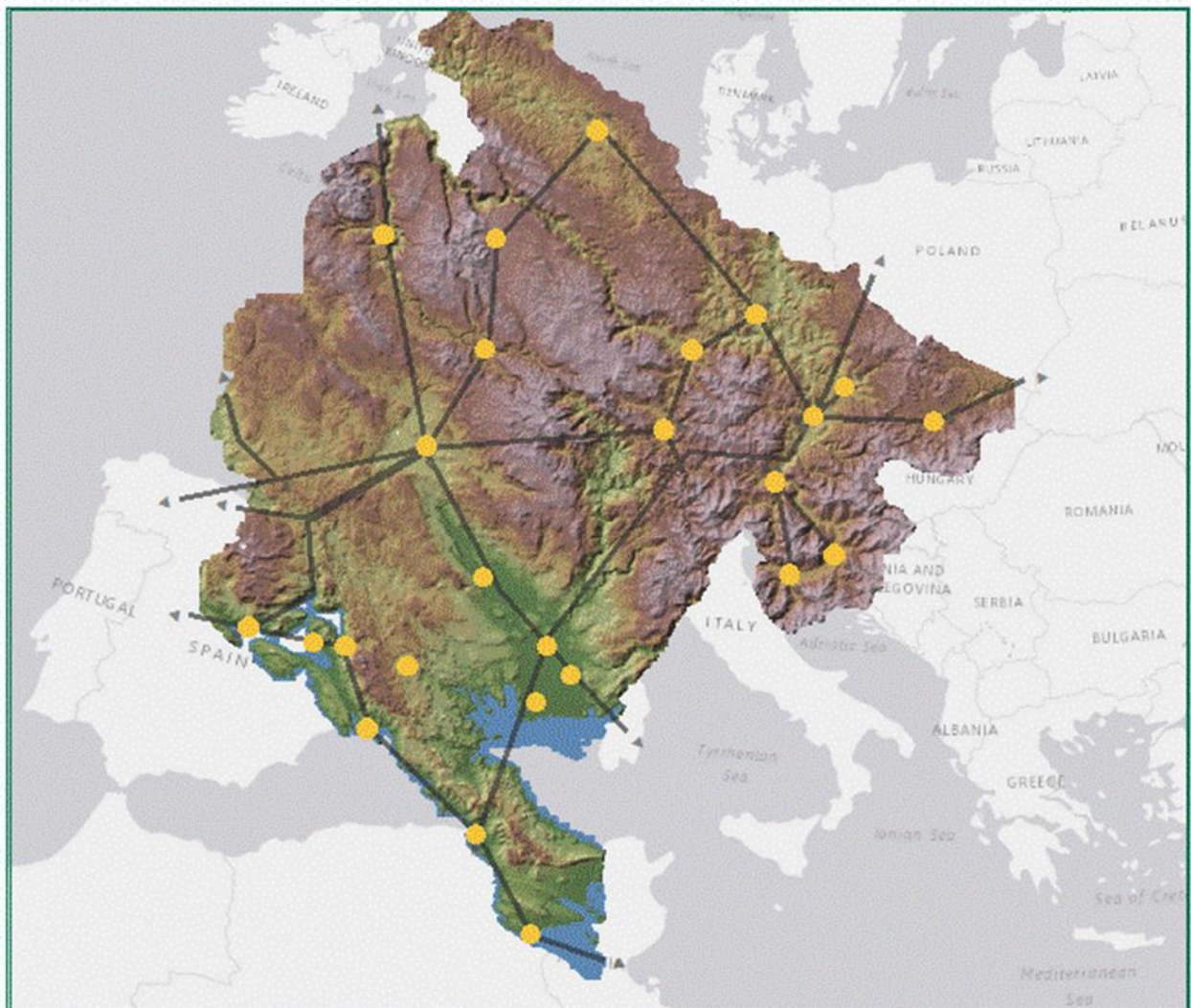




**Vlada Crne Gore**  
**Ministarstvo ekologije, prostornog planiranja i urbanizma**

# **PROSTORNI PLAN CRNE GORE DO 2040.g.**

## **NACRT PLANA**



**Podgorica, oktobar 2023.g.**



**GOVERNMENT OF MONTENEGRO**  
**MINISTRY OF ECOLOGY, SPATIAL PLANNING AND URBANISM**

# **SPATIAL PLAN OF MONTENEGRO UNTIL 2040**

## **DRAFT PLAN**

### **Summary**

*Podgorica, October, 2023*

## **Document title: SPATIAL PLAN OF MONTENEGRO UNTIL 2040**

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# CHARACTER, SIGNIFICANCE AND OBJECTIVE OF SPATIAL PLAN OF MONTENEGRO DEVELOPMENT

## SIGNIFICANCE

The Spatial Plan of Montenegro is the most important strategic planning document in the spatial planning system, which determines the national goals and measures of spatial development, in accordance with the overall economic, social, ecological and cultural-historical development of the country. This strategic plan plans the development and general basis of the organization, use, development and protection of the territory of Montenegro for the planning period until 2040.

According to the Programme Task and the defined methodology of plan development, the Spatial Plan of Montenegro represents the basis for determining the policy of spatial development, landscaping and use and defining individual strategies, plans and programmes for individual areas, including policies for their implementation.

The Spatial Plan of Montenegro contains strategic solutions regarding the use of resources for development in all areas, with planning projections for the next planning period until 2040 and binding guidelines for the preparation of detailed planning documentation.

One of the important tasks of the Spatial Plan of Montenegro until 2040 is to offer efficient mechanisms for the realization of development commitments, following the adoption of the Plan. Guidelines and rules for implementation will be defined in accordance with the solutions of the current Amendments to the Law on Spatial Planning and Construction of Structures. Thus, monitoring of the implementation and a high degree of reliability after the preparation and adoption of the Plan will be enabled.

Through considering the situation in the space, both development potentials, and observed limitations and development thresholds, a development vision was defined and a development scenario was selected that can ensure greater economic and social development in all regions and associated local communities of Montenegro, while at the same time adequately protecting space in all segments of nature, environment and cultural heritage protection.

### Methodology of Plan Development

The methodology of the planning document development is defined by the Rulebooks adopted by the Government of Montenegro and the line Ministry:

- Rulebook on the methodology of development of the planning document and detailed method of organization of prior public participation, (Official Gazette of Montenegro, No. 088/17 of 26 December 2017, which prescribes the methodology of development of the planning document, contents of all development phases, organization of the prior public participation through informing and consultation, development of the Concept, Draft Plan, Public Consultation, Report from the Public Consultation and preparation of the Planning Document Proposal.
- Rulebook on detailed contents and format of the planning document (Official Gazette 091/20), which defines the contents of the textual and graphic part of the planning document.
- *Integral, multidisciplinary and cross-sectoral approach in development of the Plan,*
- *Use of baseline studies and available data, participation of institutions,*
- *Use of modern software tools*
- *Transparency in the Plan development process*
- *The Draft Plan presents the flow and dynamics and the legal basis for the development of the Plan. (Law on Spatial Planning and Construction of Structures ("Official Gazette of Montenegro", No. 64/2017, 44/2018, 63/2018, 11/2019 - amended and 82/2020).*
- **Phases of Development of the Spatial Plan of Montenegro:** *Analysis of the current state of spatial organization, development and use, Preparation of the planning document concept, Organization of prior public participation, Preparation of the draft planning document, Conducting a Public Consultation, Development of the Proposal of the planning document and adoption by the Parliament of Montenegro.*

## BASIC STARTING POINTS FROM THE PROGRAMME TASK

The strategic commitment of Montenegro is to rationally and sustainably use the space and its natural and man-made potentials and to develop as an ecological state, in accordance with the Constitutional definition, through:

- Application of the sustainability principle in all areas of development;

- Continuation of reforms and inclusion in European integration flows
- Adoption of international standards in all activities and compliance with national legislation
- Expansion of international exchange;
- Faster and sustainable economic growth that ensures social development and a higher standard of living, development of all forms of social communication and dialogue;
- Preservation of national, local, religious, gender identity and diversity;
- Provision of legal regulations and adoption of strategic and planning documents for the smooth implementation of the postulates of the Spatial Plan of Montenegro.

**The basic starting points are:**

- Continuation of the planning process/continuity and provision of a strategic planning framework for development with realistic development projections;
- Compliance with the National Strategy for Sustainable Development until 2030;
- Dynamic continuation of the European integration process
- Principles of the European Spatial Planning Charter;
- Principles of the New Urban Agenda on sustainable cities and settlements - HABITAT III
- Implementation of the Spatial Plan of Montenegro
- Spatial information system;

**Continuity in planning:** The Spatial Plan of Montenegro, which was adopted in 2008 with a planning horizon until 2020 was not implemented in a large number of sectoral planning projections, primarily due to the general crisis in the spatial planning system and the lack of sufficiently effective instruments for monitoring and control of the implementation. Cross-sectoral development is insufficiently synchronized, and the key spatial-urban planning problems and pronounced negative impacts on the space have become more complicated in the previous period.

This does not reduce the importance of that strategic planning document, because all plans adopted in the previous period had to comply with its key strategic planning provisions.

Considering the formal aspect of the validity of that plan, as well as the amendments in the period from 2008 to date, and in compliance with the Law on Spatial Planning and Construction of Structures (Official Gazette of Montenegro No. 64/17, 63/2018, 11/2019, amended and 82(2020), it was necessary to start drafting the Spatial Plan of Montenegro until 2040.

In this sense, the development of the Spatial Plan of Montenegro means the continuation of the initiated good planning commitments from the Spatial Plan of Montenegro until 2020, but also the definition of new ones in the context of ongoing development and the addressing of observed development issues.

**Compliance with the National Sustainable Development Strategy** - An important starting point for the development of this Plan is the application of the principles of sustainable development, which are highlighted in the National Strategy for Sustainable Development until 2030. The strategic goals of this strategy are based on the goals of sustainable development defined by the UN Sustainable Development Agenda (2015). These goals are global and universally applicable and refer to the entire world. When adopting global goals, the circumstances of each country, the level and capacity of development are taken into account, while respecting the development policy and priorities of the country.

The Draft Spatial Plan of Montenegro emphasizes the guidelines from the National Strategy for Sustainable Development, points to the process of European integration, the principles of the European Spatial Planning Charter and the principles of the New Urban Agenda on sustainable cities and settlements - HABITAT III.

The importance of monitoring the implementation of the Plan is emphasized. The development of the information system is also important for the control and monitoring of the spatial changes. The Plan is made with the use of software that develop a geographic information system - GIS. (ARC Gis is used in the cartographic part of the Plan).

The following is given in the analytical part of the Plan:

- Description of the boundaries and areas covered by the planning document: (for the entire territory of Montenegro in the area of 13,812 km<sup>2</sup> with the associated sea water area of 2,540 km<sup>2</sup>)
- Administrative division of Montenegro - Montenegro is, in accordance with the Regulation of the European Commission (EC) 1059/2003, statistically defined as one NUTS region at all three levels (NUTS 1=NUTS 2=NUTS 3), out of a total of 272 NUTS II regions within the EU-28.

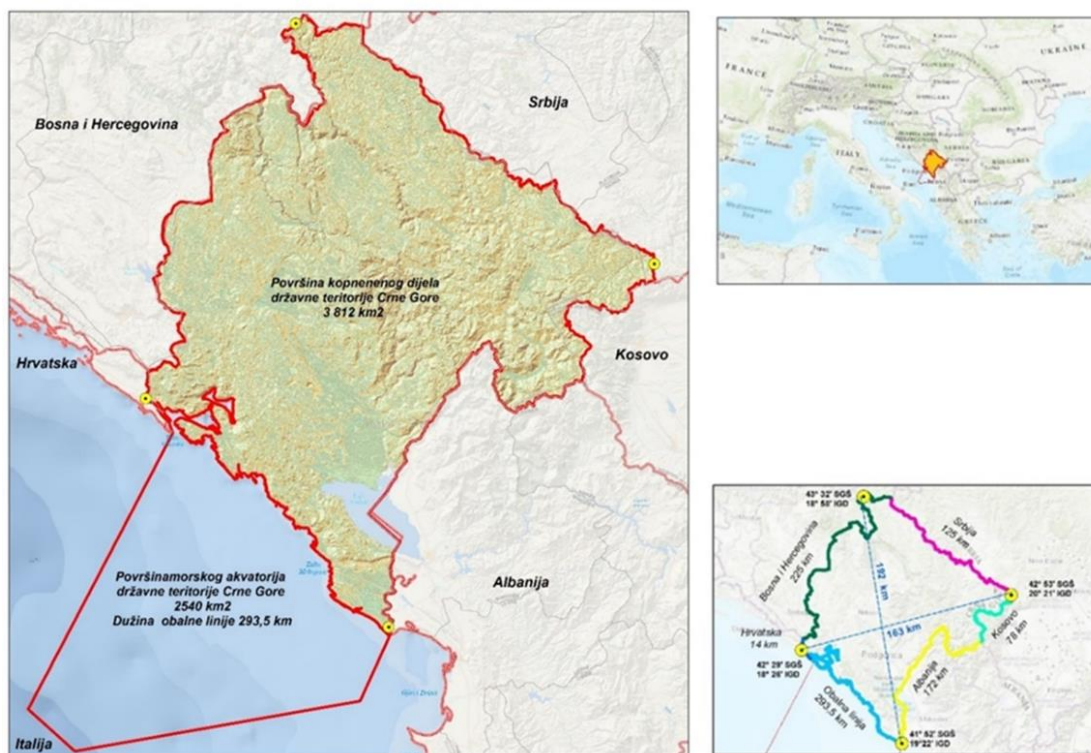


According to the domestic Law on Regional Development ("Official Gazette of Montenegro", No. 20/11 of 5 April 2011), for the purpose of planning development priorities and implementing and monitoring the regional development policy, the territory of Montenegro is divided into three regions. They consist of several geographically connected local self-government units, namely:

- Coastal Region – municipalities of Bar, Budva, Herceg-Novi, Kotor, Tivat and Ulcinj.
- Central Region – Capital City of Podgorica, Old Royal Capital Cetinje and the municipalities of Danilovgrad and Nikšić
- Northern Region – municipalities of Andrijevića, Berane, Bijelo Polje, Kolašin, Mojkovac, Plav, Pljevlja, Plužine, Rožaje, Šavnik and Žabljak.

After the adoption of this Law, the municipalities of Petnjica (2013) and Gusinje (2014) belonging to the Northern Region, as well as the municipalities of Tuzi (2018) and Zeta (2022) belonging to the Central Region, were established.

The Analysis of the State provides the following: administrative division between land and sea, position in relation to the surroundings, detailed analysis of natural characteristics, (geomorphological, geological, structural tectonic, mineral raw materials, hydrogeological characteristics, engineering geological characteristics, hydrological characteristics, seismic characteristics, pedological characteristics, plant and animal life (pp. 28-80, Book 1).





**The man-made conditions were analyzed:** demographic analysis, analysis of the current state of spatial use, physical structures and capacities, (the existing land use, spatial development by region and municipality, existing - potentials and limitations of the use of the sea. (pp. 89 - 102 Book 1).

**The landscapes were analyzed, an overview of protected and potentially protected areas** in Montenegro was given. The state of the environment (air, water, soil) was analyzed in particular. (pp. 103 – 113 Book 1).

As part of the Analysis of the State, an **Overview of protected cultural assets**, the value status of cultural assets in regions and municipalities was given. (pp. 119 – 121).

An important segment that was analyzed is the situation in the field of **disaster risk reduction and state defense aimed at reducing the disaster risk**. (pp. 124 – 127).

**An analysis of the state of social infrastructure** was made (characteristics of the settlement network, current problems in the existing organization of the settlement network, (unrealized balanced polycentric development, the concentration and centralization process, spatial, urban and rural development issues, presence of illegal construction, analysis of the state of housing, etc. An assessment of the development of social activities (social and child welfare, education, science, health, culture, sports) was given; (pp. 132 – 147).

A special part of the Analysis of the State is **the area of economic activities**. The general characteristics of the Montenegrin economy from 2004 to 2022 are given, and trends in basic indicators from 2019 to 2022 are shown. (pp. 148-156).

**Sectoral development** was analyzed (industry, tourism, construction, transport, mining, mineral resources, oil and gas exploration, the situation in agriculture, mariculture and fisheries, forestry and wood industry, tourism with an overview of macroeconomic tourism indicators.(pp. 156 – 185 ).

The existing infrastructure was analyzed: the area of transport (road, railway, water and air); energy and electrical power infrastructure, water management and hydrotechnical infrastructure, electronic communications, land and marine waste management. (pp. 200 – 260).

*The analytical part of the Draft Plan provides a synthesis assessment of the current situation for all areas with an assessment of the realization of the development goals planned in the Spatial Plan of Montenegro until 2020.*

## **PLANNING PART**

### **EXPLANATION OF THE PLANNING CONCEPT**

The territory of Montenegro, its natural characteristics and population represent the key resources and the basis of the long-term development of the country in all areas of activity.

The achievement of planning goals requires improvement of the spatial planning system, organization and use and sustainable use of the available development potentials in the country. All sectoral policies in individual development goals must follow the requirements of sustainable development given in this plan. The Spatial Plan of Montenegro is the basis for the development of all local communities for the benefit of the entire population of the country.

The starting point for the definition of the planning concept is sustainable development as a general commitment to the rational use of space, which is also defined by the National Development Strategy, and includes:

- advanced economic development, while stimulating investment, innovation and productivity, and controlling the negative effects of economic growth on the environment
- social development, reduction of poverty and unemployment, protection of vulnerable population groups
- protection of nature and cultural heritage, achievement of a balance between intensive development, spatial protection and all segments of the environment and protection of the health and safety of the population,
- adoption of an ethical vision of development through the improvement of management and the strengthening of administrative capacities among all actors of the state and local government, private sector and civil society,
- decentralization of the decision-making process and public participation in decision-making through informing, dialogue, cooperation and respect for human rights,
- building and preservation of human capital as the key development capacity and long-term prosperity of the country. (knowledge, skills, health through increase in the human capital index).
- Protection of cultural diversity and identity, while strengthening the cohesion of the entire society

The planning concept of the spatial organization of Montenegro for the planning period until 2040 is conditioned by the following characteristics:

- achieved economic and social development in the country, both at the regional and municipal levels,
- globalization and processes of European integration
- market economy,
- demographic trends and urbanization processes
- the achieved level of development of infrastructural equipment and waste management,
- the level of spatial, environmental and cultural heritage protection;

The defined development projections, rules and guidelines, principles and regulations create opportunities for proper use of resources, addressing the limitations and conflicts and present development issues, with the binding principle that complex spatial protection and protection of all segments of the environment must be ensured in all development processes.

The planning projections of development proposed in the Draft Plan will be additionally considered in the Public Inspection (Consultation), and in the further course of development of the Draft Plan, through the process of consultation with the Plan Revision Council, the Drafting Authority of the Strategic Environmental Assessment, the participation of all municipalities through dialogue, opinions and recommendations of competent Ministries, state institutions and organizations and opinions from the Public Consultation process, to the final Proposal for the Spatial Plan of Montenegro that is adopted by the Parliament of Montenegro. The Proposal for the Spatial Plan of Montenegro must correspond to the general long-term development goals of the state and the needs of its population. In the transparent process of its further development, the consensus will be ensured on all development issues that are of strategic interest for the planning period until 2040.

### **DEVELOPMENT VISION OF MONTENEGRO**

The vision of future development derives from general political and professional views related to the economic and social development, spatial organization and construction, development of infrastructure, protection of space and population of Montenegro and the positioning of Montenegro among developed European countries in the European Union.

- In the coming period, Montenegro will follow the Constitutional obligation and **the status of an ecological state** in which harmony between the traditional way of life of people and their natural environment should be achieved.
- **It will protect and improve the environment**, water, air and soil and the biodiversity values of land and sea, through an acceptable way of use and preserved for the generations to come.
- **It will ensure the remediation of environmental problems**, reduction of the impact on climate change and, based on the principles of the **"green economy"**, qualitatively improve the results in all economic sectors
- Through planning and the way of using the space in all local communities, it will **preserve and improve arable agricultural and forest land** and other natural resources, aimed at long-term economic development.
- It will ensure the **preservation of valuable natural landscapes**, through responsible evaluation and harmony of certain spatial functions and the natural environment, especially in the area of urban and rural development, construction of structures and infrastructure.
- It will improve **the preservation of cultural values** and promote them for the purpose of tourism and cultural development
- It will ensure **the preservation of cultural heritage**, landscapes and archaeological sites in the narrow coastal strip and sea area.
- By applying **the integral management of the coastal area**, sustainable use and protection of the area of the narrow coastal strip and the sea of Montenegro will be achieved.
- It will ensure the balanced **development of the "blue economy"** through the arrangement of activities such as tourist offer, fisheries and mariculture, maritime transport, controlled exploitation of mineral raw materials, regulation of waterways and nautical and fishing infrastructure,
- Through the development projections in all sectors of economic activity, Montenegro will in the coming period ensure **a more balanced economic development of the regions and stop negative demographic trends**, especially in the Northern Region.
- **It will achieve economic and social progress and a dynamic process of European integration**, with the adoption and practice of standards in all areas of activity.
- **It will develop the social standard** by developing the institutions of health, education, science, culture, social and child welfare, and physical culture and sports in all municipalities.
- **It will control and improve urban development** in order to achieve high-quality urban and public functions in accordance with humane principles and accepted European standards.
- **It will improve rural development** and preserve valuable rural areas, as a special development opportunity for tourism and the overall economy, and influence the reduction of negative demographic trends in rural areas, especially in the Northern Region.
- Through **the development of energy and energy infrastructure**, Montenegro will provide a greater share of energy from renewable sources and thereby enable energy efficiency, which will have a positive impact on the economy and increase the quality of life in urban and rural areas and contribute to reduced emissions of gases with the "greenhouse effect".
- More intensive **traffic development** will ensure greater mobility and accessibility and faster and better development in all three regions.
- **In the field of municipal infrastructure**, additional efforts will be made to ensure the water supply of the population and the economy with hygienically quality water, and by wastewater treatment and quality waste management, it will ensure the healthy environment.
- In the coming period, **in the field of tourism**, it will provide high-quality tourist projects and become a prestigious Mediterranean and mountain country, through the offer of mountain, rural and coastal tourism, using the advantages of healthy food, clean spring water and rich forest areas.
- **In the field of agriculture**, the available natural resources will be used in a long-term sustainable manner with strict protection of arable agricultural land and stimulating measures for the preservation and activation of unused agricultural land, with the aim of supporting rural development.
- **In the field of forestry**, it will ensure the improvement and preservation of forest potential through adequate forest management.
- **In the field of inland and marine waste management**, it will provide a system in accordance with modern standards, through waste generation and reduction and exclusion of negative impacts on the environment.
- With adequate measures **in the field of defense, protection and rescue, protection against natural disasters and control of seismic risk**, the required level of resistance and preparedness for possible natural risks will be ensured, thus achieving additional security for the life of the population in the country and safe investment in the economy.

- **With the achievement of sectoral development goals**, in the planning period, Montenegro will be accessible in terms of traffic, energy independent, with more organized urban and rural settlements, an economically developed country in the Balkans, which will develop good economic and cultural relations with countries in the region and Europe.
- **By recognizing weaknesses and limitations** in all areas of activity, from the level of institutions, they will be dealt with in a responsible manner.
- Montenegro **will follow modern European principles**, with the aim of becoming an economically prosperous, ecologically clean, environmentally attractive country for living and new investments.
- After the adoption of the Plan, **it will institutionally monitor the implementation of all adopted planning goals** and in accordance with legal solutions ensure the implementation of the Plan.

The recommended development vision can be realized **by a selected scenario of sustainable development** based on the "green economy" policy, which is spatially, economically and ecologically acceptable, and based on the recommended planning projections in all sectors given in the Plan.

It can ensure **balanced regional development, economically and socially developed, but above all ecologically preserved country**. (*respect for the spatial and environmental protection, development of the green economy and adaptation to the needs of local communities, traffic improvement in the country, connection with the region and Europe, energy development and independence and social and societal progress, more balanced regional development and stopping of negative demographic trends in the country*).

In its strategic commitments, Montenegro is on the way to this development scenario, insisting on compliance with **the accepted standards of the European Union in all areas of development**, especially from the aspect of protection of the space, the environment and the health of the population. In the coming period, **economic growth based on its own resources is required, as well as support from European development funds**.

The first phase of this development scenario represents the period of launching key development projects and creating the infrastructural prerequisites for development, and after achieving competitive development and joining the EU (estimated in the period until 2030), according to its principles, the sustainable development scenario would reach a high level of realization and complete connection (cohesion) with the protection scenario.

## DEVELOPMENT PRINCIPLES AND GOALS

**Economic development** - The concept of the economic policy of Montenegro, defined in the strategic development documents, entails the implementation of measures related to the strengthening of the macroeconomic stability of the country, especially the consolidation of public finances and increasing the stability of the financial sector, as well as the implementation of measures related to priority sector policies and infrastructure projects.

By monitoring development through **general strategic, special sectoral and priority goals**, structural problems in the economy will be addressed and thereby the key obstacles to improving the country's competitiveness and increasing potential economic growth in the medium and long term will be removed. In the aforementioned development context, employment and productivity are expected to increase, as well as the efficiency of the use of all spatial development resources.

Key measures and priorities for future development are proposed in the Draft Spatial Plan of Montenegro:

- Construction of infrastructure, accelerated economic growth, improvement of research and innovation in the function of development, (implementation of the priorities of the Smart Specialization Strategy (S3), which recognizes three priorities: sustainable development of agriculture and the food value chain, development of the energy sector, and sustainable tourism on the entire territory of the country, development of the ICT sector as an innovation platform for all other activities),
- Creation of a simpler and more predictable business environment in the coming period, through economic and political and legal factors, such as reducing administrative barriers for starting a business, creating incentive mechanisms for start-ups,
- System of tax benefits, encouraging competition in all markets,
- Predictability through the creation of a consistent and long-term oriented economic policy and the reduction of uncertainty in the economy, thereby raising the level of trust between economic actors and economic policy makers.
- Resolving the problem of structural imbalance in the labour market (high youth unemployment, long-term unemployment, economic migrations;
- Programmes of favourable financial support for starting a business in promising and resource-rich activities.



- Incentives for entrepreneurship and starting businesses of young people in less developed regions - through non-refundable or favourable loans for the exploitation of natural resources, especially in priority areas - in the domain of agriculture and food processing industry - and their affirmation/placing onto the market through tourism...)
- Reform of the education system - By harmonizing the needs of the labour market with the development plans of the education system.
- The structure of the education system must correspond to the structure of the economy - the needs of the economy
- Strengthening of the external position of the country (through the strengthening of export capacities) and the integration of the Montenegrin business into the regional and common market of the European Union,
- Encouraging the dynamic development of the Northern Region, where most of the development potential is concentrated based on the available natural resources for the development of tourism, agriculture, especially in the segment of food production, forestry and wood processing and energy and renewable energy sources.
- Synchronized development of all economic areas and mutual regional and inter-municipal cooperation and support

**Social development** – In parallel with economic development, it is necessary to develop social activities with the aim of fulfilling the requirements of the Europe 2020 Strategy, within the defined framework of the process of accession to the European Union. One of the strategic goals of development is the development of education, science, health, social and child welfare, cultural activities, physical culture and sports. Factors that will affect the dynamics of development in the areas of social activities are demographic trends, realization of the dynamics of industrial and economic growth, as well as legal regulations that regulate the rights of users of certain activities, in accordance with norms and international standards.

The goal of development of social activities is to meet the needs of the population of Montenegro in all regions and their local communities and to support the concept of long-term sustainable, balanced and controlled development

**The principles** on which the planning concept of the Spatial Plan of Montenegro is based, with the aim of achieving the development vision, are:

- Sustainable spatial development ensures intensive economic development, protects space and improves the status of the ecological state;
- Established system of spatial and urban planning and accompanying legislation, which enables faster implementation of developmentally acceptable and desirable projects, both in the public and private sectors
- Established principles of protection of the population, space and environment, enable long-term acceptable and steady development;
- Rational use of resources in the country, based on knowledge and innovation, positions the country among developed European countries;
- Achievement of social development and social cohesion through the realization of a social and ethical development vision, reduction of poverty, protection of all population groups and undertaking the activities to achieve gender equality, through institutional mechanisms and the implementation of the gender equality policy;
- Ensuring the quality of living in all areas of Montenegro, improving the demographic potential and equality in the development of the region.
- Openness and cooperation with countries in the immediate neighbourhood, Europe and the world, on all issues of European and global development;

The principles of spatial development, general goals and guidelines represent obligations that must be followed in sectoral development policies and in detailed planning documentation.

