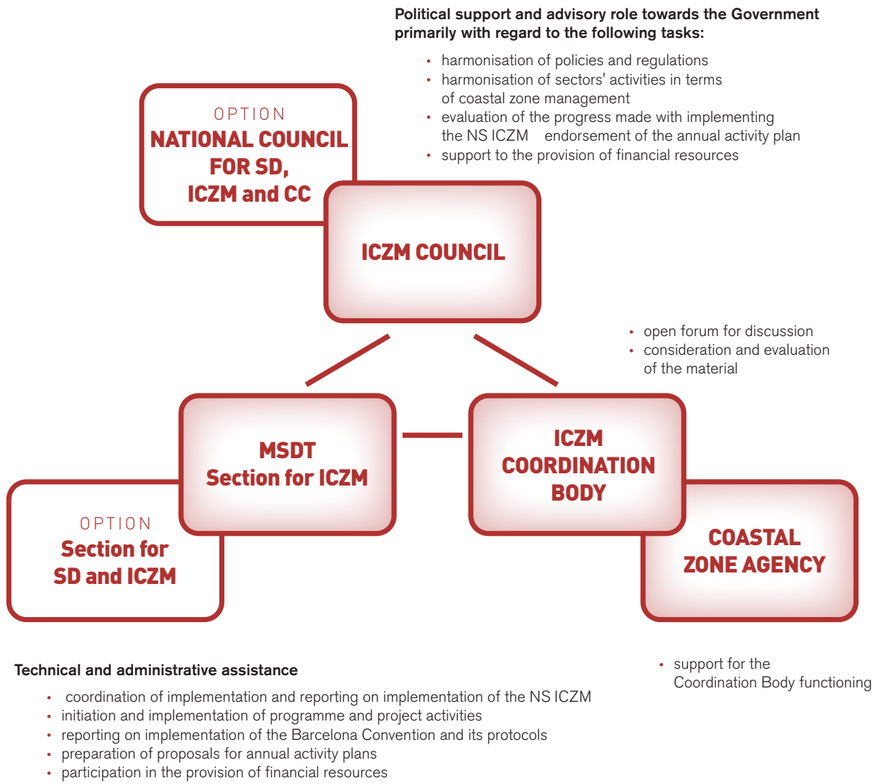

Figure 7-1: Schematic presentation of the realistic scenario for the ICZM Coordination mechanism functioning

Ploce Beach SOURCE: CAMP

- 6 representatives of the coastal zone municipalities: Herceg Novi, Kotor, Tivat, Budva, Bar and Ulcinj;
- one independent expert for the areas of relevance for achievement of the NS ICZM strategic goals.

The structure of the Coordination Body when a broad composition is convened can include representatives of: universities, Environmental Protection Agency, Administration for Inspection Affairs, Institute for Hydrometeorology and Seismology, Administration for the Protection of Cultural Heritage, Centre for Eco-toxicological Research Ltd. – CETI, Institute for Marine Biology, PE National Parks, as well as representatives of business, civil and non-governmental sectors and other members depending on the matter that is subject to the evaluation.

Public Enterprise for Public Maritime Domain Management (PE PMDM) has developed, through a public-private partnership model, a sustainable management system (protection, development and improvement) for the public maritime domain area. Through this model, funds are provided for reinvestments and management of the public maritime domain. The enterprise has competences for the management of public maritime domain, including land and marine area (territorial sea). It operates in accordance with the plans and programmes which require cooperation with authorities at the national and local levels.

The Proposal of the new Law on public maritime domain defines competences of the future Agency for Coastal Zone Management and they include provision of technical support for coordination of integrated coastal zone management. That is why this institution will perform the following functions at the technical-administrative level of operation of the coordination mechanism for integrated coastal zone management:

- act as a deputy chair of the Coordination Body for Integrated Coastal Zone Management on a rotating basis, changing position with representatives of coastal municipalities every six months;
- provide technical assistance to the work of the Coordination Body for Integrated Coastal Zone Management in terms of support for preparation of sessions of the Coordination Body in cooperation with the unit for integrated coastal zone management at the Ministry of Sustainable Development and Tourism; in the framework of technical assistance, it will participate in the provision of funds for Coordination Body operating costs;
- contribute to preparation of proposal for the annual activity plan for implementation of the NS ICZM priority actions within the area of public maritime domain;
- contribute to initiation and implementation of the programme and project activities of relevance for integrated coastal zone management within the area of public maritime domain;
- participate in the provision of funds for undertaking activities that are important for implementation of the policy on integrated coastal zone management within the area of public maritime domain;
- contribute to reporting on implementation of the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean (Barcelona Convention) and its protocols in

line with the competences of the Public Enterprise (future Agency) for Coastal Zone Management;

- participate in international cooperation in the area of protecting the coastal and marine environment in line with competences of the Public Enterprise (future Agency) for Coastal Zone Management.

As the capacities for ICZM will grow, it is expected that conditions will be created in a foreseeable future for organisation of the ICZM Coordination mechanism in accordance with the optimal scenario. In comparison with realistic scenario, technical-administrative level would be strengthened through establishment of coordination for the entire coastal zone by extending competence of the Agency for Coastal Zone Management.

7.1.5.2 Strengthen public administration capacities

Modern, efficient and accountable management system should be based on measurable results and performances of public administration, improvement of civil servants' competences and strengthening of transparency of management. It is necessary to apply the following principles: accountability for the achieved operational (non)performance, predictability of actions and compliance with regulations, and meaningful participation of all the stakeholders.

In such a context, implementation of priority measures should be based on the following approaches:

- Strengthening of the management system should be aligned with the needs related to the achievement of desired results. This requires defining of expected performances of various departments, administrative authorities and institutions, their organisational units and individuals, as well as of related outcome indicators with regard to the set goals. Indicators of successfulness should be focused on final outcome and not on the process. They should be objective, simple and precise taking into account complexity of the results they measure, availability of resources and necessary information. In that regard, it is important to establish, to the extent possible, a quantitative system for measuring the results.

- Management should be organised in a way that enables harmonisation of goals of organisational units and sub-units within them with strategic planning and related programme budget from the highest to the lowest level of decision making and operation. Performance based budget planning represents one of the basis of successful functioning of the management system.

- Management should be based on results i.e. on monitoring of the progress made and reporting on attained outcomes. This is particularly relevant given the fact that the set goals do not necessarily lead to satisfactory results and outcomes in practice. That is why monitoring of real outcomes represents the most important mechanism for evaluating implementation of strategic policies and plans. In order to enable monitoring, it is necessary to define ultimate results and outcome indicators, as well as the manner of collecting and analysing data relevant for evaluation of the achieved results and outcomes. Such an approach reinforces personal responsibility for the achievement of set goals in relation to activity plans, as well as obligation to precisely define work tasks, duties and expected results.

- It is necessary to apply objective and measurable criteria for the evaluation of performance and quality of work against expected results. Protection from unjust evaluation requires that evaluation is based on the application of justified, clear and unambiguous criteria. It is necessary to link evaluation system to the system of rewarding work results that are above average and of penalising non-performance.

- It is necessary to strengthen professionalism which is based on increasing motivation of employees by, amongst other things, introducing competitive salaries system and results-based promotion. Flexible remuneration system may improve ability of the public sector to attract, employ and retain highly motivated and professional staff. Otherwise, public sector becomes attractive employer to those whose competences, knowledge and skills are not sufficiently attractive for the private sector. Besides competitive salaries system, one of the measures that is often implemented in the programmes for improving efficiency and quality of public administration work is reduction of the number of permanent employment contracts. Such a measure may lead to reduction of the burden for administration and increased competiveness. However, it is important to highlight the fact that salary system for the highly educated professionals in public sector may not compete with salaries in private sector. Job security therefore becomes an important motivating factor for attracting qualified staff. One possible solution may be to guarantee employment to civil servants in public service but not security of remaining in the same status and at the same position unless they achieve required results.

- Harmonisation of the legal framework with the ICZM Protocol requirements referring to the improvement of the management system should be enabled, primarily by amending the laws on spatial planning and construction of objects, nature protection and public maritime domain. In addition to amending the laws and secondary legislation, it is exceptionally important to develop technical guidelines on implementation of the crucial provisions of the ICZM Protocol. It is also necessary to ensure stability of the regulatory framework.

- Sufficient funding for implementation of adopted laws and policies is a prerequisite for their successful implementation.

- Participation of all the stakeholders and in particular of the expert community is necessary in public debates and planning processes. This enables decision-making and/or correction of the way of work based on reliable and expert information, and adoption of decisions that to the greatest possible extent meet the broadest public interests. International cooperation and exchange of information can make significant contribution to that end.

- In order to strengthen transparency of management, it is necessary to provide information to the interested public in a timely manner and to improve possibilities for the public to give opinions and make objections thus influencing the work of public administration in the early stages of the process of adoption and implementation of regulations, public policies, programmes and projects.

- Participation in professional development programmes should be encouraged in the areas where deemed necessary.

Public administration reform is always a long-lasting and demanding process. It is nevertheless inevitable since the quality of public administration determines the quality of development and position of the country in integration processes and structures (primarily in the process of integration of Montenegro into the European Union). Ambitious insistence on full achievement of priority goals and measures by 2030 is not realistic, but it is important to start the process of changes. Preparation of an in-depth analysis of efficiency and quality of the work of public administration authorities competent for coastal zone management is therefore a priority. The analysis should serve a basis for adoption and implementation of recommendations that are important for improvement of the functioning of the ICZM coordination mechanism and, more broadly, for the reform of other public administration segments. Implementation of these measures requires bold decision-making so that the present reforms provide for meeting the long-term needs in the coming years.

7.1.5.3 Establish monitoring of the coastal processes

In the coming period, it is necessary to define structure and content of databases and gradual upgrade of the system for monitoring and reporting on the state of the coastal zone environment and coastal processes. In this context, transposition of the Marine Strategy Framework Directive 2008/56/EC and INSPIRE Directive 2007/2/EC, further harmonisation with the MEDPOL programme and application of ecosystem approach in the framework of implementing the Barcelona Convention, are all significant.

In order to monitor state of the coastal one and coastal processes in an efficient and quality manner, content and manner of maintaining a comprehensive information system should be defined through a separate regulation prescribing at the same time the ways of data exchange between different databases and ensuring their compatibility. Information system should, amongst other things, include:

- comprehensive and complete information on the state of the coastal zone environment;
- boundaries and state of protected natural assets, ecologically valuable habitats and ecosystems of the coastal zone, illustration of landscape values and state of beaches;
- information on actual land uses (not just the registry of planning documents, as prescribed at the moment);
- information on impacts of natural and anthropogenic hazards.

Since the current regulations prescribe keeping of separate databases on the state of the environment, state of space and (limited) monitoring of the coastal processes in the public maritime domain zone, it is necessary to prescribe content and manner of keeping a comprehensive information system as well as related institutional competences for data collection and maintenance. Data exchange between different databases and their mutual compatibility constitutes a basis for proper functioning of the overall information system for monitoring the state of the coastal zone environment in accordance with the ICZM Protocol requirements. In addition to mutual database linkages and compatibility, ensuring availability of data to the public is of exceptional importance, particularly when data is used for the projects of public interest.

It is also important to provide required funds to undertake necessary research and analyses to collect data and update and maintain databases relevant for monitoring of the coastal processes. In the event of insufficient funding, content of the research should be adjusted as to shift focus to provision of data that constitute a priority in expert terms and are most broadly used.

Data collection process should be set up systematically in a way that provides for comparable time series on important parameters of the state of the environment, coastal processes, natural and anthropogenic hazards. It is necessary to ensure continuity and gradual expansion of the content of the state of the environment monitoring programmes, as well as to provide training on the use of modern approaches in reporting on the state of terrestrial and marine environment of the coastal zone.

The system of specific, multidisciplinary indicators on the state of the coastal zone should be improved, starting from the information available in the framework of the existing databases. The improvements should be made in accordance with relevant national legislation and obligations on transposing the EU legislation into the national legal framework, obligations arising from the membership of Montenegro in relevant international organisations and UN conventions, and on the outcomes of consultations with expert community. It is especially important to improve the reporting system through strengthened support for applying the indicator-based monitoring of the state of terrestrial and marine environment, application of mathematical modelling and similar. It is also necessary to ensure that the public interest is protected when performing activities of relevance for availability of the state of the environment information.

Establishment of an efficient data collection system designed in this way may also require revision of competences, tasks and manners of operation of different institutions and administrative authorities in the context of monitoring of and reporting on the state of the environment, state of space and coastal processes. Linked to this but also in the broader context of improvement of certain aspects of the operation of public administration, possibility of delegating certain competences (e.g. from the local to the national level) should be considered instead of decentralised approach in order to increase quality and efficiency of public administration performances.

Coastal zone monitoring system cannot be implemented without a satisfactory level of development of human resources needed for development and upgrade of the data collection process and information system management in accordance with the emerging needs and improved regulations.

7.1.6. Implementation of capacity building programmes

Structure of formal education and competences of civil servants (employees) represent an important element of institutional efficiency and effectiveness. However, skills and possibilities to apply knowledge and competencies in everyday work and preferences to engage in and existence of opportunities for professional development are even more important than formal education of employees. While possibilities to influence preferences and motivation of staff to engage in professional development

THEMATIC AREA	5 Functioning of the coastal zone management system
STRATEGIC GOAL	5.1 ESTABLISH FUNCTIONAL COORDINATION MECHANISM FOR INTEGRATED COASTAL ZONE MANAGEMENT
RESPONSIBLE ENTITIES	Lead entities: Ministry of Sustainable Development and Tourism, Public Enterprise (future Agency) for Coastal Zone Management, local governments in the coastal zone Entities involved in implementation: Ministry of Agriculture and Rural Development, Ministry of Culture, Ministry of Maritime Affairs and Transport, Ministry of Economy, Environmental Protection Agency, Administration for Inspection Affairs and other administrative authorities and expert institutions (Institute for Hydrometeorology and Seismology, Administration for the Protection of Cultural Heritage, Centre for Eco-toxicological Research Ltd. – CETI, PE National Parks of MNE etc.), scientific institutions (University of Montenegro: Faculty of Natural Sciences and Mathematics, Institute of Marine Biology etc.), representatives of business, civil and non-governmental sectors

MEASURES	SUB-MEASURES	TARGET OUTCOMES TO BE ACHIEVED BY 2030
5.1.1 Efficiently manage the coastal zone at the political level of decision-making	5.1.1.1 Adopt a legal act on the establishment of the Council for Integrated Coastal Zone Management (National Council for Sustainable Development, Climate Change and Integrated Coastal Zone Management). 5.1.1.2 Determine criteria for members' participation in the work of the ICZM Council. 5.1.1.3 Improve technical assistance to the ICZM Council through capacity building of the Coordination Body for Integrated Coastal Zone Management; 5.1.1.4 Ensure that recommendations of the ICZM Council are efficiently implemented by the Government of Montenegro and local governments. 5.1.1.5 Make the work of the ICZM Council transparent and the results visible in national and international context. 5.1.1.6 Ensure continuous increase in allocation of budgetary funds for operation of the ICZM Council.	All sectors and levels of administration have a possibility to express their interests with regard to ICZM; these interests are then aligned through regulated procedures. Coordination in adopting and implementing decisions and strategic documents relevant for the coastal zone management and for enhancing the overall state of the coastal zone environment is improved. Implementation of recommendations significant for ICZM at the national and local levels is improved.
5.1.2 Efficiently manage the coastal zone at the technical-administrative level of operation	5.1.2.1 Establish the unit for integrated coastal zone management of Montenegro – optimally as the Section for Sustainable Development and Integrated Coastal Zone Management in the framework of the department competent for sustainable development, environmental protection and spatial planning (Ministry of Sustainable Development and Tourism). 5.1.2.2 Establish the Coordination Body for Integrated Coastal Zone Management comprising entities relevant for ICZM, whereas this body would at the same time provide technical assistance to the ICZM Council. 5.1.2.3 Through a special act on the Coordination Body functioning, define criteria for appointment of its members from the pool of independent experts and representatives of departments, administrative authorities, institutions and local governments in the coastal zone holding appropriate professional references; the members will act as a link with the department, administrative authority, institution and local government they are representing.	

MEASURES	SUB-MEASURES	TARGET OUTCOMES TO BE ACHIEVED BY 2030
5.1.2 Efficiently manage the coastal zone at the technical-administrative level of operation	5.1.2.4 Strengthen capacity of the components of technical-administrative level of operation in implementing integrated coastal zone management policy by ensuring efficiency in performing their priority functions: – implementation and reporting on the implementation of the NS ICZM; – monitoring of compliance of the national regulations and institutional framework with the ICZM Protocol requirements; – initiation and implementation of the programme and project activities; – expert evaluation of materials submitted to the ICZM Council (National Council for Sustainable Development, Climate Change and Integrated Coastal Zone Management) for the area of integrated coastal zone management, in particular on: monitoring of coastal processes and reporting on the overall state of the coastal zone; arrangement of the public maritime domain zone; management of protected and valuable natural areas on land and at sea, primarily in the context of preserving their integrity and completeness; improvement of the existing databases on the state of the environment, use of space in the coastal zone and management and use regime for the public maritime domain; establishment of a suitable form for data exchange; etc. 5.1.2.5 In order to implement measures of the NS ICZM Action Plan, coordination between entities responsible for implementation of individual measures at the level of annual planning should be established in the context of planning and allocation of funds from the budget and other sources of financing; administrative and technical support should be provided by the Unit (Section) for Integrated Coastal Zone Management at the Ministry of Sustainable Development and Tourism; 5.1.2.6 Work at the technical-administrative level of operation should be transparent and results visible in national and international context.	

THEMATIC AREA	5 Functioning of the coastal zone management system
STRATEGIC GOAL	5.2 STRENGHTEN PUBLIC ADMINISTRATION CAPACITIES
RESPONSIBLE ENTITIES	Lead entities: Ministry of Sustainable Development and Tourism, Public Enterprise (future Agency) for Coastal Zone Management, local governments in the coastal zone Entities involved in implementation: Ministry of Agriculture and Rural Development, Ministry of Culture, Ministry of Maritime Affairs and Transport, Ministry of Economy, Environmental Protection Agency, Administration for Inspection Affairs and other administrative authorities and expert institutions (Institute for Hydrometeorology and Seismology, Administration for the Protection of Cultural Heritage, Centre for Eco-toxicological Research Ltd. – CETI, PE National Parks of MNE etc.)

MEASURES	SUB-MEASURES	TARGET OUTCOMES TO BE ACHIEVED BY 2030
5.2.1 Institute measurability of the results of public administration work	5.2.1.1 Establish (quantitative, to the extent possible) system that will measure results, through: – quality and quantity of provided public services; – success of undertaken activities; – use of resources (financial, material and other); – achieved final outcomes for the society. 5.2.1.2 Internalise responsibilities by introducing the system to penalise inefficiency and reward above average results through the programme for competitive salaries and performance-based promotion. In that regard, it is important to establish a functional system for evaluation of staff's performances by professional auditors.	Progress in the system for monitoring, reporting and evaluating performance of public administration entities is achieved.
5.2.2. Develop civil servants' capacities	5.2.2.1 Strengthen competences for introduction and implementation of the system for measuring results and performances. 5.2.2.2 Implement (and encourage participation in) professional development programmes in the areas where they are deemed necessary, while paying priority attention to the importance of the sound application of results of conducted training and their contribution to increasing the quality of everyday activities.	
5.2.3 Enable transparent management of the coastal zone	5.2.3.1 Provide information to the interested public in a timely manner (through self-initiative or upon request) by publishing reports on performed activities and conclusions reached in important meetings and other relevant national and international events, by preparing publications, organising campaigns, round tables and the like. 5.2.3.2 Improve opportunities for the public to express opinions and make objections thus influencing the work of administrative bodies through public debates, discussions and other forms of communication in the early stage of the process of adopting and implementing regulations, public policies and projects.	Citizens are informed. Public administration institutions make decisions by taking into account public opinion and proposals.

THEMATIC AREA	5 Functioning of the coastal zone management system
STRATEGIC GOAL	5.3 ESTABLISH MONITORING OF THE COASTAL PROCESSES
RESPONSIBLE ENTITIES	Lead entities: Ministry of Sustainable Development and Tourism, Public Enterprise (future Agency) for Coastal Zone Management, Environmental Protection Agency Entities involved in implementation: Ministry of Agriculture and Rural Development, Ministry of Culture, Ministry of Maritime Affairs and Transport, Ministry of Economy, administrative authorities and expert institutions (Institute for Hydrometeorology and Seismology, Administration for the Protection of Cultural Heritage, Centre for Eco-toxicological Research Ltd. – CETI, PE National Parks of MNE etc.), scientific institutions (University of Montenegro: Faculty of Natural Sciences and Mathematics, Institute of Marine Biology etc.), local governments in the coastal zone, representatives of business, civil and non-governmental sectors.

MEASURES	SUB-MEASURES	TARGET OUTCOMES TO BE ACHIEVED BY 2030
5.3.1 Ensure availability of necessary data and compatibility of various databases	5.3.1.1 Content and manner of keeping a comprehensive information system should be defined and exchange of data between different databases and their compatibility regulated through amendments of the existing regulations (particularly those related to the state of the environment, state in space, monitoring of coastal processes, monitoring of processes in the public maritime domain zone, monitoring of the impacts of hazards) and/ or adoption of new ones; the following should be prescribed: – mandatory content of data collection and maintenance programmes; – competence of the public administration institutions responsible for implementation of the data collection and maintenance programmes; – uniform format and other technical requirements for data processing; – rules for data exchange between competent institutions, i.e. between central and specific (sectoral) databases; – rules for establishment of the joint meta-database with information on accessibility of available data; – rules for keeping the information system. 5.3.1.2 Improve the system of specific multidisciplinary indicators on the state of the coastal zone and coastal processes, starting with information available from the existing databases, in line with relevant national regulations as well as with obligations on transposing the EU legislation into the national legal framework, obligations arising from the membership of Montenegro in relevant international organisations and UN conventions, and outcome of consultations with expert community. 5.3.1.3 Provide funds for data collection and update and maintenance of databases that are important for monitoring the state of the coastal zone and coastal processes. If there are no sufficient funds, the content of the data collection programmes i.e. databases should be adjusted to provide data considered as a priority from the expert point of view and those that have the widest application.	Legal framework provides for proper functioning of the comprehensive information system for monitoring the state of the coastal zone. Information system for monitoring the state of the coastal zone consists of mutually connected, compatible and publicly available databases. A comprehensive set of indicators relevant for monitoring the state of the coastal zone is established.

MEASURES	SUB-MEASURES	TARGET OUTCOMES TO BE ACHIEVED BY 2030
5.3.1 Ensure availability of necessary data and compatibility of various databases	5.3.1.4 Ensure availability and public application of data contained in the public institutions' databases by improving the procedures for: – submission and approval of requests to access the data; – use of data for carrying out technical tasks (development of public policies, studies, analyses, development and spatial plans etc.) and for undertaking scientific research; – use of data to inform the public in accordance with legal obligations and best available practices.	
5.3.2 Implement programmes for monitoring the state of the environment and coastal processes (link with sub-measures 1.1.1.3 and 1.1.1.7)	5.3.2.1 Improve regulations, technical and institutional prerequisites significant for monitoring the state of terrestrial and marine environment, whereas improvements in monitoring the state of marine environment should be achieved on a priority basis. This should be done through: – transposition of the Marine Strategy Framework Directive 2008/56/EC and INSPIRE Directive 2007/2/EC into national legislation; – harmonisation with the MEDPOL programme and application of ecosystem approach in the framework of implementing the Barcelona Convention. 5.3.2.2 Improvements of technical and institutional prerequisites to implement continuous monitoring programmes for observing and reporting on the state of terrestrial and marine biodiversity are particularly needed. To this end, the existing programme needs to be improved in the context of: – application of criteria and approaches significant for the establishment of ecological network; – application of ecosystem approach; – relevant requirements of the Protocol on Specially Protected Areas and the ICZM Protocol to the Barcelona Convention. 5.3.2.3 It is necessary to develop technical and institutional prerequisites to implement continuous programme for monitoring and reporting on the impacts of natural and anthropogenic hazards, while prioritising climate change (meteorological hazards and extreme weather events), coastal erosion and seismic events (in relation to sub-measures 2.4.1.1 and 2.4.1.6). 5.3.2.4 Technical and institutional prerequisites to implement continuous programme for monitoring and reporting on the state of terrestrial and marine environment of the coastal zone should be improved by: – applying innovative approaches (e.g. reporting based on the use of specific multidisciplinary indicators to evaluate the existing state and to monitor and evaluate sustainability of the coastal zone development, mathematical modelling etc.); – improving availability of data on bathymetry and mapping of the sea bottom, hydrographical observations, and state in space;	Continuous programme for monitoring coastal processes and reporting on the state of the coastal zone and coastal processes is established. All data on the state of the coastal zone where collection and processing has been financed from public sources are, in line with established conditions, made available to the public and can be used by competent bodies and stakeholders free of charge.

MEASURES	SUB-MEASURES	TARGET OUTCOMES TO BE ACHIEVED BY 2030
5.3.2 Implement programmes for monitoring the state of the environment and coastal processes (link with sub-measures 1.1.1.3 and 1.1.1.7)	5.3.2.5 Within the scope of the territorial sea of Montenegro undertake scientific research of significance for data collection and comprehensive multidisciplinary evaluation of the marine ecosystem (from the aspect of indicators on the state of biodiversity, hydrographical, bathymetric, geomorphologic, geologic and other relevant characteristics, as well as indicators of impacts of anthropogenic pressures from land and at sea). Improve scientific research on biodiversity of the terrestrial part of the coastal zone. Programme of scientific research should be harmonised with the needs for monitoring and reporting on the state of the coastal zone, implementation of the development plans and resource use in the coastal zone.	
5.3.3 Develop institutional capacities for monitoring the state of the coastal zone and coastal processes	5.3.3.1 Carry out in-depth analysis of efficiency and quality of the work of public administration entities competent for ICZM, primarily from the perspective of monitoring of and reporting on the state of the coastal zone environment, space and coastal processes. 5.3.3.2 Reform of the existing institutional set-up should be carried out in line with performed efficiency assessment with a view to: – revise competences, tasks and manner of functioning of different institutions undertaking activities significant for the coastal zone management, primarily from the aspect of monitoring and reporting on the state of environment, state in space and coastal processes. In that regard, it is necessary to take into account the need to protect public interest in performing the tasks of significance for availability of environmental information; – increase quality and efficiency of the work of public administration, including testing of possibilities to use mechanisms for delegation of certain competences (e.g. from the local to the national level) when this serves the purpose of improving public administration performances and protecting the public interest. 5.3.3.3 Encourage and implement programmes for the advancement of technical and professional knowledge needed for modernisation of data collection and information system management processes in accordance with improved regulations and needs.	Expert and technical capacities for monitoring the state of the coastal zone and coastal processes are harmonised with the needs of integrated coastal zone management

(7.1.5.2) are limited, it is possible to organise adequate professional development programmes. To a certain extent, such programmes must be mandatory for some target groups of employees.

Capacity building programmes in the form of professional development, seminars and workshops should be organised at several levels, i.e. for:

1. Administrative authorities that are leading necessary reforms (sections 7.1.1 to 7.1.5), as follows:

- strengthening competences of civil servants responsible for introduction and implementation of the public administration modernisation programmes, primarily through introduction of the results measurability system;

- capacity building of the existing (and future) national services for the provision of technical support to entrepreneurs and other stakeholders that uphold the development of the coastal zone with the aim to stimulate innovative, green and rural development projects.

2. Civil servants in administrative authorities, in the form of professional development, seminars and workshops that should be formalised and regularly updated in accordance with the needs, particularly with regard to frequent legislative changes. In this context, development of capacities for spatial planning as a prerequisite for more successful functioning of the spatial planning system is one of the top priorities. Given the speed of changes as well as technological and IT developments, the spatial planning capacities require permanent professional development and improvement of competences. Such capacity building programmes for administrative authorities represent an opportunity for a two-way learning process, whereas a good understanding of practical experiences is invaluable for advancement of the spatial planning and development regulatory framework. Analyses of more successful local government units can be used to identify examples of good practice to be further transferred and, if necessary, formalised through appropriate legal norms.

3. Experts in scientific-research and technical institutions, particularly with regard to the obligations arising from the accession of Montenegro to the EU and membership in relevant UN and other international bodies and organisations. It is particularly important to develop professional knowledge needed for modernisation of the process of collecting the data on the state of the coastal zone and coastal processes, and information system management.

4. Services responsible for supervision and control of the use of coastal zone resources, first of all inspection services supervising and controlling the use of space, construction, environmental protection, water, fisheries, maritime activities and pollution from vessels, as well as local communal services.

5. Entrepreneurs, non-governmental organisations and other promoters of the coastal zone development, particularly concerning development of knowledge and skills for designing, preparing and implementing projects that encourage "greening"of economic activities

7.1.7 Awareness raising on the need to preserve coastal zone resources

Besides capacity building, it is also necessary to conduct awareness raising campaigns on the significance of healthy environment for prosperity of the society. In parallel, awareness should be raised on the importance

of preserving cultural, natural and landscape values as an obligating towards the past and future, and a prerequisite for long-term sustainable development of the society. Importance of disseminating experiences on the implementation of good practices in the development of diversified coastal activities and stimulation of local entrepreneurship should be taken into account in the framework of awareness raising campaigns.

Furthermore, public promotion of corporate social responsibility of banks is important, particularly when they recognise and support development of green projects. By ensuring healthy environment for the population, complex social cohesion important for the long-term sustainable development of the society is enabled.

Awareness raising and knowledge improvement should be done at various levels and in different ways – by including spatial planning and environmental protection into curricula, by organising exhibitions and workshops, through broader actions (e.g. by using the campaign This Country is Our Home and action Let` s Clean Montenegro as good examples) as well as by implementing specific, target-oriented projects in local communities where population is able to recognise direct benefits (clean neighbourhoods, building social infrastructure etc.).

7.2 Priority actions by 2020

Priority actions to be undertaken by 2020 are defined in the framework for implementation of strategic measures and related sub-measures i.e. for the purpose of achieving strategic goals and target outcomes set out by the NS ICZM over its time horizon by 2030. Priority actions to be implemented in the short- or medium-term (the latter expiring in 2020) were selected on the basis of their importance for the achievement of strategic goals, urgency of their implementation or their demonstration potential in implementing strategic measures. According to their type, actions may be classified into:

- operational actions representing activities that have to be undertaken urgently in order to resolve targeted problem;

- systemic actions representing a set of more complex and longer lasting activities that stimulate changes in the way the system functions; and

- demonstration actions that should serve as models or as means for transferring positive experiences.

After expiry of the mid-term period in 2020, it will be necessary to analyse achieved results and prepare proposal for priority actions for the next five-year period.

Actions proposed for implementation in the first mid-term period to a certain extent have an indicative character. In fact, after the adoption of the NS ICZM and establishment of the ICZM coordination mechanism it will be possible to amend the proposed priority actions. This is particularly needed to allow for harmonisation of priority actions with the annual work programmes of the departments competent for implementation of the NS ICZM measures and actions and with their annual budget frameworks. That is why elaboration and verification of the proposed list of priority actions until expiry of the 2020 mid-term period may be considered as a kick-off action in the implementation of this strategy.

Structure of actions for priority implementation is shown in the Gannt chart 7-1. The actions are presented in the subsequent tables.

Schematic presentation of the Action plan is provided in figure 7-2.

National strategy on integrated coastal zone management for Montenegro

THEMATIC AREA	2015		2016				2017				2018				2019				2020			
	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
1 Preservation of nature, landscape and cultural assets																						
1. Change and amend regulations of significance for the application of ecosystem approach (EcAp)																						
2. Analyse the level of harmonisation of sectoral policies with environmental protection requirements																						
3. Implement pilot project on the application of ecosystem approach in the Boka Kotorska Bay																						
4. Undertake critical analysis of the so far application of strategic and environmental impact assessments																						
5. Implement pilot project on optimal application of strategic environmental assessment																						
6. Map areas significant for preservation of species and habitat types at priority locations																						
7. Implement pilot project on landscape planning in the narrow coastal zone																						
8. Organise thematic programmes for public awareness raising on the importance of landscapes																						
9. Establish marine nature protected areas on at least 3 locations																						
10. Improve knowledge on optimal equipping of protected natural assets, ecologically valuable habitats and ecosystems of the coastal zone with infrastructure																						
11. Implement sustainable infrastructure pilot project in a selected priority protected natural asset																						
2 Development of infrastructure for pollution prevention and remediation																						
1. Prepare a programme for remediation of pollution in the coastal zone at priority locations																						
2. Strengthen capacities for green nautical tourism („green boating")																						
3. Implement pilot project of the green nautical tourism concept („green boating")																						
4. Stimulate development of tourist infrastructure through a pilot project "Pedestrian and Cycling Route"																						
5. Prepare a baseline study for revitalisation of selected beaches																						
6. Strengthen capacities for adaptation to climate change impacts																						
7. Implement pilot project for adaptation to climate change impacts																						
3 Spatial planning and sustainable spatial development																						
1. Implement first phase in establishing spatial information system																						
2.Develop maritime spatial plan																						
3. Implement analysis on feasibility of introducing urban comassation																						
4. Implement pilot project on urban comassation																						
5. Prepare guidelines for planning rehabilitation and renewal of inadequately urbanised areas and conduct professional development programmes																						
6. Implement pilot project on rehabilitation and renewal of inadequately urbanised areas																						
7. Prepare a guide for implementation of the SPSPCZ MNE and conduct professional development programmes																						
4 Achievement of satisfactory performances of the coastal zone economic development																						
1. Prepare project proposal to incentivise green economy development																						
5 Functioning of the coastal zone management system																						
1. Provide support for the functioning of the ICZM coordination mechanism																						
2. Introduce monitoring of performances and outcomes of institutions included in the ICZM system																						
3. Introduce reporting on the state of the coastal zone through the use of indicators																						

Gannt chart 7-1: Dynamics of implementing priority actions

1 Preservation of nature, landscape and cultural assets

98 / Law on nature protection, Law on forests and regulations governing economic activities in the coastal zone

PRIORITY ACTION/ TITLE	LINK TO THE STRATEGIC GOAL AND MEASURES/ SUB-MEASURES	TYPE OF ACTION	IMPLEMENTATION DEADLINE
Change and amend regulations and programmes of significance for the application of ecosystem approach - EcAp	1.1 Protect nature, landscape and cultural assets efficiently 1.1.1.1. Change regulations pertaining to the requirements on biological diversity protection and application of ecosystem approach contained in the relevant EU legislation , UN Convention on Biological Diversity and the ICZM Protocol, while ensuring their mutual harmonisation	Systemic action	2017
Implementation indicators	– Proposals of amendments to the Law on nature protection, Law on forests and regulations governing coastal activities prepared and in the procedure – Monitoring programme of the state of marine environment harmonised with requirements in the context of applying the ecosystem approach (EcAp) in the framework of the Barcelona Convention implementation		
Outcome	– Regulations are harmonised with international obligations, primarily requirements of the EU legislation and the Barcelona Convention – Monitoring of the state of marine environment harmonised with EcAp is being implemented – Ecosystem approach is applied – Capacities for applying EcAp are improved – Consequently, good status of marine environment is reached		
Description	Analyses of the state of marine environment indicate there is eutrophication and excessive pollution on certain locations, such as the Boka Kotorska Bay, marine area near Ulcinj, and partly near Budva and Bar. To remediate the existing and eliminate causes of further pollution, it is important to define objectives and undertake appropriate activities for achieving good environmental status of the sea. For this reason harmonisation of regulations and consequent harmonisation of monitoring programmes on the state of the marine environment with requirements relevant for application of EcAp as contained in the relevant EU legislation is crucial, primarily those from the Marine Strategy Framework Directive, UN Convention on Biological Diversity, and the ICZM Protocol.		

Activities	1. Additional analysis of key regulations should be performed starting from the preliminary analysis carried out in the course of preparing this Strategy, primarily for: a. The Law on nature protection concerning inter alia the following issues: – definition of principles and norms (which are completely missing or are not integrated to the sufficient extent in the current provisions) that enable application of EcAp, paying special attention to the requirements of the ICZM Protocol and preservation of the completeness of valuable and specific coastal ecosystems: coastal forests, river estuaries, dunes and islands; – harmonisation with the List of protected species of the Protocol on Specially Protected Areas (SPA Protocol) from the aspect of protection of specific coastal ecosystems and marine species; – definition of obligations of in situ preservation of natural ecosystems, habitats and species; – adoption of a bylaw to detail the manner of establishing the prevailing public interest, the manner of informing the public and definition of compensatory measures. b. The Law on forests concerning the questions of coastal forests protection, particularly those located outside protected areas. c. Regulations governing coastal activities (urbanisation, shipping, concessions, geologic research, tourism, agriculture, transport), concerning the following issues: – protection of important ecosystems, remediation obligations, implementation of measures to mitigate negative impacts, implementation of compensation measures; – definition of principles, norms and instruments enabling application of EcAp (focusing on an equitable distribution of benefits from ecosystems, adjustment of planning and management practices to ecosystem characteristics, implementation of management actions on the level appropriate to solving the problem, encouraging intra- and inter-sectoral communication). 2. Based on the conducted analysis as well as on the pilot project to be implemented in the Boka Kotorska Bay, amendments of regulations should be suggested. Regulations should be amended in a synchronised manner as to ensure that the above-mentioned aspects of importance for EcAp application are considered in their entirety and to provide for mutual alignment of regulations. 3. Perform harmonisation of programmes for monitoring the state of marine ecosystem in the framework of regular implementation of the national Programme for Monitoring the State of the Environment in relation to EcAp objectives, target values and indicators developed within the Barcelona Convention and MEDPOL Programme. The need to ensure consistency of EcAp application with the obligations to transpose the Marine Strategy Framework Directive should be taken into account.
Responsible institutions	Ministry of Sustainable Development and Tourism, in cooperation with Ministry of Agriculture and Rural Development, Ministry of Transport and Maritime Affairs, Ministry of Economy, local self-governments, technical and scientific institutions


SOURCE: CAMP

PRIORITY ACTION/ TITLE	LINK TO THE STRATEGIC GOAL AND MEASURES/ SUB-MEASURES	TYPE OF ACTION	IMPLEMENTATION DEADLINE
Analyse the level of harmonisation of sectoral policies with environmental protection requirements	1.1 Protect nature, landscape and cultural assets efficiently 1.1.1.2 Integrate principles, objectives, measures and instruments of environmental protection into sectoral policies and plans	Systemic action	2018
Implementation indicators	– Analysis of the level of mutual alignment and of harmonisation of sectoral policies with environmental protection objectives carried out – Consultative workshops with sector representatives organised – Proposal of changes of sectoral policies made		
Outcome	– Environmental protection is integrated into sectoral policies and plans and their mutual alignment is performed – Consequently, environmental protection is more efficient, and quality of the environment, public health and potential for the overall social development are improved		
Description	Baseline assessment of the level of harmonisation of policies and strategies relevant for coastal zone management with the ICZM Protocol showed there were inconsistencies between strategic documents, primarily as regards preservation of natural and cultural heritage in relation to urbanisation, expansion of tourist and other capacities and the need to adapt to climate change. Analysis of the actual spatial conditions confirms such inconsistencies i.e. the fact that sectoral regulations and policies governing economic activities important for the coastal zone do not integrate environmental protection and sustainable development objectives and measures sufficiently. It is necessary to perform a detailed analysis of key sectoral policies and plans (tourism, agriculture and rural development, maritime and land transport, maritime economy, exploitation of mineral raw materials, spatial development) to precisely define inconsistencies and important deficiencies in relation to environmental protection and sustainable development needs. The analysis refers to sectoral policies seen in the national context, but it can be primarily applied to the coastal zone within the implementation of the NS ICZM.		
Activities	1. Define criteria in relation to which assessment of sectoral strategies is performed, taking into account constitutional commitment of Montenegro as an ecological state and the necessity of its integration into social and economic development sectors, as well as priorities in the context of the EU integration of Montenegro in reference to the relevant EU policies. Criteria should take into consideration estimates (possibilities) on achievability of results i.e. successfulness of implementation by applying effective mechanisms, existence of the system to monitor implementation and harmonisation of further actions with the actual conditions, etc. 2. Identify deficiencies of adopted strategies and plans in relation to the defined criteria. 3. Define proposals to resolve identified deficiencies, particularly taking into account possibilities offered by a better quality application of strategic environmental assessment and selected appropriate funding instruments for the environment. 4. Define specific proposals to amend strategies and plans (proposals to amend the existing documents and development of possible starting points for preparation of new ones), individually by sectors. In addition, define proposals for the necessary amendments of relevant legal acts needed to ensure normative basis to harmonise sectoral strategies and plans according to the above. 5. Organize consultations with key sectors. 6. Forward proposals to the Government of Montenegro for consideration and adoption.		
Responsible institutions	Ministry of Sustainable Development and Tourism in cooperation with line ministries whose responsibilities include sustainable use of natural resources		

PRIORITY ACTION/ TITLE	LINK TO THE STRATEGIC GOAL AND MEASURES/ SUB-MEASURES	TYPE OF ACTION	IMPLEMENTATION DEADLINE
Implement pilot project on EcAp application in the Boka Kotorska Bay	1.1 Protect nature, landscape and cultural assets efficiently 1.1.1.3 Build capacities for application of ecosystem approach	Demonstration action	2017
Implementation indicators	Implemented pilot project: – Baseline assessment of the state and pressures on marine environment made; – Objectives of good environmental status defined; – Economic and social analysis carried out; – Proposed measures defined.		
Outcome	– Methodology for application of EcAp is defined to achieve good status of marine environment in the framework of the Barcelona Convention implementation and related to the transposition of the Marine Strategy Framework Directive. – Capacities for the application of EcAp are improved. – Good status of marine environment will be achieved in the long term.		
Description	The necessity to apply EcAp stems from the decisions of the Contracting Parties to the Barcelona Convention. This approach is to a significant extent compatible with reaching good environmental status of marine environment that will be required within the mandatory transposition of the Marine Strategy Framework Directive into national legislation. In testing the application of ecological objectives and related operational objectives and indicators in the framework of EcAp application, it is necessary to simultaneously test application of qualitative descriptors of the state of the environment of the marine part of the coastal zone, and criteria and methodological standards for defining good environmental status in accordance with the Marine Strategy Framework Directive. The manner of enabling compatible application of the two approaches (to the extent possible) should be defined. Differences which represent specificity of the Framework Directive's implementation compared to EcAp implementation in the framework of the Barcelona Convention should be also determined. Cooperation with countries of the Adriatic Sea sub-region and the Mediterranean region is essential in defining the set of characteristics of good ecological status of the sea. The project can be implemented independently or within a wider regional context. Optimally, implementation of this project should be harmonised and linked to the implementation of the pilot project for development of the maritime spatial plan, as well as to the process of transposing the Marine Strategy Framework Directive into national legislation.		