From the general strategic commitment to sustainable and environmentally friendly development and vision, general and special development goals arise.

**GENERAL GOALS - OF THE SPATIAL DEVELOPMENT OF MONTENEGRO** (*they are stated here, and are explained in detail in the Plan*)

Goal 1. Alleviation of regional inequalities

Goal 2. Ensuring the quality of living in all parts of Montenegro according to sustainable spatial and ecological criteria

Goal 3. Development of urban and rural areas in accordance with potentials and limitations

Goal 4. Rational use of space and natural resources

Goal 5. Integration of Montenegro into the EU

Goal 6. Development of cross-border cooperation

Goal 7. Implementation of strategic and legal solutions in the spatial planning documentation

#### SPECIFIC – SECTORAL DEVELOPMENT OBJECTIVES

They are defined according to the Rulebook and Methodology of Plan Preparation and refer to all sectors in the Plan: general land use, development of settlement structure, protection of natural and cultural-historical values, economic development (industry, mining, agriculture, forestry, water management, tourism, maritime economy), traffic, energy, electronic communication infrastructure, waste management, protection against seismic risk and other disasters.

Specific long-term objectives and overall long-term economic policy will be based on **large infrastructure projects, especially in the areas of energy, transport, tourism and agriculture**. In the development of the economy, it is necessary to recognize new economic initiatives based on **the green economy, energy efficiency and adaptation of economic activities to climate change**.

#### PLANNED SOLUTION OF SPATIAL ORGANIZATION, DEVELOPMENT AND USE

**The regional division** of Montenegro is defined according to geographical characteristics and natural conditions, formed by the functional connections of settlements and the achieved economic structure. Regional development should be based on the specific resources of each region, with the intensive linking of the three regions into a single economic and spatial system, with a higher level of integration compared to the previous period.

**The Coastal Region** includes the development zones of the Bay of Kotor, the Central and Southern Coast. It is characterized by a relatively dense population, higher representation of tertiary activities in the economy and significantly higher GDP per inhabitant compared to the Northern Region.

In the spatial sense, the narrow coastal strip is under severe pressure and requires careful spatial planning and traffic improvement, with the construction of a fast coastal road and bypasses around the cities, while ensuring and respecting the principle of as little impact on the environment and natural and cultural heritage as possible.

The key goals of development of this region are: special control and direction of urban growth, raising the level of municipal equipment in settlements, planning guidance, use and purpose of non-urban and rural areas, implementation of integral management of the Coastal area and defining the use of the sea with its adequate protection, with special guidelines and rules for the zone of the coastal area, especially the Coastal Zone. A coastal strip of 1 km from the coastline and a narrower coastal strip of 100 m from the coastline require special regimes in detailed planning, organization of use and purpose and spatial use<sup>1</sup>

Through urban development and rehabilitation in urban areas where the spatial and urban structure has been disrupted, greater control of construction and urban rehabilitation are necessary. In the rural hinterland of the Coastal Region, it is necessary to stimulate development and renovation in accordance with defined rules and planning parameters at a more detailed planning level.

**The narrow coastal strip** represents an area of special value, at the same time the most attractive area, and therefore the criteria of public interest must have priority in the planning of further development. In the zone of the narrow coastal strip, it is necessary to:

- Provide an integral approach in the use and preservation of the coastal area of Montenegro
- Provide free access to the coast as a natural asset, public use and public interest in the use of the marine assets; preserve natural beaches and indigenous vegetation;
- Use the area of the Coastal Zone in accordance with the public interest and protect it from devastation and the construction of individual structures or a larger number of structures, except for the structures that are functionally connected to the sea or the seashore and the structures of public interest, infrastructure facilities and the facilities that require accommodation on the coast, such as shipyards, ports, etc.

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<sup>1</sup> *The regimes of use are defined in the Special Purpose Spatial Plan for the Coastal Zone of Montenegro and the National Strategy for Integrated Coastal Zone Management.*

- Plan nautical tourism ports in settlements and separate construction areas outside settlements, in accordance with natural conditions and environmental protection,
- Preserve specific coastal ecosystems, use natural and cultural assets in accordance with environmental protection.

**The Central Region** includes the zones of the Zeta and Bjelopavlići plains, the Nikšić and Cetinje fields, in the lowland area of Montenegro, which is surrounded by karst surfaces. The most important administrative, economic, educational and health centers are located in this region.

Spatial conditions require infrastructural equipment, economic development and preservation of valuable agricultural land. In the Central Region, it is necessary to improve traffic and other infrastructure, enable the development of industry, tourism, encourage the development of agriculture while preserving agricultural areas and raise administrative, health, educational and cultural functions to a higher level.

It is necessary to improve the development of the Old Royal Capital Cetinje and the Capital City of Podgorica, along with the development of the city of Nikšić with predispositions for a greater number of development functions, industrial, educational, touristic, etc. The need is highlighted to address the depopulation in the northwestern part of the Central Region, the lack of water in the karst part of the region and provide better traffic and other infrastructure. The need to solve recorded environmental problems, such as the exploitation of sand from the Morača River bed and others, is emphasized.

**The Northern Region** is formed from development zones in the valleys of Lim, Tara and Ćehotina, Piva and Ibar, in contact with the mountainous area. In the economic sense, it is oriented towards agriculture and forestry, with pronounced depopulation and requires priority development measures.

The development of the Northern Region in the planning period should be directed towards achieving faster economic development, by activating the potentials in tourism, agriculture and other production areas. It is necessary to solve the problem of depopulation and deagrarianization of the rural area, to address the insufficiently controlled exploitation of forests, more intensive development of agriculture, energy, as well as a higher standard of social activities and services that will attract the younger population to live and invest in development in this region. It is necessary to intensively protect the space and solve the recorded ecological problems, especially in the area of the Municipality of Pljevlja.

## Development corridors and traffic routes

The planned strategic development corridors define the areas along which the basic development activities are concentrated and which require good traffic connections. Those corridors are conditioned by the geographical structure of the space and provide for the development of traffic and other spatial uses. (spatial protection, tourism, agriculture, etc.).

In the previous period, the planned corridors were used for the planning of traffic connections, which create conditions for development and spatial integration. A part of the Bar Boljare Highway has been realized as an eastern corridor and traffic has been improved in the western part along the Risan - Žabljak road.

In relation to the previous Spatial Plan of Montenegro, in addition to the proposed development and traffic corridors, the northern development corridor is highlighted, which emphasizes the need for more intensive traffic connection of the municipalities of the Northern Region, which, along with better connections with the Central and Coastal regions, should contribute to stopping negative demographic and economic trends and faster and more intensive development of the Northern Region. The development corridors are: eastern, western, central, coastal and northern, which also represent traffic routes.

## Traffic development routes

The planned traffic routes are:

- **Eastern traffic development route:** Bar - Podgorica - Mateševo - Andrijevića - Berane - Boljare, with branches Kolašin - Mojkovac - Bijelo Polje; secondary connections to the areas of Plav, Gusinje, Petnjica and Rožaje. In the past development of Montenegro, this traffic route represented the eastern axis of the development of Montenegro in the direction Bar - Kolašin - the border with Serbia. In the following period, the construction of the first Montenegrin highway will enable more intensive development of the area of the municipalities of Andrijevića and Berane. Secondary connections to the areas of Plav, Gusinje, Petnjica and Rožaje will enable the activation of these naturally rich areas and the valorization of significant potentials for development. The zone of the Kolašin area will continue to be developmentally attractive with the secondary (main) routes, and the area of Mojkovac will join the attractive mountain areas of Montenegro by initiating more intensive development. Particular emphasis is placed on the need for more intensive development of the areas of Plav, Gusinje and the areas of Petnjica and Rožaje.

- **Western traffic development route:** Herceg Novi - Risan - Grahovo - Nikšić - Šavnik - Žabljak - Pljevlja; with the secondary development connection Šavnik - Nikšić - Kolašin (Mateševo - Kolašin - Boan - Šavnik); Vilusi - Petrovići - Vračenovići – the state border of Bosnia and Herzegovina; Nikšić - Velimlje - Crni Kuk - Crkvice – the state border of Bosnia and Herzegovina. In this traffic corridor - route, new development opportunities were created by the construction of the road from Risan via Grahovo to Žabljak. In the coming period, it is expected that the development potentials of the Coastal and Northern regions will be more intensively connected in the field of tourism, but also in other economic activities, which will open up additional opportunities in the exchange of agricultural goods and other services and activities.
- **Coastal traffic development route:** The Bay of Kotor - (Herceg Novi - Tivat - Kotor) - Budva - Bar - Ulcinj;

The coastal traffic development route from the Bay of Kotor to Ulcinj, in addition to spatial integrity, relies on the activities and functions that take place on the sea and coast, regional infrastructure systems of the Port of Bar and other ports and marinas, nautical, bathing and stationary tourism. The morphological diversity also caused the functional division of the Coastal area into the Boka - Budva Riviera and Bar – Ulcinj units, which in terms of development needs to be overcome by building the coastal road and bypasses around the cities. The orientation of these units dominantly towards Podgorica is obvious and accordingly the need for their better connection with Cetinje and Podgorica, as well as the improvement of local connections with the immediate hinterland.

The Coastal development route is very important due to the importance of the Port of Bar and the connecting of Bar to European corridors by highway and railway. (TENT – Corridor XI), and improving traffic from Herceg Novi (Debeli Brijeg) to Bar and Ulcinj.

- **Central traffic development route: Nudo - Grahovo - Nikšić - Danilovgrad - Podgorica – the state border with Albania (Božaj), with the branch Nikšić - Plužine – the state border - Šćepan Polje**

The traffic development route of the Central Region in the coming period should remain a significant route of development that can more intensively connect economic and social activities, with additional development drivers in the field of tourism, agriculture, industry and development of the energy sector. Within this traffic and development route, complementary and high economic development is expected in the coming period and a significant traffic improvement. The development of this region will be further encouraged by the Adriatic Ionian Highway - the continental variant.

In addition to these primary development routes, secondary development links are also significant, which will establish more intensive cooperation between certain local communities.

- **Northern traffic development route: Pljevlja - Bijelo Polje - Berane - Rožaje** with secondary development connection by road and railway traffic between Pljevlja and Bijelo Polje. The Durmitor area and Žabljak were better connected in the previous period by the construction of the road from the Coast via Grahovo to Žabljak, with a connection to Nikšić, Podgorica and further to Bar. A better traffic connection between the Municipality of Pljevlja and the area of Bijelo Polje and Berane is needed, which will be achieved by the construction of the road and railway traffic. Thus, a more intensive economic and overall cooperation between the municipalities of the Northern Region is enabled.

In order to support inter-municipal cooperation, it is possible to connect the Mateševo - Kolašin - Boan - Šavnik zone by traffic. The area of Kolašin is connected to the area of Berane via Bjelasica and Jelovica, which enables greater integration of the area with the aim of developing tourism and agriculture.

## Development zones

Under the Draft Spatial Plan of Montenegro until 2040 the division into development zones defined in the Spatial Plan of Montenegro until 2020 is retained, whereby the newly formed municipalities became an integral part of the corresponding zone. The Draft Plan proposes the controlled use of development potentials, the implementation of priority activities in all regions and their development zones in a sustainable manner, through the use of their own potentials and the protection of all segments of the environment, along with the necessary strengthening of local self-government capacities for the implementation of defined development policies.

### Development Zones of the Coastal Region

- The Bay of Kotor Development Zone (subzones H.Novi, Kotor, Tivat),
- Budva-Petrovac Coast Development Zone,
- Bar-Ulcinj Coast Development Zone;

### Development Zones of the Central Region

- Development Zone with subzones Podgorica, Danilovgrad, Tuzi, Golubovci, (Zeta-Bjelopavlići Zone),
- Nikšić Development Zone
- Cetinje Development Zone
- Skadar Lake Development Zone

#### **Development Zones of the Northern Region**

- Gornja and Srednja Potarja (Kolašin, Mojkovac) Development Zone
- Polimlje-Plav Development Zone (Plav, Gusinje, Andrijevica, Berane, Petnjica),
- Rožaje Development Zone,
- Bijelo Polje Development Zone,
- Piva Development Zone (Šavnik, Plužine),
- Durmitor Development Zone - Žabljak,
- Pljevlja Development Zone;

Intensive inter-municipal cooperation between development zones is necessary, joint resolution of spatial conflicts and creation of opportunities for complementary economic development, especially cooperation in the field of transport infrastructure, energy, solving problems in waste management and resolving observed environmental problems. In this way, regional cooperation and polycentric development in the settlement network is encouraged.



I Sjeverni region  
 II Središnji region  
 III Primorski region

**Razvojni koridori**

- Istočni koridor
- - - Istočni koridor- krak
- Istočni koridor- sekundarne veze
- Primorski koridor
- Sjeverni koridor
- Središnji koridor
- - - Središnji koridor - krak
- Zapadni koridor
- - - Zapadni koridor - sekundarna veza

**Razvojne zone**

- |  |  |
|--|--|
| <span style="color: #90EE90;">■</span> A1 Šavnik-Pluzine                               | <span style="color: #FFD700;">■</span> B1 Nikšić                             |
| <span style="color: #66CDAA;">■</span> A2 Durmitorska zona - Žabljak                   | <span style="color: #FFDAB9;">■</span> B2 Cetinje                            |
| <span style="color: #8FBC8F;">■</span> A3 Pljevlja                                     | <span style="color: #FFD700;">■</span> B3 Danilovgrad, Podgorica, Tuzi, Zeta |
| <span style="color: #6B8E23;">■</span> A4 Gornje i Srednje Potarje: Kolasin - Mojkovac | <span style="color: #FFDAB9;">■</span> B4 Skadarsko jezero                   |
| <span style="color: #A8D8A8;">■</span> A5 Bijelo Polje                                 | <span style="color: #FFFF00;">■</span> C1 Boka Kotorska                      |
| <span style="color: #C8E6C9;">■</span> A6 Plavsko polimska                             | <span style="color: #FFFF00;">■</span> C2 Budva                              |
| <span style="color: #E0FFE0;">■</span> A7 Rožaje                                       | <span style="color: #FFFF00;">■</span> C3 Bar-Ulcinj                         |

Cartogram Planning zones and development corridors 2.1.-1



## Areas and modalities of cross-border cooperation

Montenegro is a European, Mediterranean and Balkan country, which has a connection with the world through ports and airports, and with the immediate surroundings through the road traffic, which implies high-quality organization in the border areas and border crossings. The state border extends over land, sea, lakes and rivers, its length is about 840.4 km, 571 km on land, 50.5 km on lakes, 81.3 km on rivers and 137 km on the sea. The length of the state border with the Republic of Croatia is 41.7 km, with Bosnia and Herzegovina 254.4 km, with the Republic of Serbia 168.5 km, with the Republic of Kosovo 75.6 km and with the Republic of Albania 207.2 km.

**Cross-border zones** represent wider zones in the immediate vicinity of the state border. Given that the space is generally indivisible, the potentials or limitations in contact border zones are mostly similar, so development should be viewed in that context and certain development issues and problems should be solved in cooperation with the neighbouring countries. This mainly refers to the issues of traffic, energy and other infrastructure, tourism, spatial protection and environmental protection through the analysis of cross-border impacts, connection in the contact zones of National Parks, etc.

### **Cross-border Development Zones are:**

- 1) Pljevlja, Gradac – Foča,
- 2) Pljevlja, Bijelo Polje - Prijepolje, Priboj,
- 3) Berane, Andrijevica, Rožaje, Plav - Peć, Kosovska Mitrovica,
- 4) Prokletije cross-border park (Plav, Gusinje – Albania – Kosovo),
- 5) Skadar Lake basin (Podgorica, Danilovgrad, Bar, Ulcinj – Skadar, Koplík),
- 6) Bay of Kotor – Dubrovnik – Trebinje,
- 7) Nikšić, Vilusi – Trebinje, Bileća, Gacko,
- 8) Plužine, Maglić – Bioč – Foča, Sutjeska valley,
- 9) Petnjica -Serbia

Given that Montenegro and neighbouring countries face similar problems and challenges in their development, the common interest is the establishment of functional complementarity and support for the general pro-European development policy. That is why it is necessary to intensify communication at all levels, strengthen business connections between institutions and non-governmental organizations and connect cities in the region in order to improve cooperation. In these development processes, infrastructural, primarily traffic improvement, is necessary.

This plan provides for the continuation of the process of mutual cooperation and improvement of those relations in the field of spatial development, in accordance with European principles. In this context, border crossings will be confirmed in terms of transport infrastructure, as well as spatial organizations, as special spatial zones, in accordance with the relevant legal regulations.

The goals of the establishment of good cross-border cooperation are: implementation of joint projects based on the use of natural conditions and common economic interests, environmental protection and promotion of adaptation and mitigation of the impacts of climate change, encouragement of the development of tourism, culture and environmental protection. Thus, the strategic goal of the European setting, the achievement of economic, social and territorial cohesion, is achieved. A well-established cross-border cooperation additionally opens up the possibility of using certain financial support through European funds and enables a better quality of life for the population in those areas.



Cartogram 2.-2.-1 Cross-border Development Zones

## DEMOGRAPHIC PROJECTION

The basic goal of the demographic policy<sup>2</sup> is the mitigation of negative demographic trends in the country, with a special emphasis on solving the critical problems in the Northern Region and rural areas.

The projection of the population was made under the assumption that by 2040 the projected goals (especially demographic) will be achieved within the planned period, as well as that external migration outside Montenegro will be minimal. It should be taken into account that the natural movement of the population of the largest number of municipalities is negative, the Northern Region is particularly at risk with a high negative rate in almost all municipalities. The migration balance of the largest number of municipalities (except for Podgorica and Danilovgrad and the municipalities of the Coastal Region) is negative, so it is realistic to expect that only after 2025 will internal migrations in Montenegro begin to calm down, so that after 2035, they will be reduced to a minimum, which would affect the reduction of the rates of the population decline in the Northern Region and other depopulated municipalities in Montenegro. (Table 3-1: Projection of the population of Montenegro, regions and municipalities until 2040)

Table 3-1: Projection of the population of Montenegro, regions and municipalities until 2040

Municipality/region	2011	2020	2025	2030	2035	2040
Andrijevića	5071	4524	4327	4221	4198	4175
Berane	28488	26400	26228	26360	26452	26544
Bijelo Polje	46051	41709	41296	41461	41668	41876
Gusinje	4027	3994	3876	3833	3829	3825
Žabljak	3569	3020	2836	2745	2699	2653
Kolašin	8380	7084	6738	6614	6587	6561
Mojkovac	8622	7419	7110	6943	6880	6818
Plav	9081	8224	8144	8164	8230	8295
Petnjica	5482	5212	4987	4895	4868	4841
Plužine	3246	2534	2316	2204	2146	2091
Prijevlja	30786	26534	24745	24139	23729	23325
Rožaje	22964	23032	23236	23980	24963	25987
Šavnik	2070	1494	1313	1222	1161	1103
<b>NORTHERN REGION</b>	<b>177837</b>	<b>161179</b>	<b>157153</b>	<b>156780</b>	<b>157410</b>	<b>158095</b>
Danilovgrad	18472	18261	18679	19080	19061	19042
Nikšić	72443	68798	66645	66511	67143	67781
Podgorica	174572	191096	200020	208021	216134	224563
Tuzi	11422	12490	12852	13102	13306	13512
Cetinje	16657	14997	14350	14092	14057	14021
<b>CENTRAL REGION</b>	<b>293566</b>	<b>305641</b>	<b>312545</b>	<b>320807</b>	<b>329700</b>	<b>338919</b>
Bar	42048	44276	45360	46630	47983	49374
Budva	19218	22416	24669	26667	28214	29851
Kotor	22601	22772	22733	23017	23432	23854
Tivat	14031	15199	15770	16291	16845	17417
Ulcinj	19921	20225	20053	20153	20365	20579
Herceg Novi	30864	30564	30117	30178	30434	30693
<b>COASTAL REGION</b>	<b>148683</b>	<b>155451</b>	<b>158703</b>	<b>162937</b>	<b>167272</b>	<b>171767</b>
<b>MONTENEGRO</b>	<b>620086</b>	<b>622271</b>	<b>628402</b>	<b>640524</b>	<b>654382</b>	<b>668781</b>

<sup>2</sup> Demographic policy can be defined in detail by a special strategy

Table 3.- 2: Projection of the population of urban settlements (municipal centers) until 2040

Municipality/region	2011	2020	2025	2030	2035	2040
Andrijevica	1055	1035	1010	1001	995	990
Berane	11193	10537	10627	10680	10717	10755
Bijelo Polje	23105	28230	28233	28332	28431	28530
Gusinje	1722	1742	1725	1715	1713	1712
Žabljak	1737	1512	1465	1455	1430	1406
Kolašin	2747	2475	2428	2408	2398	2388
Mojkovac	3631	3081	3045	3004	2977	2950
Plav	3800	4008	4069	4100	4133	4166
Petnjica	623	688	679	677	673	669
Plužine	1353	1194	1133	1090	1061	1034
Pljevlja	19327	18521	17921	17751	17538	17327
Rožaje	9567	10069	10360	10795	11237	11698
Šavnik	456	328	298	282	288	314
<b>NORTHERN REGION</b>	<b>80316</b>	<b>83420</b>	<b>82994</b>	<b>83287</b>	<b>83592</b>	<b>83905</b>
Danilovgrad	5170	5185	5325	5461	5466	5472
Nikšić	57278	56227	55311	55477	56004	56536
Podgorica*	154434	171413	179417	186594	193871	201432
Tuzi	4857	6059	6234	6356	6454	6554
Cetinje	13991	13202	12633	12532	12501	12469
<b>CENTRAL REGION</b>	<b>235730</b>	<b>252085</b>	<b>258920</b>	<b>266419</b>	<b>274296</b>	<b>282463</b>
Bar	13586	13436	13766	14151	14561	14984
Budva	13278	15933	17534	18955	20054	21217
Kotor **	9265	9221	9205	9320	9488	9659
Tivat	9390	9303	9653	9972	10311	10661
Ulcinj	10828	10869	10777	10830	10944	11059
Herceg Novi ***	14462	14077	13871	13899	14017	14137
<b>COASTAL REGION</b>	<b>70809</b>	<b>72840</b>	<b>74806</b>	<b>77127</b>	<b>79376</b>	<b>81717</b>
<b>URBAN SETTLEMENTS</b>	<b>386855</b>	<b>408345</b>	<b>416721</b>	<b>426834</b>	<b>437264</b>	<b>448085</b>

Note:

\* The urban population of Podgorica includes the urban population of Podgorica and Golubovac

\*\* The urban population of the Municipality of Kotor includes the urban population of Kotor and Dobrota

\*\*\* The urban population of Herceg Novi includes the population of Herceg Novi and Igalo

Table 3.- 3. Projection of the number of households of Montenegro, regions and municipalities until 2040

Municipality/region	2011	2020	2025	2030	2035	2040
Andrijevica	1666	1636	1492	1456	1448	1440
Berane	8375	8379	8375	8417	8447	8476
Bijelo Polje	13802	13544	13321	13308	13375	13441
Gusinje	1218	1220	1211	1180	1178	1177
Žabljak	1251	1231	1039	996	979	962
Kolašin	2836	2793	2381	2290	2280	2271
Mojkovac	2775	2781	2426	2345	2324	2303
Plav	2383	2390	2303	2298	2316	2335

Petnjica	1389	1371	1371	1332	1324	1317
Plužine	1137	1082	814	770	750	730
Pljevlja	10627	10616	9364	9088	8933	8782
Rožaje	5455	5741	5752	5907	6149	6401
Šavnik	690	668	473	331	314	299
<b>NORTHERN REGION</b>	<b>53604</b>	<b>53451</b>	<b>50323</b>	<b>49716</b>	<b>49818</b>	<b>49934</b>
Danilovgrad	5477	5598	5660	5782	5776	5770
Nikšić	21538	21307	20827	20785	20982	21182
Podgorica	54577	58191	66673	69340	72045	74854
Tuzi	2769	3263	3672	3743	3802	3861
Cetinje	5697	5552	5125	5033	5020	5008
<b>CENTRAL REGION</b>	<b>90058</b>	<b>93911</b>	<b>101957</b>	<b>104683</b>	<b>107625</b>	<b>110674</b>
Bar	13789	14499	15641	16079	16546	17026
Budva	7042	7118	9137	9877	10450	11056
Kotor	7604	8072	8119	8180	8327	8477
Tivat	4834	5011	5632	5818	6016	6220
Ulcinj	5440	5692	5868	5872	5930	5992
Herceg Novi	11090	11431	11864	11858	11869	11970
<b>COASTAL REGION</b>	<b>49799</b>	<b>51823</b>	<b>56261</b>	<b>57684</b>	<b>59137</b>	<b>60741</b>
<b>MONTENEGRO</b>	<b>193461</b>	<b>199185</b>	<b>208541</b>	<b>212083</b>	<b>216580</b>	<b>221349</b>

Table 3 - 4. Projection of the number of households in urban settlements (municipal centers) until 2040

Municipality/region	2011	2020	2025	2030	2035	2040
Andrijevisa	353	345	337	345	343	341
Berane	3574	3293	3321	3445	3457	3469
Bijelo Polje	7453	9106	9107	9139	9171	9203
Gusinje	533	544	539	536	535	535
Žabljak	618	560	543	539	530	521
Kolašin	894	853	837	830	827	823
Mojkovac	1231	1027	1015	1001	992	983
Plav	994	1113	1130	1171	1181	1190
Petnjica	129	191	189	193	192	191
Plužine	442	385	365	363	354	345
Pljevlja	6529	6387	6180	6121	6048	5975
Rožaje	2479	2517	2590	2699	2809	2925
Šavnik	153	113	103	97	92	88
<b>NORTHERN REGION</b>	<b>25382</b>	<b>26436</b>	<b>26256</b>	<b>26481</b>	<b>26532</b>	<b>26589</b>
Danilovgrad	1561	1616	1664	1707	1708	1710
Nikšić	17016	16537	16268	16317	16472	16628
Podgorica	48489	51943	54369	56544	58749	61040
Tuzi	1161	1731	1781	1816	1844	1873
Cetinje	4609	4552	4356	4321	4311	4300
<b>CENTRAL REGION</b>	<b>72836</b>	<b>76380</b>	<b>78438</b>	<b>80704</b>	<b>83083</b>	<b>85550</b>
Bar	4663	4633	4747	4880	5021	5167
Budva	4863	5901	6494	7020	7427	7858



Kotor	3187	3293	3288	3329	3389	3450
Tivat	3301	3323	3448	3561	3683	3808
Ulcinj	3245	3197	3170	3282	3316	3351
Herceg Novi	5430	5414	5335	5346	5391	5437
<b>COASTAL REGION</b>	<b>24689</b>	<b>25761</b>	<b>26481</b>	<b>27418</b>	<b>28227</b>	<b>29071</b>
<b>MONTENEGRO</b>	<b>122907</b>	<b>128576</b>	<b>131175</b>	<b>134603</b>	<b>137842</b>	<b>141211</b>

### Proposal of measures to stop negative demographic trends in the Northern Region:

- Investment in infrastructure (higher quality traffic connections, raising the level of other technical infrastructure).
- Coordination in the management and implementation of the economic policy of regional development and the strengthening of inter-municipal cooperation for the implementation of development projects in the Northern Region,
- Improvement of the business environment and introduction of tax incentives for the development and encouragement of investments in the Northern Region,
- Improvement of the competitiveness of the Northern Region, primarily in agriculture, tourism, energy, wood processing, introduction of international business standards, increase in the production value and promotion of exports; use of EU funds for development projects in the economy and infrastructure;
- Conducting the housing policy in order to stimulate young people to live and work in the region (subsidizing housing loans, support for the construction of affordable apartments, etc.)
- Measures to support the family in the field of healthcare and education (subsidies for childbirth, free education and healthcare for children.)
- Different programmes of support, subsidies and incentives to the coordinated activities of the Government and local self-governments to attract investments in various economic areas,
- Provision of quality healthcare
- Provision and improvement of education, establishment of higher education institutions or training programmes for required skills,
- Promotion of nature protection and natural beauty, which the Northern Region is rich in,
- Promotion of cultural heritage, tradition, eco-tourism, rural and health tourism;
- Preparation of a comprehensive programme in cooperation with the Government and local authorities, for the implementation of measures.

*Note: New data from the 2023 Census will be provided in the Plan Proposal phase and the data on foreigners immigrated to Montenegro with temporary residence, so that they can become an integral part of the population projection in the coming period.*

### CONCEPT OF MACROECONOMIC DEVELOPMENT (excerpt - page 33 of Book 2)

The current economic policy of Montenegro and the economic development model are based on the Constitution, Article 1, which states that Montenegro is an independent and sovereign state with a republican form of government, but also that it is a civil, democratic, ecological and social justice state, based on the rule of law.

In recent years, significant economic growth has been stimulated by the implementation of large infrastructure projects with positive multiplier effects, with the involvement of domestic resources and an increasingly attractive tourist offer. Although positive trends are evident in most sectors, the key generators of growth in the previous decade and a half have been **construction, industry and tourism**. While the main advantages of Montenegro are numerous and unused natural resources, the limiting factor is the **inadequate competitiveness of our economy**.

**Planning goal: Montenegro as a social justice state, an economic model based on a free and open market with full responsibility of the state for assumed obligations.**

The concept of economic growth and development is reflected in the increase in the competitiveness of the economy. **A developed and competitive economy is based on knowledge and resources that should be valorized, through the related priorities of the Research and Innovation Strategy of Smart Specialization (S3), for a more complete utilization of significant development potentials.** This concept

of development is complementary to the achieved foreign policy priority and membership in the NATO alliance. Monitoring and realization of goals, measures and initiatives related to the Europe 2020 Strategy are connected with the key mid-term priority - membership in the European Union. The S3 Strategy was adopted by the Government of Montenegro. (one of the few countries which has adopted this Strategy even though it is not a member of the EU).

The concept of economic development, which is defined in the Smart Specialization Strategy, refers to a developed and competitive state that is based on three key strategic directions, namely:

- Healthy Montenegro;
- Sustainable Montenegro;
- Modernized and digitized Montenegro.

The strategic directions represent a logical continuation of the achievement of the goals of the Europe 2020 Strategy and a commitment towards development that **is based on knowledge, with the protection of environment, a high level of employment, productivity and social cohesion, focusing on three interrelated priorities: smart growth, sustainable growth and inclusive growth.**

**Healthy Montenegro** - with improved aspects of primary, secondary and tertiary protection and prevention and new products, will enable a higher quality of life, and thus the prosperity of the nation. Healthy Montenegro is the center of biomedical development through new technologies, the production of medicines, medicinal plants and organic food, health tourism, along with the provision of specialized health services as a finished product. Healthy Montenegro is a society of technology for health, science, well-being, regional cooperation and peace.

**Sustainable Montenegro** - The strategic direction "Sustainable Montenegro" refers to the fulfillment of the constitutional category of Montenegro as an ecological state. It is based on the Millennium Development Goals, the Europe 2020 Strategy and basic strategic documents in Montenegro. Sustainable Montenegro, above all, means further development and efficient use of natural resources. Space, as the most important resource of the state, must be valorized so that its devastation does not occur. The development of transport infrastructure and rehabilitation of "black spots" must rely on innovative solutions and new technologies, for a more complete use of secondary raw materials and adequate reuse of waste based on the principles of circular economy, thus creating preconditions for sustainable development. The fulfillment of tasks in the field of environmental protection, especially those provided for in Chapter 27, will have a positive impact on the entire state.

**Modernized and digitalized Montenegro** - The strategic direction "Modernized and Digitalized Montenegro" should enable the achievement of EU standards related to the Digital Agenda 2020, the Digital Single Market Strategy and the EU's innovative Industrial Policy. The development and application of ICT is of crucial importance for economic development. The achievement of standards and fulfillment of goals help the development of trade, better use of capital and strengthening of national competitiveness. The introduction of modern technologies and the valorization of the use of available raw materials in priority sectors will lead to supplying the market with high-quality products. The foundations of this direction are related to better infrastructure, e-economy and information security.

**Green economy/green growth** - The importance of applying the concept of sustainable development is one of the most current topics today, both in the academic and business community, and in the general public, and represents the proposed development scenario in the Concept of the Spatial Plan of Montenegro. Sustainable development from the aspect of overall economic development implies the obligation of the state to take care of the efficient use of available resources, and to ensure their long-term quality and sufficiency, while respecting the fact that resources are limited, and environmental pollution has its limits.

Montenegro is the first ecological state in the world. The Declaration defines the country's strategic commitment to adopt and apply the highest standards and norms in the field of environmental protection, nature conservation and economic development based on the principles of an ecologically sustainable system. One of the key instruments in the realization of the proposed scenario is the development of the green economy. It is a macroeconomic approach to sustainable economic growth, which is based on the principle of achieving growth in income and employment through investments that reduce the emission of harmful gases and enable the optimal functioning of the ecosystem. The National Sustainable Development Strategy of Montenegro until 2030 integrates the requirements of the UN Agenda for Sustainable Development into the national context through solutions for sustainable management of four groups of national resources: human, social, natural and economic, which represent the priority of the overall

sustainable development of the Montenegrin society. As a member of the UN, Montenegro is simultaneously implementing the 2030 Agenda and the negotiation process with the European Union.

**The adoption of the European economic policy and the definition of common goals are in accordance with the principles of an open market economy and free competition.**

The strengthening of the role of the state for Montenegrin citizens, strengthening the competitiveness of the Montenegrin economy, its ability to face competitive pressure on the European Union market, as well as the overall strengthening of all macroeconomic indicators that point to greater stability and incentive for growth are among the most important challenges of the economic policy.

**Development goals (excerpt from the text, p. 35, Book 2).**

The key challenges and risks facing the Montenegrin economy are the result of several factors: (1) restrictions that occurred under the influence and as a result of the COVID-19 pandemic, (2) the geopolitical situation caused by the crisis in Ukraine, (3) galloping inflation caused by broken supply chains and limited supply of goods on global markets, (4) tightening of financial conditions on international markets and fiscal sustainability and last but not least (5) political instability and institutional crisis.

A special segment that determines the success of a certain model of economic policy is that of internationally assumed obligations. The adoption of the European economic policy and the definition of common goals are in accordance with the principles of an open market economy and free competition. By entering the negotiations for EU membership, Montenegro expressed its willingness to share common goals. And they are related to:

- functional market economy;
- stability of interest rates;
- increasing competitiveness;
- stable inflation rates;
- stability of public finances;
- that is, overall macroeconomic stability.



## SECTORAL PROJECTIONS

### MINING, INDUSTRY AND HYDROCARBON EXPLORATION - extract from the text p.38 Book 2.

The development goals in the field of mining, industry and hydrocarbon exploration are as follows:

- Ensure the participation of authorities for the activities of detailed geological exploration in the process of planning the detailed use of space. It is necessary to amend the legal regulations as regards the provisions concerning the conclusion of the Concession Agreement, in such a manner that the signing of the concession agreements is dependant on the obtaining all approvals from the relevant institutions regarding healthcare and environmental protection.
- Respect and, if necessary, review during detailed planning, the planned use of the concession areas, for which geological exploration rights have been granted.
- Encourage projects for the conversion of exploitation areas, where exploitation has completed, especially in the Coastal Region. Exploited spaces can be converted into spaces for recreational facilities, sports fields, picnic areas, artificial lakes, viewpoints, shopping centers, plants and factories or green areas.
- Prevent illegal exploitation of solid mineral raw materials, especially technical-construction and architectural-construction stone.

#### **Policy, strategies and plans for the use of mineral raw materials - excerpt from the text**

Deposits of mineral raw materials are located in limited geographical areas, were formed during certain geological periods through special geological processes and are located in areas with specific geological characteristics. The state of Montenegro, as a candidate for membership in the European Union, among other things, has the task to comply with and follow the European policies, strategies and initiatives in all areas, even when it comes to mining and industry based on the use of metallic, non-metallic and energy mineral raw material.

The activities of the European Commission in this area is reflected in the adoption of the Raw Material Initiative (2008), which aims to provide: a fair and sustainable supply of mineral raw materials from global markets; sustainable supply of mineral raw materials within the EU and efficiency, that is, rational use of resources through the supply of recycled "secondary mineral raw materials". The strategy includes all mineral raw materials used in the European industry, excluding materials from agricultural production and materials used as fuels (energy mineral raw materials).

The European Commission regularly publishes a list of critical raw materials (CRM) in the European Union. Some of them, such as: bauxite, barite, titanium, rare earth elements (light and heavy), vanadium, scandium and gallium are found in primary deposits of mineral raw materials in Montenegro and/or in secondary resources, that is, "technogenic mineral raw materials"

The development goals in the field of mining, industry and hydrocarbon exploration are:

- Ensure the participation of authorities for the activities of detailed geological investigations in the process of planning the detailed use of space. It is necessary to amend the legal regulations as regards the provisions concerning the conclusion of the Concession Agreement, in such a manner that the signing of the concession agreement is conditional upon obtaining all approvals from the relevant institutions regarding health and environmental protection.
- Respect and, if necessary, review during detailed planning, the use of the concession areas, for which geological exploration rights have been granted.
- Encourage projects for the conversion of exploitation areas, where exploitation has ended, especially in the Coastal Region. Exploited spaces can be converted into spaces for recreational facilities, sports fields, picnic areas, artificial lakes, viewpoints, shopping centers, plants and factories or green areas.
- Prevent illegal exploitation of solid mineral raw materials, especially technical-construction and architectural-construction stone.

The Draft Plan indicates the possibility of increased total annual exploitation of mineral raw materials and prevention of illegal exploitation of technical construction stone.

**During the exploitation of mineral raw materials, it is mandatory to comply with the legal regulations and strategic documents, EU regulations and directives related to the exploration of mineral raw**

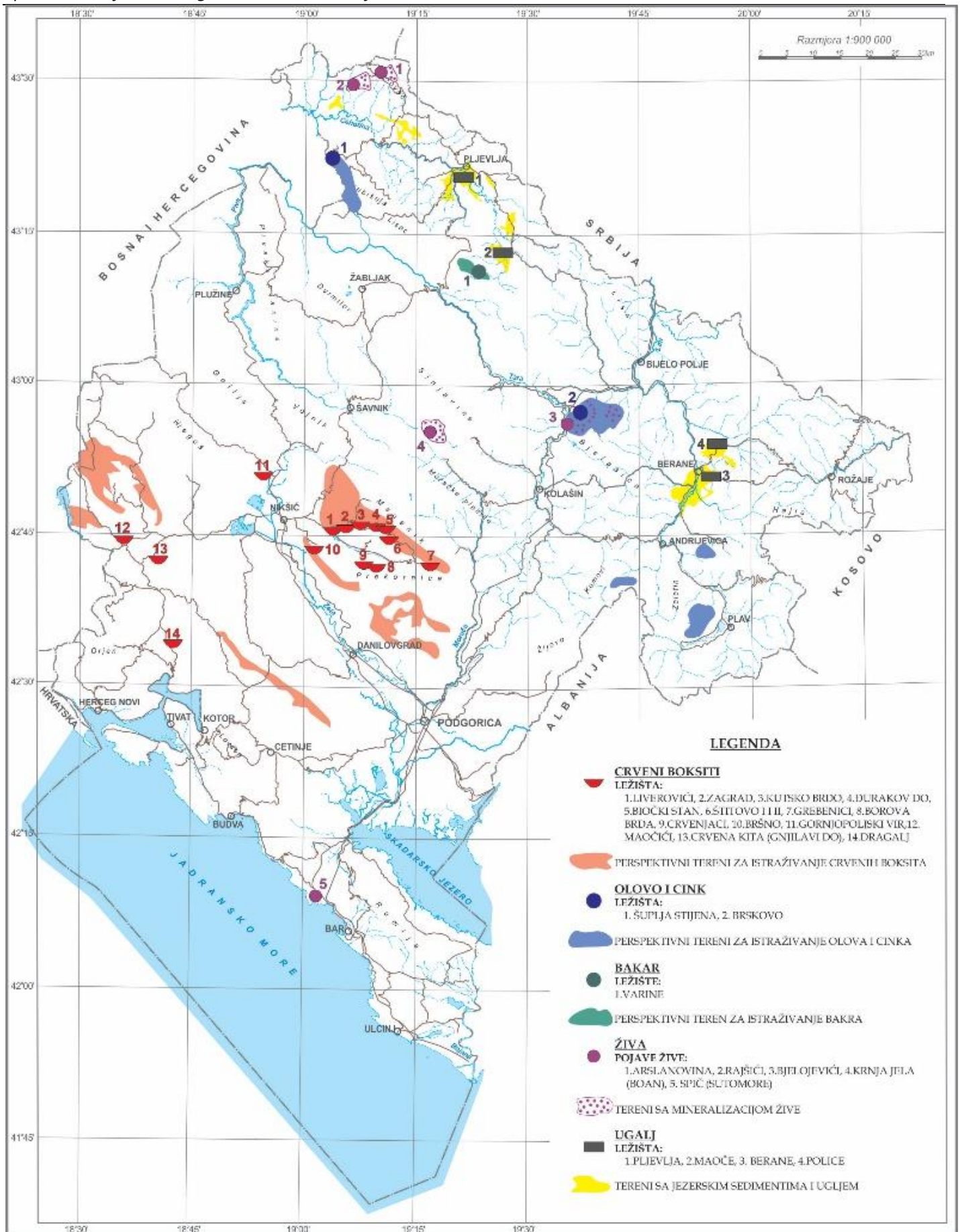
**materials, which ensures the sustainable exploitation of mineral raw materials with the application of spatial and environmental protection measures.**

The Draft Plan lists the most important deposits of mineral resources in Montenegro (red bauxite, lead and zinc, copper, decorative stone, technical construction stone, bitumen, cement marl, brick clay, white bauxite, bentonite clay, quartz sand, chert, dolomite, coal) and all active mines.

**Preservation of areas where deposits of mineral raw materials have been confirmed** and promising areas for further geological exploration, through comprehensive spatial planning, is a long-term investment in the context of economic and industry development, preservation of sustainable supply of mineral resources at the state and local level, but also in a wider regional and European context.

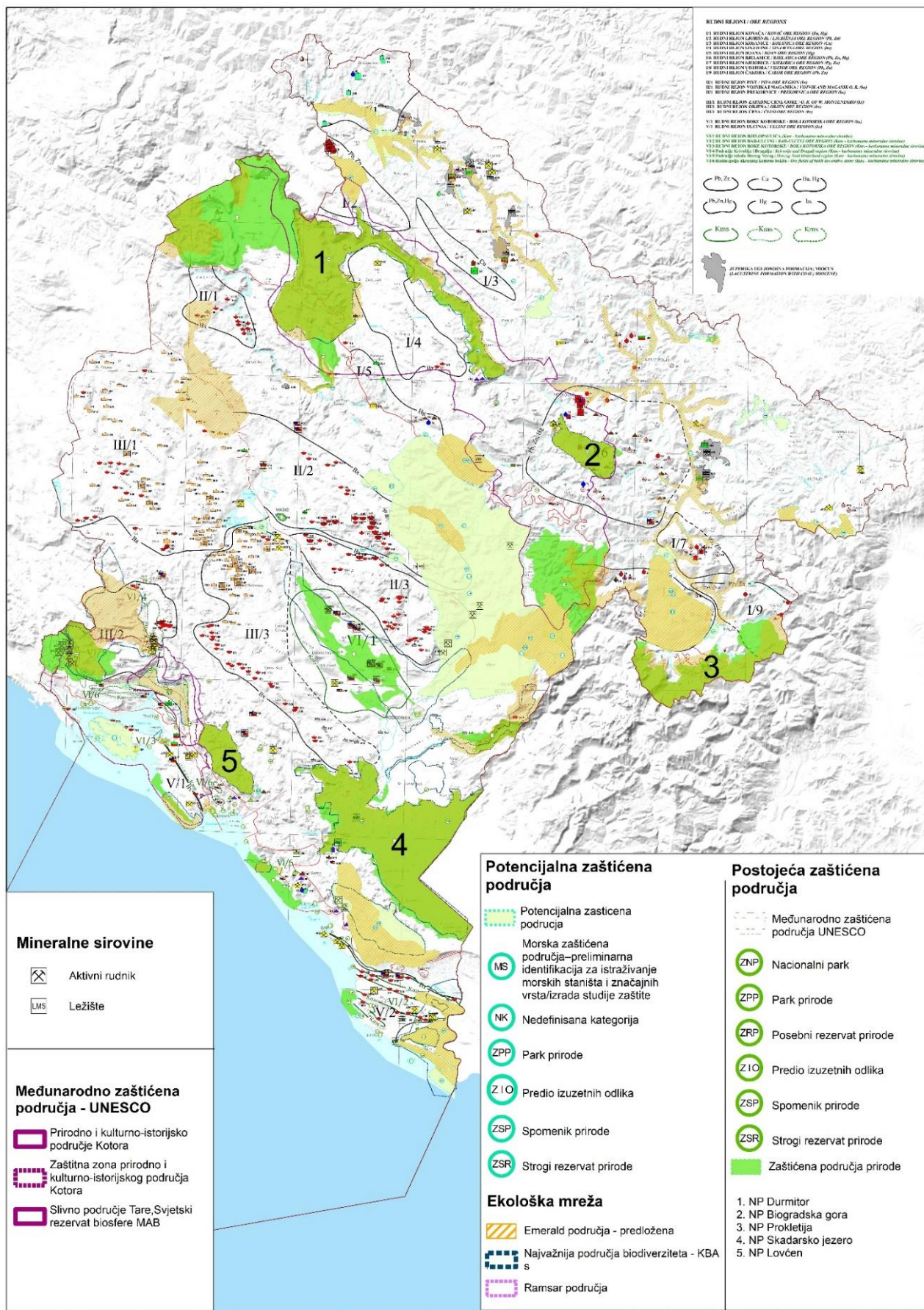
**Future exploitation must be carried out under strict environmental conditions, with the approval of the Government and competent institutions. (Environmental Protection Agency, etc.).**

**Whether a deposit will be explored to the required and prescribed level of defining the quantity and quality, that is, positively evaluated in economic terms, depends on numerous natural, geological, technical-technological, economic, ecological and other factors, as well as natural and valuable indicators. Whether a deposit will be exploited, in addition to meeting all of the above, as well as other conditions defined by law, primarily depends on the strategic commitments of the country (under the legal requirements of spatial and environmental protection).**



Cartogram 5.1 -1: Map of the most significant deposits and promising terrains of metallic mineral resources (red bauxite, lead and zinc, copper and mercury) and coal in Montenegro (Pajović and Radusinović, 2010)





Cartogram 5.1-2. Overview map of protected areas and mining regions with locations of deposits and occurrence of mineral resources in Montenegro. Data according to: Pajović, M. 1999: Metallogenic map of Montenegro, 1:200,000, and Radusinović S., 2016: Project MINATURA2020; updated and amended.

## INDUSTRY

The sectors recognized by the **Industrial Policy** as having the potential for growth and which can represent drivers of industrial development with the potential to increase competitiveness on the domestic market and strong export potential are: **Manufacturing industry** - food, wood, metal and pharmaceutical; **Energy and Tourism**.

The sectors that have growth potential and should contribute to **modern industrial development** are: **Transport, ICT and creative industries, Business services and Construction**.

On the basis of recognized potentials, the following are the key indicators for monitoring industry trends, which are in direct correlation with the achievement of the goals of the Industrial Policy of Montenegro:

- increasing the share of industry in GDP;
- increase in the number of employees in the industry sector;
- increasing the share of industry in the total exports.

*An important prerequisite for the sustainable and steady development of any country is a healthy economy, which, above all, rests on a developed industry. Industry, as the most important part of material production, represents a large economic multiplier on which the development of both tertiary activities and the society as a whole depends. (Baseline study and Draft Spatial Plan of Montenegro).*

It is very important to build and strengthen the capacities of the national innovation system as a whole, which will effectively enable the connection of science and economy and provide support to highly innovative SMEs, enable greater use of funds from EU programmes available for these purposes and encourage companies to think innovatively. It is necessary to provide support for eco-innovations, improvement of energy efficiency and efficiency of resource use in industry and SMEs, and development of innovative entrepreneurial ventures in the field of information technologies and creative industries.

It is necessary to encourage the dynamism of development of the Northern Region, where the largest part of the development potential based on the available natural resources is concentrated. The development and economic policy will influence the better use and market valorization of the potentials of this region, especially for the development of tourism, available forest and energy potentials, as well as the potentials for the development of agriculture, especially in the segment of healthy food production.

**SECTOR OF HYDROCARBON EXPLORATION AND PRODUCTION (given the changes in the research results, this text has been corrected in relation to the adopted Draft of October 2023)**

Although the world is rapidly moving towards renewable energy sources, it is emphasized that oil and gas will continue to play an irreplaceable role in the development of the world in the decades to come. Bearing this in mind, Montenegro must continue with the development of the oil and gas exploration sector with the aim of becoming an oil and gas producing country.

**Continuation of exploration in the Montenegrin offshore** - In the oil industry, the area of the South Adriatic, from the aspect of the possibility of existence of commercial quantities of hydrocarbon, belongs to the promising one. At the same time, it was a poorly explored area. In recent years, this situation is changing. The existing concessionaires, in accordance with the obligations from the Work Programme of the Agreement on Hydrocarbon Exploration and Production Concession, performed 3D geophysical surveys at the end of 2018. The collected data were processed during 2019. The data processed in this way were interpreted and based on them, the locations were defined where the first exploratory drilling was performed. However, the degree of coverage of the total offshore area by 3D seismic surveys is still low and amounts to something around 12% (1500 km<sup>2</sup>).

During 2021, the activity started on drilling the first exploratory well in the offshore of Montenegro (Eni, Novatek) was completed. The well, which was initially planned to be completed at a depth of 6,500 m, was drilled to a depth of 5,950 m and was drilled 27 km south-west of Bar. The goal of drilling the well was to get an answer to the question about the existence of oil and gas in the deep carbonate prospect. The depth of the sea at that place is 100m. Based on the available data, the well entered the target geological environment, Cretaceous carbonate limestone, at a depth of 5800 m. Unfortunately, the well was dry and did not diagnose the presence of hydrocarbon. The second shallower well, which was planned to be drilled to a depth of 1,500m, was to verify the existence of gas in the isolated gas prospect. This well was located 15.6 km from the Port of Bar. The concessionaire gave up drilling this well.

The negative drilling results have largely created future activities in the "upstream" sector in Montenegro. In the event that the well had a positive outcome and discovered commercial hydrocarbon deposits, Montenegro would be included in the world list of oil and gas producers. After that, the development of this industry would be natural and inevitable.

The negative result of drilling a deep exploratory well certainly had a negative impact on the oil industry's interest in this area. The attractiveness of the space has certainly declined significantly. In this case, the Government of Montenegro is left to activate the already prepared tender for awarding the concession for exploration on the remaining free blocks in the offshore. The purpose of announcing this tender would be to offer the area to geophysical companies, which would, at their own expense and risk, carry out seismic ventilations of the area in order to identify new interesting prospects, in which it would be possible to make new commercial discoveries. Afterwards, a new cycle would follow, the announcement of a tender for the award of a concession for exploration and production.

### ***Gas supply and gas infrastructure (an integral text given)***

By becoming a member of the Energy Community, Montenegro accepted the obligation to apply the acts passed by the competent bodies of the Community, including the acts related to natural gas, even though Montenegro still does not have a built infrastructure for the transmission and distribution of natural gas.

(The legal and regulatory framework for the gas market in Montenegro is currently defined by the *Law on Energy*, which was adopted and amended in 2017. Under the current (applicable) Law on Energy, Montenegro transferred into its legislation the obligations arising from the Third Energy Package ( Directive 2003/55/EC and Regulation (EC) No. 1775/2005, as well as Directive 2004/67/EC) from the EU legislation). Although it is still not known when any of the projects that could bring the first quantities of gas to Montenegro will be realized, and when the moment will be created for the real need for regulation, the Energy Regulatory Agency adopted the act regulating the general conditions for gas supply, which entered into force on 4 February 2020, and which, among other things, regulate gas supply.

**Gas infrastructure must be developed in accordance with the provisions of the Law on Spatial Planning and Construction of Structures and the adoption of appropriate planning documents, with the participation of the public and the issuance of permits that authorize the construction and use of the gas distribution system.** The implementation of this law ensures the analysis and planning of measures for the purpose of avoiding or mitigating negative impacts on the environment.

Apart from the limited consumption of LPG (liquefied petroleum gas), there is no consumption of natural gas in Montenegro. Despite the expressed political interest in gasification, the development of the gas market in Montenegro is entirely dependent on the degree of cooperation with neighbouring countries.

Based on the Energy Development Strategy of Montenegro until 2030, there are several routes from which natural gas could be supplied to Montenegro. At the time of drafting the Strategy, two regional pipeline construction projects were current, namely **the Ionian-Adriatic Pipeline (IAP)** as part of the Trans-Adriatic Pipeline (TAP) and **the Gas Ring Concept**, through which the gasification of Southeast Europe was to be carried out. Both concepts envisaged bringing gas from the giant Shah Deniz gas field (Caspian Sea, Azerbaijan) to the Southeast Europe.

Through technical assistance financed from the Western Balkans Investment Framework (WBIF), which is a joint initiative of the EU, International Financial Institutions, bilateral sponsors and the governments of the Western Balkans, **The Gas Development Master Plan for the development of the gas transportation system (gasification) of Montenegro** (November 2015) was developed. The concept of development of the gas distribution network, which is presented in the study, is based on the connection of Montenegro to the Ionian-Adriatic gas pipeline (IAP).

The potential direct gas consumption (based on the **"Energy Development Strategy of Montenegro until 2030"**, Ministry of Economy, May 2014, White Book) in Montenegro could grow to 590 million m<sup>3</sup> of gas in 2040 if all pipelines are built towards larger municipal centers.

**In addition to the construction of regional pipelines, which Montenegro supports, while being aware that it cannot influence the decision about their construction, at the same time the country is trying to valorize its potential gas reserves from its offshore.** Although a deep exploratory well (ENI/Novatek) was drilled in 2021, to a depth of 5900 m, which did not lead to the discovery of either an oil or gas deposit, the hope that some commercial hydrocarbon deposit will be discovered in the future still remains.

**In the case of a commercial discovery, the possibility of developing a local gas market as well as exporting gas to neighbouring countries through a potential regional pipeline (IAP) or another would**



**certainly be considered. Montenegro's closest connections with gas are Split (Croatia), Kraljevo (Serbia), Fiera (Albania), which should be connected by the IAP pipeline.**

According to the Gas Development Master Plan, appropriate corridors/routes have been proposed that minimize the length and environmental impact of the proposed gas pipeline system. The branches towards Podgorica and Nikšić were considered. Considering the position of the IAP, the coastal part of the transport system in Montenegro is shown with shorter gas transport pipelines that branch directly from the IAP system, such as the branches towards Ulcinj, Tivat, Kotor and Herceg Novi. The second major part of the system is based on a large branch towards Podgorica that stretches across Montenegro to the northeast and reaches Berane. Transport pipelines to all municipal centers in central and northern Montenegro branch from this main gas pipeline. Coastal settlements should be the first phase of the construction of the system, towards Podgorica as the second phase of the construction of the system, and the branch towards Nikšić as the third phase of the construction of the project.

A gas pipeline in the direction of mountain settlements in Montenegro should be built only if that gas pipeline is part of the international connection towards Kosovo and Serbia and if such interconnection will be profitable for Kosovo and Serbia. The distribution gas system is planned for the gasification of all cities and larger settlements in the state territory of Montenegro. The route of the distribution gas pipeline is planned to be traced in such a manner that the priority is the supply of large consumers such as industrial consumers, large public and service facilities and large shopping centers located on that part of the route. After that, the route should continue towards other consumers.