Activities	Starting from the initial results of testing the possibility to apply EcAp in the marine waters of the Boka Kotorska Bay implemented within CAMP, it is necessary to carry out the following activities: 1. Initial assessment of the general state of marine environment based on the application of EcAp and taking into account state of the terrestrial part of the coastal zone, comprising the following analyses: – Analysis of the basic characteristics and components of the existing state of marine environment: hydrographic, physical and chemical characteristics, geological characteristics, biological characteristics, habitat types, etc. – Analysis of main pressures and impacts on the state of marine environment, including human activities: physical loss of space, e.g. urbanisation/ making the coastal line artificial; physical damages e.g. abrasion and other physical disturbances – e.g. marine litter, noise; impacts on hydrological processes, e.g. changes of heat regime, changes in the sea salinity regime; pollution with hazardous substances such as heavy metals, synthetic compounds, radionuclides; continuous inputs of matters the discharges of which are regulated by the law; inputs of nutrients and organic matter e.g. input of matters rich in N and P from point and diffuse pollution sources; biologic disturbances e.g. introduction of non-indigenous (alien) species, invasive species, pathogens, as well as selective extraction of species; this analysis will include qualitative and quantitative characteristics of pressures and trends in their impacts, as well as the main cumulative and synergetic effects; – Analysis of the state and main pressures and impacts on the state of terrestrial environment of the coastal zone; – Economic and social analysis of the use of sea resources and the costs of degradation of marine and terrestrial environment of the coastal zone. 2. After completing the initial assessment of the overall state of the environment, good environmental status of the marine environment and of the land part of the coastal zone in the Boka Kotorska Bay will be established. Good environmental status will be defined as a set of characteristics on the good environmental status of the sea and land parts of the coastal zone. This will be done based on qualitative descriptors i.e. ecological objectives and related operational objectives and indicators as listed within the decisions of the Contracting Parties to the Barcelona Convention on EcAp application (e.g. they can include: location and extent of habitats impacted directly by hydrographic alterations (EO7; 7.2.2); length of the coastline subject to physical disturbances due to the influence of manmade structures (EO8; 8.1.4); land use changes (EO8/8.2.1), and others). Methodological differences in the application of EcAp should be established thereby, and good environmental status of marine environment in accordance with the Marine Strategy Framework Directive defined. As the next step, amendments in relation to the requirements of the Marine Strategy Framework Directive should be made. 3. Determining the objectives of good environmental status of the marine environment based on the initial assessment and a set of characteristics of good environmental status of the marine and terrestrial environment of the coastal zone. 4. In accordance with the established baseline and objectives of good environmental status, proposal of the amendments to the existing marine environment monitoring programme and proposal of protection and management measures for the marine and land parts of the coastal zone will be defined.
Responsible institutions	Ministry of Sustainable Development and Tourism and Environmental Protection Agency in cooperation with relevant technical and scientific institutions

PRIORITY ACTION/ TITLE	LINK TO THE STRATEGIC GOAL AND MEASURES/ SUB-MEASURES	TYPE OF ACTION	IMPLEMENTATION DEADLINE
Undertake critical analysis of the so far application of strategic and environmental impact assessments	1.1 Protect nature, landscape and cultural assets efficiently 1.1.1.4 Improve the so far application of strategic and environmental impact assessments	Operational action	2018
Implementation indicators	Study with an objective and comprehensive assessment of the implementation of strategic environmental impact assessments prepared: – Objective and comprehensive assessment of strategic and environmental impact assessments prepared; – Measures proposed to enhance efficiency of applying strategic and environmental impact assessments.		
Outcome	– Implementation and evaluation of strategic and environmental impact assessments is improved. – Quality of planning solutions is improved. – Consequently, environmental protection is more efficient.		
Description	Implementation of environmental impact assessments (strategic and project level) is characterised by a set of weaknesses, with the following being particularly important: insufficient information to perform assessment; unsatisfactory capacities of practitioners that perform assessments and of administration units that performs evaluations; carrying out assessments as formal procedures in developing and adopting planning documentation, or obtaining permits to implement project activities; not taking into account public objections sufficiently (and the same sometimes applies to the institutions that are consulted on a mandatory basis); and others. These weaknesses reflect on the quality of planning solutions, as well as on the success of implementing specific measures to mitigate or eliminate negative impacts of programmes and projects which are subject to impact assessments. The following are also evident: a lack of understanding on the need and purpose of carrying out impact assessments; conflicted opinions on the content and results of assessments, procedures of their implementation with related deadlines and increased costs of preparing plans or executing interventions; inability of assessments to contribute to achievement of sustainable development objectives and consequent inappropriate/ unsustainable spatial solutions. With this in mind, it is necessary to analyse in depth the so far application of strategic and environmental impact assessments and propose measures for their improvement.		

Activities	In preparing the Study of objective and comprehensive assessment of strategic and environmental impact assessments, the following activities should be carried out: 1. Analyse similar studies assessing implementation of strategic and environmental impact assessments in different countries. 2. Definition of benchmarks for quality assessments and implementation efficiency. 3. By applying different methods (e.g. review of completed strategic environmental assessment and environmental impact assessment reports, surveys/ interviews with participants in the processes of strategic and environmental impact assessments, holding of) analyse: – Legal and theoretical framework applied in the so far implementation of strategic and environmental impact assessments; – Decisions on the need to carry out strategic and environmental impact assessments; – Structure, scope and content of strategic assessment report or impact assessment study (analyse in particular proposals on improvement of the plans i.e. project documentation and related adequacy of measures prevent, mitigate or eliminate negative impacts on the environment); – Participation and interaction of participants in the process of strategic and environmental impact assessment; – Issuance of consents to strategic assessment reports i.e. environmental impact assessment studies; – Application of alternative solutions; – Impact of strategic and environmental impact assessments on plans i.e. interventions for which they have been applied; – Time and financial frameworks for implementing strategic and environmental impact assessments. 4. Prepare proposals to improve quality of implementation of strategic and environmental impact assessments (changes of regulations and improvement of implementation of procedures). Measures should include specific recommendations to establish monitoring of implementation of strategic and environmental impact assessments. In developing the measures, it is necessary to take into account results of the pilot project on the implementation of strategic environmental assessment.
Responsible institutions	Ministry of Sustainable Development and Tourism and Environmental Protection Agency

PRIORITY ACTION/ TITLE	LINK TO THE STRATEGIC GOAL AND MEASURES/ SUB-MEASURES	TYPE OF ACTION	IMPLEMENTATION DEADLINE
Implement pilot project on optimal application of strategic environmental assessment	1.1 Protect nature, landscape and cultural assets efficiently 1.1.1.4 Improve the so far application of strategic and environmental impact assessments	Demonstration action	2018
Implementation indicators	– Pilot project on optimal application of strategic environmental assessment for a selected spatial planning documents is carried out. – Workshops and professional development trainings are organised for applying and evaluating strategic environmental assessments.		
Outcome	– Capacities for implementation and evaluation of strategic and environmental impact assessments is improved. – Consequently, environmental protection is more efficient		
Description	Following-up on the analysis of the so far implementation of strategic and environmental impact assessments, it is important to demonstrate its optimal application for a selected thematic and spatial area. Results of the pilot project's implementation should be included in the final proposal of measures for improving the quality of strategic environmental assessments.		
Activities	1. Based on the first results of the analysis of implementing strategic environmental assessments, a pilot project should be implemented for a selected number of different types of spatial planning documents to demonstrate its optimal use. Entities involved in strategic environmental assessments, line ministries and administrative bodies responsible for preparation and evaluation of strategic environmental assessment should be included in project implementation. 2. In parallel with pilot project implementation, professional development activities should be carried out with the aim to improve capacities of practitioners performing the assessments and administration bodies performing evaluations.		
Responsible institutions	Ministry of Sustainable Development and Tourism and Environmental Protection Agency		

PRIORITY ACTION/ TITLE	LINK TO THE STRATEGIC GOAL AND MEASURES/ SUB-MEASURES	TYPE OF ACTION	IMPLEMENTATION DEADLINE
Map areas significant for preservation of species and habitat types at priority locations	1.11.1 Protect nature, landscape and cultural assets efficiently 1.1.1.7 Improve availability of updated data on the state of terrestrial and marine biodiversity 1.2 Manage protected natural assets, ecologically valuable habitats and ecosystems of the coastal zone sustainably	Operational action	2020
Implementation indicators	– Publicly available comprehensive GIS database with distribution and state of species and habitat types on the locations foreseen for priority investment in the 1 km wide zone from the coastline		
Outcome	– Knowledge about distribution of important species and habitat types, their scope, and vulnerability is increased. – The following preconditions are met for preparation of: • Technical basis for legal protection of areas significant for preservation of species and habitat types; • Technical basis for development of spatial plans. – Consequently, the process of preparing spatial plans and strategic environmental assessments is accelerated, i.e. the scope for definition of conflicting land uses is decreased		
Description	Availability of baselines on distribution and state of species and habitat types is one of the key preconditions for sustainable land use planning. Their lack has to a significant extent contributed to a rise in conflicting land uses when the state of the environment, vulnerability and suitability of space are concerned. Taking into account the existing baselines on vulnerability of the coastal zone's space, it is a priority to determine in detail the state of biodiversity at the most vulnerable and developmentally most attractive locations; it is also necessary to provide conditions for avoiding future negative consequences of anthropogenic impacts on locations foreseen for priority investments.		
Activities	1. Select priority locations for mapping areas important for preservation of species and habitat types having in mind vulnerability assessments and scope of locations foreseen for priority investment in the 1 km wide belt from the coastline and in accordance with priorities defined by the Spatial Development Programme. 2. Consolidate the existing data on significance of species and habitat types in the defined zone. 3. Perform additional field surveys. 4. Develop a spatial outline of distribution and state of species and habitats (in GIS), first of all in the 1 km wide belt starting from the coastline. 5. As needed, propose changes in the mapping approach in a way as to enable optimisation of spatial solutions, protection regime and conditions of use of valuable and protected natural areas based on the prepared baselines. 6. Update coastal zone database (prepared during implementation of CAMP project). 7. Define preservation measures. In conducting the analysis, internationally accepted standards should be respected so that: – GIS platforms, system of attributes, classification of habitat types, value concept and scales are uniformly used; – Spatial planning needs are observed, i.e. that optimisation of spatial solutions, protection regime and conditions of use of valuable and protected natural areas is enabled based on the prepared baselines.		
Responsible institutions	Ministry of Sustainable Development and Tourism and Environmental Protection Agency		


SOURCE: CAMP

PRIORITY ACTION/ TITLE	LINK TO THE STRATEGIC GOAL AND MEASURES/ SUB-MEASURES	TYPE OF ACTION	IMPLEMENTATION DEADLINE
Implement pilot project on landscape planning in the narrow coastal zone	1.1 Protect nature, landscape and cultural assets efficiently 1.1.2.2 Adopt landscape policy 3.1 Develop a system of sustainable spatial planning	Demonstration action	2016.
Implementation indicators	– Landscape analysis and evaluation of selected coastal zone sites performed. – Development and landscape protection measures for selected landscapes proposed. – Survey on landscapes carried out		
Outcome	– Knowledge about landscape planning and integration of cultural heritage into spatial planning is improved. – Preparation of expert baselines for spatial plans and project documentation is improved.		
Description	Mapping of landscapes as an expert baseline for developing planning documentation has for the first time been comprehensively, and in accordance with requirements of the Landscape Convention, performed in the process of preparing the Landscape Study in the framework of the SPSPCZ MNE development. Nevertheless, integration of landscapes into spatial planning is yet to take hold as a systemic approach i.e. it has not become a part of standard procedures of spatial plans preparation yet. As a consequence, this could lead to conflicts between cultural landscape and cultural assets preservation on one and intensive urbanisation on the other hand. This is why it is important to strengthen capacities for landscape evaluation and their protection through spatial planning.		
Activities	Following experience acquired in developing CASP and recommendations from the Handbook on the Manner of Developing Landscape Plans, as well as the identified needs and defined priorities, it is necessary to carry out a landscape planning pilot project in the narrow coastal zone that is in the 1 km wide belt starting from the coastline. As a priority, locations of the existing/ expected conflicts between preservation of cultural landscape and cultural heritage, and urbanisation pressures, should be considered (examples: Luštica, Krimovica - Trsteno - Lastva, Dobra voda - Stari Ulcinj - Valdanos), so that: 1. A detailed analysis is performed and evaluation of the coastal zone made (definition of important landscape character types and landscape elements, landscape analysis/ vista and visual exposure, structural analysis and mental image analysis, cultural heritage analysis in the spatial context, evaluation of types/ parts of the coast, including visual attractiveness). 2. Landscape development and protection concept (adoption of decisions on development and protection based on clear objectives) is prepared. 3. Guidelines, principles and concrete solutions for development and protection of selected coastal zone sites (by development type, for individual types and locations, giving due attention to the development of space where cultural assets are located, seaside promenade space and beaches, as well as remediation of degraded areas) are prepared. 4. Survey on landscapes is carried out.		
Responsible institutions	Ministry of Sustainable Development, Administration for the Protection of Cultural Heritage and local self-governments on whose territories the project area is located		

PRIORITY ACTION/ TITLE	LINK TO THE STRATEGIC GOAL AND MEASURES/ SUB-MEASURES	TYPE OF ACTION	IMPLEMENTATION DEAD-LINE
Organise thematic programmes for public awareness raising on the importance of landscapes	1.1 Protect nature, landscape and cultural assets efficiently 1.1.2.2 Adopt landscape policy 3.1 Develop a system of sustainable spatial planning	Demonstration action	2018.
Implementation indicators	– Programmes for raising public awareness on the importance of landscapes organised. – Programme "Space and Children" established. – Competition for the national award "Golden Cube" organised.		
Outcome	– Level of public awareness level is raised, primarily among children and youth, on the importance of the quality of the environment and space. – Knowledge about architecture, urbanism, landscape, cultural heritage, and sustainable development is improved. – National award "Golden Cube" for individuals and organisations working with children in the area of spatial development and architecture is established.		
Description	When landscape recognisability and the impact of uncontrolled urbanisation are concerned, conflicts in space are to an important extent a result of insufficiently developed awareness and knowledge on the importance of protecting nature, landscapes and cultural assets, and spatial development system based on that approach. For this reason, fostering awareness and knowledge among population and from the earliest age is important, because this is the period when most important value judgments are formed. They on the other hand to a significant extent define future attitudes and commitments. Such programmes should encourage active participation of citizens and decision makers in providing continuous contributions to improvements in the state of space in which they live and to ensuring a healthy environment.		
Activities	In line with results of the analysis and evaluation of the coastal zone landscape, a wide spectrum of programmes for raising awareness and knowledge on the importance of landscapes should be organised. In connection with that, the following should be organised/ established: 1. Workshops with different groups, including children, lectures and exhibitions; 2. Programme "Space and Children" which can be implemented based on the example of the Project "Architecture and Children" (web link: Architecture & Children, www.uia-architecture-children.bak.de) which was initiated in 1999 by the International Union of Architects (www.uia.archi) with the aim to familiarise the youth with the essence and importance of good architecture and environmental protection. To establish this programme it is necessary to: – Choose a national programme coordinator; – Organise/ encourage presentations, excursions, and workshops in schools, professional associations and local communities, and primarily those activities in which children actively participate concerning the analysis of the state and creation of proposals for changes; – Promote the programme, including setting up of a project website; – Hold a public competition for the national "Golden Cube" prize to be awarded to individuals and organisation for working with children in the area of spatial development and architecture, thus encourage further development of such projects. The winners of the competition will run for the international award (UIA Architecture & Children Golden Cubes Award).		
Responsible institutions	Chamber of Engineering of Montenegro, Union of Architects of Montenegro, non-governmental organisations		

PRIORITY ACTION/ TITLE	LINK TO THE STRATEGIC GOAL AND MEASURES/ SUB-MEASURES	TYPE OF ACTION	IMPLEMENTATION DEADLINE
Establish marine nature protected areas on at least 3 locations	1.2 Manage protected natural assets, ecologically valuable habitats and ecosystems of the coastal zone sustainably 1.2.1.2 Establish priority new protected natural assets/ areas which should be placed under protection until 2020	Systemic action	2020
Implementation indicators	– Marine nature protected areas declared. – Management structures established.		
Outcome	– Share of marine nature protected areas is increased. – State of marine biodiversity is improved. – Capacities for managing marine nature protected areas are strengthened.		
Description	The existing management system of nature protected areas is characterised by a lack of marine protected natural assets. Given the diversity of marine habitats and types on one hand, and increasing pressures to which they are exposed on the other, it is necessary to establish a network of marine protected areas with the aim to preserve, and where found necessary regenerate values of marine biodiversity. Until 2020, the initiated procedures for establishing marine nature protected areas should be finalised on at least three locations (e.g. Katič, Platamuni, Ratac) recognised for protection in the Spatial Plan of Montenegro and the Special Purpose Spatial Plan for public maritime domain area, or those that will be identified in the Special Purpose Spatial Plan for the coastal zone of Montenegro.		
Activities	1. Review the documentation basis prepared so far and determine needs for additional research aimed at collecting missing data on the state of habitats and species at observed localities. 2. Develop protection studies for priority areas. 3. Define optimal management model, including partnership of Public Enterprise for Public Maritime Domain Management with local self-governments. 4. Adopt the act on declaring protected areas. 5. Amend the Law on nature protection so that full normative basis for establishing marine natural assets is provided (taking into consideration recommendations of the Study on the institutional and legislative framework needs with a view to establishment of marine nature protected areas, prepared with SPA/RAC's support). Amendments of this legal act should be harmonised with the amendments of other relevant acts, particularly those regulating the use of natural resources and economic activities in the coastal zone in accordance with recommendations and requirements for sustainable resources use. 6. Conduct procedure for establishing Specially Protected Areas of Mediterranean Importance (SPAMI) on the selected sites where nationally protected marine area has been previously established. 7. Organise training to develop management capacities, including information exchange with successful managers of certain protected areas in the Mediterranean and wider regions. 8. Link possibilities for providing ecosystem services with tourist offer.		
Responsible institutions	Ministry of Sustainable Development and Tourism, Environmental Protection Agency, Public Enterprise for Public Maritime Domain Management and local self-governments in the coastal zone		

PRIORITY ACTION/ TITLE	LINK TO THE STRATEGIC GOAL AND MEASURES/ SUB-MEASURES	TYPE OF ACTION	IMPLEMENTATION DEADLINE
Improve knowledge on optimal equipping of protected natural assets, ecologically valuable habitats and ecosystems of the coastal zone with infrastructure	1.2 Manage protected natural assets, ecologically valuable habitats and ecosystems of the coastal zone sustainably 1.2.2.2 Improve existing capacities for managing protected natural assets 2.4 Establish risk management system for natural and anthropogenic hazards	Systemic action	2018
Implementation indicators	– Guidelines (programme) for infrastructural equipping in protected natural assets, ecologically valuable habitats and ecosystems of the coastal zone prepared. – Integrated information on the state of certain protected natural assets, ecologically valuable habitats and ecosystems of the coastal zone and the manner of their arrangement prepared. – Training and educational programmes on sustainable infrastructural equipping organised for the employees of the PE for Public Maritime Domain Management, with participation of the PE National Parks of Montenegro and administrations on local and national level.		
Outcome	– Knowledge on spatial development and protected natural assets management is improved. – Contribution to establishment of protected natural assets network is provided. – Contribution to strengthening sustainable tourist offer and related fostering of awareness of the importance of nature is provided. – Capacities of the PE Public Maritime Domain Management are strengthened.		
Description	The existing state is characterised by nature protected areas management system that is not sufficiently efficient. This includes lack of management structures for a significant number of protected natural assets i.e. undeveloped protected natural assets management system. Review of the status of existing protected natural assets is not performed, while establishment of new nature protected areas is slow and inefficient. Furthermore, protection measures for natural values outside protected areas are not implemented or are very rare. It often happens that construction of infrastructure outside protected natural assets undermines their natural values. At the same time, infrastructure in the protected natural assets is not developed with the aim of preserving original natural values and state of ecosystem, provision of ecosystem services, appropriate spatial development and increase of ecosystem resilience. The purpose of the Programme (Guidelines) for construction of infrastructure in protected natural assets, ecologically valuable habitats and ecosystems of the coastal zone is to provide an overview of the extent to which protected natural assets, ecologically valuable habitats and ecosystems of the coastal zone are arranged and to give proposals for developing infrastructure and arranging the space with the aim to improve the existing state in these areas.		

Activities	Development of the Programme (Guidelines) for constructing infrastructure in protected natural assets, ecologically valuable habitats and ecosystems of the coastal zone, through: – Assessment of importance and acceptability of infrastructure in nature protected areas; – Overview of good practices from different countries and Montenegro; – Analysis of the existing infrastructure in nature protected areas, with assessment of its state and functionality; – Definition of problems in protected natural areas with proposals of possible solutions; – Development of a catalogue of possible infrastructural objects (info centres, paths, observatories, info boards, ...); – Provision of recommendations for reducing to the lowest possible extent the impact of infrastructure construction in nature protected areas and outside of them; – Proposal of infrastructure in certain areas with guidelines for the design of individual infrastructure elements (topics such as typical infrastructure and/ or infrastructure adapted to individual areas should be elaborated and comprehensive proposal of graphic solutions made) and cost estimation; – Analysis of possibilities for constructing infrastructure on the basis of the existing spatial planning documentation or management plans and preparation of proposals to change them if construction is not possible; – Development of Action Plan for construction of priority infrastructure in nature protected areas; – Organisation of workshops for applying the guidelines.
Responsible institutions	Ministry of Sustainable Development and Tourism, Environmental Protection Agency, Public Enterprise for Public Maritime Domain Management and local self-governments in the coastal zone

PRIORITY ACTION/ TITLE	LINK TO THE STRATEGIC GOAL AND MEASURES/ SUB-MEASURES	TYPE OF ACTION	IMPLEMENTATION DEADLINE
Implement sustainable infrastructure pilot project in a selected priority protected natural asset	1.2 Manage protected natural assets, ecologically valuable habitats and ecosystems of the coastal zone sustainably 1.2.2.2 Improve existing capacities for managing protected natural assets 2.4 Establish risk management system for natural and anthropogenic hazards	Systemic action	2020
Implementation indicators	– Pilot project implemented.		
Outcome	– Contribution to strengthening the sustainable tourism offer and to related fostering of awareness on the importance of nature provided. – Consequently, after the programme is applied i.e. after the pilot project on infrastructure construction is implemented, the state of protected natural assets is improved. – Capacities of the PE for Public Maritime Domain Management are strengthened.		
Description	Implementation of the project that will demonstrate how to apply the guidelines is important for their quality application and for strengthening of capacities.		
Activities	1. Selection of priority area, if possible one where spatial planning documentation has been adopted. 2. Development of project documentation and obtaining of necessary permits. 3. Infrastructure construction.		
Responsible institutions	Ministry of Sustainable Development and Tourism, Environmental Protection Agency, Public Enterprise for Public Maritime Domain Management and local self-governments in the coastal zone		

2. Development of infrastructure for pollution prevention and remediation

PRIORITY ACTION/ TITLE	LINK TO THE STRATEGIC GOAL AND MEASURES/ SUB-MEASURES	TYPE OF ACTION	IMPLEMENTATION DEADLINE
Prepare a programme for remediation of pollution in the coastal zone at priority locations	2.1. Achieve good environmental status of marine ecosystems 2.1.1 Remediate marine ecosystems on priority locations 2.2 Contribute to safe arrangement, re-vitalisation and reclamation of areas polluted due to inadequate disposal and treatment of waste	Systemic action	2020
Implementation indicators	– The National Action Plan for Reducing Pollution from Land-Based Sources updated. – The Coastal Zone Pollution Remediation Programme for priority locations developed, including detailed analysis of environmental carrying capacities. – Documentation basis for remediation of priority locations prepared (see below). – Act on managing cross-border area of the river Bojana signed.		
Outcome	– Priority hot-spot locations are remediated. – Consequently, state of the environment is improved, in particular environmental status of the marine ecosystem, and public health is enhanced.		
Description	The existing level of development of environmental infrastructure (wastewater treatment, waste disposal, etc.) is insufficient to provide for development and the needs of preserving the sea, water, land and air. Remediation and reclamation of priority locations with pollution problems should enable their safe arrangement. Analysis carried out within CAMP project resulted, among others, with a pollution model which was used to identify polluted sites and determine spatial extent and intensity of impacts. Based on these data and wider documentation developed under the so far implemented programmes and projects (e.g. Horizon 2020 and Union for the Mediterranean initiative for depolluting the Mediterranean, the World Bank analyses for remediation of Bijela Shipyard), the mid-term Coastal Zone Pollution Remediation Programme for priority locations should be prepared, and remediation activities initiated.		

Activities	1. In the framework of implementing the Protocol for the Prevention of Pollution from Land-Based Sources of the Barcelona Convention, the National Action Plan for Reduction of Pollution from Land-Based Sources should be updated in accordance with the Protocol's requirements; this should among others include: – Definition of impacts of diffuse pollution sources (e.g. from transport, agriculture sector); – Prioritisation of needs for remediation of pollution on hot-spot locations, using (previously mentioned) inventories and assessments prepared so far. Thus updated National Action Plan should serve as an input for the development of the Coastal Zone Pollution Remediation Programme for priority locations. 2. Develop the Coastal Zone Pollution Remediation Programme for priority locations so that for each selected location: – Assessment of the existing state is provided; – Pollution remediation measures are defined (future land uses, concrete technical solutions and spatial arrangements, treatment of hazardous waste); – Costs and (possible) funding sources are evaluated; – Remediation dynamics is defined; and – Detailed analysis of environmental carrying capacities (primarily for marine ecosystem) for the area of the Boka Kotorska Bay is conducted. 3. Based on this programme, successive pollution remediation on priority locations should be initiated (implementing remediation at certain locations in parallel with the Programme implementation), including: a. Remediation of water and sediment pollution in the marine waters zone and land area of Bijela Shipyard and replacement of outdated technologies in performing its technological operations; b. Remediation of pollution in the Boka Kotorska Bay; c. Remediation of pollution in the Port Milena channel; d. Elimination of further anthropogenic impacts and pollution remediation on priority locations with peloid deposits (e.g. mouth of the river Sutorina) to preserve potential of resources significant for health tourism; e. Construction of wastewater treatment plant of lower capacity for smaller settlements (Perast, Risan, etc.); f. Remediation of priority sites for the disposal of communal waste that are no longer in use: closed sanitary landfills on locations Lovanja and Ćafe in Bar; g. Replacement of outdated technology in performing port operations in the ports of Bar and Kotor with environmentally acceptable technological solutions (cleaner/ best available technologies, etc.); 4. Prepare and adopt an act on cross-border management of the river Bojana, aiming for, among other things, comprehensive pollution remediation and prevention (including flood protection measures). The agreement and activities should draw on recommendations of the river Bojana Cross-border Management Plan (the development of which will be completed in 2015).
Responsible institutions	Ministry of Sustainable Development and Tourism, Ministry of Transport and Maritime Affairs, Ministry of Agriculture and Rural Development, and local self-governments in the coastal zone

PRIORITY ACTION/ TITLE	LINK TO THE STRATEGIC GOAL AND MEASURES/ SUB-MEASURES	TYPE OF ACTION	IMPLEMENTATION DEADLINE
Strengthen capacities for green nautical tourism („green boating")	2.1 Achieve good environmental status of marine ecosystems 2.3 Stimulate development of green infrastructure 2.3.1 Implement selected projects of green mobility at sea	Systemic action	2019
Implementation indicators	– Analysis of the state and needs to apply the "green boating" concept developed. – Knowledge and skills of the staff and users of marinas improved.		
Outcome	– Impacts of marinas on marine ecosystem are reduced and there is a subsequent improvement of its state. – "Green boating" concept is applied (primarily at anchoring).		
Description	Although nautical tourism is characterised by a fast growth, with Montenegro becoming a favourite destination of those who prefer this kind of tourism, optimal standards to decrease negative impacts on the environment are not developed. This refers to the construction planning stage (in the sense of applying optimal approaches to plan accepting capacity of the marine waters zone in relation to the number of berths), as well as to definition of technical standards when environmental impact assessment is prepared as a part of technical documentation development, and the execution of works. A lack of berths functionally linked to the existing marinas and ports is also evident. For this reason it often happens that ships and yachts are anchored in the coastal and open sea, on arbitrarily chosen locations, thus endangering the state of marine ecosystem through mechanical destruction of underwater habitats with anchors and through waste disposal. The practice also undermines safety of maritime navigation. With the aim of preparing the basis for prevention, mitigation and elimination of impacts of nautical tourism, particularly with regard to impacts of marinas on marine ecosystems, conditions should be created and capacities strengthened for introducing sustainable nautical tourism practices.		
Activities	1. 1Prepare state and needs assessment for the application of "green boating" including: – Assessment of the existing state with the aim to establish deficiencies of the existing regulations and environmental standards that should be observed in the planning stage for marinas and their construction and operation; it is necessary to include an overview of regulations and state of the existing marinas (establish problematic technical solutions, good and poor practices in maintaining marinas and ships, waste management,...); – Overview of good practice examples; – Definition of guidelines for constructing new marinas; – Determination of a proposal of measures and specific solutions to improve operations in the existing marinas; – Determination of proposals for changing the existing regulations. 2. Based on the results of the assessment, implement educational programmes for the staff and marina users. As a good practice example, the "green boating" concept should be implemented in remediating one of the existing marinas or when constructing a new one.		
Responsible institutions	Ministry of Sustainable Development and Tourism, Ministry of Transport and Maritime Affairs, Port Administration, Harbour Master Offices, Public Enterprise for Public Maritime Domain Management		

SOURCE: National Tourism Organisation

PRIORITY ACTION/ TITLE	LINK TO THE STRATEGIC GOAL AND MEASURES/ SUB-MEASURES	TYPE OF ACTION	IMPLEMENTATION DEADLINE
Implement pilot project of the green nautical tourism concept („green boating")	2.1 Achieve good environmental status of marine ecosystems 2.3 Stimulate development of green infrastructure 2.3.1 Implement selected projects of green mobility at sea	Demonstration action	2020
Implementation indicators	Pilot example of introducing "green boating" implemented.		
Outcome	– Impacts of marinas on marine ecosystem are reduced and there is a subsequent improvement of its state. – "Green boating" concept is applied.		
Description	Contribute to development of positive attitude towards green nautical tourism through pilot example at a selected marina; the pilot will demonstrate positive aspects of the approach that has application of optimal standards for mitigation of negative impacts on marine environment at its core.		
Activities	In the framework of project that will demonstrate application of the "green boating" concept, the following should be done: 1. Optimal site chosen – marina under construction or an operational one; 2. In accordance with the state and needs assessment for applying the "green boating" concept and in line with examples of good practices, new measures and concrete solutions for improving marina operation should be determined and applied for the established problematic technical solutions and poor practices; 3. Prepare operational instructions and educational materials to be applied in further operational regime of the marina.		
Responsible institutions	Ministry of Sustainable Development and Tourism, Ministry of Transport and Maritime Affairs, Port Administration, Harbour Master Offices, Public Enterprise for Public Maritime Domain Management, management of the selected marina		

PRIORITY ACTION/ TITLE	LINK TO THE STRATEGIC GOAL AND MEASURES/ SUB-MEASURES	TYPE OF ACTION	IMPLEMENTATION DEADLINE
Stimulate development of tourist infrastructure through a pilot project "Pedestrian and cycling route"	2.3 Stimulate development of green infrastructure 2.3.3.2 Provide incentives for implementation of green infrastructure projects in order to increase efficiency of using rural areas and increase in ecosystem services they provide 4.1 Manage coastal zone resources sustainably	Demonstration action	2020
Implementation indicators	– Project "Pedestrian and Cycling Route" prepared. – Pedestrian and Cycling Route constructed.		
Outcome	– Tourist offer is improved. – Contribution to sustainable mobility is provided. – Cycling and pedestrian tourism is integrated into programmes developed with the aim of sustainable utilisation of rural open spaces.		
Description	Cycling and pedestrian tourism is growing. Attractiveness and the need for respective type of infrastructure type is confirmed through existence of numerous routes (www.biketours.com), e.g. along the river Danube. Montenegro is already marked on the map of cycling destinations – it offers pedestrian and cycling routes in the central and mountainous region of the country, while as the coastal zone hinterland is to a lesser degree included in such an offer. Quality of the sustainable tourism offer would be significantly improved by constructing a route along the entire coastal zone, connecting attractive tourist points in a unique series. As an illustration of the idea of sustainable tourism, a concept of the pedestrian-cycling route should be developed.		
Activities	1. Develop a pedestrian and cycling route project and submit the proposal to the EU (and other relevant) support programmes. In the framework of project preparation, the following should be defined: – Cycling route concept (places it connects, tourist attractions included in the offer, accommodation capacities); – Layout of the route (joint and separated parts of cycling and pedestrian routes, parts using the existing infrastructure and new parts); – Additional infrastructure (resorts, etc.); – Comprehensive graphical solution (directions and information boards); – Construction stages; – Management/ maintenance; – Logistics/ use-related services (possibility to return to the starting point, luggage delivery, etc.). 2. After securing funds for construction, determine whether the basis for implementing the project exists in the valid spatial planning documentation and if needed, prepare targeted amendments and changes of the applicable spatial plans. 3. Develop detailed project documentation for the layout of the route. 4. Gradually (stage by stage) implement construction of the route. 5. Initiate management and marketing (promotional materials, project website, registration into databases of such routes, ...).		
Responsible institutions	Ministry of Sustainable Development and Tourism, Ministry of Transport and Maritime Affairs, and local self-governments in the coastal zone		

PRIORITY ACTION/ TITLE	LINK TO THE STRATEGIC GOAL AND MEASURES/ SUB-MEASURES	TYPE OF ACTION	IMPLEMENTATION DEADLINE
Prepare a baseline study for revitalisation of selected beaches	2.4 Establish risk management system for natural and anthropogenic hazards	Operational action	2017
Implementation indicators	– Baseline studies for revitalisation of Mogren, Petrovac, Pržno and Sutomore beaches developed. – Workshops and trainings presenting and discussing the studies organised.		
Outcome	– Knowledge on possibilities for beach revitalisation is improved. – Beach erosion is decreased.		
Description	Around the world, and particularly in the countries of the European Union and the Mediterranean, significant attention is paid to coastal erosion problems and coastal and beach protection against erosion. Coasts and beaches are treated as national natural heritage, so that any human intervention in the coastal zone requires harmonisation with the needs to preserve the environment and natural characteristics of the coast. Coastal management strategy in Europe is based on the principle of the least possible intervention with maximum protection of natural characteristics of the coast and its habitats of flora and fauna. Article 23 of the ICZM Protocol requires all the Contracting Parties to make significant efforts to prevent or mitigate effects of coastal erosion. Mogren, Petrovac, Pržno and Sutomore beaches are typical examples of erosion of Montenegrin beaches. These beaches were stable and rather spacious in the past, while today they are endangered due to intensive, often uncontrolled urbanisation of the narrow coastal zone, hydro-technical works on regulation of torrent flows that made additional quantities of materials deposited on the beaches insignificant, and construction of objects by the very coastline (coastal walls, waterfronts). The first step of the complex revitalisation project of the mentioned beaches is development of baseline studies of their revitalisation.		
Activities	1. Develop revitalisation baseline studies for Mogren, Petrovac, Pržno and Sutomore beaches so that the following is performed: – Analysis of methods for revitalisation of natural beaches, with particular reference to revitalisation projects of the beaches in the Mediterranean; – Detailed analysis of causes of loosing beach deposits; – Choice of acceptable methods (while highlighting the unacceptable ones) of beaches revitalisation, taking into account the fact that they have a status of protected natural assets and are very important for tourism development; – Analysis of possibilities to restore natural nourishment of beaches (by restoring confluences of torrent flows); – Analysis of other possibilities of beach nourishment (for example, by depositing autochthonous material dredged from the sea bottom); – Definition of guidelines and recommendations for planners of beaches' revitalisation; – Definition of urban and technical conditions for revitalisation of beaches in Montenegro given the fact that possibilities of wider application of complex beach revitalisation methods have not been awarded in-depth consideration so far. 2. Organise a series of workshops and training for technical institutions, primarily for the PE Public Maritime Domain Management.		
Responsible institutions	Public Enterprise for Public Maritime Domain Management with engagement of the Institute of Hydrometeorology and Seismology of Montenegro, and Environmental Protection Agency		

Velika plaža SOURCE: National Tourism Organisation

PRIORITY ACTION/ TITLE	LINK TO THE STRATEGIC GOAL AND MEASURES/ SUB-MEASURES	TYPE OF ACTION	IMPLEMENTATION DEADLINE
Strengthen capacities for adaptation to climate change impacts	2.4 Establish risk management system for natural and anthropogenic hazards	Systemic action	2020.
Implementation indicators	– Assessment of possible impacts of flooding caused by sea level rise and small torrent flows performed. – Adaptation measures to climate change impacts proposed. – Awareness raising workshops on climate change impacts organised.		
Outcome	– Knowledge on the use of data important for climate change impact assessment is increased in the national and regional context. – Level of awareness on climate change importance and its impacts is raised. – Contribution is provided to mitigation of risks from climate change impacts on national and regional level.		
Description	According to the climate change vulnerability model, droughts, forest fires and stormy winds have the biggest impact in the areas of Herceg Novi and Budva municipalities and southern part of the coast. Heavy rains have the biggest impact in the parts of Kotor municipality and in Budva's hinterland. From the aspect of vulnerability to sea level rise, the following areas are found to be vulnerable: confluence of the river Sutorina, Kostanjica – Risan stretch, north-western part of Vrmac, Tivat Salinas, Jaz beach and a part of Mrčevo field, Buljarica, Čanj, Velika beach, and Ada Bojana. In addition to applying the coastal setback on some of the said locations, it is necessary to develop adaptation system which also includes other important measures and instruments enabling adaptation to climate change impacts in the context of implementing adaptation measures. For this reason, priority should be given to activities that will create preconditions for implementing climate change adaptation measures and increase resilience to climate change impacts.		
Activities	1. Assess possible impacts of flooding caused by sea level rise and small torrent flows. 2. Define adaptation measures to climate change in spatial plans and relevant national strategies for the identified impacts of sea level rise and small torrent flows, including, among others: – Introduction of selected climate change adaptation technologies; – Improvement of observation and warning system in examining coastal zone vulnerability; – Improving early warning and response systems; – Modernisation and increase in the number of meteorological stations along the coastal zone; – Development of regional and local climate information services adapted to tourism and spatial planning sectors. 3. Organise workshops to exchange knowledge on suitable examples of climate change adaptation. 4. Raise awareness of all the stakeholders in tourism (both public and private sector) on the need to protect the coastal zone from damages caused by floods, droughts, forest fires, strong rains, storms, coastal erosion and high waves activities as a consequence of climate change.		
Responsible institutions	Ministry of Sustainable Development and Tourism, Institute of Hydrometeorology and Seismology of Montenegro and local self-governments in the coastal zone		

PRIORITY ACTION/ TITLE	LINK TO THE STRATEGIC GOAL AND MEASURES/ SUB-MEASURES	TYPE OF ACTION	IMPLEMENTATION DEADLINE
Implement pilot project for adaptation to climate change impacts	2.4 Establish risk management system for natural and anthropogenic hazards	Demonstration action	2020
Implementation indicators	Pilot project carried out and: – Operational programmes for implementing climate change adaptation measures on the observed location developed; – Cost-benefit analysis and assessment of costs in the event of non-implementation of climate change adaptation measures conducted; – Climate change adaptation measures incorporated into spatial plans and strategic documents.		
Outcome	– Knowledge on the use of data important for climate change impact assessment is increased in the national and regional context. – Level of awareness on climate change importance and its impacts is raised. – Contribution is provided to mitigation of risks from climate change impacts on national and regional level.		
Description	Based on the assessment of possible impacts of flooding caused by the sea level rise, priority locations with the expected strongest impacts of climate change should be defined. On these locations, a pilot project to test application of the proposed climate change adaptation measures should be carried out. It is possible to implement this activity through the development of the ICZM Plan related to variability and climate change, and by using similar plans (e.g. for Šibensko-kninska county in Croatia) as a model.		
Activities	Pilot project should be carried out on a selected location or in one of coastal municipalities so that: 1. Operational programme is developed for implementing climate change adaptation measures proposed within the assessment of the possible impacts of flooding caused by sea level rise; cost-benefit analysis and cost assessment in case of non-implementation of adaptation measures is conducted; 2. 2Climate change adaptation measures for the observed location are incorporated into spatial planning documentation and strategic documents; 3. Workshops for expert and interested public on climate change impacts and related risks, as well as on suitable climate change adaptation measures are organised.		
Responsible institutions	Ministry of Sustainable Development and Tourism, Institute of Hydrometeorology and Seismology of Montenegro and local self-governments in the coastal zone		