The gas distribution pipeline should mainly be placed under public roads, parallel to other municipal infrastructure. In this way, the distribution system forms a gas network that can have a capillary shape or a ring shape. (Gas networks are designed in such a manner as to enable the construction of the network in individual settlements, so that it is possible to separate parts of the network).

Compared to other fossil fuels, natural gas has the lowest carbon content and is a relatively cleaner source of energy. Therefore, the gas used for energy production can be considered as an alternative fuel that will reduce the emission of greenhouse gases.

Gasification can contribute to the reduction of greenhouse gas emissions from the energy sector (assuming that the gas power plant is near Podgorica) and the industrial sector (assuming the replacement of existing fossil fuels and the use of gas in large industrial plants (former KAP). Since the households are large consumers of energy, gasification will be an incentive for further development of industry and increase of the energy standard of households and even tourism.



*Cartogram 5.1. - 3: Excerpt from the Master Plan of the proposed gas pipeline route in Montenegro (COWI/IPF 2015 Gas Master Plan) Note: The graphic representation represents the Excerpt from the Master Plan and indicates a conceptual approach. The corridor and route of the gas pipeline will be determined in detail based on the strategic*

## **AGRICULTURE**

The importance of agriculture is seen not only through its contribution to the gross national product, but much more through its multifunctional role for the society as a whole. In addition to the economic contribution, the role of agriculture in the protection and development of rural areas is irreplaceable; the development of rural tourism and agritourism, as well as the ecological role in protection against erosion, overgrowth, preservation of typical landscapes, and the contribution to the protection of cultural and natural heritage.

The general goals of agricultural development must be in accordance with the basic commitments defined by strategic documents at the state level, especially the Agriculture Development Strategy (2023-2028) whose preparation is in the final stage, but also in accordance with the selected scenario of further development (Responsible and balanced development).

Therefore, in the context of the general commitment of Montenegro to lead a policy of accession to the EU, the generally accepted goals are:

- Management of natural agricultural resources in a long-term sustainable manner, with maximum protection of the environment and achievement of green response goals in accordance with the EU agenda;
- Strengthening of the competitiveness of agriculture while providing a stable supply of safe food, acceptable in terms of quality and prices;
- Improvement of the standard of living of the rural population and overall rural development, while preserving traditional values;
- Application of new technologies in order to increase food safety and increase competitiveness, as well as
- Diversification of economic activities in rural areas and implementation of agricultural policy and rural development policy measures.

### **Special - specific objectives**

- Establishment of an information system on agricultural land in public and private ownership, (identification of resources, precise and updated information on the characteristics of the land, the way of use, ownership and other relevant aspects).
- In the plans elaborated in more detail, adjust the use of the land in terms of categorization and define guidelines in accordance with the characteristics
- Protection of the existing potential of agricultural land from further degradation or conversion into construction land,
- Activating unused agricultural land and thereby increasing the area of used agricultural land,
- Increasing the share of arable agricultural land in the structure of the total agricultural land,
- Increasing the volume of agricultural production to the level of optimal and long-term sustainable use of available resources,
- Increasing the added value of agricultural products, through raising the level of processing and finalization of products, etc.
- Raising the level of self-sufficiency and reducing import dependence, especially in the sector of fruit, vegetable, milk and meat production;
- Expansion of the coverage of organic agriculture in all areas,
- Improvement of the complete infrastructure in rural areas, in order to stop the trend of further depopulation of the Montenegrin countryside,
- Provision of tourist and hospitality services directly on the farm, especially tourism valorization and preservation of katuns,
- Strong connection of primary producers with manufacturers and tourist facilities,
- Creation of larger commodity producers and grouping of small producers in associations,
- Affirmation and protection of traditional technologies and traditional products,
- Diversification of activities in the countryside (encouragement of traditional handicrafts, crafts) and protection of rural cultural heritage,
- Strengthening of institutional capacity to support agricultural producers, implementation of standards, etc.
- Further development of processing facilities - agro-industry, as well as mini plants for processing and packaging of agricultural products,



- Implementation of quality schemes and food safety and quality standards in a larger scope, in response to increasingly demanding criteria of trade chains
- Strengthening of horizontal and vertical connection in the food production chain, etc.
- Support for agro-innovations and digitization in agriculture, and, in general, the implementation of new technologies;

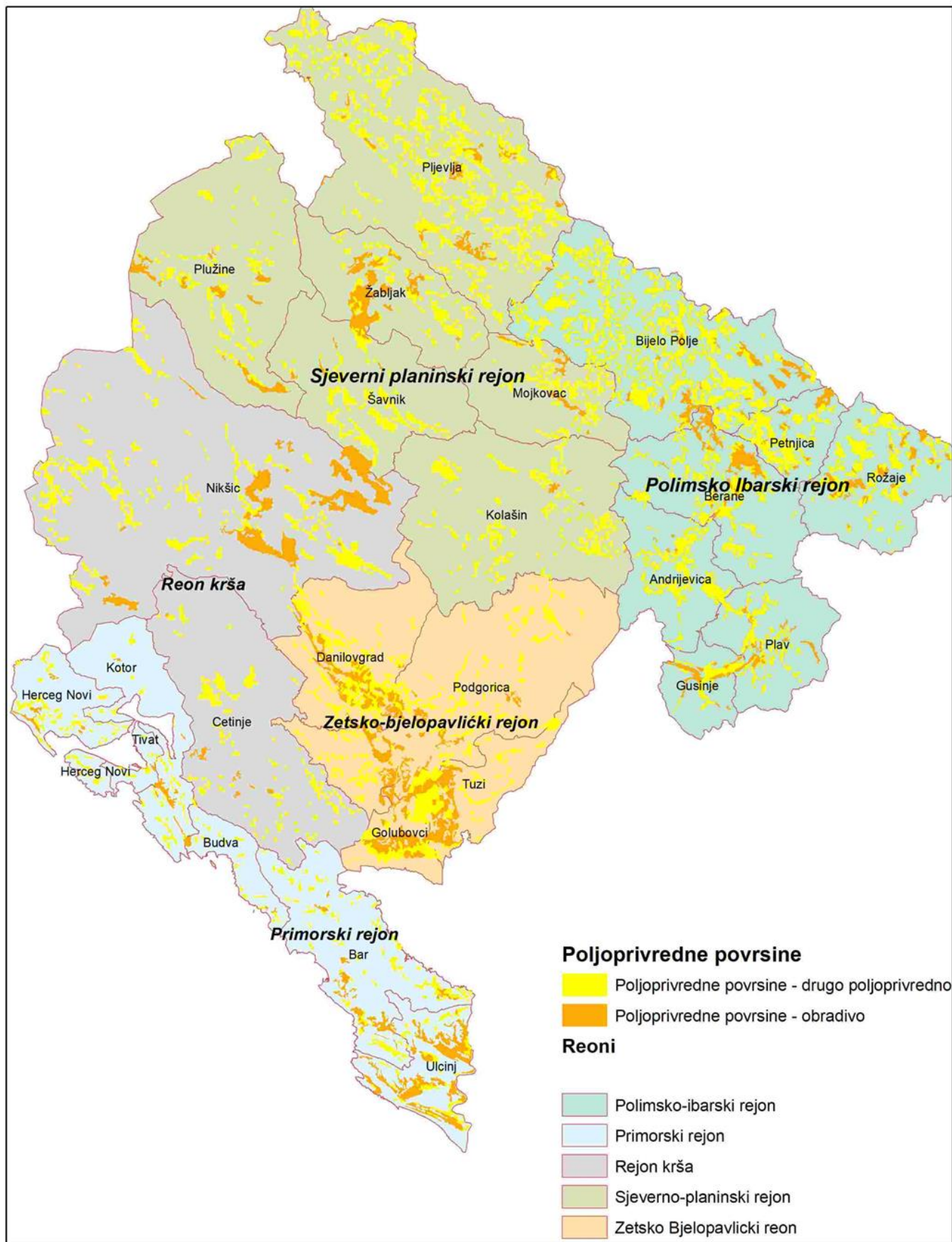
Priority goals in the short term – until 2030

In the short term of this planning document, that is, in the next seven years (until 2030), the priority in the development of agriculture should be given to:

- Preservation and valorization of available agricultural land for agricultural purposes (cultivation of unused land, prevention of its further conversion into construction land, protection from erosion, preservation of soil fertility and soil water quality).
- In the case of planned conflicting uses, such as intensive agriculture and health tourism, use of medicinal mud, protection of water sources and intensive agriculture, etc. (example of Kutsko polje in the Municipality of Herceg Novi), at a more detailed planning level, define the use according to the importance of priorities (water source protection, tourism, agriculture);
- Increase of irrigated areas by 50%;
- Technological modernization of agricultural production;
- Further expansion of organic production and products with designation of origin or protection of geographical origin
- Diversification of activities in rural areas;
- Building of institutions and stronger support for investments;

### **It is planned to preserve agricultural areas in all municipalities!**

- In the Coastal Region: Ulcinjsko polje, Zoganjsko polje, the Štoj area – the Štoj sand, stretch from Ada through the Bojana River valley to Šas and Šasko polje, the remaining part of Barsko polje, the remaining part of Mrčevo polje, although restitution has been made, Grbaljsko polje and Sutorinsko polje.
- In the Central Region, - valuable agricultural land (plain land) most attacked by construction, the dispersive expansion of private settlements in the Zeta plain starting from Karabuško polje to Lake Skadar, as well as part of Sadin and Lješkopolje, should be limited.
- A large part of the best quality agricultural land in the Bjelopavlići plain has already been attacked by industrial construction (along the main roads) and dispersive private construction. It is proposed to preserve agricultural areas and use the benefits of the municipalities of Danilovgrad, Nikšić, Tuzi, Golubovci;
- In the Municipality of Nikšić, special attention should be paid to the free part of Nikišćko polje (Gornje polje, Krupačko and Slansko polje, Vir and Miločani), Grahovsko polje, as well as the flat areas of Župa Nikšićka.
- The valuable plateaus of Krnovo, Lukovo are emphasized, as well as other areas that are at higher altitudes and are used for the production of potatoes, cereals and fodder, which are not threatened by the construction of buildings, as well as similar agricultural areas - plateaus in most other municipalities (Kolašin - especially Lipovo and Trebaljevo, Plužine, Žabljak, Petnjica, Berane, Andrijevića and others).
- In the Northern Region, high-quality agricultural areas are located in the Lim River valley, and they are most attacked in the Municipality of Bijelo Polje, starting from Pod and Zaton from the Municipality of Berane to Rasovo, Njegnjevo and further towards the border of Montenegro. It is necessary to preserve those zones of available agricultural land even in the planning period.
- In other municipalities, settlement expansion is less intense, except for Pljevlja, where part of the agricultural land is constantly taken over for ore exploitation.
- In the coming period, it is expected that large infrastructure facilities will occupy significant agricultural areas, such as the highway, energy facilities - transmission lines and other road infrastructure.



**Mariculture** - The analysis of the suitability and attractiveness of the Bay of Kotor area for the development of shellfish farming was done on the basis of the prerequisites for defining the mariculture locations, which were accepted as a recommendation from the General Fisheries Commission for the Mediterranean (GFCM), of which Montenegro is a member, and which are aligned with the needs and specificities of the Montenegrin coast.

The concept that was used during the analysis of the suitability of the Bay of Kotor area for the development of mariculture implies compliance with the ICZM protocol, the Ecosystem approach to the development of aquaculture, Blue growth, as well as compliance with 3 basic principles, namely:

- development of aquaculture and its management should take into account the full range of ecosystem services, while they should not threaten their sustainability;
- aquaculture development improves human well being and the principle of equality for all relevant users;
- aquaculture development must be developed in accordance with the development of other sectors, policies and goals. All these principles are in accordance with Directive 2014/89/EU.

All existing shellfish farms are located in locations that are suitable for mariculture development, but a significant part of the Bay of Kotor is very suitable, but unused for the mariculture programme.

The Draft Plan provides locations that should be protected and improved and potentially suitable locations in the Bay of Kotor and in the open sea. (p. 52 of Book 2). The pressures on the mariculture sector from: tourism, shipbuilding, an increasing impact of pollution due to disposing of waste into the sea, the construction and increase of the capacity of ports, marinas, beach replenishment, climate change, lack of basic infrastructure, etc. were pointed out.

**Mariculture in Montenegro until 2040 is an environmentally and market-sustainable economic activity, with high productivity, efficiency and resilience, which offers competitive and healthy food products of recognizable quality and protected geographical origin (mussels), and in synergy with related activities (tourism) creates better working and living conditions in coastal areas. Key development goals were proposed: encouragement of development, improvement of facilities and innovative technologies, organic cultivation and protection, linking with the tourism sector, etc.**

## FORESTRY, WOOD INDUSTRY AND HUNTING

The development of forestry in the coming period should be based on multifunctionality, professional criteria, and principles of the forestry profession, in order to emphasize the general beneficial functions of forests and ecological balance in the area, that is, on the principle of sustainable development - ensuring the continuity of production and income.

Sustainable forest management plays an active role in the fight against the negative effects of climate change, their mitigation and adaptation measures, maintains, restores and improves biodiversity, including genetic resources; affects the quality and quantity of water and mitigates natural disasters, such as: floods, droughts, avalanches, landslides and soil erosion; and creates the possibility for numerous economic, ecological and social activities (recreation and tourism based on natural heritage);

The recommended solutions were derived from the analysis of the state of forests based on the data obtained from the first National Forest Inventory and from the Forest Management Programme and the current model and level of forest utilization in Montenegro. Changes and trends in the wood market and expected changes in the medium and long term were taken into account, as well as the trend of changing the use of forests, especially the creation of new areas with a limited protective character, such as Regional Parks.

The principles of forestry development, general and special goals and priority development goals, as well as the measures for forestry improvement, were defined. (p. 58, Book 2).

Measures for the improvement of wood industry were defined, such as:

- Restriction on the export of raw materials (logs and round timber)
- Adjust primary wood processing capacities to the real capacity and quality of wood masses that come from sustainable forest management,
- Increase the degree of finalization of wood processing,
- Ensure the supply of raw materials of appropriate quality, permanently from both state and private forests
- Introduce quotas on the import of finished products and semi-finished wood products to the Montenegrin market

- Strengthening of professional capacities in the wood industry
- Introduction of systematic legal measures and securing the market for wood products
- Sale of wood mass classified according to quality and in a transparent procedure through auctions
- Creation of clusters of wood producers
- Establishment of a system for quality control of wood products.

*It is especially important to reduce the export of high-quality raw materials such as round timber and logs, process and produce finished products and semi-finished products and export them, in order to obtain additional value, or use them on the domestic market instead of imported products. The overall effects of the implementation of measures in forestry and the wood industry were pointed out, especially with regard to increasing the economic activity, the number of new jobs, improving the generally useful functions of forests, etc.*

Measures for the **improvement of hunting** are defined in the Plan. The goal is the development of hunting in Montenegro through the improvement of the state of game populations and their habitats through the implementation of appropriate management measures that achieve the optimal numerical state of populations, protection, breeding and sustainable use of game. For the realization of the goals, it is necessary to ensure the continuity of accurate determination and monitoring of the state of game funds, professional, realistic, long-term and short-term planning and consistent, timely and professional implementation of plans.

## **TOURISM DEVELOPMENT**

A strategically defined, controlled and sustainable development of the tourism industry is planned. The focus is on the high added-value product and activities that respect the local specificities and regional characteristics of Montenegro and are in line with the development needs of the economy. It is necessary to achieve success in the balance between satisfying the development interest of the private sector (which has an interest in achieving commercial success) and the public interest aimed at optimal valorization of the limited resource.

Such a variant of balanced development best meets two key strategic-development challenges, 1) the need for improvement of general competitiveness of the tourist offer and 2) the preservation of an extremely valuable spatial resource. Until today, this balance has been disturbed, which is visible to the greatest extent through the unplanned construction of tourist facilities and secondary housing facilities in the Coastal Region, as well as insufficient traffic and technical infrastructure, and negative impacts on nature and the quality of life in tourist destinations with the highest frequency of tourist traffic. The planning recommendations point to interdependent issues of seasonal dispersion of tourist traffic through the development of diversified facilities and issues of spatial dispersion through more intensive development in areas that are less developed in terms of tourism to date.

### **General principles of tourism development**

***Directing the growth of accommodation facilities towards high-quality offer*** - direct the development of accommodation facilities towards diversification and high quality. It is a special challenge due to the strong growth of private accommodation and capacity in non-commercial facilities, primarily in coastal areas, which burden the general infrastructure and in a certain part generate other negative consequences, such as high seasonality, lower level of general product quality, etc.

***Spatial protection as the basis of development*** - Through the spatial protection, as a fundamental development resource, it is necessary to provide the possibility of strategically defined development, in accordance with the destination positioning, but also with the fundamental postulates of sustainability, with the aim of reducing the negative impact on the environment.

***Rational determination of tourist zones*** - should be based on market justification, national and local public interest, taking into account adequate spatial protection.

***Meaningful development of integral zones and tourist centers*** - Tourist zones, that is, projects that are implemented in certain zones, need to be integrated into the general environment of the destination in a visually and practically meaningful manner and, through the implementation of projects, produce a positive effect on the development and sophistication of wider spaces.

***Provision of general infrastructure as a basic prerequisite for the implementation of tourist projects*** - The lack of general infrastructure such as roads, sewerage, water supply, electricity and the Internet has a

strong negative effect on the realization of tourist projects and is actually one of the key prerequisites for controlled and sustainable development.

**The Plan gives specific characteristics of the regions** of Montenegro in tourism planning. For each region, a vision of development is defined, as well as primary tourism products, secondary tourism products, the introduction of a modern system of measurement and monitoring of accommodation capacity and the system of development of a competitive accommodation structure, investment in the quality and quantity of beaches on the Coast and the development and availability of tourist destinations. A model of growth of accommodation facilities for the next period was also proposed. (pp. 62 – 73). Tourist clusters, that is, tourist zones, are defined.

According to the Tourism Development Strategy of Montenegro 2022-2025, Montenegro as a tourist destination is divided into eight tourist clusters, which differ from each other in socio-cultural, historical, traditional, natural and economic characteristics, and at the same time represent the basis for a unique and specific tourism product of Montenegro:

1. Ulcinj with Ada Bojana; 2. Bar Riviera with Lake Skadar, 3. Budva Riviera 4. Bay of Kotor, 5. Old Royal Capital Cetinje, 6. Capital City with Central Region 7. Bjelasica, Komovi and Prokletije, 8. Durmitor and Sinjajevina with the Tara and the Piva Rivers;

*(Tourist clusters 1-5 belong to the Coastal Region, cluster 6 to the Central Region, cluster 7 includes the northeastern part of Montenegro (Bjelasica, Komovi, Prokletije, and cluster 8 includes Durmitor and Sinjajevina with the Tara and the Piva Rivers. The Municipality of Nikšić is in this division, although it belongs to the Central Region, included in the tourist cluster 8 with the area of the northeastern part of Montenegro).*

**TOURIST ZONES** - Tourist zones with recommendations for development are given for each region. (pp. 74 – 83).

### **COASTAL REGION**

1. ULCINJ ZONE - Subzones Long Beach and Ada Bojana, Ulcinj Old Town, Valdanos, Ulcinj Saltworks (protected area), Briska Gora, Šas Lake, rural hinterland;
2. BAR ZONE - Subzone Bar Riviera. Old Bar, Rural hinterland with the Skadar Lake shore
3. BUDVA ZONE - Subzone Budva Riviera, Old Town Budva, Rural hinterland
4. BAY OF KOTOR ZONE - Subzones: Area of the Kotor-Risan Bay under UNESCO protection, part of Vrmac, Tivat Riviera, Luštica, Herceg Novi Riviera, Orijen

### **CENTRAL REGION**

5. CETINJE ZONE - Subzones: Lovćen National Park, Old Royal Capital Cetinje
6. SKADAR LAKE ZONE - Skadar Lake NP
7. CENTRAL ZONE – Subzones; Podgorica, Zeta, Tuzi, Danilovgrad, Nikšić

### **NORTHERN REGION**

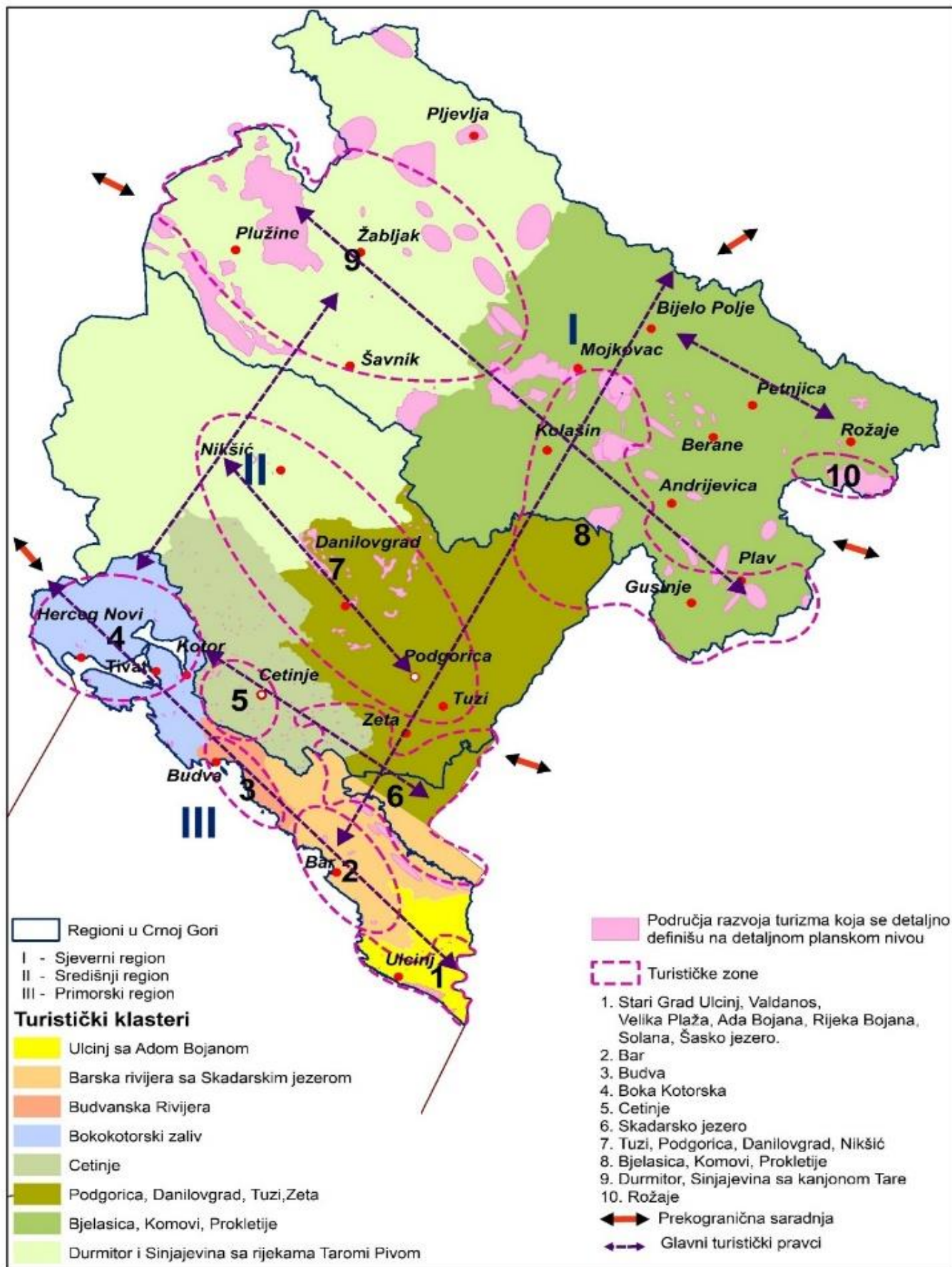
8. PROKLETIJE, BJELASICA, KOMOVI ZONE– Subzones: Prokletije NP, Biogradska gora NP, Komovi Nature Park
9. DURMITOR AND SINJAJEVINA ZONE WITH TARA CANYON – Subzones Piva Nature Park, Durmitor NP, rural area of Pljevlja, Sinjajevina; (municipalities of Žabljak, Pljevlja, Plužine and Šavnik)
10. ROŽAJE - subzones: Hajla, Štedim, Rusolija, Rožaje

**Special overview of protected areas** - Development in protected areas is regulated by special planning documentation (special purpose spatial plans), in accordance with the specific characteristics of the area and the level of protection. In protected areas, through spatial planning documentation, it is necessary to allow development exclusively in the direction of a high quality level of facilities, with as little impact on the natural sustainability of the area as possible. In these areas, there is a need for the implementation of modern facilities to ensure the desirable energy independence of accommodation facilities and the "zero waste" principle of development.

In the planning period, it is necessary to intensify **cross-border cooperation with all neighbouring countries in the field of tourism as well**. In order to ensure quality cooperation with neighbouring countries, the construction of infrastructure is planned. Border crossings and cross-border zones in the planning period



should be viewed as open spaces for the promotion of tourism through the exchange of experiences of specific tourist motives, cultural heritage, etc.



## **Model of accommodation capacity growth**

- The total accommodation capacity is expected to grow by around 30,000 new beds in 2030 compared to 2019.
- Coastal Region - 7,000 new beds are planned, exclusively in 4\* and 5\* categories, while capacity reduction is planned in lower categories.
- Central Region - In the projection until 2030, an additional improvement of the structure is planned with the participation of hotel facilities of 53%.
- Northern Region - the strongest growth rate of quality capacities in hotels and similar facilities is planned, but also the growth of capacities in mountainous areas, rural tourism, etc. By 2030, an increase from 4,353 to 10,100 beds is planned;
- Reduction of seasonality and achievement of year-round tourism development.

## **MARITIME ECONOMY**

Montenegro, as a maritime country, should have a strong and competitive maritime economy in the planning period and contribute to the overall economic development of Montenegro with a significant share in GDP. The development of maritime transport (and water traffic in general) is, in accordance with the EU Integrated Maritime Policy, directed towards a balanced and integrated system of all types of traffic and the development of logistics centers, multimodality, digitization and application of ecosystem solutions.

The Plan of maritime transport development includes coordination and cooperation between all subsystems of the maritime economy, such as shipping, ports, shipbuilding, marinas, the environment, exploration and exploitation of the sea and offshore, other associated activities in maritime transport, maritime and coastal tourism, fisheries and mariculture.

In the coming period, the continuous growth of maritime transport is planned, which will confirm Montenegro as a maritime country, through the strengthening and competitive maritime economy based on the general principles of sustainability. This includes the built port infrastructure that will be connected to the hinterland by road and railway infrastructure.

The "Blue Highways" concept aims to introduce new intermodal logistics chains that lead to a more efficient organization of transport and have economic benefits. This results in an improved access to the European and global markets and contributes towards the relief of the traffic road network. For the implementation of "Blue Highways"<sup>3</sup> it is necessary to ensure the potentials of railway and road infrastructure, inland waterways as parts of an integrated transport chain.

The guidelines of the TEN-T network define "Blue Highways" as the maritime dimension of the trans-European network that will contribute towards the achievement of the European maritime transport space without barriers.

The maritime transport in Montenegro is planned to take place in international and domestic ports: Port of Bar, Port of Budva, Port of Kotor, Porto Novi, Porto Montenegro - Tivat, Port of Zelenika and Port of Risan, marinas, moorings and piers on the sea coast. (According to the Decision on Classification of Ports according to Type of the Maritime Transport, Official Gazette of Montenegro No. 70/2017).

**Development of the Port of Bar** primarily represents the basis and priority of development of maritime transport, in accordance with the Strategy for Development of Maritime Economy. The construction of the Bar - Boljare highway, as well as the rehabilitation of the Bar - Belgrade railway line, will create an adequate infrastructural hinterland, with which it is only possible to fully valorize the potential of this port and develop multimodal transport.

To this end, **technological improvement of port facilities and development of an international container terminal of regional importance** to serve the wider gravity zone of all cargo-handling units in the Balkans are necessary. **The Port of Bar should become a distribution center** with the function of concentration, consolidation, coordination and cooperation in transport. For this function, an international logistics center is

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<sup>3</sup> 4 corridors have been recognized for the project of European interest: 1. The Baltic Sea Highway, which connects the Baltic Sea countries with the countries of the Western Europe; 2. The maritime route of Western Europe from Portugal and Spain through the Atlantic Arc to the North and Irish seas; **3. Maritime highway of Southeast Europe connecting the Adriatic Sea with the Ionian Sea and Eastern Mediterranean and Cyprus**; 4. Maritime route of Southwest Europe - Western Mediterranean connecting Spain, France, Italy, including Malta and connection to the maritime highway of Southeast Europe, including connections with the Black Sea;



necessary as a goods transport center with a wider distribution, storage and transit function. The port and logistics center should be based on **the principles of the green economy**.

The development of all the functions of the Port of Bar requires the development of a dry port - the "dry port" concept - which would be connected to the railway and developed transshipment, storage and distribution functions and connected to the airport.

The activities on the improvement of the Port of Bar as a maritime logistics center are:

- Extension and development of the existing waterfront at the Passenger Terminal, which will enable the reception of medium and large passenger ships and cruise ships (and combined ships for cargo and passengers).
- Extension of the operational waterfront at the Terminal for dry and bulk cargo.
- The "Second Phase of the Volujica Quarry" Project and the permanent rehabilitation of the northern slope of the Volujica hill in order to protect the infrastructural and suprastructural facilities located at the foot of the hill and to obtain a new zone for transshipment and storage of dry and bulk cargo.
- Construction of a new container terminal. With the implementation of the project, Montenegro would have the opportunity to become the first port in Europe for ships coming from Asia, which will increase the further transport of goods by railway and road traffic to the Central and Eastern Europe and the last port in Europe on the way to the Far East, which will, in addition to the transport activities, provide the Port of Bar with an opportunity for the development of production and packaging of goods in containers.

**In the Port of Kotor**, adaptation, reconstruction, construction and equipping of the port was carried out to perform the activities of a commercial port which is open to international traffic with an emphasis on the tourist-passenger segment. An increase in the capacity of receiving ships at the berth itself in the Port of Kotor and the securing of cruise ships at anchorages by installing temporary buoys for tying ships is underway.

It is significant for the Port of Kotor to:

- Improve safety and security for large ships at the berth, especially in difficult weather conditions;
- Consider the aspect of safety for the environment and reduction of the emission of harmful particles from gases (CO<sub>2</sub>, SO<sub>2</sub>, etc.).
- Enabling the extension of the season with a safe berth,
- Safety of the protected UNESCO area, especially with regard to the marine environment;

In order to further develop maritime transport, the rehabilitation and equipping of **the Port of Risan** is planned, which would be open to international traffic and intended for the development of cruise tourism. It is also necessary to provide for the construction of a secondary road that would connect the port with the main road Kotor - Risan and the construction of facilities and installations for the reception of passengers, and a border crossing with accompanying facilities and equipment. According to the planning documentation, the Port of Risan is planned as a city port and a port for nautical tourism. (DSL sector 10). Infrastructural equipping, modernization and capacity increase are needed.

**The Port of Zelenika** has the function of a commercial port open to international maritime transport and the function of a border crossing. With building extensions and modernization, the Port of Zelenika can be an alternative solution for the Port of Kotor.

In addition to development related to ports, the development of **coastal navigation** is necessary **in the function of tourism, as an important economic branch**. From the aspect of spatial protection and the exclusion of conflicts with environmental protection, it is necessary to analyze in detail the establishment of passenger and excursion navigation on Skadar Lake and the Bojana River.

## **Development Goals**

**General goal** - Increasing the contribution of the maritime economy to the overall economic development of the country, in a way that will enable sustainable and inclusive economic growth and that will contribute to reducing the development gap of the country compared to the EU average and increasing the quality of life of all its citizens.

**Specific objectives** - *Improve connectivity and operations of the Port of Bar* – The port infrastructure and services should be improved to support intermodal activities and potentially attract additional flows of passenger and freight traffic. Improve business in a way that will enable better conditions for the flow of

goods, capital, people and ideas and efficient provision of services in terms of quality, reliability and safety. Improvement of the efficiency of port services should be aimed at increasing the level of satisfaction of clients' needs and maintaining a competitive regional position.

With the overall level of development and construction of the port, the total projected capacity is 12 million tons annually. With the construction of the "dry port", the maximum capacity of the port will be up to 15 million tons per year. An increase in the technological level will result in a higher percentage of the participation of the port in its gravity zone. For the planning period, it is possible to expect 5.5 million tons of turnover in the "pessimistic scenario". In a realistic scenario, 7.2 million tons are expected. In the optimistic scenario, the projection is 8.5 million tons of all types of goods.

***Continue the development and improvement of the Port of Kotor while considering the possibility of moving cruise ships out of Kotor*** - The goal is to move the entry of cruise ships out of Kotor to other locations in the Bay of Kotor, and to leave only the mooring of luxury ships and yachts up to 150 meters in the Port of Kotor.

It is necessary to launch local maritime transport both in the water area of the Kotor Bay, and more widely, in the water area of the Bay of Kotor, which would serve to relieve the land traffic pressure.

***Development and improvement of the operations of maritime shipping companies*** - The main goal is the efficient provision of transportation services, primarily by the two largest maritime shipping companies (Crnogorska plovidba a.d. and Barska plovidba a.d.), while meeting the needs of users in terms of quality, reliability and safety. In line with this, it is necessary to optimize the use of existing ship capacities and perform activities in accordance with the policy of economically and ecologically sustainable development. It is necessary to introduce additional services in order to create complete logistical support for service users, along with the corresponding expansion of the fleet and other necessary capacities.

***Modernization and conversion of use of the existing facilities for maintenance and servicing of ships in Bijela and Tivat*** - The main goal is to complete the initiated activities on the adaptation, reconstruction, construction and equipping of the shipyard Port of Bijela for the performance of activities of a modern international shipyard port for the construction and repair of yachts and megayachts, leisure boats and sports boats. To this end, it is also necessary to convert the Bijela Shipyard into a marina for the overhaul of mega yachts, which will enrich the nautical offer of Montenegro in this segment as well. It is necessary to conclude the concession award procedure for the shipyard in Tivat (Bonići).

***Further development of nautical tourism and positioning of Montenegro as an attractive nautical and cruising destination*** - The main goal is adequate management of existing nautical tourism facilities, but also investments in new ports and other supporting facilities of nautical tourism, while respecting coastal environmental protection measures.

***Continuation of intensive exploration on potential oil and gas reserves in the Adriatic Sea*** - The oil and gas industry can be a significant generator of the development of the maritime economy, with a great impact on the entire economy of Montenegro. In case of successful exploration works, it is necessary to build appropriate supporting port infrastructure and other land installations.

***Completion of activities related to the complete harmonization of legislation in this area with appropriate international regulations*** - It is necessary to fully harmonize domestic legislation with the requirements and rules of the IMO (International Maritime Organization) and other relevant UN conventions and regulations of the European Union. Montenegro needs to complete the activities related to the second phase of VTIMS - the establishment of a system for monitoring and managing maritime transport, and become a full member of the Paris Memorandum of Understanding (Paris MoU) on Port State Control.

***Priority goals:***

Taking into account the defined special goals, priority goals are proposed:

- Reconstruction and modernization of existing port facilities;
- Encouraging the development of the Port of Bar as a logistics center that is integrated into the multimodal transport system;
- Construction of a new container terminal in the Port of Bar, which will position the Port of Bar as a port of regional importance;
- Increasing the gross tonnage of the Montenegrin merchant navy;

- Encouraging the activities to further position Montenegro as an attractive nautical and cruising destination.
- Completing the adoption and application of the remaining EU legislation in this area.

## SPATIAL PROTECTION

### Protection measures and landscape development planning

In 2008, Montenegro ratified the European Landscape Convention of the Council of Europe and thus joined the countries that have shown their willingness to take into account sustainable development in their strategic documents and plans and recognize the landscape planning as an important factor in establishing a balance between natural and cultural heritage and that **promote a uniform approach in protection, management and planning of landscape**. The concept of sustainable development implies: sustainable use of available resources, with very careful and thoughtful protection, care and development of landscape<sup>4</sup>.

The Draft Spatial Plan of Montenegro provides general guidelines for the protection of the landscape: optimal use of landscape resources by preservation and protection through the planning and management system, planning of green infrastructure as an important factor in urban development, planning of a network of green belts along road infrastructure, watercourses, integral protection of the natural and cultural landscape, preservation of rural landscapes, restoration of degraded landscapes, etc.

General guidelines are given for protected and potentially protected areas from the aspect of protecting the landscapes, rural units and their development with the protection of landscapes, establishment of sustainable settlements according to the Habitat Agenda, defining the public green areas, etc. The measures for protection of extremely valuable landscapes and significant coastal and marine landscapes are indicated:

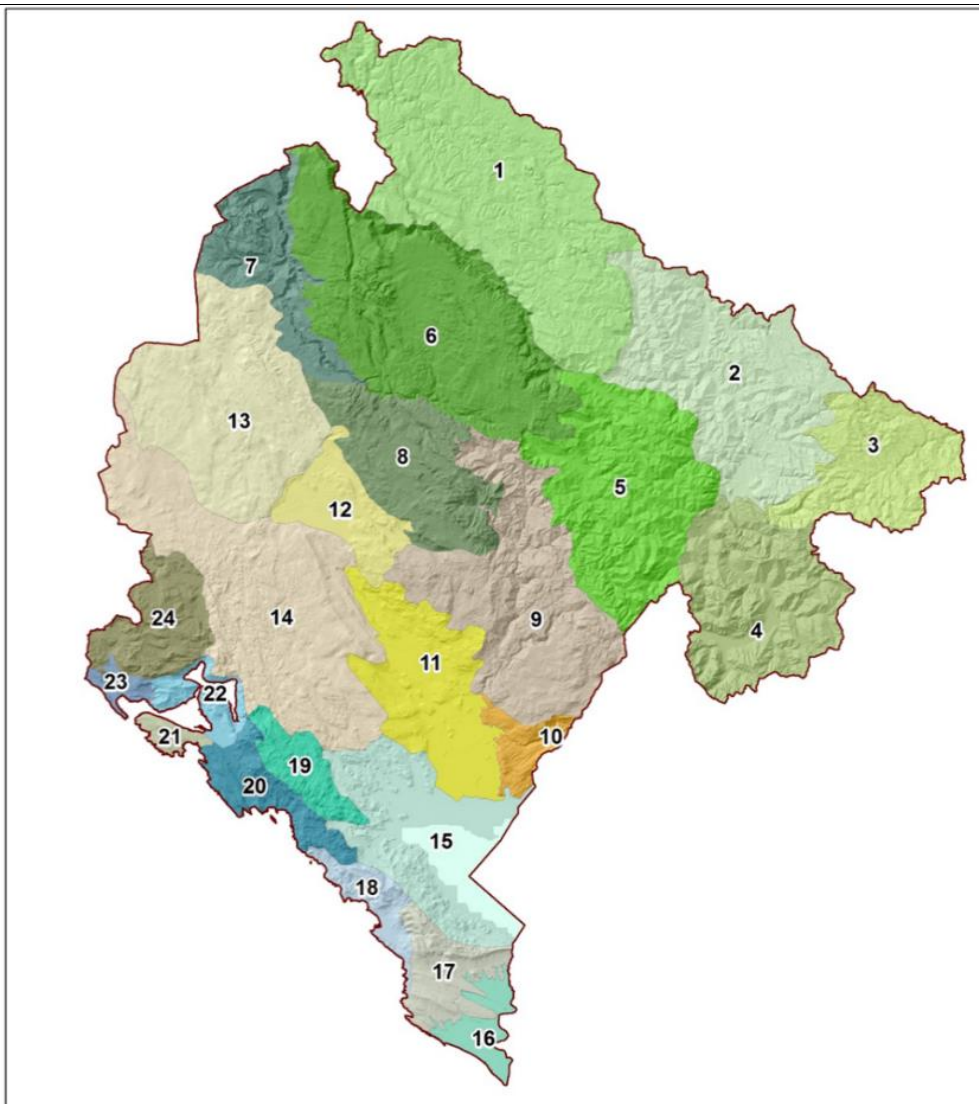
Wider areas of significant marine landscapes - circled areas of inalienable interaction (natural and cultural) between land and marine landscapes in the Bay of Kotor are: Mamula - Žanjice Bay; Prevlaka – Rose; St. Marko – Tivat Salt Pans; Morinj; Verige – St. Đorđe – Our Lady of the Rocks – Perast; Kotor.

**In the open sea area, such areas are:** Mamula - Luštica; Platamuni; Jaz beach – Budva – St. Nikola – St. Stefan; Buljarica – Dubovica – Pećin Cove; Čanj – Crni Cape – Ratac – Sutomore; Ulcinj - Đeran Cape.

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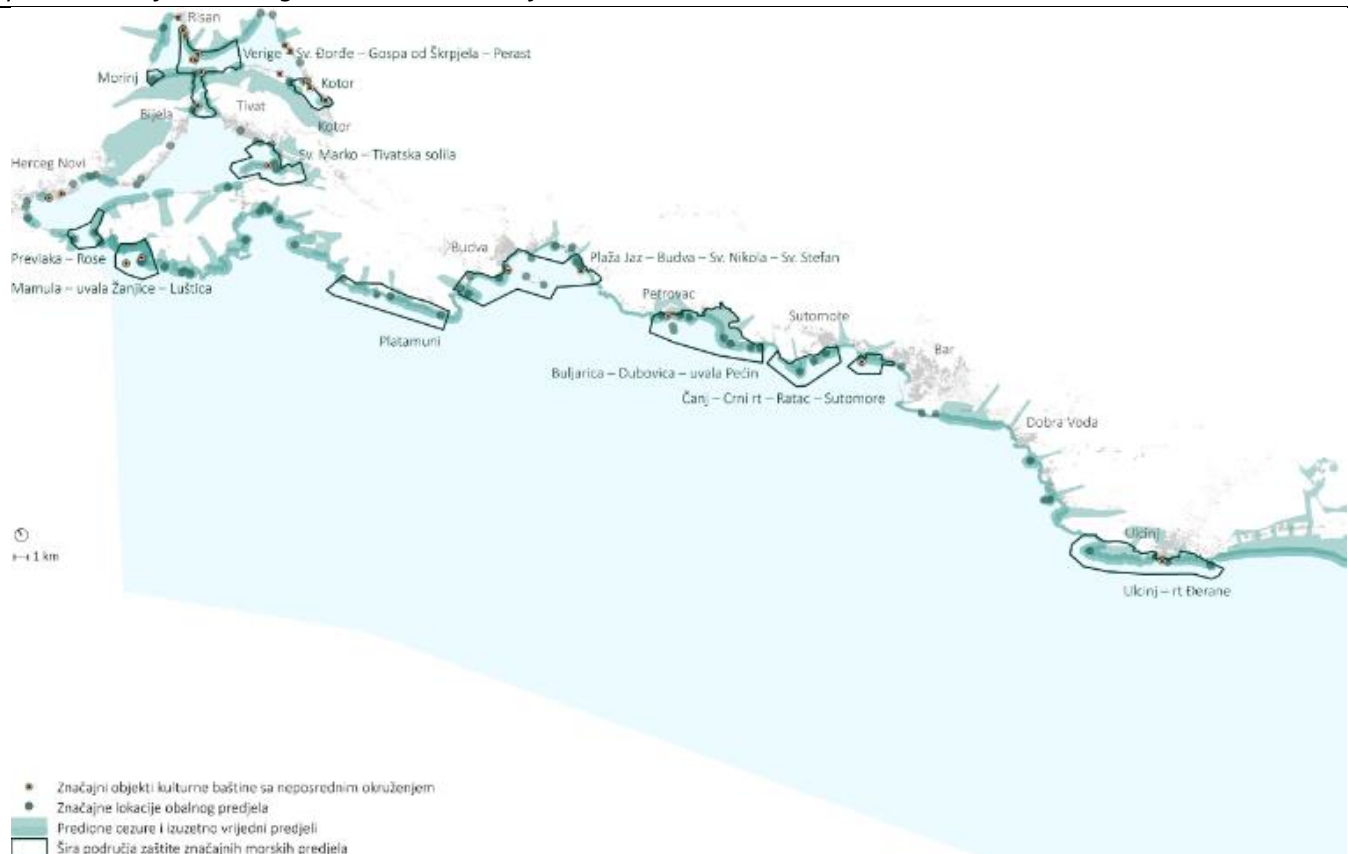
– <sup>4</sup>*The inclusion of landscape in spatial planning instruments restores the ties that traditionally exist between each society and the area it lives in, strengthens the sense of rootedness and belonging and thus enables or at least facilitates the preservation of the territorial diversity and uniqueness of a place;*

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**Područja karaktera predjela - regionalni nivo**

1. Predjeli pljevaljskog područja	9. Predjeli kanjona Morače	17. Brdovit predjeli ulcinjskog područja
2. Predjeli Vraneške doline i Donjeg Kolasina	10. Predio kanjona rijeke Cijevne	18. Predjeli barskog područja
3. Predjeli Rozajskog kraja	11. Ravnicarski predjeli Zetsko bjelopavličke ravnice	19. Predjeli Lovčenskog područja
4. Predjeli plavskog područja	12. Ravnicarski kraski predjeli niksickog područja	20. Predjeli budvanskog područja
5. Predjeli Bjelasice i Komova	13. Planinski predjeli niksickog područja	21. Predjeli područja Lustice
6. Predjeli Durmitora i Sinjajevine	14. Brdoviti kraski predjeli niksickog i cetinjskog područja	22. Predjeli bokokotorskog zaliva
7. Predjeli kanjona Pive	15. Predjeli Skadarskog jezera	23. Predjeli hercegNovskog područja
8. Planinski predjeli niksickog i šavnickog kraja	16. Ravnicarski predjeli ulcinjskog područja	24. Planinski predjeli Orijena



## NATURE PROTECTION CONCEPT

The main goals of nature protection are to increase the area under some form of protection, to conserve biodiversity, while enabling local and regional development based on the sustainable use of natural resources.

In order to further increase the quality and scope of protection, continue with:

- establishing new protected nature areas,
- revision of the status of existing areas under protection,
- appointing managers and creating management plans.

In order to close the negotiation Chapter 27, which concerns environmental protection, Montenegro, as a country in the process of EU integration, **is obliged to establish the international Natura 2000 network of protected areas**. The network consists of Sites of Community Importance (SCI), which are declared under the provisions of the Habitats Directive, and Special Protection Areas (SPAs) under the Birds Directive. The establishment of an ecological network area for the protection and conservation of important habitat types and species of interest to Montenegro and the European Union (Natura 2000) will take place in accordance with the implementation of the project "Establishment of Nature 2000 in Montenegro". By 2025, the preconditions for the formal establishment of an ecological network should be created.

For the areas that are candidates for the Emerald national ecological network (Areas of Special Conservation Interest - ASCI), the Spatial Plan of Montenegro provides guidelines for conservation and avoidance of planning conflicts with the requirements for their conservation.

The goals in terms of new areas and deadlines should be harmonized with the EU Biodiversity Strategy until 2030 and with the adopted Global Biodiversity Framework of the UN Convention on Biological Diversity. In accordance with the Biodiversity Strategy for 2030, the European Union has committed itself to expand the network of protected areas in the next ten years, with the aim of:

- legally protecting at least 30% of land and 30% of marine areas;
- strictly protecting at least a third of the EU protected areas, that is, 10% of land and 10% of marine areas including all remaining primary and old forests of the EU;
- integrating ecological corridors as part of a true trans-European network of natural areas to prevent genetic isolation.

*(Each EU member state will have to make its contribution based on objective ecological criteria. These goals are fully in accordance with the Kunming - Montreal Global Biodiversity Framework (COP15 - Meeting of the Conference of the Parties to the UN Convention on Biological Diversity, 2022).*

Other key goals according to the EU Biodiversity Strategy for 2030:

- ensure efficient management of protected areas, define clear goals and conservation measures and ensure adequate monitoring;
- large areas of degraded and carbon-rich ecosystems should be restored,
- the trends and state of conservation of habitats and species should be without deterioration, and at least 30% of them should be in a favourable state of conservation or at least show a positive trend.
- reduce the overall use and risks from chemical pesticides by 50%
- restore the characteristics of areas of great diversity to at least 10% of agricultural land,
- at least 25% of agricultural land must be used for ecological agriculture,
- increase the quality, quantity and resilience of forests,
- marine resources must be used sustainably,
- restoration of freshwater ecosystems and natural functions of rivers, etc.

**Ecosystem services** represent a special aspect of nature protection, because they represent the link between biodiversity and human well-being. The ecosystem approach in protection is the norm in the world, because in this way the ecosystem functions provided by the biodiversity are conserved in the best way, and are converted into goods and services that people use. This is especially important in the context of climate change, where an increased frequency of extreme weather conditions and fires is expected, and in the context of the growing needs of an increasing human population.

### **Nature protection plan**

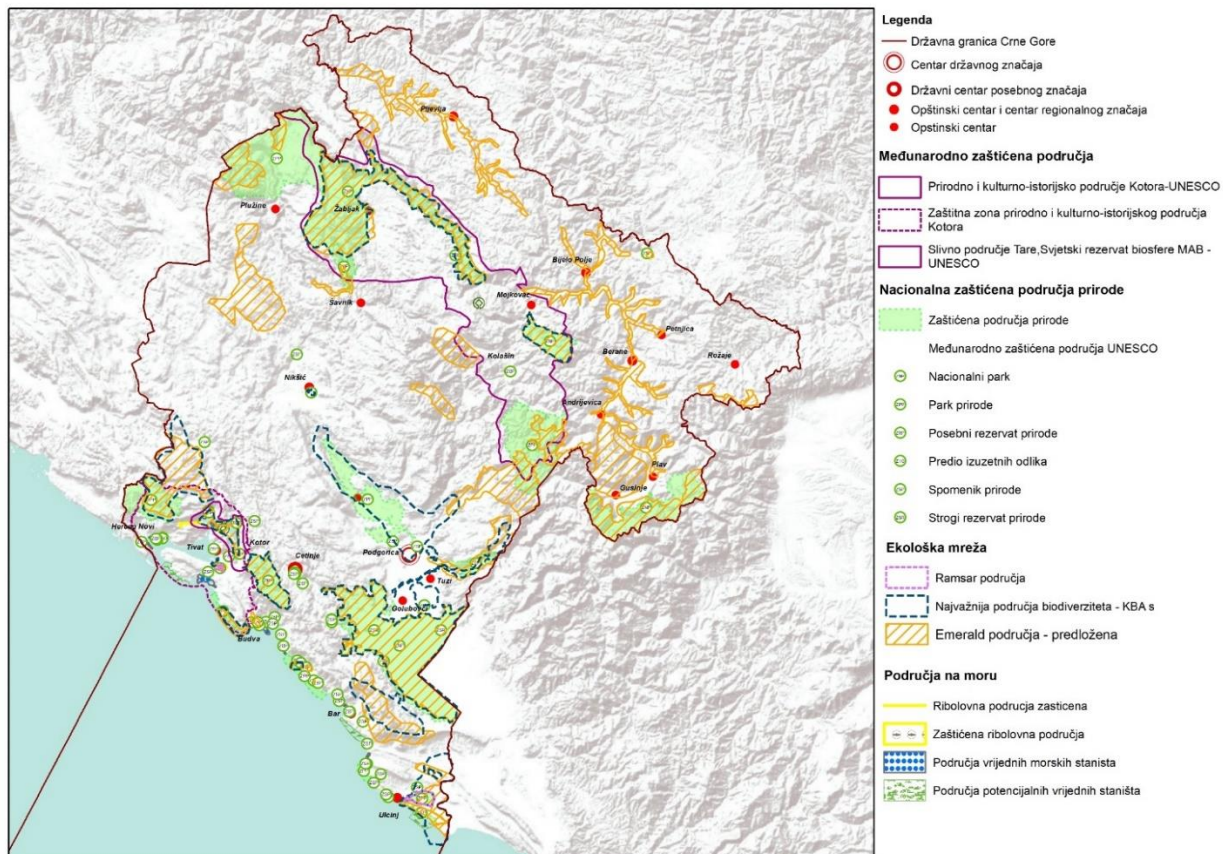
The Plan lists protected and potentially protected areas: (pp. 94 – 108)

International protection, UNESCO: the Kotor-Risan Bay, Protection Zone of the Natural and Cultural-Historical Area of Kotor, Tara catchment area;

National protection: (National Parks, Nature Parks, Special Nature Reserves, Areas of Exceptional Characteristics, Nature Monuments, Strict Nature Reserves);

Protected fishing areas, the offshore fishing area, areas of valuable marine habitats; Emerald ecological network; Overview of potentially protected areas (coastal and continental part).





Cartogram 6.2. - 2. Protected areas and ecological networks

**Regimes of protection, use and rehabilitation of marine areas** - The Marine Protection Plan was given according to the Overview of potential protected areas, which was drafted within the framework of the GEF - UNEP MEPPU Project "Promoting Protected Areas Management through Integrated Marine and Coastal Ecosystems Protection in Coastal Areas of Montenegro).



Cartogram 6.2-3. Marine protection regimes



In order to ensure the sustainable utilization and use of preserved, valuable parts of the coastal and marine environment and the rehabilitation of parts that are already under stress, the concept of protection and rehabilitation is implemented through:

- protection and use regimes;
- regimes of endangered marine environment rehabilitation.

**Protection and use regimes with implementation conditions** - Given the level of pressure on the marine environment, the obligation is prescribed to implement measures which completely eliminate or minimize the negative anthropogenic impacts of activities taking place in the marine ecosystem of Montenegro. For the areas of existing protected areas that are adjacent to the sea or partially include the sea area, the applicable protection and use regimes are taken into account. Protection regimes are implemented in accordance with the legal regulations for the following areas:

**Protected areas in the sea:** Platamuni and Katič Nature Parks and the Island of Old Ulcinj, special Nature Reserves Sopot and Dražin vrt.

**Areas of valuable marine habitats** - the Bay of Trašte, the area in front of Ratac, the area in front of Budva - Budvanska Tunja, the area in front of Long Beach, the water area of the Tivat Salt Pans, important sandy habitats, beaches, sea caves and pits, etc. (page 103 of Book 2).

**Wider areas of potentially valuable habitats** have also been defined: Mamula Bay to Mačka Cape; Volujica Cape to Dobre Vode; Seka Đeran and southern Long Beach to the Bojana delta. Underwater Posidonia meadows and sea grass communities, valuable coralligenous biocenoses, were especially singled out.

For the purpose of protection, the following is necessary:

- installation of wastewater treatment facilities;
- remediation of marine waste;
- control and planning of anchorages outside the distribution area or, if this is impossible, provide for the use of placing eco-buoys that serve as moorings;
- minimization, restriction and control of construction activities and backfilling and tourist development activities;
- control of discharges from ships;
- control of diving activities (important for coral protection);
- avoiding locations where this habitat type is present for planning and placing mariculture (fish farming);
- prohibition of the use of fishing tools in the distribution area of this habitat, which can damage these habitat types.

Montenegro established a list of 32 areas, candidates for the Emerald ecological network (also defined as Areas of Special Conservation Interest at the European level - ASCIs), of which 12 are located in the coastal or offshore area.

The Draft Spatial Plan of Montenegro highlights **significant areas for fishing, fish reproduction and feeding**: protected fishing areas Port Milena Channel: from the mouth of the channel into the sea to the Saltworks, including the peripheral channel of the Saltworks to the Brdela River, Tivat Salt Pans, Krtole Cove with Kukuljina Cove, stretch from Kalimanj port - island of Milosrđa to the outer cape, mouth of the Morinjska River, mouth of the Mrčevska River, mouth of Gradiošnica, mouth of Veliki potok (the Široka River, the mouth of the Sutorina River, the mouth of the Škurda River).