3. 3 Spatial planning and sustainable spatial development

PRIORITY ACTION/ TITLE	LINK TO THE STRATEGIC GOAL AND MEASURES/ SUB-MEASURES	TYPE OF ACTION	IMPLEMENTATION DEADLINE
Implement first phase in establishing spatial information system	3.1 Develop a system of sustainable spatial planning 3.1.1.3 Establish basic GIS databases on space on both national and local level	Operational action	2016
Implementation indicators	– GIS layers of spatial data including planned land uses and valid construction areas for coastal municipalities operational. – Procedures defined and human resources trained to analyse proposals of local planning documents in the consent-giving procedure, in the context of harmonisation with the plans of higher order and valid borders of construction areas.		
Outcome	– More reliable and objective procedures for planning documents analysis and assessment are established. – Construction areas are instituted and affirmed as an instrument to increase control over spatial processes and prevent illegal activities. – Human resources capacities are strengthened and there is a significant increase in efficiency as a result of using information technology.		
Description	This priority action is a part of measures for strengthening systematic monitoring and research of the state and processes in space and for development of spatial planning information system. In the coastal zone, there is continuous work on development of a number planning documents. This trend will continue in the immediate future when local planning documents will be harmonised with the SPSPCZ MNE. This requires preparedness, expertise and tools of the responsible Ministry, particularly in the procedures for issuing opinions and consents. Development of a comprehensive geographic information system in a normatively defined manner and extent requires time and resources. At the same time, the need to develop information system for servicing priority needs is evident. In GIS development, the layer of construction areas developed through the preparation of SPSPCZ MNE should be used. This initial stage can be understood as a test which will in the most practical manner harmonise the needs of users with technical requirements and possibilities.		
Activities	1. Additionally verify and update the layer of construction areas developed in preparing the SPSPCZ MNE. 2. Store data in the database. 3. Organise additional training for the staff responsible for giving opinions and consents. The system should be planned so that it enables gradual expansion in availability of data stored in the database, primarily for authorised entities (developers of planning documents), but also for wider public.		
Responsible institutions	Ministry of Sustainable Development and Tourism, Real Estate Administration		

PRIORITY ACTION/ TITLE	LINK TO THE STRATEGIC GOAL AND MEASURES/ SUB-MEASURES	TYPE OF ACTION	IMPLEMENTATION DEADLINE
Develop maritime spatial plan	3.1 Develop a system of sustainable spatial planning 3.1.3.2 Establish procedures for the application of maritime spatial planning	Demonstration action	2018
Implementation indicators	– Maritime spatial plan developed for (the entire or a part of) the marine area. – Measures to remove obstacles for introduction of maritime spatial planning defined. – Workshops strengthen the existing capacities for developing maritime spatial plans organised.		
Outcome	– Spatial planning capacities and capacities in relevant sectors for preparing maritime spatial plans are strengthened. – Procedures for the development of maritime spatial plans are established		
Description	International requirements (primarily those defined by the EU Directive establishing a framework for maritime spatial planning 2014/89/EU) and ever more pronounced conflicts in marine areas uses point to the need to manage pressures on marine ecosystem. Maritime spatial planning enables sustainable use of maritime resources while protecting valuable parts of the sea. In developing maritime spatial plan in order to optimise marine area uses, application of EcAp is proposed to determine the state and pressures on marine environment. This creates preconditions to achieve good environmental status and reduce to the lowest possible extent conflicting interests among potential users of the marine environment while maximising economic effects. Prior to developing maritime spatial plan for the entire marine area, it would be optimal to test this approach by carrying out a demonstration project for a selected area. This would help to identify obstacles, propose measures and build capacities for introduction of maritime spatial planning. Spatial scope for implementing demonstration project for maritime spatial plan should be defined in relation to the level of available data. Given the experience with the CAMP MNE project, development of the plan for the Boka Kotorska Bay is proposed, simultaneously with and by using results of the pilot project on the application of EcAp in the Boka Kotorska Bay. The project can be prepared as an individual proposal or placed into wider regional – Mediterranean/Adriatic context. Project development should comprise detailed consultations with all included and interested parties.		
Activities	To initiate maritime spatial planning, a demonstration project should first be implemented so that: 1. Type and availability of necessary data will be defined; 2. Consultations will be held for selecting an area for which the plan will be developed, starting from the initial proposal to develop the plan for the Boka Kotorska Bay on the basis of results of theoretical testing of the EcAp application in this part of marine area and results of vulnerability assessment of marine environment obtained within CAMP MNE; 3. Detailed environmental vulnerability assessment will be made for a selected marine area (Boka Kotorska Bay); 4. Maritime spatial plan of the selected marine area (Boka Kotorska Bay) will be developed; 5. Based on experiences in project implementation the existing obstacles for introducing a comprehensive system of maritime spatial planning should be analysed; 6. Measures for removing obstacles will be proposed and creation of conditions for their implementation initiated; 7. A series of workshops for strengthening capacities for maritime spatial plans development will be organised.		
Responsible institutions	Ministry of Sustainable Development and Tourism		

PRIORITY ACTION/ TITLE	LINK TO THE STRATEGIC GOAL AND MEASURES/ SUB-MEASURES	TYPE OF ACTION	IMPLEMENTATION DEADLINE
Implement analysis on feasibility of introducing urban comassation	3.1 Develop a system of sustainable spatial planning 3.2.1.1 Provide for efficient preparation of construction land – urban comassation	Operational action	2016
Implementation indicators	– Feasibility study on introduction of urban comassation carried out. – Workshops and technical training presenting and discussing the study held.		
Outcome	– Awareness on the issues solved by urban comassation is more developed, particularly on the application of instrument of efficient physical reproduction of settlements and equitable distribution of construction rights. – Understanding of the importance of harmonising individual and public interests through a transparent procedure is improved. – Urban comassation is regulated through Montenegrin legislation.		
Description	Quality reproduction of settlements without instruments such as urban comassation is next to impossible except in cases when large investors carry out comprehensive individual projects within which areas in public use are implemented. Such projects are extremely rare, and most interventions, even on rather valuable locations, are comprised of individual smaller interventions. In such situations, without quality urban regulation and land policy instruments, it is not possible to expect satisfactory quality of built environment. The main land policy instrument which serves the purpose of development of settlements is urban comassation or urban re-arrangement of plots (the second name is probably more appropriate as its connotations to a different socio-economic system compared to the existing one are lower). In brief, urban re-arrangement of plots solves two important problems i.e. it enables: – Distributional justice in allocating construction rights between different land owners; – Areas of public interests in settlements (streets, public green and other areas) without any cost for local self-governments. Using urban re-arrangement of plots, local self-government resolves the first step in preparing construction land for communal equipping without costs, through contributions in land by all the land owners within the scope of the regulatory plan. In addition, urban comassation enables a situation where quality of the built environment is based on the vision of planners and architects, and not on land owners' rights as a precondition for planning document's implementation. Nevertheless, before implementing urban comassation it is necessary to consider possibilities to introduce such an instrument, to identify possible obstacles in the system, raise awareness and increase capacities for its full application.		
Activities	1. Prepare feasibility study on urban comassation that will show costs and benefits of this instrument's application based on comparative experience of numerous developed countries which have been successfully using it for decades. This priority action could be carried out with the support of institutions for international cooperation of donor countries in which urban comassation instrument is successfully used. 2. Workshops and technical training to present the study should be prepared. Decision makers from state and local administration should be included in these workshops and technical training.		
Responsible institutions	Ministry of Sustainable Development and Tourism		

PRIORITY ACTION/ TITLE	LINK TO THE STRATEGIC GOAL AND MEASURES/ SUB-MEASURES	TYPE OF ACTION	IMPLEMENTATION DEADLINE
Implement pilot project on urban comassation	3.1 Develop a system of sustainable spatial planning 3.2.1.1 Provide for efficient preparation of construction land – urban comassation	Demonstration action	2017
Implementation indicators	– Urban comassation pilot project carried out.		
Outcome	– Awareness on the issues solved by urban comassation is more developed, particularly on the application of instrument of efficient physical reproduction of settlements and equitable distribution of construction rights. – Understanding of the importance of harmonising individual and public interests through a transparent procedure is improved. – Urban comassation is regulated through Montenegrin legislation.		
Description	Preparation of the feasibility study on introducing urban comassation should be followed by a pilot project aiming to demonstrate use of such an instrument in practice. Urban comassation regulates land to ensure that plots are formed by their position, size and shape in such a manner as to be suitable for construction and spatial arrangement. In the process, old borders of the plots are deleted, and a unique land mass is formed which is reshaped into new urban plots in line with the requirements for public areas and planned construction conditions. As a result, plots of smaller size but greater market value are created. If the pilot project is implemented prior to formal establishment of the legal basis for comassation, it can be implemented as a voluntary procedure. In such a case, it will not be necessary that all the official bodies participating in the procedure are established, however it will be necessary to enable essential technical steps which make urban comassation. Certain exemptions to the existing construction land arrangement system could also be defined, especially for preparation of construction land for communal equipping. They could be replaced by instruments and procedures constituting urban comassation. Special measures to incentivise participation of land owners should be foreseen within the scope of the pilot project. (It is suggested to explore possibilities to cooperate with GiZ on this issue as they carried out similar activities in Serbia)		
Activities	1. Select appropriate locations in cooperation with responsible bodies from state and local administrations; the simplest option is to choose a part of undeveloped construction land for a planned settlement (one location can be for mixed but mainly housing purposes and another one for business purposes). 2. Obtain or prepare detailed planning documentation. 3. Ensure ad hoc instruments (if there are no official ones) for transparent assessment of land value, as well as for assessment of costs for arrangement of land in accordance with planning documents. 4. Include land owners in the project and brief them on the advantages of urban comassation. 5. Carry out technical steps of urban comassation. 6. Provide for experience exchange through various forms of participation (workshops, public debates, media presentations), primarily in such a way as to enable land owners to present their experiences and with contributions of consultants from developed countries where urban re-arrangement of plots or comassation is done routinely.		
Responsible institutions	Ministry of Sustainable Development and Tourism		

PRIORITY ACTION/ TITLE	LINK TO THE STRATEGIC GOAL AND MEASURES/ SUB-MEASURES	TYPE OF ACTION	IMPLEMENTATION DEADLINE
Prepare guidelines for planning rehabilitation and renewal of inadequately urbanised areas and conduct professional development programmes	3.1 Develop a system of sustainable spatial planning 3.2.1.2 Create more efficient mechanisms for prevention of illegal construction 3.2.2.2 Strengthen local administration capacities	Operational action	2017
Implementation indicators	– Handbook with guidelines for planning rehabilitation and renewal of inadequately and illegally urbanised areas developed. – Professional development programme conducted for spatial planners, local administration staff working on preparation, development and implementation of planning documents, and civil sector representatives.		
Outcome	– Spatial planning and other capacities for development of quality and viable plans, programmes and projects for rehabilitation and regeneration of inadequately and illegally urbanised areas in the coastal zone are improved. – Awareness on manifold importance of the quality of built environment is strengthened.		
Description	The quality of developed space is a basis for quality of life and an indicator of construction and general culture of a community. It is moreover important for regions, such as the coastal zone of Montenegro, which have potentials and ambitions for high quality tourism development. Analyses and field assessments show that a high share of developed areas are of unsatisfactory quality. A high share of illegal construction contributes to the problem. For this reason it is important to systemically strengthen capacities of spatial planners, local administrations and civil sector representatives for prevention, remediation and renewal of inadequately urbanised areas. The central part of this priority action is development of a practical handbook which should guide the existing remediation and renewal activities for inadequately urbanised areas.		
Activities	1. Develop a handbook defining the possible scope of intervention which, among others, may include: 2. Raising standard of areas in public use (street network reconstruction, planting tree alleys, arrangement of park, landscape and recreational areas, cycling paths, arrangement of promenades, particularly along the coast, beaches and bathing areas,...); 3. Activities of functional maintenance and beautification of private areas and objects (façade restoration, cleaning, arrangement of gardens and yards, energy efficiency improvements); 4. Restoration and maintenance of infrastructure systems; 5. Comprehensive restoration projects of predominantly construction nature that link, depending on local conditions, social, economic, protection, cultural and spatial aspects. 6. Remediation of illegal construction will soon gain on importance, especially in semi-urban areas closer to the coastline, including their communal equipping, public areas development, particularly green ones, transport network reconstruction, etc. 7. The importance of quality urban and architectonic design, and especially of preservation, looking after and improving inherited construction culture and spatial identity of settlements and areas should be emphasised in the handbook. It is necessary to sum up experiences compare them with similar projects from other countries, particularly in relation to formalising illegally developed areas. The basic criteria in proposing solutions must be their viability. 8. Professional development and capacity building activities, in the form of workshops, can be implemented when working materials for the handbook are prepared. It is desirable to elaborate additional practical examples as a result of workshops, particularly as a result of interaction of planners and architects, representatives of local administrations and NGO sector		
Responsible institutions	Ministry of Sustainable Development and Tourism, Chamber of Engineers of Montenegro, local self-governments on whose territory the pilot project is located		

Settlement near Sozina SOURCE: CAMP

PRIORITY ACTION/ TITLE	LINK TO THE STRATEGIC GOAL AND MEASURES/ SUB-MEASURES	TYPE OF ACTION	IMPLEMENTATION DEADLINE
Implement pilot project on rehabilitation and renewal of inadequately urbanised areas	3.2 Provide wider preconditions for the spatial planning system functioning 3.2.1.2 Create more efficient mechanisms for prevention of illegal construction 3.2.2 Strengthen technical capacities	Operational action	2018
Outcome	– Successfully implemented demonstration project of rehabilitation and renewal of inadequately urbanised areas		
Expected change	– Spatial planning and other capacities for development of quality and viable plans, programmes and projects for rehabilitation and regeneration of inadequately and illegally urbanised areas in the coastal zone are improved. – Awareness on manifold importance of the quality of built environment is strengthened.		
Description	The aim of the activity is practical implementation of a project to improve the quality of built environment by strengthening capacities of all the involved entities. This project can be implemented after the handbook on planning rehabilitation and renewal of inadequately urbanised areas is developed as a way of practically testing handbook's recommendations. Within the same spatial area, this can be linked to projects on introducing urban comassation, legalisation of illegally built objects, as well as to projects dealing with energy efficiency improvements.		
Activities	1. In cooperation with responsible bodies from state and local administration the appropriate location should be selected having typical problems of illegal construction – inadequate public areas, insufficient communal infrastructure, problematic design. In choosing locations, it would be good to select ones where preparation of detailed spatial plan tasked precisely (among other things) with urban rehabilitation is under way. 2. Include owners of land and objects in the project and brief them on the benefits of urban rehabilitation, particularly in terms of raising standards of arrangement and consequent increases in real estate value. 3. After accepting the planning solution, together with local self-government representatives, elaborate all costs related to the implementation of this solution, and define implementation stages and funding sources. 4. After adoption of the planning document, in cooperation with local self-government, initiate execution of the plan, particularly those parts that refer to public areas and communal infrastructure. 5. Perform evaluation of the whole project in the sense of identification of important obstacles and problems, particularly those of systemic nature. 6. Exchange of experiences should be enabled through various forms of participation (workshops, public debates, media presentations), primarily in such a way as to enable all the participants to present their experiences.		
Responsible institutions	Ministry of Sustainable Development, Chamber of Engineers of Montenegro, municipalities on whose territories the pilot project is located		

PRIORITY ACTION/ TITLE	LINK TO THE STRATEGIC GOAL AND MEASURES/ SUB-MEASURES	TYPE OF ACTION	IMPLEMENTATION DEADLINE
Prepare a guide for implementation of the SPSPCZ MNE and conduct professional development programmes	3.2 Provide wider preconditions for the spatial planning system functioning 3.2.2.1 Develop professional development programmes and strengthen competencies of spatial planners and architects	Operational action	2016
Implementation indicators	– Handbook with guidelines for the implementation of SPSPCZ MNE and harmonisation of SUPs of the coastal zone municipalities with SPSPCZ MNE developed, and its application tested on a selected site. – Amendments to the Law on spatial planning and construction of objects and the Rulebook on closer content and form of the planning document, land use criteria, urban regulation elements and unique graphic symbols prepared. – Professional development programme for spatial planners and local administration staff working on preparation, development and implementation of planning documents carried out.		
Outcome	– Spatial planning capacities for developing quality planning documents in the coastal zone are improved. – Capacities of local administration staff working on preparation, development and implementation of planning documents are strengthened.		
Description	Adoption of the SPSPCZ MNE marks an important step in spatial development planning in the coastal zone. As the first regional spatial plan in Montenegro that also serves the purpose of implementing numerous requirements of the ICZM Protocol, this planning document brings methodological and content-wise novelties. They on the other hand require development of capacities needed for its better understanding and successful application. Adoption of the SPSPCZ MNE also initiates the process of harmonisation of the coastal municipalities' SUPs as well as other local planning documents. The aim of this priority action is to timely ensure availability of spatial planning capacities, as well as of capacities of local administration staff working on preparation, development and implementation of spatial planning documents of the coastal municipalities.		
Activities	1. Development of the Handbook that will explain in more detail requirements of the SPSPCZ MNE in relation to municipalities' SUPs with an emphasis on the provisions relating to: – Revision of construction areas based on land use plan and SPSPCZ MNE numerical criteria; – Application of coastal setback; – More detailed planning of open rural areas; – Landscape planning; – Preservation of cultural heritage; – Maritime planning; – Use of database with results of vulnerability assessments of the coastal zone; – Application of flexibility instruments integrated in the provisions and guidelines of the SPSPCZ MNE; – Areas of direct SPSPCZ MNE application.		