The Kotor-Risan Bay is designated as an area of special interest for the reproduction and feeding of fish and fish progeny, and the offshore fishing area from the Bay of Bigova to the Bay of Budva is also designated; and from the Black Cape to the border with Albania; Platamuni. Budva and the area in front of Ulcinj;

**Protection of beaches with the status of natural assets** - Some of the beaches have the status of protected natural assets, and all beaches represent an important natural resource. **The organization of swimming areas on protected beaches, as well as their utilization and future use, is carried out in accordance with the general conditions for the protection of protected natural assets, taking into account the protection of biological and environmental diversity.**

The prohibited purpose and use on these beaches (protected natural assets) in a way that causes permanent changes include: permanent structures, concreting, changes to the coastline and remodelling of the beach.

Special criteria have been established in the protected dune zone on Long Beach, where construction and other interventions cannot be carried out, but only rehabilitation measures can be implemented;

**Ensuring beach stability** - As part of beach protection, it is also necessary to ensure beach stability. In this process, it is necessary to prevent and mitigate the effects of erosion by replenishing beaches without building protective structures, except in exceptional situations when it is necessary to build groynes and underwater breakwaters. Biological measures for coast protection from erosion should be implemented by establishing a vegetation belt in the coastal zone that is exposed to erosion.

In order to ensure the prevention or mitigation of the effects of coastal erosion, it is necessary to:

- carry out replenishment of beaches without building protective structures; in exceptional situations, with the construction of groynes - facilities to prevent the movement of bulk material along the coast; replenishment must be done on the basis of special analyses of the possible impact on wildlife in the coastal zone;
- on beaches where the intensity of erosion is not excessive, build underwater breakwaters to reduce the effects of waves;
- implement biological measures to protect coasts from erosion by establishing a vegetation belt in the coastal zone of the coast exposed to erosion.

**Regimes for rehabilitation of endangered marine environment and reduction of the existing and prevention of future pollution and anthropogenic impacts on the trophicity of the marine environment are defined.** (comprehensive infrastructure for the collection and treatment of municipal wastewater and the construction of sewerage systems and facilities for the treatment of municipal wastewater for all agglomerations in the Bay of Kotor and other zones of observed problems - *Bar, Sutomore, Ulcinj, Long Beach, Port Milena, etc.*

- *Strictly respect the application of the criteria for coastal setback. Ensure that no facilities are planned near locations of special importance for mariculture that may threaten the quality of water for mariculture (industrial and similar facilities) and prevent negative impacts on the locations of breeding grounds, especially in the Bay of Kotor.*
- *It is necessary to protect important locations, such as peloids and healing mud in the Igalo Bay, the location from Ulcinj to Cape Đeran (the so-called "women's beach") and other locations where there are also healing peloids (Kalardovo, Bigova, Long Beach); to ensure the conservation of the Bay of Bigova, as a potential archaeological site and an area rich in natural deposits of peloids;*
- *Rehabilitate the existing municipal waste disposal sites in the coastal area in order to prevent percolation and leaching of toxic substances by groundwater into the sea water area.*
- *Use control and monitoring measures to prevent the discharge of wastewater from ships and yachts in the entire area of the Bay of Kotor, especially in Kotor, Tivat and Herceg Novi.*
- *Construction of new port facilities, as well as the locations for ship overhaul, is not recommended in undeveloped/natural areas (greenfield) from the aspect of sea biodiversity conservation and seawater eutrophication.*

## CULTURAL HERITAGE

The planning projection of protection, along with the remediation of the consequences caused by the absence of (formal) systemic protection, should ensure the conservation of identity and the active inclusion of cultural heritage in the strategy of responsible, balanced, sustainable development of Montenegro, above all the Natural and Cultural-Historical Area of Kotor, which represents a special goal of the Spatial Plan of Montenegro until 2040.

**The development goals for cultural heritage according to the Spatial Plan of Montenegro until 2040** are directed towards the systemic improvement of the integral protection of natural and cultural heritage, that is, cultural assets as an integral part of contemporary social, economic and urban development; spatial units and special complexes and facilities that have the characteristics of cultural heritage; historical towns of Montenegro as the most representative part and an important resource of spatial development.

*(Protection measures and guidelines for implementation are given in the Plan - p. 109 Book 2).*

*The special goal is the conservation of the Outstanding Universal Value/OUV of the Natural Cultural and Historical Area of Kotor and its immediate surroundings, protection of village architecture and ambience, archaeological sites, fortifications, sacral architecture, industrial architecture and architecture of the 20<sup>th</sup> century, cultural landscape and ambience; cultural landscapes of regional significance and local significance;*

Although applicable regimes for the protection of the Natural and Cultural-Historical Area of Kotor and its protected environment (buffer zone) are consistently respected, **the need to define a protected ambient unit and the contact zone of urban city cores is emphasized.** The sea area is considered part of that ambient unit. This applies to the historical urban cores and castle towns of medieval origin Herceg Novi, Risan, Perast, Kotor, Budva, Sveti Stefan and Ulcinj.

Other significant structures of cultural heritage (such as Banja Monastery, Sveti Vavedanje Monastery, St. Nicholas Church) along the coastal belt and their spatial surroundings (included in the significant locations of the coastal area) are also taken into account.

- *Special measures: **Permanent suspension of further construction (Kostanjica); restriction of future construction (Morinj)** in accordance with the maintenance of the remaining historical character of the place and the harmony between landscapes and structures; **prohibition of construction** along the coast between Verige passage and Morinj (including the planned new road), and the "tourist village" in Glavati, or the urbanization of this historically agricultural land between historical settlements; strict restriction of future construction (Muo, Prčanj, Stoliv); **The existing undeveloped space between Ljuta and Dobrota should be kept as such;** possible new construction in the function of tourism in harmony with the landscape (Orahovac, Dražin vrt); mitigating the consequences of the visual impact (rehabilitation) of the already built area for Kostanjica, for the Boka and Boka Apartments projects; preparation of the HIA for the Teuta Hotel project, the former Fjord Hotel and the Jugooceanija building, the Cetinje - Škaljari cable car (to be submitted to UNESCO for approval); Limit the "temporary" existence of the facility on Turkish Cape.*
- ***Adoption of an integrated traffic plan for the entire Boka (available resources); abandoning the construction of the Verige bridge (alternative solutions outside the strait or tunnel); cancellation or reconsideration of the protected route of the proposed bypass for Risan (spatial integration); abandoning the plans for the construction of roads in the settlements (Muo, Prčanj, Stoliv, Kostanjica), designed to facilitate and service the construction along the western coast of the bay; an alternative solution of a short tunnel to bypass the Old Town of Kotor;** if the bypass is still considered essential for Risan if the construction of the Adriatic Highway begins, a less ambitious route for it should be examined in relation to the morphology of the settlement;*

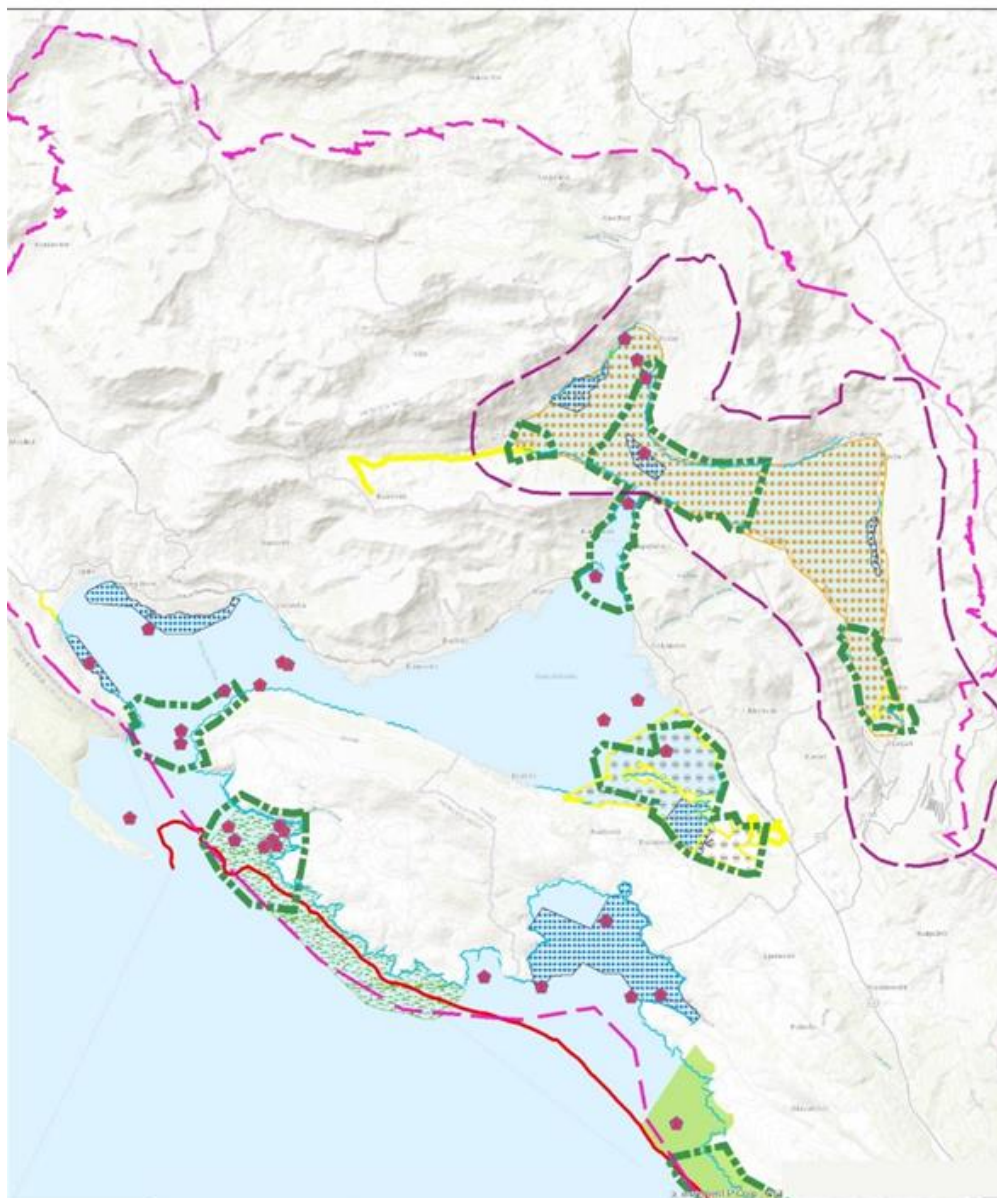
**Specific measures, strategies, activities and action plans were defined. (page 111 of Book 2.)**

The protection of **the underwater cultural heritage** has also been defined. The protection of underwater archaeological sites implies the prohibition of all activities that may threaten the cultural, social, economic, research, educational and other significant archaeological sites (construction of buildings, dredging of the seabed, anchoring, fishing with deep trawl nets, shellfish/fish farms).

**Cultural heritage protection regimes can be subordinated to activities for defense, navigation safety, protection and rescue, all in accordance with special regulations.** Other maritime activities, primarily those involving the utilization and use of the sea area for economic purposes, if they take place on the site of the protected underwater heritage or in its surroundings, should be harmonized with the established protection regimes and conservation guidelines issued by the competent state bodies.




#### **Restriction of activities with significant impacts on marine environment**

Activities with significant impacts are shipbuilding, oil and gas exploitation (*implementation of the greatest precautionary measures for environmental protection, as far as possible from the coast*); large ships and cruise ships and monitoring of their environmental impacts, positioning of anchorages (*avoid locations of valuable/more vulnerable habitat types*); in the Kotor-Risan Bay, and later in the area of the entire Bay of Kotor, gradually introduce the rule of access only to vessels with a built-in holding tank; activities in port facilities and marinas, exploitation of mineral raw materials, fish farming (in the open sea and displacement from the Bay of Kotor), dredging activities (*the activity should be limited to occasional dredging for the purpose of deepening the waterways and port water areas*); ban on disposing waste into the sea.



## LEGENDA






### Kulturna bastina

-  Međunarodno zaštićena područja - UNESCO
-  Međunarodno zaštićena područja - UNESCO- bafer zona
-  Lokaliteti podmorske kulturne bastine

### Vrijedni predjeli

-  Predione cezure
-  Sira područja zaštite značajnih morskih predjela

### Prirodna bastina

-  Zasticena područja park prirode
-  Zasticena područja poseban rezervat prirode
-  Područja vrijednih morskih stanista
-  Područja potenc vrijednih stanista
-  Predložena Emerald područja

## DISASTER RISK REDUCTION AND PROTECTION AGAINST NATURAL DISASTERS

The building of comprehensive resilience and ensuring the safe functioning of the state in the areas of natural and other disaster risk reduction, that is, defense, implies the need to determine general and special goals and priorities in these two areas, namely: within the priority of updating the National Disaster Risk Assessment in accordance with EU guidelines; development of strategies for disaster risk reduction through local strategies in accordance with the Roadmap for the implementation of the SENDAI framework, adopted by the United Nations and the European Commission; updating of national protection and rescue plans for different types of risks; integrating disaster risk reduction policies in key areas such as sustainable development, climate change, environmental protection and natural resource management, etc.;

***The Draft Spatial Plan of Montenegro defines goals and priorities in relation to geological hazards, hydrometeorological hazards, fire risks, technical and technological and other accidents, and state defense goals. (page 115 of Book 2).***

### GOALS OF SEISMIC RISK CONTROL AND REDUCTION

The goals represent binding guidelines and trace the ways of achieving earthquake safety, strengthening resilience and capacity in Montenegro. They are valid for the entire territory of the country - which is entirely exposed to a high level of seismic risk. Some of them are promoted for the areas of the highest seismic hazard and/or with recognized problems of organization and use of space.

1. **Strengthening of seismic monitoring, further research into seismic hazard and geotechnical environment** (modernization of the capacity of the national seismological network, continuity of seismic monitoring and research into seismic hazard, etc.).
2. **Strengthening of the construction sector, conditions, requirements and knowledge required to reduce seismic risk** (implementation of Euro codes, prescribing stricter conditions and requirements for reducing seismic risk in construction and construction supervision of structures, etc.)
3. **Analysis, assessment and evaluation of seismic risk for the purposes of spatial planning** (identification, analysis and evaluation of earthquake risk at the state level, especially critical infrastructure, active landslides, potentially unstable terrain and the vulnerability of critical infrastructure facilities).
4. **Strengthening of the capacity for seismic risk management** (uniting and strengthening of the state's administrative capacity for seismic risk control, raising awareness of risk, establishing a special administrative body with the task of promoting, planning and implementing the policy of reducing seismic risk, etc.)

*A more detailed elaboration of the goals is given in the Draft, page 119, Book 2),*

**Guidelines for detailed spatial and urban planning** - It is necessary to use microseismic zoning maps. Seismic zones and subzones or zones of land suitability for urbanization identify the expected maximum intensity of earthquakes, but also contain elements of: geology, geomechanics, hydrology, etc.

The rules that are implemented are:

- to favour zones of lower intensity and zones of stable terrain (suitable for urbanization). These are the zones where the most important urban activities and development are planned (center, housing, hospitals, university centers, etc.)
- to allocate light industry, services, warehouses, etc. in less favourable zones.
- that in the event that the settlement is already formed on a fault or seismogenic zone, this must be taken into account by tightening all planning conditions. Important structures must be located away from the fault. Larger open spaces than is the standard in urbanism are recommended.
- to take measures to control the development of densely populated areas - with special emphasis on the Coastal and Central regions.
- that seismically unstable terrains are prohibited for construction and should be used for green areas and open spaces. These include unstable terrains, potential or active landslides, terrains with a high potential for occurrence of liquefaction, flooded terrains.

- that the terrains of conditionally stable zones (e.g. terrains with a high level of underground water) must be improved by implementing engineering measures (hydrotechnical, etc.), and only then included in the urban planning concept.
- that the road infrastructure of urban areas is planned in such a way as to avoid a single traffic junction. Instead, traffic should be carried out by a system of roads that do not pass through the urban center but are efficiently connected to it.
- that corridors to and from emergency services, as well as access roads to residential blocks, are clearly formed within the urban area.
- that the collectors, etc. installations are built with duplicate pipes,
- that a gravity water supply system (whole or parts) that is functional even during power supply interruptions is preferred.
- that separate drainage systems for surface and sewage water are preferred.
- that gas pipelines are avoided in principle - and if necessary, an automatic shutdown in the event of an earthquake and devices that ensure safe replacement of system parts are provided.
- that structures with a proper distribution of mass and stiffness - in the foundation and in height are preferred; that the best regular shapes of the foundations of structures - symmetrical in both directions.
- that the structures with complex foundation shapes and with different number of floors be separated by seismic gaps into smaller parts of regular shapes. The same applies to long linear structures.
- that macroseismic zoning should be consulted when choosing the number of floors of the blocks - the matching of the dominant periods of ground oscillation and the structure should be avoided. For example - in terrains with a very small predominant oscillation period of 0.15 - 0.25 sec, avoid the construction of low buildings (1-3 floors), in terrains with small periods, both low and tall buildings can be built.
- that enough space is provided between buildings so that they do not collide during an earthquake. Also to provide a free space larger than 1.5 of height for protection against collapse during an earthquake.
- that unsuitable terrains and land of lower quality are planned for the accommodation of temporary settlements and areas for landfills of construction waste during earthquakes.

## REQUIREMENTS FOR RESISTANCE TO CLIMATE CHANGE

The increased risks of the impact of climate change and the response to their consequences by adapting in all sectoral policies, or reducing the impact, are an integral part of the goals and commitments for sustainable development. Joint action on the implementation of goals requires cooperation between institutions in order to strengthen resistance to these changes.

Montenegro's contribution to the efforts of the international community in the fight against climate change is expressed through the established task of reducing greenhouse gas emissions to at least 30% in the period up to 2030, compared to the baseline year (1990). This goal can be achieved through measures defined in national strategic plans.

The Law on Protection from Negative Impacts of Climate Change was adopted in 2019 and in 2020, the Decree on activities that emit greenhouse gases was issued, which was one of the prerequisites for negotiations in **Chapter 27 - Environment and Climate Change in the EU accession process**.

Adaptation to climate change and positive measures, from the aspect of Spatial Plan of Montenegro, were considered in planning proposals and projections in all areas of development, especially in energy, transport, agriculture, construction of structures and infrastructure.

The National Strategy in the Field of Climate Change until 2030 prescribes the Government's obligation to act against climate change in an integrated and multisectoral manner, while respecting the international obligations undertaken under the UNFCCC. (UN Framework Convention on Climate Change. (2006 – 2007). The Strategy emphasizes that Montenegro must adapt to negative effects and promote low-carbon sustainable development. The Strategy is harmonized with the EU legislative framework in the field of climate change.

In order to adapt to climate change and reduce gas emissions (GHG), it is necessary to take appropriate measures in all sectors of development, which is planned in the sectoral projections. Here are the most significant ones:

- Sector of planning and urbanism - From the aspect of spatial and urban planning and construction of structures in urban areas, adaptable planning and organization of facilities is required that adapts to the natural environment and takes into account extreme climatic characteristics. Prevent the uncontrolled expansion of cities, take into account the need to avoid urban heat islands, adequate protection against



floods, landslides, erosion and extreme weather events. (droughts, hail, stormy winds, large amounts of precipitation, etc.).

- Application of spatial standards and requirements for the construction of such structures in space, which in terms of shape, layout, and dimensions ensure adaptation to the phenomenon of climate change.
- Special construction requirements must be prescribed in areas of increased/pronounced risk, through the selection of areas and zones for construction, to the regulation of the distance of structures, planning green penetrations, surfaces, etc.
- More intensive development in individual areas and zones (detailed planning level) should be directed to less sensitive areas,
- In the energy sector, it is necessary to increase energy efficiency, increase the share of renewable energy sources, modernize the energy production and distribution sector, reduce energy consumption in households and build energy-efficient buildings, energy labels and eco-design, etc.
- In the agricultural sector, it is necessary to apply protective measures in agriculture, irrigation, drainage, support for organic production, use of organic manure, etc.
- In the industry sector - Control of gas emissions (GHG) in industrial processes, improvement of technologies and processes.
- In the transport sector, it is necessary to organize more intensive public transport, promote electric vehicles and public transport and reduce the number of old vehicles that are major polluters.
- In the sector of land use, land conversion and forestry - limiting the amount of felling in state and private forests, reducing burned areas on an annual basis.
- In the waste management sector - reducing the share of waste in municipal waste and redirecting it to recycling - composting.

It is expected that by applying the measures in all sectors, GHG emissions in 2030 will reduce from 3,321 Gg CO<sub>2</sub>e, which is their value under the scenario without measures, to 2,301 Gg CO<sub>2</sub>e.

*(The results of climate projections indicate that the annual temperature will increase from 1.5 to 2 degrees by 2040 (by 2070 by 3, and by 2100 by 5.5 degrees). Rainfall is expected to decrease, especially in the summer, an increase in the amount of precipitation in the winter, a decrease in snowfall and a decrease in the amount of snow).*

Montenegro is vulnerable to droughts, forest fires and heat waves, which may become more pronounced and frequent. All sectors of the economy are affected by these phenomena, so taking strategic preventive measures to mitigate and adapt to climate change is considered part of the overall development strategy.

## **SOCIAL INFRASTRUCTURE NETWORK AND FACILITIES**

### **DEVELOPMENT OF SOCIAL ACTIVITIES**

**Development goals and measures for achievement of goals:** In accordance with the need for the Spatial Plan to enable the realization of general social and economic development, according to a polycentric model that will provide appropriate contents of social activities in all regions and municipalities, goals from the domain of social activities were formulated. The goals are aligned with the need to stimulate regional development and ensure the availability of social activities to all population groups.

The activities of education, science, culture, sports, healthcare and social protection are very important in modern economic conditions, and are often a key indicator of the development of a society. A knowledge-based society with developed social activities enables the achievement of positive socio-economic performances over a longer period of time and is closely related to the level of global competitiveness of the national economy

#### **Goals of social activities development:**

**Education** - *All municipalities in Montenegro and centers from the settlement network should have the established function of pre-school and primary education. Centers of regional importance and centers of municipal importance must have secondary education institutions in accordance with the needs of the population. All centers of regional importance should have institutions of academic/higher education.*

**Scientific activity** - *Institutions for the development of scientific activities should be located in centers of regional importance.*

**Cultural activity** - *Protection of cultural diversity and cultural heritage, as well as the development of cultural activity in all parts of Montenegro, through the construction of cultural institutions and the organization of mobile forms of cultural activity in accordance with the needs of the demographic structure.*

**Healthcare activity** - *All municipalities in Montenegro must have an adequate system of primary healthcare, while centers of regional importance must be the location for general hospitals.*

**Social and child welfare** - *Within all settlement networks where the demographic structure requires it, facilities for taking care of children with developmental disabilities, children with behavioural disorders and children without parental care must be built.*

*Build nursing homes in all municipalities which represent regional centers. Stronger development of institutions and services of the social protection system that will keep pace with the needs of pensioners.*

**Physical culture and sports** - Each municipality within the settlement network should have appropriate sports infrastructure for sports and recreational activities.

**Gender equality** - Achieving a higher level of gender equality in Montenegro, through the improvement of the application of the existing normative framework and the application of measures that strengthen the capacities of institutional mechanisms for the implementation of legal provisions for protection against discrimination. Improve the application of the existing normative framework for the implementation of gender equality (general and special goals and priorities are defined).

## CONCEPT OF SETTLEMENT NETWORK, URBAN AND RURAL DEVELOPMENT

The sustainability of the spatial organization should continue to be based on the polycentric model of development. This model is also accepted in EU countries as optimal and appropriate for the territorial development of Montenegro. The goal of developing this model is to achieve a balanced spatial distribution of the population and mitigate the depopulation processes characteristic of the Northern Region, especially of rural settlements. In this way, the principle of territorial cohesion is supported and support is given to urban-rural connection and strengthening of the social, economic and cultural development component in areas that need support in development. (demographic and construction pressure on the Central and Coastal regions decreases;

Priorities are given:

- Provide traffic and other technical infrastructure in all parts of the region,
- Encourage entrepreneurship based on local potentials and capacities,
- Support the development of green, healthy settlements with created working conditions,
- Strengthen individual centers through taking over part of the administrative-governing functions;
- Establish new or strengthen existing specialized centers (business, healthcare, tourist, recreational, administrative, educational),
- Create functional relations among cities that go beyond administrative borders and create cooperation through common development opportunities;
- Develop urban and rural settlements according to urban rules and principles and plan construction areas carefully/rationally;

The settlement network will be represented by the established rank of centers in Montenegro:

- **Center of national importance** - Podgorica, the Capital City is the most developed type of urban settlement in Montenegro and provides functions of the highest rank, as well as state and international functions.
- **National center of special importance** - Cetinje, Old Royal Capital of Montenegro, is of special importance due to its administrative, historical and cultural values.

(The request of the Municipality of Žabljak that the settlement of Žabljak becomes a state center of special importance - the ecological capital of Montenegro;

- **Centers of regional significance** – Bar and Ulcinj, Bijelo Polje and Berane, Herceg Novi, Kotor, and Tivat;
- **Centers of municipal importance** – all municipal centers in Montenegro;
- **Significant local centers** - are urban, rural or tourist settlements of all municipalities, with certain primary service and social functions (educational, healthcare, social, sports, cultural).

- **Local centers** are the smallest settlements with basic functions for supplying the population, mostly in rural areas or the hinterland of municipalities in the Coastal Region.



Sources: Esri, USGS, NOAA

- Državna granica Crne Gore
- Granice opština
- Granice naselja

**Pravci gravitacije**

- Primarni, lokalni, značajni lokalni centri ka opštinskom centru
- Ka značajnom lokalnom centru
- Ka lokalnom centru

**Mreža naselja**

- Centar državnog značaja
- Državni centar posebnog značaja
- Opštinski centar i centar regionalnog značaja
- Opštinski centar
- Značajni lokalni centar
- Lokalni centar
- Primarno naselje

**Jačanje vodećih funkcija opštinskih centara**

- U Uprava
- S Saobraćaj
- O Obrazovanje
- T Turizam
- P Poljoprivreda
- I Industrija
- K Kultura
- Z Zdravstvena zaštita

**Jačanje osnovnih funkcija značajnih lokalnih centara**

- RU Razvoj osnovnih usluga

7.2. - 1. Planned settlement network in Montenegro



## CONCEPT OF INTEGRAL URBAN DEVELOPMENT

According to the proposed sustainable model of urban development, the development of cities is focused on their functional urban areas and on their rural surroundings. The goal of such development is the transformation of urban settlements in the direction of creating quality living conditions in the urban area and immediate surroundings and the creation of functionally organized urban forms.

In all urban settlements in Montenegro, it is necessary to remediate observed urban and municipal problems as a matter of priority, exclude the possibility of development according to unacceptable urban concepts and plans, and establish urban construction and development rules.

### **Strategic goals and priorities of urban development and binding guidelines:**

- Alignment with the goals of urban development in Europe, realization of the European vision of spatial organization of cities and regions, in order to ensure social cohesion, economic connectivity, cooperation, cultural exchange and diversity.
- Encouragement of integral urban and rural development, while improving the traffic accessibility of rural areas and connecting the functions of cities and villages;
- Strengthening or establishing new functions and services in accordance with the settlement rank;
- Appreciation of regional diversity and local specificity, when developing urban and rural settlements;
- Creation of humane and liveable cities and their immediate surroundings, with recognizable urban patterns;
- For the development of all settlements in Montenegro, the municipal development and equipping of construction land is important, which increases its use value and importance for the development and improvement of the community. To that end, the priority task is the rational and efficient management of construction land as a public good. This requires an organized system of municipal equipping and maintenance, with the necessary rehabilitation of the state of the most threatened areas.
- Affirmation of green infrastructure as the starting point of future sustainable - green development (open spaces, natural areas, protection of park areas, squares and public spaces, provision of irrigation and drainage systems, preservation of watercourses in settlements, formation of bicycle and pedestrian paths within the city environment, etc.
- Development of facilities in cities for all generations, safe and spatially functionally organized in such a way as to reduce travel time for performing basic work and life needs and at the same time reduce energy consumption; (traffic, travel time, parking spaces, etc.).
- Development of high-quality public areas in accordance with defined urban standards, rules and principles.
- Development of the settlement structure should be based on a rational approach to the use of space for urbanization, while controlling the expansion of construction areas,
- Compliance with clear rules and restrictions (Rulebook), which concern the increase of construction zones in all regions, municipalities and settlements;
- Achieve the attractiveness of cities and other settlements by providing a quality and protected environment, strictly taking into account the cultural heritage;
- Preserve the specificity and identity of urban structures, especially old towns;
- Reduce pollution in cities and support the development of vital, clean, traffic-friendly, municipally equipped and as much "green" cities and settlements as possible;

### **Specific objectives**

When preparing planning documentation, ensure sustainable patterns of urban and rural development, whereby the following is highlighted:

- Revise the planning documentation that is not in accordance with acceptable urban standards and parameters for construction.
- Conduct the urbanization process in accordance with the possibilities and limitations of local areas, individual zones and locations, in such a way that, primarily, the existing natural limitations and possible conflicts in the use of space are considered;
- During detailed planning, ensure the safety and security of access to all planned or built facilities in case of earthquakes, fires, floods or any other natural or man-made disasters;
- Preserve the corridors of fresh and clean air and during construction ensure sunlight, especially for residential buildings, schools, healthcare institutions and hospitals, tourist facilities for rest and recreation;

- Abandoned areas will be improved through renovation and new functions and put into appropriate function;
- Plan urban areas in such a way that energy consumption is reduced to the minimum;
- Restoration of cultural heritage shall be carried out in accordance with the protection requirements or conservation requirements prescribed by the competent institution;
- Plan at a detailed planning level the construction of appropriate sports zones and fields in accordance with the needs of the population;
- Carry out rehabilitation, reconstruction and construction in damaged urban zones,
- Old urban cores, especially in the Coastal Region, represent a great potential, which must be strictly protected from damage, repaired and revitalized.
- Legalization of structures in all municipalities of Montenegro with previous detailed records of illegal structures.
- Harmonious architectural design in accordance with the local specificities of the space;
- Development of abandoned areas that are infrastructurally connected - brownfield;

**Priority goals:**

- **Development and adoption of the Spatial Plan of Montenegro and Amendments to the Law on Spatial Planning and Construction of Structures.**
- Synchronization of the plan development at the state and local level.
- Addressing key observed problems in the urban development of each municipal center.
- Addressing key problems and limitations in detailed planning documentation in all municipalities of Montenegro.
- Addressing the status of illegal structures in urban and non-urban zones;

**RURAL/VILLAGE SETTLEMENTS AND THEIR DEVELOPMENT**

Rural development is an important component of balanced regional development in Montenegro. Recognizing the value of rural areas and their specific development conditions is one of the priority topics of sustainable development in EU countries and a special goal in the future development of Montenegro. The previous plans did not deal too much with the problems of rural settlements, nor with their revitalization.

In order to achieve desirable sustainable development, it is necessary **to change the attitude towards the countryside and direct all activities towards the rehabilitation of the rural area, first of all by improving living conditions.** Spatial development of rural areas in Montenegro will be focused on the economic aspects of rural development, improvement of competitiveness in food production, ecological aspects through the protection and use of ecosystems and preservation of biological and landscape diversity, and demographic aspects in terms of influence on the structure and distribution of the population. Rural settlements represent spaces for ensuring the existence and safety of the community in emergency situations.

***The general goals of rural development are:***

- In addition to planning guidelines, incentive measures of agrarian policy, support for rural development through various funds, state incentives, etc. are also necessary (small entrepreneurship, rural tourism, traffic and social infrastructure, education opportunities, care for elderly households).
- Rehabilitation is possible only by approximating or equalizing the living conditions in the countryside and in the urban area.
- Part of the concept of countryside revitalization is the demographic policy that relieves urban settlements and provides support for countryside development.
- Stimulate the development of important local centers of rural areas and prevent their further devastation and degradation.

***Specific objectives:***

- When planning the development of rural settlements, take into account their specificity, that is, the characteristics of the region/municipality where the rural settlement is located;
- Availability and infrastructural equipment,
- Village activation and planned preservation of village identity, support for the development of agricultural production, agrarian, eco and ethnic tourism,
- Development of manufacturing companies and processing plants,



- Ensuring the required level and facilities of social activities and services;
- Maximum protection of agricultural and forest areas and their sustainable valorization through food production and the development of appropriate types of tourism,
- Support for the development of agritourism and other forms of rural tourism in such a way that arable agricultural land does not turn into construction land.
- Adequate protection and revitalization of villages with preservation of specific environmental characteristics of settlements in all municipalities.
- Defining in the plans the zones of new construction for the needs of the development of agriculture, tourism and housing in the rural area, in such a way that the identity of the village is not threatened and the remains of the old villages are revitalized.
- Equipping rural areas with the necessary infrastructure and social services;
- Careful development, utilization and use of the village space while preserving the value of the landscape, especially when building infrastructure systems, industrial and other economic facilities;
- At the detailed planning level, definition of the rules for development of rural settlements, depending on geomorphological characteristics, regional and traditional peculiarities. (especially for settlements in the Coastal, Central and Northern - mountain regions, in accordance with the specific urban and architectural characteristics of each planning zone, each municipality and its settlements).

**Priority goals:**

- Provision of traffic availability,
- Stimulative measures in the field of agriculture,
- Stimulative measures in the field of tourism development in rural areas,
- Opening of facilities for secondary education in the area of the Northern Region;
- Provision of prerequisites for the local population to engage in tourism.

**Compliance with the objectives of urban and rural development in Europe**

In Montenegro, it is necessary to implement measures and recommendations from international documents relevant to urban development (New Urban Agenda - NUA - UN Conference on Housing and Sustainable Urban Development - Habitat III - 2016); According to the recommendations of Habitat III, a built structure of city management and planning and management of urban spaces with provided funds are required); The most important segments that are aligned with the European goals refer to: integral approach in planning, rational city planning, territorial integration with cross-border areas, protection of ecological values, strengthening of rural and sparsely populated areas, etc.

The application of new standards for sustainable urban development should provide functional cities with an adequately designed network of roads, pedestrian streets and public spaces, bicycle routes, green areas, commercial use of the ground floor of buildings and conditions for encouraging local initiatives.

In order to stop and prevent conflicts and negative trends from the previous period, it is necessary to identify the main urban challenges in every urban settlement in the municipalities of Montenegro and apply special measures and rules for the purpose of quality urban regeneration, renovation, rehabilitation and construction aimed at good organization of urban areas.

**Special measures and rules of urbanization in Montenegro refer primarily to:**

- urbanization planning in accordance with available possibilities and limitations,
- rational expansion and internal development of the settlement
- slowing down the growth of the Capital City and coastal local centers,
- increase in population concentration and urban functions in the cities of the Central and Northern regions,
- stopping the abandonment of villages, strengthening the connection between the village and the city,
- strengthening of local economies,
- investments in traffic and technical infrastructure

Through the application of special measures and rules, conditions would be created for the establishment of a planned polycentric settlement network and harmonized and balanced social and economic development at the regional level.

**The polycentric network of urbanized centers of different hierarchical ranks and functions should function as a harmonious and connected system of urban and rural settlements that complement each other.**

**Guidelines and directions in urbanism and architecture** are given related to the synthesis of natural and built structures in the space, the harmony of structures, streets, open spaces, the recognition of unique scenarios in urban settings, the creation and protection of visual corridors, the implementation of facilities that are complementary to the public environment, the integration of common open spaces, landscaping and architecture, implementation of natural systems with the aim of increasing the quality of housing, sustainable architecture, design of public spaces, etc.

**The basic measures and instruments in the field of urbanization, development of settlements and functions of urban centers of Montenegro that the Plan prescribes are:**

- **Normative-legal measures** - legal regulations in the area of spatial planning and construction of structures, housing, environmental protection and other relevant regulations, timely preparation of spatial and urban plans, monitoring of preparation, implementation and evaluation and monitoring of adopted planning documents).
- **Organizational-institutional** measures refer to more intensive and synchronized cooperation of institutions in Montenegro, especially line ministries, as well as more intensive cooperation of local communities, starting with the adoption of legal regulations, through key strategic decisions.
- **Economic and financial funds** for the needs of urban development, except from the budget of Montenegro, can additionally be provided from other sources in accordance with the law, such as the use of foreign donations and accession to EU funds;
- **Educating and informing the public** about the importance of humane urban and rural development, humane housing and attitudes towards the public good and its preservation and improvement, as an increase in value for the benefit of the entire community and each individual.

## HOUSING

The Draft Plan proposes general strategic goals that can solve current problems and provide a new model of housing policy to address the needs of all categories of the population.

**Development goals are:** Finalization of the legal and institutional framework for regulating the housing sector, in a way that corresponds to the newly emerging conditions and needs of the market economy, in the direction of harmonization with EU regulations; Creation of prerequisites for the improvement of the housing market; Optimization of investments, competitiveness and employment in housing construction; Organization of a more efficient management and maintenance sector of the existing housing stock; Increase in the availability and security in the housing rental sector; Promotion of ecologically sustainable solutions in housing construction; Provision of humane housing conditions in accordance with EU standards; Improvement of living conditions of special social groups; Regulation of the issue of illegal settlements; Provision of energy efficient residential buildings and certifications; Improvement of infrastructure and energy consumption in housing; etc.

## LAND POLICY

The Draft Spatial Plan of Montenegro indicates the necessary urgent measures to stop negative flows, rehabilitate the existing situation and establish a new practice in this area - the reform of the overall system of planning and spatial development.

General goals:

- Reform of the system of planning, development and use of space in order to ensure efficient and consistent implementation of strategic decisions and development goals;
- Redefinition of the policy in this area with strategic commitments and goals that are in line with the needs of sustainable development - rational use of space.

Specific objectives:

- Improve the regulatory framework – amend the current or adopt a new law, (set of laws);
- Improve the practice and synchronize the development of spatial planning documents,
- Strengthen the administration, by training staff and improving resources for efficient and responsible implementation of plans, establishment of GIS on the territory of Montenegro;
- With the policy of spatial planning and development through land policy measures, stimulate the rational utilization and use of space and discourage the construction of buildings that serve the purpose of

- capital turnover - "privatization of profits and socialization of costs" according to the principle that in the development of space as a general good, the public interest is the priority;
- Provide prerequisites for the preparation (equipping) of construction land - urbanization, regulations for pre-allotment of cadastral plots into urban plots, funds for equipping the land / the costs of equipping the land are borne by whoever profits from the construction;
- Redefine the regulations for the legalization of illegal structures, specifying the "damage" they caused for specific situations - based on the acceptability of the situation and the principle of fairness;
- Determine land policy measures (fiscal and stimulus measures) in order to activate the built facilities ("second apartment" and "weekend apartment") for economic purposes - tourist accommodation facilities;
- Establish funds with adequate funds for rehabilitation of the state in the space and development according to the plans.

## **Measures**

- on the basis of goals and strategic commitments that will be defined and verified in the Draft Spatial Plan of Montenegro, establish a new - reform policy of planning and spatial development;
- limit residential construction outside settlements to already formed construction areas (without new residential zones);
- redefine - reduce the capacities of planned residential buildings in already formed construction areas;
- determine guidelines for rehabilitation of urban zones and construction areas that are not, or are below standard, equipped with technical infrastructure, social standard facilities and public areas.
- Residential construction, which is contrary to strategic commitments by area and capacity, should be limited by revising current plans (applicable SUPs and those whose development is in progress, detailed plans, according to the principles of simultaneity and concurrency of plans / planning, specify and additionally check general commitments).

## **Baseline commitments in land policy:**

**Regulatory framework:** Improve regulations in the field of planning, development and use of space in terms of codification with EU regulations and standards and mutual codification. Improve the organizational structure and practice of bodies and institutions that keep public records on relevant spatial elements, primarily the land cadastre, with the establishment of GIS on the total space.

**Development of plans** - Through the development of planning documentation, it is necessary to form a comprehensive knowledge base which could, with implementation in GIS, serve as a basis for monitoring the state and processes in the space, which would open up the possibility of consistent compliance with the principle of "permanent planning"

**Tax policy** - Tax-fiscal policy measures should solve the issue of investing in the development and equipping of land planned for urbanization/construction and especially the rehabilitation of zones that have already been built but are substandardly equipped and undeveloped.

*Note: During the preparation of the Draft Spatial Plan of Montenegro, the municipalities expressed initiatives for:*

- *planning decentralization through amendments to the Law on Spatial Planning and Construction of Structures and adoption of faster and more efficient planning solutions in order to realize development projects;*
- *identification of illegal settlements in all municipalities,*
- *reduction of the fragmentation of planned residential zones,*
- *defining the center of the settlement in rural areas,*

## **NETWORK AND INFRASTRUCTURE FACILITIES**

### **TRANSPORT INFRASTRUCTURE**

An integral system of transport infrastructure should ensure the realization of general development goals: balanced regional development, connection of local communities, and connection with the neighbouring countries.

In order to achieve the general goals of development, it is necessary to implement the following:

- Implement a network of main transport infrastructure lines,
- Increase the density of the network in the northern part of Montenegro,
- Develop public city, suburban and intercity traffic,
- Increase the level of services in all types of transport infrastructure,
- Increase the share of railway and marine traffic in the entire system,
- Increase the share of air traffic in transport.
- Development of missing technical regulations (rulebooks, standards,...).

**Road traffic:** The basis of the development of road traffic should be the extension and reconstruction of the network of all levels of the road network. The development priorities are: Improvement of traffic safety and security on the existing road network - adequate maintenance, protection and rehabilitation of existing roads and modernization of certain road sections (elimination of black spots, improvement of road elements, etc.) and enabling safe use of roads throughout the year.

**The primary road network** consists of one transverse route (**Bar-Boljare Highway**) from which **three longitudinal routes (Adriatic - Ionian Highway, Andrijevica, Murino, Čakor Highway, border with Kosovo and highway for fast motor traffic)** are separated. The longitudinal route, which is missing in the north of the country, is proposed by the Draft Spatial Plan of Montenegro. **It is necessary to connect Bijelo Polje and Pljevlja with a road for fast motor traffic, which would connect to the Bar Boljare Highway.** In this sense, it is necessary to examine the technical possibilities for routing this road.

**Adriatic Ionian Highway** - connects Montenegro with Bosnia and Herzegovina, further with Croatia, Slovenia and Italy, as well as Albania and Greece. Through Montenegro, a corridor is planned from the border with Bosnia and Herzegovina in the area of Nudo - Grahovo - Čevo - Podgorica, (bypass), to the border with Albania, with a length of about 1550 km. It passes through a sparsely populated and waterless region and has the role of transit international traffic. It has connections with pan-European corridors (corridors V, Vb, Vc, VIII). The drafting of the conceptual solution for the AI Highway corridor from Čevo to the connection with the Bar Boljare Highway is underway.

**Bar - Boljare Highway** - The Draft Spatial Plan of Montenegro **provides for a variant of the highway corridor and route that goes around Skadar Lake, and in the Berane area, it goes around the town center of Berane.** (graphic part of Spatial Plan of Montenegro, appendix Transport Infrastructure). The connection of the Bar Boljare Highway with the highway through Serbia has been agreed upon, and the junction of the roads through the two countries has been defined. The connection was made in the Boljare - Borov do locality.

**Fast road** - several options for the defining of the fast road corridor were analyzed, both through studies and technical documentation. Dilemmas regarding the defining of the fast traffic corridor in Montenegro have been present for decades. The key dilemma is related to the crossing of the fast road across the Bay of Kotor. The technical solution can be defined after the proposal of the HIA study, in such a way that nothing threatens the Unesco status of the subject area. *(the need for the construction of a fast coastal road was explained and conflicts with spatial protection were pointed out.). The attention was drawn to all previous analyses and technical solutions regarding the crossing of the Bay of Kotor were considered)*

On the one hand, there are requirements for strict protection of the space, and on the other hand, the position of the fast road corridor, which is a project that is part of the indicative extension of the Trans-European Transport Network (TEN-T) in the area of the Western Balkans (Mediterranean Corridor), is being questioned in technical terms and as such it is recognized as part of the so-called "Blue Highway". Changes in the position of this project in relation to the position determined at the TEN-T level would cause additional problems in communication with the European Commission and make it impossible to award grants for the implementation of the bypass project around Budva on the route of the fast road.

For the purpose of final commitment and expression of the views of the competent institutions of Montenegro, and in order to adopt the proposal of the optimal and technically possible solution in the Draft Spatial Plan of Montenegro, it is necessary for the competent ministries to intensify communication with UNESCO and consider the additional preparation of the Heritage Impact Assessment (HIA) of the crossing over the Bay of Kotor, which was pointed out by the Administration for Protection of Cultural Property. In the process of the Public Consultation on the Draft Spatial Plan of Montenegro, the positions of the Government and its institutions will be accepted, as well as the final position of the Administration for Protection of Cultural Property and UNESCO representatives.

**The Draft Plan proposes the priority construction of bypasses around coastal towns (according to priorities and prepared project documentation), the construction of the Adriatic-Ionian Highway in the continental part of Montenegro and the completion of the already started construction of the Bar - Boljare Highway. The fast road corridor is retained with the crossing in the Sveta Nedelja - Opatovo zone, and the technical solution in the design phase must be given in accordance with the recommendations of the HIA study and the opinions of UNESCO. The draft of this plan stipulates that the UNESCO status of the Kotor area must not be threatened by the future solution.**

**For the passage of the fast road corridor in the Municipality of Budva, in the zone through Paštrovići, the Draft proposes a "northern Paštrovići variant" that bypasses the settlements, is further away from the existing highway and enables the connection of the fast road with the Bar-Boljare Highway.**

**The basic network of primary roads is completed by the network of main and regional roads.** The complete network aims to connect the main carriers of development in the country, and connect the area with the neighbouring and European countries.

The network of main and regional roads needs to be further improved, both in terms of improving existing ones and in terms of building new routes. Special attention should be paid to connections with neighbouring countries, that is, border crossings. It is proposed to introduce a new road category - tourist road. These are roads that have been built or are yet to be built, and are used for the purpose of accessing tourist facilities. Roads that have the potential to be recategorized into state roads after reconstruction have been analysed and tabulated.

**Priorities of construction of the main roads in Montenegro** - Based on the Transport Development Strategy in Montenegro, the priority is the continuation of the construction of the Bar-Boljare Highway, namely the Mateševo-Andrijevića section, and then other sections. For the transversal connection of the country with the neighbouring countries, the priority is the construction of the Adriatic-Ionian Highway. For a better internal connection, it is necessary to build bypasses around coastal cities that are on the route of the fast road. The Draft Spatial Plan of Montenegro provides an overview of the existing and planned main and regional roads;

**Railway traffic** - The planning concept for development of the railway type of traffic is proposed in accordance with the Transport Development Strategy of Montenegro 2019-2035. Railway Development Strategy for the period 2017-2027 (Ministry of Transport and Maritime Affairs, 2017), defined REBIS and SEETO Balkan traffic networks, EU Stabilization and Association Agreement, guidelines of the Vision planet INTERREG IIIC Project, global trends in this area and predictions for real economic needs for the time horizon until 2040.

The concept of development of the railway type of traffic has the following strategic goals:

- Defining of the spatial component of the railway system of Montenegro, based on reengineering and improvement in the function of implementing the process of integration, innovation, extension and overall improvement of the state of the railway system;
- Modernization with the aim of developing a highly efficient centralized third-level railway line for train speeds of 160 - 200 km/h on a multimodal basis;
- Development of the new PAN European multimodal corridor XI (Bucharest-Belgrade-Bar-Bari) networkably connected in which the railway is a system integrator and the key subsystem;
- Putting the railway in the function of logistics. The railways of Montenegro as a system that is more represented in the delivery and dispatch of goods flows of a regional and urban character;
- Development of interconnectivity, intermodality and interoperability on the railways.
- The directions and key goals of the development of railway traffic and infrastructure have been defined. (interregional connectivity and intraregional connectivity)

The railway network in Montenegro can be defined as primary and secondary.

**The primary railway network** consists of the Montenegrin part of the Belgrade-Bar railway line (Vrbnica - Bar in Montenegro), with **branches Podgorica - Nikšić and Podgorica - Tuzi state border with Albania.**

**The secondary railway network consists of:**

1. Railway line: Pljevlja - Bijelo Polje - Berane - Peć (alternative Mateševo-Peć);
2. Railway line: Nikšić - Trebinje - Čapljina, connection to the PAN European Corridor V.

**Priorities in the implementation of the railway network development plan are:**

- Reconstruction and modernization of the railway line **Vrbnica - Bar** (general overhaul, rehabilitation of signalling, rehabilitation of tunnels, preparation of concrete bridges, reconstruction of tracks, etc.);
- Reconstruction, electrification and modernization of the railway line **Podgorica - Tuzi state border with Albania (reconstruction of tracks, electrification, etc.);**
- **Pljevlja - Bijelo Polje (Ravna Rijeka) - Berane - border with Kosovo** (feasibility study prepared, and conceptual design, construction of an intermodal terminal in Berane has been proposed);
- Čapljina – Trebinje – Nikšić – a preliminary traffic study and accompanying studies were developed, the construction of 3 terminals for combined traffic within the Podgorica, Bijelo Polje and Bar railway stations is planned. Bearing in mind the EU Transport Development Strategy stipulating the development of core corridors and the connection of the network of Montenegro with the TEN-T network, this represents the priority in the coming period.
- Relocation of part of the route of the Nikšić - Podgorica railway line that passes through Duklja.
- Construction of multimodal terminals in Bar, Podgorica and Bijelo Polje;
- Connecting the Port of Bar with the planned dry port on Ćemovsko polje with a double track;
- Converting storage capacities at railway stations into city distribution centers in order to include the railways in logistics flows and the city logistics system.

Through the introduction of the highest standards in the planning and design of railway infrastructure, the conditions for the spatial and environmental protection and the reduction of harmful gas emissions are ensured, which is one of the EU goals.

**Air traffic** - Continuous and long-term development management is required, which will contribute to an efficient, safe, economical and environmentally friendly airport system in Montenegro. The airport development strategy is in line with the constant increase in the number of aircrafts and passengers on an annual basis. There is a continuing need to create the conditions for adaptation for future airport investment plans in accordance with the standards adopted by the International Civil Aviation Organization (ICAO).

The airport network of Montenegro in the planning period consists of two international and 5 local airports:

- **Podgorica Airport**, which will be further developed as the main international airport of class 4E and which will serve 60-70% of the total air traffic. (regular, charter, business aviation, etc.).
- **Tivat Airport** is also important for air traffic in Montenegro. It should provide direct access to tourist centers in the Coastal Region in its full capacity and play a key role in the development of tourism. In addition, it is an alternative airport to the Podgorica airport and airports in the neighbouring countries.

In order to improve the quality of services in the field of air transport, it is necessary to ensure spatial expansion and improvement of the capacity of international airports Podgorica and Tivat, in order to respond to future needs and standards in this area. This requires the provision of standards that are defined in air traffic in EU countries. The improvement should be reflected in a more diverse offer of passenger and goods transportation and the provision of all operational features that guarantee transportation comfort, safety and speed.

In the coming period, the Tivat Airport will undergo significant infrastructural development, in accordance with the planning documentation - DSL Sector 24 and the conceptual design that has already been completed, which imposes the need for a certain intervention within the scope of the SLS Airport Tivat - Sector 24.

For the Podgorica Airport, it is necessary to adopt a suitable planning document as soon as possible in order to create formal assumptions for its further development.

At the Podgorica and Tivat airports, detailed planning documentation can be used to plan Logistics centers and terminals for the reception, storage, handling and distribution of air cargo shipments. This enables the use of drones in the future in the distribution of goods from favourable locations, which is already being used around the world.

In the more detailed planning documentation, plan zones for the reception of seaplanes at the locations of Tivat (near the existing airport), Bar (location of the Port of Bar) and Virpazar (location of the Port of Virpazar). Within the Tivat Airport, the development of multiple functions within one physical structure creates the basis for the development of an integrated system of airport land - water terminal as a unique system with a number of positive effects on space, traffic, economy and environmental protection.

**The planned locations for the airports are in Berane, Nikšić, Podgorica (Ćemovsko polje), Pljevlja, Žabljak, Bar and Ulcinj.**



**The Berane Airport will be developed in category 4D. Other airports Nikšić, Žabljak, Pljevlja, Bar and Ulcinj will be developed primarily as airports for special needs, recreational flying, sports flying, seasonal tourist traffic, business and tourist needs of category 3C.**

*For the area of the Berane airport, it is necessary to provide space, solve the problems of illegally built facilities in the immediate vicinity and define the conditions for the development of the airport in a planned manner.*

*(In the previous period, significant investments were made at the Nikšić Airport, and an analysis of the possibility and justification of putting this airport into operation for commercial air traffic is being carried out. Depending on the future purpose, type and volume of traffic, the conditions for its further development will be created.)*

In the planning documentation of a more detailed level **in all municipalities, plan the locations for helipads** that can be used for tourist purposes and for emergency situations.

**Guidelines for Airport Sites** - All airport sites must be protected from other requirements and uses that conflict or interfere with the primary use for airport development and potential airport expansion.

For future infrastructure projects, it is necessary to provide high-quality detailed planning documentation, both for airport zones and for protective zones in the immediate vicinity of the airport, in order to avoid creation of possible obstacles for the development of airports and traffic flow.

Mandatory guidelines:

- establish protective areas for smooth and safe air traffic at all airports in Montenegro,
- ensure smooth operation of radio-navigation devices on the ground,
- define and protect the protective areas that stretch in the extension of the runway and in the immediate vicinity of the airport, so that in the procedure of arrival to the airport and departure from the airport the clean space can be used necessary for the aircraft to perform a safe take-off and landing and to prevent the negative impacts of aviation obstacles to aircraft operations. In the graphic appendix of the transport infrastructure plan, the areas that define the construction restriction for all Montenegrin airports are given.

**Water traffic** - The development of water traffic is directed towards the improvement of the existing situation in the technical-technological, organizational, management, security and IT direction. The water traffic development plan is predominantly focused on the most important subsystem, maritime traffic, with an approach of balanced development needs in lake and river traffic.

**Maritime traffic** - The basis and priorities of development of maritime traffic are aligned with the Maritime Economy Strategy.

The concept of maritime traffic development has strategic goals:

- Defining of new infrastructural facilities for reception, service and dispatch of vessels;
- Adoption of the "Blue Highways" concept and the accession of Montenegro to it on an equal basis;
- Organization of maritime traffic in regular and charter lines;
- Defining of the optimal plan for the sustainable development of cruising;
- Improvement of the navigation safety and security system in all segments.

The directions and measures of maritime traffic development are:

- Functional, improved and redesigned maritime system of Montenegro;
- Adopt the concept of development of "Blue Highways" in accordance with EU requirements, in order to obtain all the conditions for the organization of regular freight and passenger traffic between Albania, Montenegro and Croatia;
- Modernization of the passenger terminal in the Port of Bar for the reception, service and dispatch of medium and large passenger and cruise ships;
- Modernization of the Port of Kotor for the reception of larger cruise ships using the concept of buoys and pylons;
- Reservation of space for the development of the new terminal of the Port of Kotor for cruise ships at the location "Lipci";
- Develop a model of cooperation and coordination between road and maritime traffic aimed at greater inclusion of maritime traffic in the realization of goods and passenger flows and improvement of the unfavourable modal split in favour of the road type of traffic;

- Preserve the territory of Montenegro from the negative impact of traffic on the environment, through the introduction of the highest standards in planning and designing maritime infrastructure;
- Develop a network of cooperation with neighbours with the aim of expanding the policy in the field of maritime traffic, in order to establish better maritime connectivity and closer integration of the market, including the preparation of a plan for mobility continuity development;
- Define the concept of passenger traffic organization along the sea coast during the summer tourist season.

**Lake traffic** - can be organized on Skadar Lake for passenger and tourist purposes, while respecting ecological criteria. With the development of tourist facilities, the organization of their supply can be organized with eco distribution boats. The organization of lake transport is possible in two categories: (1) excursion tourism on the lake by tourist boats and ships, (2) regular passenger traffic in the summer period by small passenger boats on the route Skadar - Ckla - Virpazar - Rijeka Crnojevića and vice versa. In order to receive vessels, it is necessary to build and modernize the berths in Ckla, Virpazar and Rijeka Crnojevića, in accordance with ecological criteria.