Activities	Given the importance and size of open rural areas, a part of the handbook should be in the form of guidance for planning and construction of objects and other interventions in valuable rural areas. An important topic is preservation of identity of traditional rural settlements which is based on respecting uniqueness of the landscape context and relationship towards it. The topics that will be elaborated in the handbook in a practical manner among others include: – Preservation of historical image, dimensions and outlines of settlements, inherited values of landscapes and vistas; – Preservation and restoration of traditional construction (particularly old stone houses) as well as of all other historical objects and monuments as bearers of spatial recognisability; – Application of modern rural architecture, harmonised with the characteristics of space; – Maintaining of the historic routes of roads (old roads, walking paths, field and forest cut through paths); – Preservation of natural values of contact areas next to protected units as well as of values of landscapes that are not protected such as shores, natural forests, cultivated landscapes; – Ecosystem approach principles; – Climate change adaptation principles, – Application of sustainable infrastructure development and waste management. As for its content, due attention should be paid to the handbook being complementary with the existing publications of similar purpose. It is desirable to offer model provisions and guidelines for local planning documents in this publication. Also, ways and criteria of quality assessment of planning and architectonic interventions in the consent-giving procedure should be suggested, i.e. of the outcomes of construction acts. The handbook should explain in more detail the application or elaboration of indicators to local planning documents. If proved to be rational, a guide for planning and construction of objects and other interventions in valuable rural areas could be prepared as a separate publication. One of the preconditions for developing the handbook is completion of changes and amendments to the Law on spatial planning and construction of objects and particularly to the Rulebook on closer content and form of planning documents. If the Rulebook is not completed, preparation of the Handbook should be coordinated with changes of the Rulebook, particularly concerning planning of construction areas and application of Article 77. 2. Handbook preparation should be followed by its testing in a selected area; an optimal situation would be to test it on an integral arrangement of a rural area while presuming active public participation. 3. Professional development activities, in the form of workshops, can be implemented when working materials for the handbook are prepared. Practical examples of situations from the SPSPCZ MNE and coastal municipalities should be used in the handbook. A part of practical examples will be created as a result of workshop deliberations in the handbook drafting stage.
Responsible institutions	Ministry of Sustainable Development and Tourism, Chamber of Engineers of Montenegro, local self-governments in the coastal zone of Montenegro

4. Achievement of satisfactory performances of the coastal zone economic development

PRIORITY ACTION/ TITLE	LINK TO THE STRATEGIC GOAL AND MEASURES/ SUB-MEASURES	TYPE OF ACTION	IMPLEMENTATION DEADLINE
Prepare project proposal to incentivise green economy development	4.1 Manage coastal zone resources sustainably 4.2 "Green" the development of the coastal zone	Demonstration action	2018
Implementation indicators	– Project proposal to incentivise green economy development prepared.		
Outcome	– The approach that nature preservation does not represent an obstacle but development opportunity is demonstrated through the project's implementation.		
Description	Particularly important obstacles that make a shift of the coastal zone economy towards sustainability more difficult include: – Aspiration to gain short-term benefits is a frequent characteristic of the existing conditions, accompanied with unsustainable consumption of natural resources, which minimizes vitality of economic development; – A lack of quality development initiatives in which biodiversity, landscape diversity and attractiveness based on them are integrated into economic prosperity and quality of life as basic comparative development advantages; – A lack of public awareness on the value of services offered by ecosystems and the importance of the environment for society's prosperity, as well as insufficient promotion of socially responsible behaviour of companies (primarily of the banking sector), particularly those supporting green projects. That is why it is necessary to: 1. Strengthen capacities of coastal zone planning, development and protection structures to provide quality support to "greening" the economy i.e. to steering economic activities in the direction of sustainability;		

Description	2. Support preparation, implementation and monitoring of demonstration projects to show different ways of supporting green economy development (from technical to direct financial assistance). To encourage development and implementation of project ideas, various assistance should be provided (grants, exceptionally favourable loans, guarantees, different types of technical assistance, etc.), depending on the kind and importance of the project. This is a complex system which should include banking sector and other partners who could be providing assistance. Projects contributing to the following can be given as examples: – Improving local economy and rural development; – Developing new elements of tourism offer through opening of the hinterland for tourism (for example, by implementing the project "The architecture of fortifications path ") and alleviating the narrow coastal zone from pressures to which it is exposed; – Preventing degradation of cultural assets and revitalisation of cultural landscape; – Increasing knowledge, including knowledge on utilisation of different available funds. 3. Raise awareness on the importance of preserving recognisability and authentic values of the coastal zone. Based on the above, it is a priority to initiate development and implementation of a project, over the period of at least five years, which will enable application of the aforementioned approach. If possible, it would be optimal to enable involvement of banks and / or other financial institutions already in the initial phase of preparing project documentation and project implementation. Preparation of project documentation is estimated to last 12-15 months.
Activities	1. Preparation of a draft project proposal, including definition of objectives, expected outcomes, and implementation indicators. 2. Consultations with key technical and management institutions, local self-governments and civil sector on harmonising objectives and expected project outcomes. 3. Preparation of detailed project documentation. 4. Final harmonisation with partners in the project and key participants in project implementation.
Responsible institutions	Ministry of Sustainable Development and Tourism

5. Funkcionisanje sistema upravljanja obalnim područjem

PRIORITY ACTION/ TITLE	LINK TO THE STRATEGIC GOAL AND MEASURES/ SUB-MEASURES	TYPE OF ACTION	IMPLEMENTATION DEADLINE
Provide support for the functioning of the ICZM coordination mechanism	5.1 Establish functional coordination mechanism for integrated management of the coastal zone	Systemic action	2020
Implementation indicators	– Work programmes for the ICZM Council, ICZM Department and ICZM Coordinating body prepared. – Work programme for the PE for Public Maritime Domain Management (future Agency for Coastal Zone Management) from ICZM perspective prepared. – Technical assistance programmes aimed at building institutional capacities for ICZM carried out. – Annual ICZM Action Plans of entities responsible for the NS ICZM implementation elaborated, approved and carried out. – Annual NS ICZM measures and actions harmonised with annual action plans or allocated funds of responsible entities.		
Outcome	– A system is established in which ICZM department has appropriate capacities to stimulate operation of relevant departments and institutions, and identify problematic areas and possibilities for harmonised action. Based on this, it elaborates operational proposals and submits them to decision makers in an appropriate (presentable, understandable) manner (through the ICZM Council). – Harmonisation of operation of departments/ responsible entities in the coastal zone management activities is achieved. – The Council and the Coordination body exercise their functions and tasks in implementing the ICZM policy.		
Description	Implementation of the ICZM Protocol and the NS ICZM requires a functional coordinating mechanism for integrated coastal zone management. Its establishment through creation of the Department, Council, and ICZM Coordinating body requires that adequate technical and expert support for building institutional capacities for ICZM are provided for. Technical assistance directed towards ensuring coordinating mechanism's functionality may include expert advice, experience exchange, and capacity building of the employed in the ICZM Department and in the Agency for Coastal Zone Management. Establishing inter-departmental cooperation in implementing measures, sub-measures and actions of the NS ICZM should be in the centre of attention. This can be primarily achieved through creation of conditions for implementing the tasks of the Council and ICZM Coordinating body.		
Activities	1. Establish the ICZM Department, Council and Coordinating body. 2. Elaborate and approve detailed work programmes for the said bodies. 3. Based on the objectives and measures of the NS ICZM as additionally considered through inter-sectoral coordination mechanisms, detailed annual action plans of responsible entities should be prepared. Such action plans must be harmonised with annual work programmes of departments/ responsible entities taking part in the work of the ICZM Coordinating mechanism i.e. with their annual budget framework. Initially, implementation of this is coordinated by the ICZM Department in cooperation with relevant departments included in the operation of the ICZM Council. 4. Approve annual ICZM Council work programmes, with accompanying action plans of responsible entities. 5. Monitor implementation of actions on an annual level.		
Responsible institutions	Ministry of Sustainable Development and Tourism, ICZM coordinating body, ICZM Council, Public Enterprise for Public Maritime Domain Management		

PRIORITY ACTION/ TITLE	LINK TO THE STRATEGIC GOAL AND MEASURES/ SUB-MEASURES	TYPE OF ACTION	IMPLEMENTATION DEADLINE
Introduce monitoring of performances and outcomes of institutions included in the ICZM system	5.2 Strengthen public administration capacities	Systemic action	2020
Implementation indicators	– Analyses of performances of the institutions involved in ICZM MNE – Programme to monitor operational performances introduced – Professional development programme carried out for civil servants responsible for ensuring measurability of results		
Outcome	– Operating and proceeding in line with results of performance monitoring is established in the ICZM system. – Positive experiences in the functioning of the ICZM system are applied in other public administration segments.		
Description	Application of the good governance principles is the goal to which public administration system in Montenegro should strive. However, such changes are demanding and time-consuming. To demonstrate application of good governance principles, primarily by introducing the system to monitor performances, its application can be tested in the ICZM system. The first five-year implementation period of the NS ICZM will be the initial test phase and based on experiences acquired in its implementation, it would be desirable to propose recommendations relevant for application in the wider context of public administration's work (e.g. through cooperation with Human Resources Administration). One of the key preconditions for introducing and applying the system to monitor institutions' performances is capacity building and development of competences of officials responsible for implementing the system for measurability of work results or outcomes.		
Activities	1. Based on the existing relevant documents (e.g. study on developing administrative capacities in the environmental sector in Montenegro), an in-depth initial analysis should be conducted to assess functioning of institutions responsible for ICZM. 2. Based on such an analysis, specific recommendations should be provided to introduce the system to monitor performances in the ICZM system. 3. In line with recommendations, introduction of the system to monitor performances of institutions responsible for ICZM should be initiated, with the assistance of an independent technical organisation and optimal use of programmes available on the market. Programmes (optimally available computer programs) have to be simply applicable, adaptable to the needs of involved institutions, acceptable in terms of costs and sustainable (not requiring constant link with the organisation installing the program). 4. It is necessary to conduct a training programme in the form of workshops (participation should be ensured for employees of the Human Resources Administration of Montenegro, MSDT and other subjects responsible for ICZM). The first stage of activities' implementation (until performance monitoring system is integrated into public administration system) is three years, after which training programme and additional experimental stage of self-implementation should be continued over the next two years.		
Responsible institutions	Ministry of Sustainable Development and Tourism, Human Resources Administration of Montenegro		

PRIORITY ACTION/ TITLE	LINK TO THE STRATEGIC GOAL	TYPE OF ACTION	FRAMEWORK IMPLEMENTATION DEADLINE
Introduce reporting on the state of the coastal zone through the use of indicators	5.3. Establish monitoring of the coastal processes	Operational action	2020
Implementation indicators	– The existing indicators for monitoring the state of the coastal zone improved and new ones introduced. – Reports on the state of the coastal zone are prepared in accordance with EcAp and defined objectives for achieving good ecological status of marine environment.		
Outcome	– Multidisciplinary indicators for monitoring the state and process of the coastal zone are applied. – Information on the state of the coastal zone are improved. – Information are available and useable for different planning, remediation and research activities.		
Description	Ensuring compatibility and link of individual databases and their upgrading with missing indicators is of priority significance for establishing a good quality basis for: development and implementation of plans and programmes for coastal zone resources use, monitoring of the state of the environment (marine ecosystem, biodiversity, and environmental segments), use of coastal zone areas, for defining the regime of public maritime domain use and management, and for identification and monitoring of natural hazards impacts . Linked to this, it is essential to improve the system of specific and multidisciplinary indicators on the state of the coastal zone.		
Activities	1. Perform analysis of the existing databases and identify deficiencies concerning data collection and processing methods i.e. deficiencies of input data provided by scientific and expert institutions that are necessary to calculate indicators for monitoring the state of the environment, space, coastal processes, and natural and anthropogenic hazards. 2. In line with results of the analysis, propose introduction of the missing specific and multidisciplinary indicators on the state of the coastal zone, starting from information available within the existing databases, in accordance with the relevant national regulations as well as with obligations from transposing the EU legislation into the national legal framework, obligations stemming from Montenegro's membership in the relevant international organisations and UN Conventions, and outcomes of consultations with the expert public. In this context, transposition of the Marine Strategy Framework Directive 2008/56/EC, harmonisation with MEDPOL programme and application of ecosystem approach in the framework of the Barcelona Convention implementation is a priority. 3. Define responsibilities for collecting input data for each indicator, and identify target and limit values. 4. Define common data processing format in individual databases. 5. Define data exchange rules between entities responsible for management of individual databases. 6. Establish a model to ensure mutual compatibility, links and public use of databases. 7. Elaborate reporting template by applying multidisciplinary indicators of the state and processes of the coastal zone. 8. Prepare comprehensive integrated report on the state of the coastal zone.		
Responsible institutions	Ministry of Sustainable Development and Tourism, Environmental Protection Agency, Public Enterprise for Public Maritime Domain Management, Institute of Hydrometeorology and Seismology of Montenegro, Centre for Eco-toxicological Research Ltd - CETI, Marine Biology Institute		

7.3 Financing implementation of the Strategy

From a financial point of view, priority actions, measures and sub-measures have a diverse structure of potential financing sources:

1. A significant share of activities may be planned through annual budgets of the departments to be involved in the NS ICZM implementation. This in particular refers to the plan of regular legislative activities in accordance with the Montenegro`s Programme for Accession to the EU 2014-2018. For a significant number of activities, it may suffice to restructure budgets of the departments that will be involved in the NS ICZM implementation.

2. For a part of the proposed activities, particularly those comprising remediation programmes, various pilot projects and application of good practices, it is necessary to provide additional funding from the national (capital) and local government budgets, as well as from complementary sources such as the EU pre-accession assistance. Indicative funds available under the current financial perspective are shown in annex 4 (programme areas relevant from the standpoint of allocation of funds for the NS ICZM indicative priority actions are shown the first part of the table providing an overview of funds available under IPA). National IPA lines for socio-economic and regional development (environment and climate actions; transport), as well as for agriculture and rural development, are important for the needs of implementing the NS ICZM cross-sectoral approach.

3. As for multi-beneficiary IPA priorities, horizontal assistance under all TAIEX lines is particularly useful for fast actions related to legislation, assistance with unification of indicators necessary for comparative analyses and monitoring, initiation of cooperation with IMF, WB, OECD and other partners, mobility of researchers and students, youth actions and especially for civil society's initiatives and communication strategy towards media. Other important areas are participation in and activities of ECRAN network, as well as assistance for maritime spatial planning (GGF). Western Balkan Investment Framework (WBIF) is important for investments in environmental protection, energy, transport and socio-economic development, as well as for preparation of project documentation.

4. Close attention should be paid to what is referred to as the Union` s programmes for the period 2014-2020 – both those that are already open for Montenegro and those that still need to be accessed (Horizon 2020, COSME - Programme for the Competitiveness of Enterprises and SMEs, LIFE – Programme for the Environment and Climate Change, Employment and Social Innovation, Health for Growth, Creative Europe, Consumer, Europe for Citizens, EU Civil Protection Mechanism etc.).

5. Under the Union's pre-accession assistance programmes special attention is devoted to the civil society activities, and particularly to the projects implemented in partnership with the Ministry of Sustainable Development and Tourism (for example, priority action referring to the proposed project Space and Children might be considered under this group).

6. For a part of activities, available funding of in-

ternational development organisations and the EU partners in this area (combined mechanisms of grants and loans) should be used, as well as EBRD and EIB credit lines and other sources.

7. Finally, it is necessary to find, among the sources mentioned above, an adequate financial framework to support mechanisms for coordinating, managing and monitoring the Strategy's implementation in a sustainable manner.

In the Opinion on Montenegro's preparedness to start accession negotiations with the EU from November 2010, the EC stated that full harmonisation with the EU standards in the area of environment might be achieved only in the long-run. In view of the Commission, this is the only chapter where full harmonisation will not be possible in the mid-term period, which creates room for negotiation on transitional deadlines for the full compliance with standards. This opens a possibility to indicatively plan full implementation of some financially highly demanding requirements for a period after completion of accession negotiations. At that stage Montenegro could, as a potential future EU member state, access more substantial EU instruments of economic, social and territorial cohesion (CAP, EFS, ERDF, Cohesion Fund etc.). From the aspect of the NS IZCM measures and sub-measures planned for implementation by 2030, as well as from the aspect of systemic priority actions to be undertaken by 2020, this would mean that in the period after 2020 the EU cohesion policy and structural instruments funds open for member states could be also included in the budget frameworks for projects.

The Analytical review on the level of harmonisation of Montenegro's legislation with the EU acquis for chapter 27 – Environment and climate change (February 2014) also states that the overall harmonisation with the EU environmental acquis requires significant investments. In addition, it is necessary to have strong and well equipped administration at the national and local levels. Since the costs of harmonisation with the EU acquis in the area of environment and climate change will be high, the European Commission assessed that "Montenegro must provide adequate financial resources and align available funding with the plan for harmonisation and implementation of legislation. Montenegro should be able to complete legislative harmonisation until the date of accession, but the limited financial resources for environmental protection investments (including investments for ICZM) determine dynamics of implementation of harmonised legislation and compliance with demanding standards in this area. At the same time, administrative capacities should be strengthened considerably and structures for coordination of policies, implementation and supervision should be set up."

Having in mind the long-term development framework defined under the NS ICZM as well as the proposed priority actions, it is important, also from the aspect of securing the financial resources, to keep in mind the fact that there are several dozens[99] of strategies in Montenegro today. Various departments are responsible for their implementation, without a central coordination mechanism in place. Consequently, there is no a mechanism for "harmonisation" of accompanying action plans which reduces synergetic effect and increases the risk of overlapping. Reporting on the implementation of these documents is a complex process involving inter-sectoral cooperation and it is a major effort for the entire administration. Also, it may be concluded that there is a whole range of important development projects which cumulatively exceed medium-term investment capacity of the budget

99 / For example, Serbia has 169 different strategic documents.

which is why many of the planned activities are postponed, regardless of whether they are defined as sectoral or national development priorities. At the same time, all the strategic development documents are "restricted" by macroeconomic development guidelines, mid-term budget projections, annual budget law, pre-accession assistance priorities, as well as by the borrowing plan and capacity to manage the country's public debt.

That is why the alignment of activities undertaken by different departments and coordinated distribution of their tasks in implementing the NS ICZM measures, sub-measures and actions (based on the proposal of responsible entities from the NS ICZM Action Plan) will represent a test of successful functioning of the ICZM coordination mechanism. In carrying out this task, it will be necessary for the priority set of actions to be integrated into the departments' work programmes and budgets for 2016. This is to be done primarily through cooperation of the unit for integrated coastal zone management with representatives of the departments involved in the work of the ICZM Council. Until expiry of the mid-term period in 2020, it will be necessary to continuously harmonise priority actions with annual work programmes of the departments competent for implementation of measures, while also harmonising priority actions with their medium-term programme and budget projections. The NS ICZM priority actions should be aligned with the medium-term budget projections of the Ministry of Finance also covering macroeconomic guidelines, public debt management and inclusion in the system of the European Commission's new economic governance.[100]

As a result of the above-mentioned coordination and alignment of priorities in the function of time and in accordance with the real financial framework, it will be necessary to prepare the annual plan of actions for 2016 in the course of 2015. The plan should be elaborated in accordance and aligned with determined financial sources including budget and project funds, as well as the funds from the EU pre-accession programmes.

100 / Montenegro will implement it in cooperation with the Directorate General for Economic and Financial Affairs (entails preparation of annual macroeconomic and fiscal programmes i.e. of national economic reform programmes, and preparation of the biannual growth and competitiveness programmes).

08

MONITORING IMPLEMENTATION OF THE STRATEGY

St. Nikola church (Crkva Sv. Nikole) SOURCE: CAMP

Progress monitoring through application of indicators is an indispensible element in public policies (strategies, plans, programmes) implementation. This is particularly relevant for implementation of public policies significant for the management of processes in the coastal zone, primarily for follow up and evaluation of results and outcomes. This as density of natural and social structures and processes makes the coastal zone a particularly complex system which requires continued monitoring and evaluation of the state.

Changes resulting from a strategy or plan implementation, including those planned – expected, but also the unplanned ones that can pose a problem, are recorded through monitoring. Success in the implementation of a policy or a strategic document is thus measured for two reasons: 1) to assess progress in implementing the set goals, measures, and actions, and 2) to enable comparability of state and trends both in national and international context. Based on achieved progress it is possible to perform periodic adjustments of monitored goals, measures and actions.

Choice of indicators is of crucial importance for successful assessment of effectiveness of measures and policies. For this reason, the following approach has been applied in choosing NS ICZM indicators:

- Indicators of the NS ICZM implementation have been proposed despite existing limitations stemming from the still evident weaknesses in collecting and processing data in almost all the areas relevant for ICZM. The expectation is that progress will be achieved by improving monitoring system on the state of space, the environment, the impacts of hazards and coastal processes.
- Indicators that are already monitored or can be introduced into the monitoring system in a relatively short period have been selected for monitoring the NS ICZM implementation, to the extent possible. In addition, due attention was paid to achieving as high a compatibility as possible with indicators that are part of the reporting requirements to the relevant international organisations.
- The need to include different kinds of indicators such as process, impact or outcome (or state) indicators was also taken into account. Nevertheless, due to limitations in quantitative presentation of statistical data on impacts and outcomes, long-term character of defined measures and sub-measures, process indicators are prevalent.
- Appropriate indicator has not been assigned to every measure; certain indicators have been defined for specific groups of measures or sub-measures in thematic areas of the strategy. By defining target values of indicators in 2020, a qualitative or quantitative assessment of the expected mid-term outcome of the implementation of measures and sub-measures is enabled.
- Indicators and their target values have a qualitative or quantitative character depending on possibilities to measure/ quantify results of measures and sub-measures to which they refer. Given the present limitations, a smaller number of quantitative indicators have been proposed when assessed they would enable an objective assessment of the achieved progress in combination with qualitative indicators.

Proposal of main indicators for monitoring progress

with the NS ICZM implementation is presented in Table 8-1 below. In the process of implementing the Strategy, continued upgrade of the main indicators should be planned in accordance with the expected progress in establishing information system on the coastal zone state and processes i.e. in accordance with improvements in data collection, processing and reporting.

The first progress report should be prepared by reporting on the main indicators in the second year of the NS ICZM implementation, while attempting to establish annual reporting afterwards. Since time horizon for completion of the NS ICZM priority actions is 2020, comprehensive review of indicators should be conducted after expiry of five-year period of the Strategy implementation.

Progress reports should be submitted for review to the ICZM Council i.e. to the Government of Montenegro with the aim to identify deficiencies and needs in implementing the NS ICZM.

Table 8-1: Main indicators for monitoring the NS ICZM implementation

THEMATIC AREA	1 Preservation of nature, landscape and cultural assets
INDICATOR	TARGET VALUE IN 2020
1. PERCENTAGE OF NATIONAL REGULATIONS HARMONISED WITH INTERNATIONAL REQUIREMENTS ON BIODIVERSITY PROTECTION AND APPLICATION OF ECOSYSTEMIC APPROACH	100%
2. SURFACE AREA (ha) AND PERCENTAGE (%) OF THE COASTAL ZONE WHERE SPECIES AND HABITAT TYPES HAVE BEEN MAPPED AND PROTECTION MEASURES DEFINED	Trend of increase
3. LOSS OF SURFACE AREA OF THE COASTAL ZONE WITH NATURAL HABITATS IN RELATION TO THE STATE OF LAND COVER DEFINED UNDER IMPLEMENTATION OF THE CORINE LAND COVER PROGRAMME	Trend of decrease
4. NUMBER OF ESTABLISHED MARINE PROTECTED NATURAL ASSETS	On all the sites proposed for protection in the SPSPCZ MNE, or at least on 3 sites
5. PERCENTAGE (%) OF THE TERRESTRIAL PART OF THE COASTAL ZONE PROTECTED ACCORDING TO DIFFERENT CATEGORIES OF PROTECTED NATURAL ASSETS	17%
6. MAPPING OF DISTRIBUTION OF IMPORTANT TYPES OF MARINE HABITATS	Trend of increase
7. NUMBER OF RESTORED CULTURAL ASSETS AND FUNDS (EUR) DIRECTLY INVESTED IN RESTORATION OF CULTURAL ASSETS ANNUALLY	Trend of increase
8. SURFACE AREA (ha) AND PERCENTAGE (%) OF THE COASTAL ZONE FOR WHICH LANDSCAPE TYPOLOGY HAS BEEN DEFINED	100%
9. STRATEGIC ENVIRONMENTAL ASSESSMENT REPORTS THAT HAVE SIGNIFICANTLY IMPROVED EVALUATION OF SPATIAL PLANS (THROUGH INNOVATIVE SPATIAL AND/ OR TECHNICAL SOLUTIONS, DEVELOPED ALTERNATIVES, MEASURES FOR PREVENTION, MITIGATION OR ELIMINATION OF NEGATIVE IMPACTS ON THE ENVIRONMENT)	Trend of increase

101 / In accordance with the Law on waste management

102 / In accordance with the Law on waste management

THEMATIC AREA	2 Development of infrastructure for pollution prevention and remediation
INDICATOR	TARGET VALUE IN 2020
1. TRIX INDEX VALUE	– At open sea within the range 1-4 (excellent environmental status) – In the Boka Kotorska Bay 4-5 (good environmental status)
2. INDICATORS FOR REACHING GOOD ENVIRONMENTAL STATUS (GES) OF THE SEA: – content of nutrients, chlorophyll a, oxygen and transparency – content of contaminants in water, sediment and biota (content of heavy metals and persistent organic pollutants (POPs) in bio-indicators, primarily mytilus galoprovincialis) – content of intestinal enterococci – Harmful Algal Blooms – HABs – marine litter – concentration of priority pollutants at hot-spot locations	– Within natural values and with a downward trend; BOD5 below the value of 8 – Below EACs (Environmental Acceptable Concentrations) for reference concentrations with downward trend (Shellfish water directive on inorganic contaminants in shellfish 629/2008/EC) – Within prescribed standard values – Without harmful algal blooms – Quantity of marine litter is decreasing – Stay within prescribed values or have downward trend
3. POLLUTION LOAD FROM LAND-BASED SOURCES (calculated according to the MED POL methodology on NBB (national baseline budget of pollutants))	Continued downward trend compared to 2004 baseline
4.a CONNECTION TO SEWAGE NETWORK 4.b SHARE OF TREATED WASTEWATER	4.a 85% 4.b 80%
5. SHARE OF COLLECTED MUNICIPAL WASTE	100%
6. SHARE OF COLLECTED MUNICIPAL WASTE RECYCLING	50%[101]
7. SHARE OF CONSTRUCTION WASTE RECYCLING	70%[102]
8. SHARE OF PROCESSED INDUSTRIAL WASTE	Trend of increase
9. FUNDS ALLOCATED FOR GREEN MOBILITY PROGRAMME IMPLEMENTATION AT THE NATIONAL AND LOCAL LEVEL	Trend of increase
10. USE OF ELECTRIC AND SOLAR ENERGY VEHICLES	Trend of increase

THEMATIC AREA	3 Spatial planning and sustainable spatial development
INDICATOR	TARGET VALUE IN 2020
1. THE EXTENT TO WHICH CONSTRUCTION AREAS IN THE COASTAL MUNICIPALITIES ARE BUILT-UP OR USED	30%
2. SPATIAL INFORMATION SYSTEM	Functional
3. REGULAR ANNUAL REPORTING ON SPSPCZ MNE IMPLEMENTATION BASED ON DEFINED INDICATORS (FROM TABLE 8-2) AND BY USING DATA FROM THE SPATIAL INFORMATION SYSTEM	Established
4. IMPLEMENTATION OF URBAN COMASSATION	Within the scope of at least 10 detailed spatial plans
5. IMPLEMENTATION OF ACTIVITIES SUCH AS LECTURES, SEMINARS, ETC., FOR TECHNICAL SPECIALISATION OF SPATIAL PLANNERS AND REPRESENTATIVES OF STATE AND LOCAL ADMINISTRATION	At least 20 different activities are carried out annually
6. LEGALISATION OF ILLEGALLY BUILT OBJECTS, WITH ACCOMPANYING REHABILITATION	Legalisation completed

THEMATIC AREA	4 Achievement of satisfactory performances of the coastal zone economic development
INDICATOR	TARGET VALUE IN 2020
1. SHARE OF PRIMARY TOURIST CAPACITIES IN TOTAL CAPACITIES	Trend of increase
2. AVERAGE ANNUAL OCCUPANCY (IN %) OF PRIMARY TOURIST CAPACITIES	Trend of increase
3. NUMBER OF FAMILY AGIRCULTURAL HOLDINGS (IN THE HINTERLAND OF THE COASTAL ZONE) INCLUDED IN TOURIST OFFER	100–200
4. SHARE OF AGRICULTURAL HOLDINGS INCLUDED IN TOURIST OFFER WHOSE OWNERS ARE YOUNGER THAN 40 (YOUNG FARMERS)	More than 50% of the total number
5. SHARE OF AGRICULTURAL LAND UNDER PROGRAMMES OF SPECIAL SUPPORT TO AGRICULTURE AND RURAL DEVELOPMENT (GREEN PAYMENTS, ORGANIC AGRICULTURE, PROTECTED AREAS, AREAS WITH NATURAL LIMITATIONS FOR AGRICULTURE, AREAS OF SPECIAL NATURAL VALUE, AND SIMILAR)	More than 70% of total agricultural areas
6. FUNDS FOR SUPPORTING IMPLEMENTATION OF RURAL DEVELOPMENT PROJECTS	Accelerated upward trend, annual growth rate of more than 30%
7. NUMBER OF DEVELOPMENT PROJECTS IN RURAL AREAS INITIATED BY LOCAL COMMUNITIES	At least 10
8. NUMBER OF FAMILY AGRICULTURAL HOLDINGS WHICH HAVE MODERNISED THEIR PRODUCTION THROUGH RURAL DEVELOPMENT PROGRAMMES	100
9. NUMBER OF FAMILY AGRICULTURAL HOLDINGS WHICH USE THE ENTITLEMENTS TO DIRECT GREEN PAYMENTS	400
10. NUMBER OF CERTIFIED AGRICULTURAL PRODUCTS FROM THE COASTAL ZONE (PROTECTED GEOGRAPHIC ORIGIN, GEOGRAPHIC LABELS, GUARANTEED TRADITIONAL SPECIALTY)	5
11. NUMBER OF AGRICULTURAL PRODUCTS FROM THE COASTAL ZONE WHICH USE "DOBRO IZ CRNE GORE" HALLMARK	Accelerated upward trend
12. NUMBER OF PRODUCERS WITH ORGANIC PRODUCERS' STATUS	100
13. NUMBER OF ESTABLISHED CLUSTERS	3
14. NUMBER OF NEW COMPANIES (MICRO AND SMALL), CO-OPERATIVES AND PRODUCERS' GROUPS IN THE RURAL AREA OF THE COASTAL BELT	20
15. NUMBER OF NEW JOBS IN RURAL DEVELOPMENT	300

THEMATIC AREA	5 Functioning of the coastal zone management system
INDICATOR	TARGET VALUE IN 2020
1.a NUMBER OF DECISIONS OR RECOMMENDATIONS ADOPTED BY THE ICZM COUNCIL 1.b NUMBER OF TECHNICAL ANALYSES AND RECOMMENDATIONS PREPARED BY THE COORDINATION BODY FOR INTEGRATED COASTAL ZONE MANAGEMENT	1.a Trend of increase 1.b Trend of increase
2.a NUMBER OF OBJECTIONS/ COMMENTS SUBMITTED BY INTERESTED PUBLIC THAT ARE ACCEPTED OR HAVE INFLUENCED HARMONISATION OF/ CHANGES IN STRATEGIC DOCUMENTS AND REGULATIONS 2.b NUMBER OF STRATEGIC DOCUMENTS AND REGULATIONS FOR WHICH PUBLIC CONSULTATIONS WERE ORGANISED AT PREPARATION STAGE AND SIMILAR	2.a Trend of increase 2.b Trend of increase
3. NUMBER OF INTEGRATED COASTAL ZONE MANAGEMENT PROGRAMMES AND PROJECTS IMPLEMENTED BY USING AND UPGRADING THE EXISTING DATABASES AND INDICATORS OF STATE IN THE COASTAL ZONE	Trend of increase
4. PUBLIC SATISFACTION WITH STRATEGIC DOCUMENTS AND REGULATIONS ADOPTION AND IMPLEMENTATION PROCESSES	Trend of increase
5. ENVIRONMENTAL INVESTMENT AT THE: a. national level b. local level c. polluters' level	a. 1.5%-2% of budget resources, with a trend of increase in annual allocations b. average value of allocations at the level of six coastal municipalities is in the range of 2-3% of municipal budget resources, with a trend of increase in annual allocations c. sall polluters allocate funds for environmental protection and improvements, with a trend of increase in annual allocations
6. ALLOCATION OF FUNDS FOR: a. IMPLEMENTATION OF SCIENTIFIC RESEARCH IN THE TERRITORIAL SEA OF MONTENEGRO, IMPROVEMENT IN LINKAGES AND PERFORMANCES OF THE CENTRAL DATABASE, INDIVIDUAL DATABASES AND META DATABASE b. IMPLEMENTATION OF THE MONITORING PROGRAMME ON COASTAL PROCESSES (OF ALL ENVIRONMENTAL, SPATIAL AND NATURAL HAZARDS SEGMENTS)	6.a Trend of increase 6.b Trend of increase
7. NUMBER OF COMPLAINTS REGARDING AVAILABILITY OF ANALYSES AND DATA ON THE STATE OF THE COASTAL ZONE	Trend of decrease

8.1 Spatial development indicators

In addition to indicators for monitoring achievement of strategic objectives, measures, sub-measures and actions in the thematic area Spatial planning and sustainable spatial development, application of a special group of indicators for monitoring implementation of the CASP is also important. These are grouped around the key planning objectives of the coastal zone spatial development. This group of indicators, with baseline values and framework values for baseline planning state (CASP), as well as with target state according to the CASP in 2030, is presented in table 8-2. Several types of indicators are proposed:

- Indicators 1, 2, 3 are quantitative indicators with a three-fold role – analytic (have a function of analytical baseline indicators), planning baseline (describe planning solution or the level of performed corrections in relation to baseline) and planning target (describe planned target state in 2030).
- Indicators 4 and 6 are a combination of quantitative and qualitative indicators since it is not possible to determine the status of new construction area detached from the existing construction areas by using GIS analyses solely. It is understood that the alignment of construction areas and eliminated conflicting land uses in the baseline planning state will remain at the level of the SPSPCZ MNE Pre-draft from August 2014. Unlike indicators 1, 2 and 3 which measure total surface area, this group of indicators tracks changes in the number of construction areas. As a rule, opening of new construction areas is less spatially sustainable and exerts a greater pressure on environmental segments than does expansion of existing construction areas by for the same surface. Indicator 6 targets the number of new construction areas in the areas of high vulnerability.
- Indicator 5 measures the extent to which land use is optimised through SPSPCZ MNE in the sense of decreasing conflicts between construction and high vulnerability areas.
- Indicator 7 measures baseline state of the extent to which the coastal line is built-up i.e. it will measure state of development of the coastal line during SPSPCZ MNE implementation. This indicator does not contain planning target value.
- Indicator 8 measures share of the coast to which setback is applied without adaptations as defined under Article 8 of the ICZM Protocol. This indicator does not contain planning target value.
- Indicator 9 measures compliance with the zone of extended setback in implementing the SPSPCZ MNE implementation.

As can be seen from the baseline state column in the table 8-2, all proposed indicators are calculated from several input data which makes them relatively economical, particularly with a view to their multiple role (analytical, planning baseline and planning target indicators). The main two layers of spatial data serving as input data are: construction areas borders (the layer is updated by transferring data from the planning documents that define construction areas) and the extent to which the space is built-up (the layer is updated by vectorising ortophoto images). Furthermore, all proposed indicators can also be expressed at the level of different municipalities.

Table 8-2: Proposal of indicators by groups of the key planning targets of the coastal zone development with baseline values, framework baseline planning state values (SPSPCZ MNE), and target state according to the SPSPCZ MNE in 2030

SPSPCZ PLANNING GOALS	KEY INDICATORS	BASELINE	SPSPCZ 2015	SPSPCZ 2030
Regulating excessive consumption of space	1. share of construction areas in the total surface of coastal municipalities	15.5% (synthesis map of construction areas according to the state of valid planning documents from 2013)	10%	10%
	2. share of construction areas in the 1 km wide belt from the coastal line	46.3% (synthesis map of construction areas according to the state of valid planning documents from 2013)	35%	35%
	3. the extent to which the construction areas are used or built-up	18.5% (synthesis map of construction areas map, use according to ortophoto image from 2011)	30%	50%
	4. number of new construction areas detached from the existing ones as defined through the SPSPCZ and its implementation	synthesis map of construction areas according to the state of valid planning documents from 2013	according to land use plan	according to future changes of the SPSPCZ and SUPs
Land use optimisation through minimisation of conflicts between uses and vulnerability of space	1. surface of conflict areas comprising non-developed construction areas in the zones of high vulnerability	In total 6,247 ha in 36 zones with a surface of more than 50 ha (overlapping of the map of non-developed construction areas according to the state valid planning documents from 2013 and of the vulnerability map)		
	2. number of new construction areas (detached from the existing ones, as defined through the SPSPCZ and its implementation) in the zones with high vulnerability	(synthesis map of construction areas according to the state of valid planning documents from 2013 and vulnerability map)	according to land use plan	according to future changes of the SPSPCZ and SUPs
Regulation of construction in the narrow coastal strip – coastal setback	3. the extent to which the coastal line is built-up	31.9% (construction by ortophoto image from 2011)	the same	-
	4. share of the coast line where setback is applied without adaptation is defined by the SPSPCZ	-	26%	-
	5. the extent to which the zone with extended setback is built-up	(construction by ortophoto image from 2011)	the same	

SOURCE: National Tourism Organisation

In addition to their role in the CASP planning process – from contributions to a more objective analytical phase, through setting of planning objectives to implementation of the monitoring plan, the above-listed indicators I.e. the layers of spatial data from which they are calculated have an important function in establishing the system of more efficient monitoring and assessment of practically all planning documents. In the procedure of giving opinion or consent to the proposed planning documents, the responsible ministry (among others) has the task to verify alignment of the plan with the plans of higher order. It is precisely in this decision-making process that the above-mentioned spatial data and indicators find their application. In this way it becomes possible to obtain precise and reliable quantified data on mutual harmonisation of planning documents by using simple and quite fast GIS analyses. This segment of spatial information system represents a basis for controlling processes in space, it can be developed with very low investment and has partly been already established through the CAMP activities. That is why this activity is proposed as one of the priority actions of the NS ICZM implementation in the Action Plan.

09
ANNEXES

SOURCE: CAMP

Annex 1: Results of the problems and causes analysis

Table A: Protection of natural and cultural heritage[103]

Problems	Direct and underlying causes
Loss of habitats (fragmentation, decreased functionality and stability, destruction) and valuable biodiversity on land and at sea	Land use conversion and planning of construction areas that allows dispersed construction
Loss of properties that led to original designation of protected areas or to protection plans (examples of Slovenska and Bečićka beaches, Spas hill; also dunes on Velika beach)	Urbanisation; development of technical, catering and recreational capacities (including temporary objects); high real estate demand
Plans for development of large capacities (for tourism and other purposes) have been adopted for several locations with valuable biodiversity and specific habitats (Velika beach, Buljarica, Luštica)	Pressure on attractive locations due to commercialisation and attempts to make quick profits; non-adjusted construction
Goals set in strategic and spatial planning documents related to protection of certain (terrestrial and marine) areas have not been achieved yet (Tivat Salinas are the only newly designated protected area since 2007)	Insufficient control (through urban-technical conditions and construction permits) of investors' preferences and ambitions
Existing network of protected areas is not representative (not all the valuable ecosystems are covered, marine especially; not all the specific ecosystems recognised by the ICZM Protocol are covered)	Exploitation of raw materials; improper waste disposal
Diminishing of ecosystems' integrity reduces their ability to keep providing products and services provided so far	Inadequate control of pollution from maritime and land-based activities
Measures on protecting ecosystems outside protected areas are rarely planned and extremely rarely implemented	There are no grounds (clearly prescribed procedures, status information, borders, appointed managers, management plans) for adequate management of protected areas
It is evident that the quality of natural and cultural landscape is diminished which leads to reduced attractiveness of the tourist destination; expansion of settlements at the expense of green areas	Inadequate information basis and non-existence of database on the system of protected/ valuable areas of natural and cultural heritage
Worsening of general conditions and decline of certain parts of cultural heritage; system for protection of submerged cultural heritage is particularly weak	Insufficient information on the values provided by ecosystems and non-integration of these values into development plans
	Promotion of policies and development plans incompatible with sustainable use of natural resources; lack of harmonisation of sectoral policies and land use conflicts
	Principles, goals and measures for protecting biodiversity, cultural assets and landscape are not integrated into sectoral policies, national and local development plans
	Ecosystem approach is not applied in planning and management
	Maritime spatial planning is not developed
	Insufficient support to green and blue economy development

103 / Certain causes refer to several problems and vice versa – roots of certain problems can be linked to several listed causes

Table B: Summary overview of problems and causes – prevention and reduction of damages from natural hazards

Problems	Direct and underlying causes
The risk related to consequences of possible earthquakes has increased lately with the current quality of planning and construction	Land use conversions, planning of construction areas in the zones of high seismic risks
Uncontrolled construction has interrupted a significant number of torrential watercourses which results in flooding of certain areas and interruption of nourishment of certain beaches with sediments	During the past couple of decades construction standards fail to sufficiently take into account recommendations of risks assessments from the period after 1979
Decrease in available beach surfaces	Protection of agricultural land from erosion is not prescribed
Significant forest and macchia areas are endangered by forest fires	Programme of coastal erosion monitoring (especially when caused by torrents and waves) is limited (time- and scope-wise); information on coastal erosion does not provide for quality decision making
High flooding risk in Bojana's watershed; risks are increased by hydrological specificities of the watershed and Bojana's mouth, as well as by climate change	Inadequate fire protection system, non-implementation of preventive measures
Decreased natural flooding defence capacities due to disturbance of ecosystems such as coastal forests and wetlands	Insufficient information on possible impacts of climate change
Frequency of extreme weather events and damages they cause have increased	Inadequate integration of available data on vulnerabilities to climate change into spatial and development plans
Development plans for locations where preliminary assessments indicated high flooding risks due to sea level rise have been adopted or are under consideration	Insufficient allocation of funds for research and monitoring programmes for natural hazards
	Incomplete and non-existent legal provisions
	Unsatisfactory technical and administrative capacities

Table C: Summary overview of problems and causes – regulation of coastal activities

Problems	Direct and underlying causes
Excess marine pollution in the Boka Kotorska Bay and in Ulcinj area (to a lesser extent in Budva and Bar); sediment pollution with heavy metals at certain locations (Bijela Shipyard, former overhaul institute – now Porto Montenegro, several ports)	Urbanisation is not accompanied with adequate infrastructure development; inadequate outfalls and non-treatment of waste water
Occasional deviation of water quality of the rivers Bojana and Sutorina from prescribed norms for envisaged classes	Port reception facilities for waste and waste water are not developed; technical equipment for prevention and rehabilitation of damages at sea is still at a rather low level
Quality of water springs, peloid deposits and springs of thermal mineral waters is endangered	Out-dated technologies contribute to pollution of the sea (at certain industrial hot spot locations)
Irrational water consumption in the water supply systems (high network losses, use of potable water for other purposes)	Pollution that reaches Bojana river from upstream watershed sources (including transboundary sources), hydrological specificities of the river's estuary; due to small water quantity during the dry part of the year, most of the surface flows of the coastal zone are exceptionally sensitive to pollution
Pollution of soil, groundwater and sea as well as diminishing of the coastal zone attractiveness due to inadequate disposal of solid waste; non-rehabilitated waste disposal sites represent critical spots of soil pollution	Studies on determination of protection zones are not prepared for all the springs included in the water supply system for the Montenegrin coastal region; continuous monitoring of groundwater physical and chemical characteristics is not performed
Loss of agricultural and forest land	Insufficient technical and financial capacities for collection, transport and treatment of municipal and other types of wastes
Planning and siting of unacceptable facilites on locations of sensitive/ protected areas on land and at sea; oversized construction areas (planned CA take up 46.3% of the surface of 1 km belt)	Strong development of real estate business in the coastal zone
Still present illegal construction (370 decisions on destruction/ removal of unpermitted projects issued in 2013); total stock of illegally constructed objects is not known (surface with illegally constructed objects estimated at 560 ha)	Pronounced requests to the spatial plan developers and decision makers aiming for expansion of construction areas
Fragmented and dispersed construction disables adequate communal equipping and development of settlements (share of CA in the total surface of the coastal zone is 15.5%; only 18.5% of the total CA are brought to their use)	Lack of instruments to implement urban plans
Diminished quality of built environment	Lack of unique and official baseline for landscape valuation of the coastal zone
Linear costal urbanisation (the extent to which the coastline is built-up is 31.9%)	Inefficient implementation of decision to halt illegal construction
Conflicting land uses due to failing to take into account natural and landscape values in the urbanisation process	Overlap of competencies of the Administration for Inspection Affairs and local communal police
Tourism with pronounce seasonal character dominates in the coastal zone economy; unemployment is high, underdeveloped areas are present (e.g. Ulcinj)	Opportunities for quick profits through tourism and real estate trade
	Orientation to 'less demanding' markets
	Tourism is understood as a secondary occupation that does not require professional development
	Lack of instruments and incentives for diversification of tourist product, dominant investments into so called "residential tourism"

Problems	Direct and underlying causes
Intensive construction during the last 20 years did not lead to proportional benefits for economy and society (e.g. benefits from tourism); in newly developed areas, holiday apartments and private accommodation capacities (assessed at 74% of the total) dominate, while as the share of hotel capacities, especially in higher categories, is low	Lack of unique and official baseline with an overview of the land quality classes (including agricultural land)
Tourism offer is still characterised by a low level of diversification; low rent tourism dominates (average daily expenditure is 60 euros)	Unfavourable age and educational structure of rural population, limited knowledge and skills
Devastation of space (of ambiance values) as a tourist resource	Lack of innovative production and sales chains in agriculture
Pronounced pressure on limited beach resources (there are assessments that beach carrying capacity is exceed by 40% during high season)	Lack of support for application of cleaner and more efficient technologies, undeveloped technical standards
Agriculture is not competitive; import of food products, including typical products from the coastal region, is high	Inefficient pollution control system
The level to which agricultural land is used in the coastal region is exceptionally low and it amounts to 24%; only 720 ha or less than 6% of cultivated land is irrigated	Insufficient allocations for implementation of measures to protect the sea against pollution from land-based and sources at the sea
Examples of damaging fishing practices and of inadequate environmental management in aquaculture are present (despite the fact that fishery and aquaculture sectors are insufficiently developed)	Capacities of inspection control and supervision are not at the satisfactory level, coordination is not efficient and effective
Development of rural areas is neglected; links between agriculture and tourism are weak	Declarative planning and general guidelines are dominant, without quantified indicators of state and trends in space as well as without concrete and mandatory spatial planning measures
Shipping industry is not developed yet it generates significant pressures on marine environment	Exceptional attractiveness of the coastal zone for tourism and temporary housing
	(Short-term) Planning that does not take into account real tourism growth needs in an interaction with other sectors
	Unarranged system of land and fiscal policies
	Low budget allocations and low total level of investment in agriculture; insufficient institutional and technical support
	Non-harmonised goals and priorities of different sectorial policies
	Lack of or non-implementation/ ineffectiveness of mechanisms that enable integration of environmental sensitivity in making development decisions
	Insufficient level of coordination within state administration
	Inefficient and non-transparent operation of public administration
	Unfavourable economic and social conditions, in particular unemployment

Annex 2: General principles and objectives of the SP MNE

SP MNE defines, among others, the following general principles (GP) and general objectives (GO) relevant for the coastal zone:

GP-1: Spatial development fosters and encourages accelerated economic development and improves status of "Montenegro – ecological state" by ensuring rational land and space use and landscape utilisation.

GP-5: Widespread unplanned construction and misuse of land will be combated through development of more appropriate legal instruments and improvement of control mechanisms and their application.

GO-1: Coordination of all management and decision-making levels, primarily inter-sectoral harmonisation of development decisions, their bringing into line with regional and local development requirements, establishment of development agencies to support entrepreneurship and sustainable local development, and harmonisation with the already envisaged regional and local business centres for small and medium-sized enterprises.

GO-4: Rational use of natural resources by:

(1) Limiting expansion of construction land to the lowest possible extent;

(2) Keeping the production potential of land for various forms of agricultural production, in particular for so-called "healthy food" and agricultural products for which Montenegro has the most significant comparative advantage;

(3) Rational use of space for urbanisation and control and limitation of more intensive expansion of urban areas.

Among other things, the following has been emphasised for tourism development: "Each aspect of tourism development should strive towards preservation of natural values which make the main basis for tourism in Montenegro. This includes respecting the architectural structures as well as carrying capacities of certain areas".

One of the defined objectives aimed at preservation of agricultural potential is „... to fully protect the existing agricultural land potential, particularly in the vicinity of urban settlements (peri-urban area). Conversion of agricultural into construction land should be carried out through strictly controlled procedures".

As a part of spatial agricultural development concept in the coastal zone, the following is emphasised: "...it is necessary to keep around 11,900 ha for intensive agriculture zones, of which 8,900 ha in Vladimirsko and Ulcinjsko field, as well as around 3,000 ha in the parts of Grbaljsko, Mrčevo and Tivatsko field".

When rural development is concerned, among other things it has been concluded that: „Restoring of rural economy should be founded on creative integration of modern consumers' and production trends, local heritage, resources, culture and skills. It is necessary to adopt additional simulative measures for development of tourism on agricultural holdings as well as for other kinds of tourist offer in rural areas".

One of the systemic measures for the SP MNE implementation defines the following: "Making land inven-

tories and establishing unique information system are important presumptions of modern spatial development planning, organisation and implementation control, which requires appropriate adjustment, human resources and technical specialisation of bodies and institutions for successful and quality performance of these affairs".

To build institutional capacities, in particular of the coordination mechanism, the following systemic measure is relevant: "Since the area of spatial development and environmental protection of settlements is complex and multi-disciplinary, it is necessary to establish a special appropriate institution in the government of Montenegro to deal with spatial development, carry out state responsibilities in spatial planning and ensure inter-sectoral harmonisation of different ministries, state institutions, local authorities, and private and civil sectors".

Annex 3: Criteria and guidelines for defining the coastal setback

As a part of the assistance extended in the process of SPSPCZ MNE preparation, the CAMP MNE expert team paid special attention to questions pertaining to the implementation of obligations stemming from the ICZM Protocol. Among these, rules for arrangement and construction in the setback zone and definition of exceptions and possible setback adaptations are especially important. That is why criteria to define the coastal setback have been elaborated in the Analysis for defining the coastal setback (CAMP MNE, December 2014) and zones that meet the conditions for possible setback adaptation in line with the ICZM Protocol requirements proposed; zones that meet the conditions for extending the setback were proposed too.

The left part of the table contains anthropogenic criteria and the right one natural criteria grouped into four degrees of vulnerability in line with vulnerability assessment of the narrow coastal zone (belt of 1 km from the coastal line). A cross section of anthropogenic and natural criteria provides a matrix with guidelines for defining the setback line and conditions for its adaptation in line with provisions of the ICZM Protocol.

Types of coastal setback, their length and share, calculated by applying anthropogenic and natural criteria.

104 / DSL – state study of location, LSL – local study of location, DUP – detailed urban plan, UP – urban project

Anthropogenic criteria				Natural criteria			
Land use	State of land	Description	Planning document	R1 lower vulnerability	R2 moderate vulnerability	R3 high vulnerability	R4 highest vulnerability
1. Construction areas (CA) of settlements	1. Built-up	1.1 areas of coastal settlements, built-up or brought to a planned use, undivided CA		**Tip 1** Setback cannot be applied **60147 m, 25,0%**			
	2. Partly built-up	1.2 areas of coastal settlements, partly built-up, linear or discontinues CA	DSL[104]	**Tip 2** Adaptation due to acquired development rights, **2595 m, 1,1%**			
			LSL	**Tip 2** Adaptation due to acquired development rights, **0**		**Tip 2** Adaptation due to acquired development rights,, **0**	
			DUP/UP	**Tip 2** Adaptation due to acquired development rights, **7986 m, 3,3%**		**Tip 2** Adaptation due to acquired development rights, **4694 m, 2,0%**	
			Other plans	**Tip 3** Adaptation, urban planning criteria, **2799 m, 1,2%**		**Tip 4** Adaptation, urban planning criteria and additional measures, **0**	
	3. Undeveloped parts	1.3 undeveloped parts of construction areas of settlements	DSL	**Tip 2** Adaptation due to acquired development rights, **1410 m, 0,6%**			
			LSL	**Tip 2** Adaptation due to acquired development rights, **93 m, 0,0%**		**Tip 2** Adaptation due to acquired development rights, **385 m, 0,2%**	
			DUP/UP	**Tip 2** Adaptation due to acquired development rights, **4720 m, 2,0%**		**Tip 2** Adaptation due to acquired development rights, **307 m, 0,1%**	
			Other plans	**Tip 3** Adaptation, urban planning criteria, **3072 m, 1,3%**		**Tip 9** No adaptation, **0**	

2. CA outside settle-ments	1. Built-up	2.1 built-up detached zones, primarily for tourism purposes		**Tip 1** Setback cannot be applied, **8204 m, 3,4%**	
	2. Partly built-up	2.2 areas of detached zones, primarily for tourism purposes, partly built-up	DSL	**Tip 2** Adaptation due to acquired development rights, **13744 m, 5,7%**	
			LSL	**Tip 2** Adaptation due to acquired development rights, **0**	**Tip 2** Adaptation due to acquired development rights, **0**
			DUP/UP	**Tip 2** Adaptation due to acquired development rights, **525 m, 0,2%**	**Tip 2** Adaptation due to acquired development rights, **0**
				Tip 3 Adaptation, urban planning criteria, **1924 m, 0,8%**	**Tip 6** Adaptation for projects of public interest with additional measures, **718 m, 0,3%**
	3. Undeveloped parts	2.3 undeveloped areas of detached zones, primarily for tourism purposes	DSL	**Tip 2** Adaptation due to acquired development rights, **12745 m, 5,3%**	
			LSL	**Tip 2** Adaptation due to acquired development rights, **0**	**Tip 2** Adaptation due to acquired development rights, **0**
			DUP/UP	**Tip 2** Adaptation due to acquired development rights, **4800 m, 2,0%**	**Tip 2** Adaptation due to acquired development rights, **6196 m, 2,7%**
			Other plans	**Tip 5** Adaptation for projects of public interest, **3211 m, 1,3%**	**Tip 9** No adaptation, **10050 m, 4,2%**
3. Coast outside CA planned to remain in its natural state	1. Built-up	3.1 Areas built-up through illegal construction	-	**Tip 1** Setback cannot be applied, priorities - formalisation and rehabilitation, **1378 m, 0,6%**	**Tip 1a** Setback cannot be applied, priorities - formalisation and rehabilitation with additional measures, **289 m, 0,1%**
	2. Partly built-up	3.2 Partly built-up areas through illegal construction	-	**Tip 7** Adaptation, priorities - formalisation and rehabilitation, **3977 m, 1,7%**	**Tip 8** Adaptation exclusively for the purpose of formalisation and rehabilitation, with additional measures, **1536 m, 0,6%**
	3. Undeveloped parts	3.3 Untouched, natural coast	-	**Tip 5** Adaptation for projects of public interest, **20596 m, 8,6%**	**Tip 9** No adaptation, **54193 m, 22,6%**

Annex 4: The EU pre-accession support through national and multi-beneficiary lines

MONTENEGRO - IPA II	2014.	2015.	2016.	2017.	2018–2020.	TOTAL[105]
a. Rule of law and democracy – preparation for membership	18,8	15,8	12,8	13,3	38,5	99,2
b. Socio-economic and regional development	14,8	8,4	14,8	13,3	39,4	90,7
Environment and climate change (80% of funds relevant for climate change projects)	18,8				18,7	37,5
Transport (80% of funds relevant for climate change projects)	20,2				11,8	32,0
Competitiveness and innovation	12,3				8,9	21,2
c. Employment, social policy, education, gender equality and development of human resources	3,5	4,0	3,9	4,0	12,8	28,2
d. Agriculture and rural development (10% of funds relevant for climate change projects)	2,5	7,4	5,9	8,9	27,7	52,4
TOTAL	39,5	35,6	37,5	39,6	118,4	270,6

MULTI-BENEFICIARY PRIORITIES - IPA II	2014.	2015.	2016.	2017.	2018–2020.	TOTAL
a. Horizontal support	152,0	122,5	136,5	115,5	395,5	922
TAIEX i statistics	20,0	21,0	20,0	21,0	59,0	141,0
Advisory function int. organisations	49,0	40,0	25,0	32,0	91,0	237,0
Civil society and media	25,0	5,0	30,0	5,0	60,0	125,0
Erasmus + including youth dimension	33,0	34,0	35,0	35,0	110,0	247,0
Horizontal measures	25,0	22,5	26,5	22,5	75,5	172,0
b. Regional structures and measures including ECRAN	9,0	27,0	31,0	10,0	57,5	134,5
c. Regional support to investment projects	158,1	181,9	177,9	216,3	772,8	1.507,0
WBIF, SEETO, EDIF, GGF[106] and other instruments	148,1	91,9	177,9	216,3	772,8	1.407,0
RHP, Regional housing programme	10,0	90,0	0,0	0,0	0,0	100,0
d. Territorial cooperation (cross-border programmes - ERDF)	28,9	33,6	44,6	68,6	219,5	395,2
TOTAL	348,0	365,0	390,0	410,4	1445,3	2.958,7

105 / Source: IPA II, Indicative strategy for Montenegro and IPA II, Multi-beneficiary indicative strategy, 2014)

106 / ECRAN – Environment and Climate Regional Accession Network; EDIF – Enterprise Development Innovation Facility; GGF – Green for Growth Fund (including technical assitance fund)

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ABBREVATIONS

Perast SOURCE: National Tourism Organisation

Definitions of the key terms and concepts

CAMP Montenegro: Coastal Area Management Programme (CAMP) Montenegro has been implemented jointly by the United Nations Environment Programme – Mediterranean Action Plan (MAP) and the Ministry of Sustainable Development and Tourism of Montenegro. Six coastal local self-government units, competent institutions and representatives of business and NGO sector have also taken part. Through the CAMP MNE project, a set of instruments for integrated management of the coastal zone (ICZM) of Montenegro has been introduced to provide for efficient coordination of numerous activities and achievement of the coastal zone sustainable development goals. The most important objectives of the CAMP MNE are to: (1) develop strategy and procedures for sustainable development of the coastal zone of Montenegro, (2) identify and apply relevant methodologies and instruments, (3) contribute to development of capacities at local and national levels, and (4) provide for application of best available knowledge and practices.

Direct green payments to farmers: In line with principles of the EU Common Agricultural Policy (2014–2020), these payments represent a form of support that should contribute to regeneration, preservation and improvement of coastal ecosystems linked to agriculture, including areas with natural constraints as well as those exposed to climate change impacts.

Social capital: According to the World Bank's definition, social capital refers to institutions, relationships and norms that shape the quality and quantity of a society's social interactions. Increasing evidence shows that social cohesion is critical for societies to prosper economically and for development to be sustainable. According to OECD, social capital is a set of networks and common norms, values and viewpoints that facilitates cooperation within and among social groups. Human and social capitals are interrelated in a complex way and to a certain extent they underpin and strengthen each other.

Ecological network: Ecological network is a set of mutually connected or geographically close sites of ecological significance which contribute to a considerable extent to preservation of natural equilibrium and of biological diversity due to their balanced bio-geographical distribution.

Ecosystem approach: Ecosystem approach is a strategy for integrated management of soil, water and living resources that promotes conservation and sustainable use in an equitable manner.

Emerald sites: Areas of Special Conservation Interest (ASCI) at the European level in line with resolutions 4 and 6 of the Bern Convention. Establishment of the network of Emerald sites is based on the same principles as Natura 2000 and in this way Emerald network de facto represents a form of extension of Natura 2000 in the countries that not members of the EU.

In situ preservation of natural assets: Preservation of natural ecosystems and habitats, maintenance and revitalisation of plant, animal and fungi wild species capable of surviving in natural environment, preservation of cultivated plants and domestic animals in environments in which they developed their specificities as well as preservation of geo-diversity forms at the place of their occurrence or preservation of rock, mine, mineral, crystal and fossil deposits.

In situ preservation of cultural assets: Preservation

107 / Mapped depictions of spatial vulnerability also cover national parks areas within the scope of coastal municipalities in order to provide for consistent overviews of conditions in space.

of moveable and immovable cultural assets at the place of their origin or discovery is the first choice prior to any intervention.

Natura 2000: Ecologically significant sites in the European Union designated as NATURA 2000 are distinct sites (areas) for preservation of habitats and species and sites of special protection for preservation of habitats of certain species in line with the EU's legislation on habitat and bird protection.

Coastal setback: Setback zone is defined under the Protocol on Integrated Coastal Zone Management in the Mediterranean as at least 100 m wide area starting from the coastline where construction is prohibited unless national legal act regulates the matter differently in line with the Protocol's criteria.

Coastal zone: According to the proposal of changes to the Law on spatial planning and construction of objects, coastal zone of Montenegro is defined as the area within administrative boundaries of Herceg Novi, Kotor, Tivat, Budva, Bar and Ulcinj municipalities (with the exception of the areas designated as national parks[107]), as well as the stretch of sea extending to the outer border of the territorial sea. Several other terms are commonly used for the land part of the coastal zone including coastal or southern region, and Montenegrin coast.

According to the provisions of the ICZM Protocol, "coastal zone" is geomorphologic area either side of the seashore in which the interaction between the marine and land parts occurs in the form of complex ecological and resource systems made up of biotic and abiotic components coexisting and interacting with human communities and relevant socio-economic activities.

Maritime spatial planning: Maritime spatial planning encompasses a process that analyses and plans spatial and time distribution of human activities in the marine areas in a way as to enable harmonisation between economic, social and environmental objectives. The ultimate goal of maritime spatial planning is to develop plans that determine use of marine area surfaces for different purposes.

Vulnerability, attractiveness and suitability: Vulnerability of space is defined as a state of the environment, space, soil or phenomena that may give rise to negative impacts in case certain interventions are implemented. Vulnerability assessment i.e. determination of susceptibility of space is a method that identifies more vulnerable (unsuitable) parts of space for the observed (planned) intervention. Assessment of attractiveness is determination of parts of space where it is justified to plan (or preserve) certain activities or interventions. Assessment of attractiveness is derived from development goals and it identifies parts of space that provide for an optimal relation of activities i.e. those that bring greater development benefits. Comparison and harmonisation of protection and development goals is performed within suitability assessments by looking for more attractive and less vulnerable parts of space.

Narrow coastal zone: Zone extending ±1000 m from the coastline. This is an area that has the highest significance for preservation of natural environment and is at the same time exposed to intensive development pressures.

CAMP	Coastal area management programme
DPSIR	Drivers-pressures-state-impact-response
EC	European Commission
EU	European Union
GEF	Global Environmental Facility
GFCM	General Fisheries Commission for the Mediterranean
GIS	Geo-information system
IMP	Integrated maritime policy
ICZM	Integrated coastal zone management
ICZM	Protocol Protocol on Integrated Coastal Zone Management in the Mediterranean
MED POL	Marine Pollution Assessment and Control Programme of the Mediterranean Action Plan
MPA	Marine protected areas
NS	National strategy
NS ICZM	National strategy on integrated coastal zone management
PAP/RAC	Priority Actions Programme Regional Activity Centre
SPMNE	Spatial plan of Montenegro
SPSP	Special purpose spatial plan
SPSP CZ	Special purpose spatial plan for the coastal zone
SAP/BIO	Strategic Action Programme for the Conservation of Biological Diversity in the Mediterranean Region in the framework of Barcelona Convention
SAP/MED	Strategic Action Plan to reduce land-based pollution in the Mediterranean in the framework of Barcelona Convention
UNEP/MAP	United Nations Environment Programme/ Mediterranean Action Plan
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNESCO IOC	UNESCO International Oceanographic Commission