**River traffic** - can be organized on the Bojana and Tara rivers. The Bojana River, as a navigable river, can accept smaller navigable units primarily for passenger and excursion purposes. Due to its attractive canyon, the Tara River will continue to be attractive to tourists for rafting and canyoning.

Due to the sensitivity of these river systems, it is necessary to take into account the protection of the nature and biodiversity in these areas.

Indicators for monitoring the development of water traffic: (1) the number of ships by type and category arriving at the ports, (2) the number of transported passengers arriving and departing on regular, charter lines and cruise voyages, (3) the volume and structure of goods traffic in delivery, dispatch and transit, (4) the number of existing operators, (5) the number of eco-boats in the realization of goods and passenger flows, (6) the amount of goods realized in the process of coordinating road traffic - sea, (7) time savings by applying new technologies, (8) economic effects, (9) degree of satisfaction of service users.

## **Logistics, City Logistics and Intermodal Transport**

**Logistics** - Today, regional economies increasingly depend on logistics systems and their degree of operability. Likewise, the increased intensity and frequency of freight transport initiates the application of new technological forms, organizational forms, forms of cooperation and management methods in order to reduce their negative impact on the space, systems and processes. Accordingly, the main goals of logistics today are optimization of processes, systems and spatial rationalization.

The concept of logistics development in Montenegro has the following strategic goals:

- Defining of the concept of logistics centers and variable cross docking terminals <sup>5</sup>;
- Creation of prerequisites for the total integration of the transport and logistics system of Montenegro;
- Defining of the structure of the system that enables the smooth implementation of supply chains, city logistics and the process of physical distribution of goods.

Directions and measures of logistics development, and key goals are given. The planning of the network structure of logistics centers is based on the scenario of regional concentration of the basic logistics activities of warehouses, transport, stocks and physical distribution of goods:

**Southern Region:** International logistics center within the Port of Bar with an intermodal terminal and a developed logistics sub center in the form of a City distribution center as its subsystem and City distribution centers in Tivat and Herceg Novi that would cover the area of Tivat, Kotor and Herceg Novi.

**Central Region:** A logistics center with an intermodal terminal in the area of Podgorica and a regional logistics center in the area of the municipalities of Nikšić or Danilovgrad.

**Northern Region:** One logistics center with an intermodal terminal in the area of the Municipality of Bijelo Polje with a dominant collection and distribution role.

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<sup>5</sup> According to some projections, the European global LC network should contain: about 450 main international LCs, about 750 international LCs, about 1750 international transport and distribution centers and about 3500 regional and distribution LCs.

**City logistics** - Urban areas in Montenegro are under a heavy burden of road freight transport in all categories of vehicles, which are involved in the physical distribution of goods. In order to overcome the current situation, the organization and management of logistics flows (flows - ecological and economic effects of goods and materials) within the city area and tourist zones require the application of a logistic approach - City logistics<sup>6</sup>

**Intermodal transport** - development of the network of intermodal transport terminals. Intermodal transport is primarily developed on the transport corridor Bar - Podgorica - Bijelo Polje - Belgrade, which implies the development of four terminals in the three regions of Montenegro Bar - Virpazar - Podgorica - Bijelo Polje for combined road and railway transport, that is, container and hucke-pack transport technology, and in Bar for Ro-Ro transport technology as well.

### Border crossings

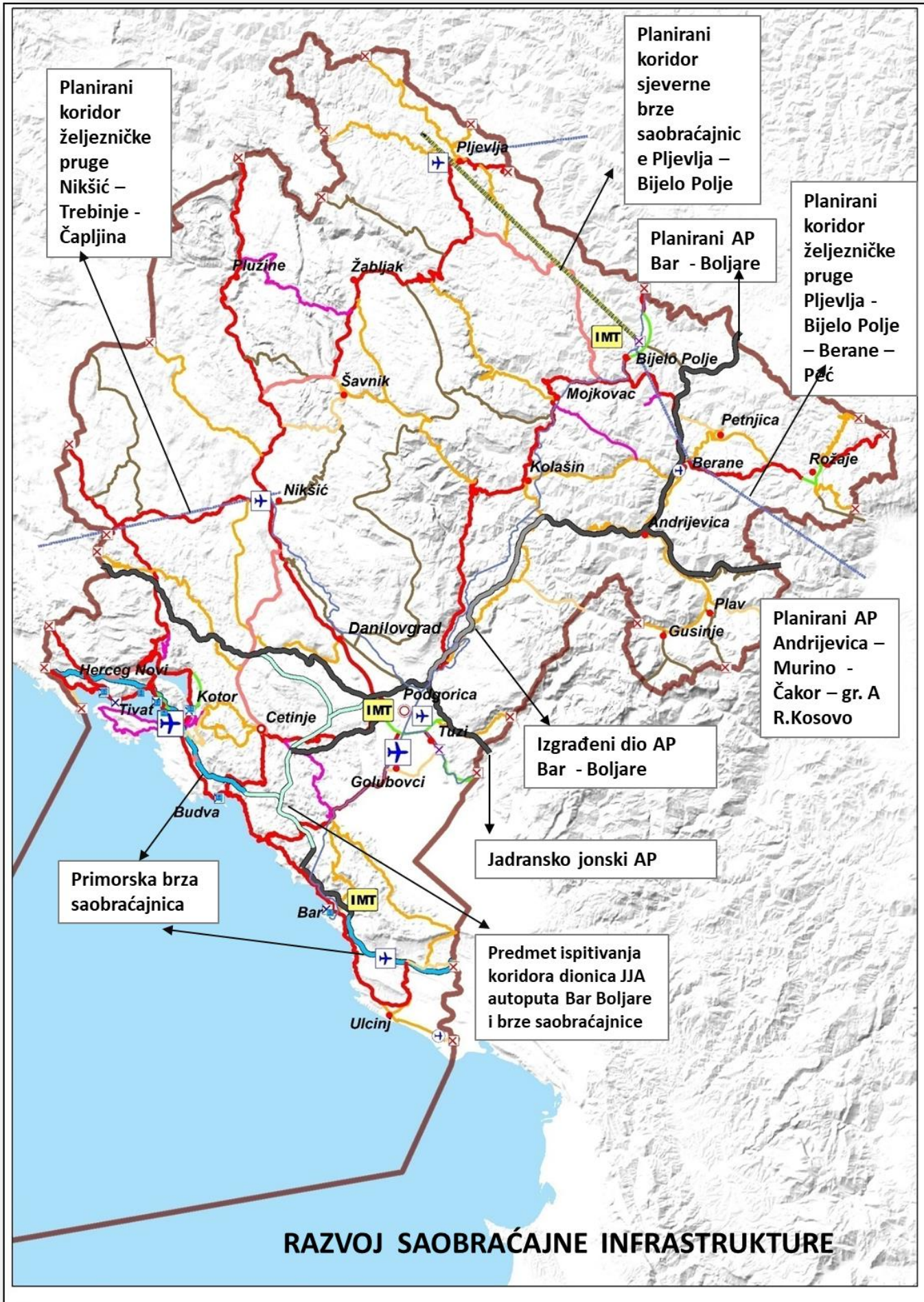
Border crossing	Adjacent border crossing	Country	Type of transport	Transport
Kobila	Vitaljina	Croatia	Road	Passenger
Debeli brijeg	Karasovići	Croatia	Road	Passenger
Metaljka	Metaljka	B&H	Road	Passenger and freight
Šćepan Polje	Hum	B&H	Road	Passenger
Krstac	Krstac	B&H	Road	Passenger and frontier
Vraćenovići	Deleuša	B&H	Road	Passenger and freight, common
Ilinobrdo	Klobuk	B&H	Road	Passenger and freight
Šitnica	Zupci	B&H	Road	Passenger
Nudo	Arandjelovo	B&H	Road	Passenger and frontier
Šula	Vitine	B&H	Road	Passenger
Ranče	Jabuka	Serbia	Road	Passenger and freight
Dračenovac	Špiljani	Serbia	Road	Passenger and freight
Vuča	Godovo	Serbia	Road	Passenger
Dobrakovo	Gostun	Serbia	Road	Passenger and freight
Čemerno	Čemerno	Serbia	Road	Passenger
Kula	Kulina	Kosovo	Road	Passenger and freight
Grnčar	Baškim	Albania	Road	Passenger, common in construction
Sukobin	Murićani	Albania	Road	Passenger, common
Božaj	Hani Hotit	Albania	Road	Passenger, common in construction
Cijevna Zatrijebačka	Grabom	Albania	Road	Passenger, common in construction
RS Bijelo Polje	Prijepolje	Serbia	Railway	Freight
RS Tuzi	Bajza	Albania	Railway	Freight
Podgorica Airport			Air	Passenger and freight
Tivat Airport			Air	Passenger and freight
Port of Kotor			Maritime	Passenger and freight
Port of Bar			Maritime	Passenger and freight
Port of Budva			Maritime	Passenger, seasonal 1.05.-30.10.
Port of Tivat			Maritime	Passenger and freight

<sup>6</sup> City logistics as a subsystem of the integrated logistics system represents: all dispositive and operational activities related to the efficient supply of the city with necessary goods, transportation of materials and secondary raw materials to specialized landfills. In order to effectively implement city logistics, strict dispositive requirements have been defined in terms of: type of goods, quantity, time, space and other requirements, as well as the factors that exist in the environment. City logistics as a system consists of: (i) generators of logistics requirements, (ii) logistics systems, (iii) logistics flows and (iv) logistics conceptual solutions.

Port of Zelenika			Maritime	Passenger and freight
Port of Kumbor			Maritime	Passenger

Recommended border crossings

Ulcinj - Gornji Štoj (Spatial Plan of Montenegro)			Road	
Planned – Bobovo (Spatial Plan of Montenegro)	Mestrovac		Road	
Šćapice – plan		Albania	Road	





## ENERGY AND ELECTRIC POWER INFRASTRUCTURE

Sustainable energy development is a prerequisite for the development of all economic and social activities and an important strategic pillar of the long-term stable development of the national economy. The general goals of the development of the energy sector of Montenegro are:

- **Security of energy supply**
  - Permanent, safe, high-quality and diverse energy supply in order to balance delivery with customer requirements;
  - Sustainable energy production through reducing dependence on energy imports with optimal use of available production resources and investment in new production facilities. The goal is to achieve adequate diversification of production taking into account the reduction of CO<sub>2</sub> emissions;
  - Diversification of energy supply routes;
  - Increase in the flexibility of the electric power system;
  - Protection of critical infrastructure and mitigating the risks related to cyber security and climate change.
  - Use of energy storage facilities.
- **Development of a competitive energy market**
  - Ensuring a liberalized, non-discriminatory, competitive and open energy market based on transparent conditions;
  - Establishment of competition in market activities (production and supply of electricity and natural gas), basing the price policy for energy products exclusively on market principles, as well as creating conditions for the emergence of new energy entities (independent energy producers, suppliers, traders);
  - Integration of the energy market into the international energy market;
- **Sustainable energy development**
  - Ensuring the sustainable energy development based on accelerated but rational use of own energy resources while respecting the principles of environmental protection, increasing energy efficiency (EE) and greater use of renewable energy sources (RES), as well as the need for the socio-economic development of Montenegro;
  - Timely realization of investment plans of transmission and distribution network operators with regulatory supervision;
  - Encouragement of research, development, knowledge transfer and application of environmentally sustainable new technologies in the energy sector;

### **Strategic commitments are as follows:**

- Maintenance, revitalization and modernization of existing and construction of new infrastructure for production, transmission and distribution of energy based on the principles of meeting international technical standards, energy efficiency, reduction of losses and negative impact on the environment;
- Gradual reduction of dependence on energy imports (i) by reducing specific consumption of final energy, (ii) by increasing energy production (primary and secondary) by using own resources and (iii) by reducing energy losses from production to the final consumption. The goal is for Montenegro to become a permanent net exporter of electricity in the short term.
- More significant realization of energy efficiency potential in all sectors of consumption and especially in the transport sector through improvement of public transport including railway transport, promotion of energy efficient and low-emission vehicles, integration of EE criteria into transport infrastructure projects;
- Continuation of research into RES potential and the study work on the possibility of using the remaining available RES potential in order to achieve the national goal regarding the participation of RES in the final energy consumption with special attention to the share of RES use in the transport sector and significant expansion of the buyer-producer concept.



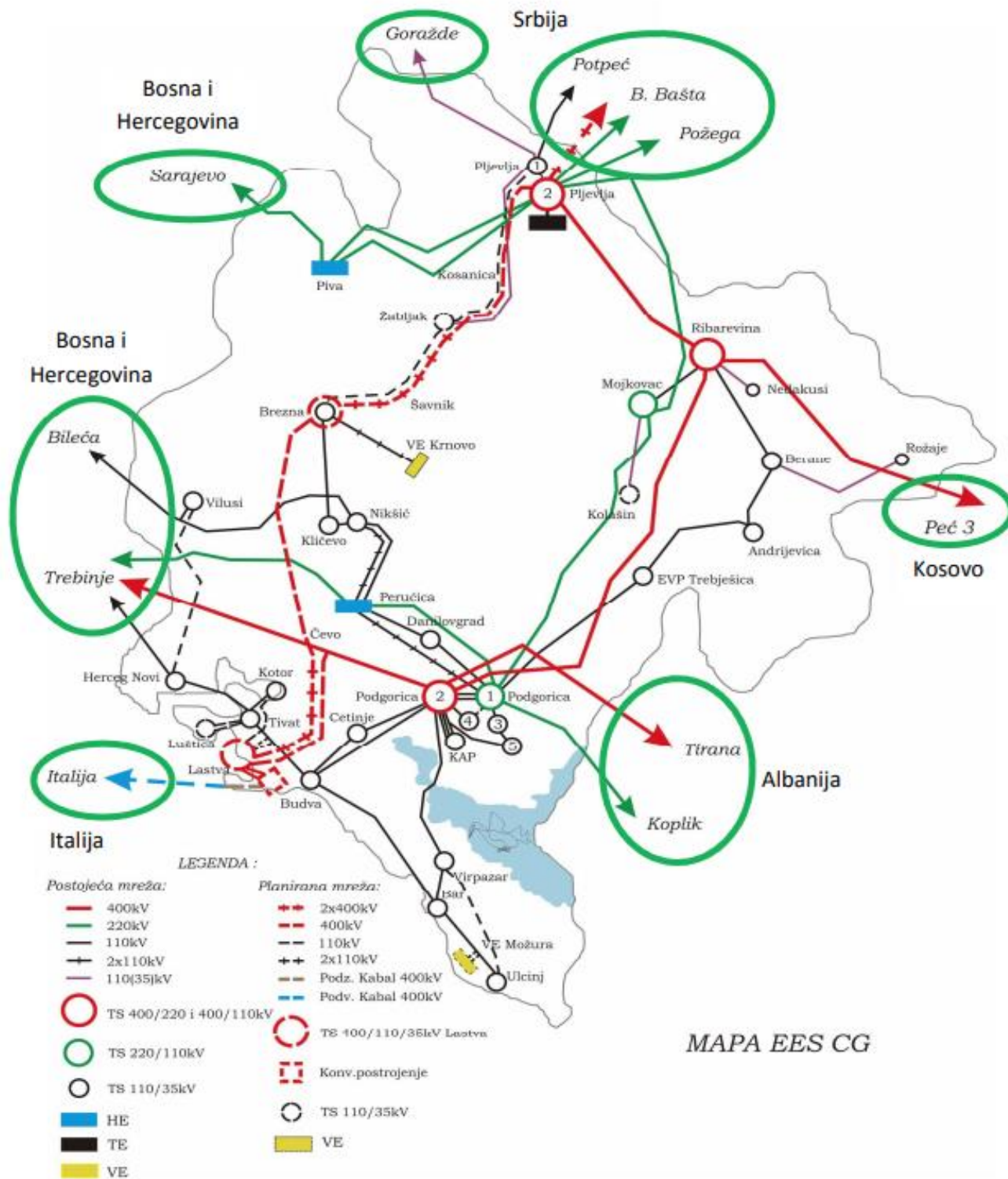
- Continuation of oil and gas exploration in the Montenegrin offshore with setting up an action plan for the sustainable implementation of recognized resources, respecting international standards of environmental protection.
- Ensuring the social protection of endangered (vulnerable) energy customers;

**Specific objectives of energy development are:**

- Achievement of the set national goals for 2030 and intensifying the achieved dynamics by the end of the planning period, in terms of:
  - Participation of renewable energy sources in the final consumption,
  - Reduction in greenhouse gas emissions from the energy sector
  - Energy efficiency of the final consumption;
- Increase in energy independence by at least 30% compared to the baseline year;
- Reaching the level of energy intensity of the final consumption characteristic of developed EU countries;
- Increase in the diversification of energy sources in the energy balance (increasing the share of new renewable energy sources to at least 30%), parallel construction of controllable and uncontrollable energy sources in order to ensure the stability of the electric power system;
- Substitution of energy sources and technologies for their use with the aim of increasing efficiency and reducing the negative impact on the environment in accordance with the best available technologies on the market;
- Activation of all RES potentials, especially regarding the use of solar energy, namely:
  - centralized production of electricity,
  - distributed production of electricity with an emphasis on micro-production and expansion of the consumer-producer concept,
  - meeting the needs for heat energy in the service and household sectors,
  - expansion and significant participation of renewable energy sources in the transport sector;
- Rational consumption of energy with the application of technological innovations (kinetic power plants) and energy efficiency with a focus on the construction and transport sectors.

**Priority goals of energy development:**

- Construction of the second pole of the HVDC interconnection towards Italy;
- Construction of 400 kV interconnection towards Serbia;
- Construction of a new 400 kV interconnection towards Bosnia and Herzegovina;
- Construction of the 110 kV overhead line Virpazar-Ulcinj in order to ensure a duplicate supply of the Ulcinj consumer area,
- Construction of the 110 kV overhead line Vilusi-Herceg Novi in order to enable a duplicate supply of the consumer area of Herceg Novi (on the territory of Montenegro) and to enable greater realization of solar potential on the territory of Nikšić,
- Construction of the planned TS 110/35 kV in order to ensure a more stable supply of consumers and more efficient exploitation of the electric power distribution network,
- Enabling the greater participation of uncontrollable renewable energy sources (such as wind farms and photovoltaic power plants) through the parallel implementation of controllable renewable energy sources (such as planned hydroelectric power plants and energy storage facilities) - at least in the ratio of installed power of 3:1 in favour of new renewable energy sources,
- Realization of solar potential in the territory of the Capital City of Podgorica as the largest consumption area in the country with the best prerequisites for connection to the existing electric power infrastructure,
- Construction of renewable energy sources with an annual production of at least 700 GWh by 2030 and 2000 GWh by 2040,
- Inclusion of electric vehicle charging infrastructure in the plans of electric power grid development in order to enable greater participation of electric vehicles in the total number of vehicles.



Cartogram 8.2.-1. EES network - source Baseline study of Energetics

**New power plants proposed in the Draft Plan:**

With the completion of the Ecological Reconstruction Project of the Pljevlja Thermal Power Plant, the implementation of which is underway, the operation of the Thermal Power Plant will be ensured in a more environmentally friendly way, which opens up the possibility of district heating of Pljevlja through the project "District Heating Pljevlja, towards clean and warm Pljevlja - construction of the primary heating pipe from the thermal power plant to the town".

The purpose of launching the project "Construction of the primary heating pipe from the Thermal power plant Pljevlja to the town" is to improve the environmental conditions in Pljevlja, and to improve the level of efficiency of operations of the Pljevlja Thermal power plant.

After the implementation of the project Ecological reconstruction of the Pljevlja thermal power plant, as a consequence of the technological process, an additional by-product is obtained - gypsum, which can be used for the production of several types of products.

### **Hydropower plants:**

In addition to the existing Piva and Perućica hydroelectric power plants, which continue to be important pillars of the electric power system of Montenegro, the construction of new hydroelectric power plants is proposed, in order to enable much greater integration of new renewable sources of electricity.

- Aggregate A8 is being planned and built in order to more efficiently valorize the hydropower potential of the HPP Perućica. (Municipality of Nikšić-Glava Zete).
- The project of transferring part of the Zeta River waters to the Krupac and Slano reservoir in order to increase the total annual production of HPP Perućica. (locations Zavrh, Poklonci, Crnodoli and Kuside).
- HPP Komarnica – an important energy facility due to the controllability of electricity production and enabling greater integration of renewable energy sources. Urban technical conditions have been issued based on the plan (DSP for a multi-purpose reservoir on the Komarnica River), a project has been completed and an environmental impact assessment is being considered. (undisputed energy importance of HPP Komarnica and additional consideration from the aspect of environmental protection).  
The construction of HPP Komarnica is planned under the Energy Development Strategy of Montenegro until 2030, the National Strategy for Sustainable Development of Montenegro until 2030, Detailed Spatial Plan for HPP Komarnica, SUP of the Municipality of Šavnik and SUP of the Municipality of Plužine.
- HPP Kruševo – due to the high controllability of electricity production, it is also important for enabling greater integration of new renewable energy sources.

### **The need for building controllable energy sources**

The national energy development goals are aimed at investing in renewable energy sources, especially sun and wind, since they are recognized as the least harmful to the environment. However, although these sources can provide large amounts of electricity, they adversely affect system management (safe and stable operation). In order to take advantage of all the positive effects of photovoltaic power plants and wind power plants, it is necessary for the power system to be flexible, and this flexibility is obtained through the construction of controllable energy sources, and the following are significant in particular: reversible HPPs, reservoir HPPs or some of the modern technologies for energy storage (currently they are not a commercial solution for large power plants). The hydroelectric power plants (HE) just mentioned are a type of energy source that is complementary to new renewable energy sources and enables their greater integration into the electric power system.

**Solar-photovoltaic power plants** - The advantage of using solar energy in the form of photovoltaic power plants is especially highlighted. Montenegro is characterized by an obvious potential of solar insolation resulting from a very good average annual length of sunshine. Insolation amounts to more than 2,000 hours per year for most of the territory of Montenegro (the lowest duration of 1,600 hours characterizes the region of Pljevlja and Bijelo Polje). The average insolation is 1,450 kWh/m<sup>2</sup> per year, which practically indicates the possibility of valorizing the potential of solar energy throughout the country in all locations that are not intended for any other purpose.

There are two ways of using the potential of solar energy:

- Centralized sources of medium or higher installed power, which are connected to the medium or high voltage network. (they are built on the ground and occupy a large area)
- Distributed sources of smaller installed power that are connected to the low-voltage network (installation on structures is favourable from the aspect of users and for the electric power infrastructure). Photovoltaic power plants for which UTCs have been issued are listed and general conditions for the construction of photovoltaic - solar power plants are given.

**Wind farms** - it is estimated that the total gross capacity of wind farms that can be installed is approximately 400 MW, and in accordance with the previous strategic commitments, the wind farms are listed in the area of the municipalities of Nikšić, Šavnik, Bijelo Polje and Budva-Bar (which is considered from the aspect of environmental impact) .

## **General conditions for construction of solar and wind power plants**

The construction of solar power plants is possible in all areas that have natural potential for the use of solar energy and wind energy, while meeting the necessary microlocation conditions, such as land orientation, levelling, conditions for connecting to the power grid and other conditions that affect the level of investment. From the aspect of the use and protection of the space, it is necessary to fulfill the necessary conditions that exclude conflicts with other uses in the space, such as the proximity of settlements, the use of the space for the development of tourism, valuable arable agricultural land, valuable forest land, protected areas and zones of cultural and historical monuments, zones of water sources protection or other infrastructure facilities of great importance.

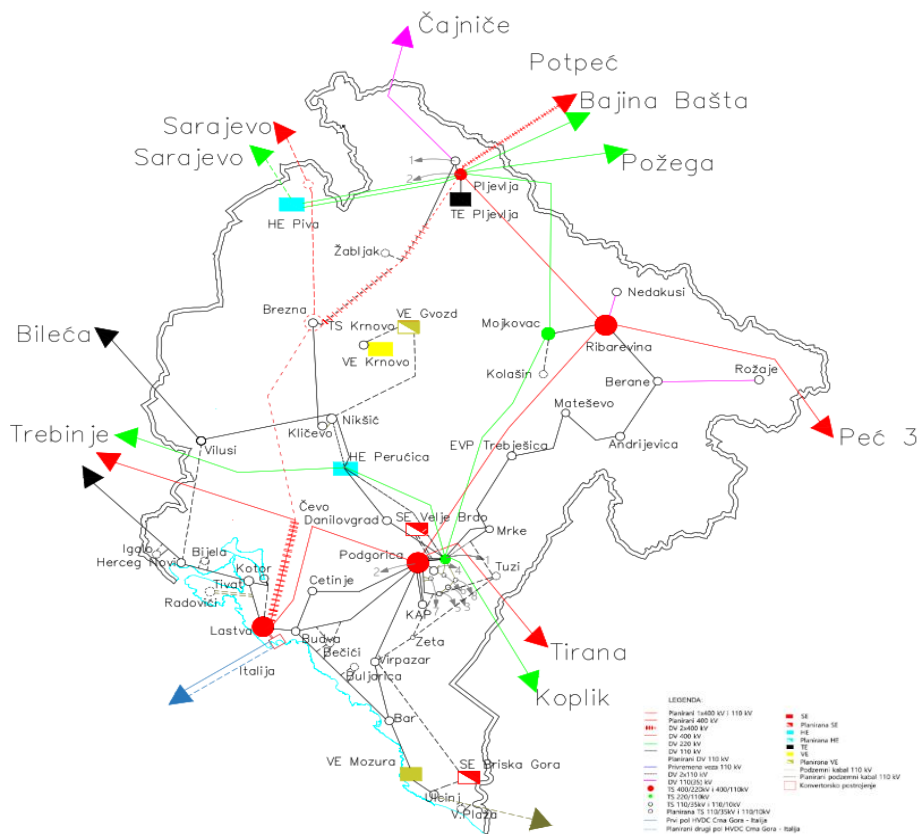
It is emphasized that the construction of solar and wind power plants implies the construction of uncontrollable energy sources that directly adversely affect the possibility of preserving the stability of the power system during disturbances, and also significantly increase the costs of balancing the system, as a result of which it is necessary to enable the greater use of these energy potentials, to build controllable energy sources as well (conventional sources such as hydroelectric power plants or financially demanding new energy storage technologies) that strengthen the stability of the power system and enable system balancing with lower costs (minimization of electricity imports).

In the phase of preparation of the Spatial Plan of Montenegro, the initiative for planning **kinetic power plants as renewable energy sources** was introduced. In previous analyses, it has been shown that this type of power plant is acceptable from the aspect of spatial organization, since it requires a small area for organization, and it is particularly favourable from the aspect of environmental protection, because it provides "zero emission" of CO<sub>2</sub>.

The Draft Plan specifies new substations and new lines.

According to the existing practice and positive experience in our country, as well as the rules of the transmission system operators of the neighbouring countries, the minimum corridor width for the 400 kV transmission line is 70 m (35 m on both sides of the transmission line axis), the minimum corridor width for the 220 kV transmission line is 50 m (25 m on both sides of the transmission line axis), and the minimum corridor width for the 110 kV transmission line is 40 m (20 m on both sides of the transmission line axis). This must be taken into account when designing other infrastructure facilities that may gravitate to the same geographical location as the transmission line route.

- 500 kV: HVDC Lastva (ME) – Villanova (IT) (second pole of the HVDC cable);
- 400 kV: DV Lastva – Pljevlja, DV Pljevlja – Bajina Bašta (RS) – Višegrad (BA) –Trans-Balkans Corridor, DV 400 kV Brezna – Sarajevo;
- 110 kV: Virpazar – Briska Gora – Ulcinj, Lastva – Kotor, Vilusi – Herceg Novi, Ulcinj – B.Gora – Kosmač, Golubovci – Tuzi, Podgorica 5 - Golubovci, Golubovci – Virpazar, cable connection to Albania from TS 110/35 kV Velika Plaža, cables from TS 110/35 kV Radovići to DV 110 kV Lastva – Tivat.



Cartogram 8.2.-2. Planned transmission network

The Draft PPCG stipulates a 35 kV network in all municipalities for fast implementation of the projects.

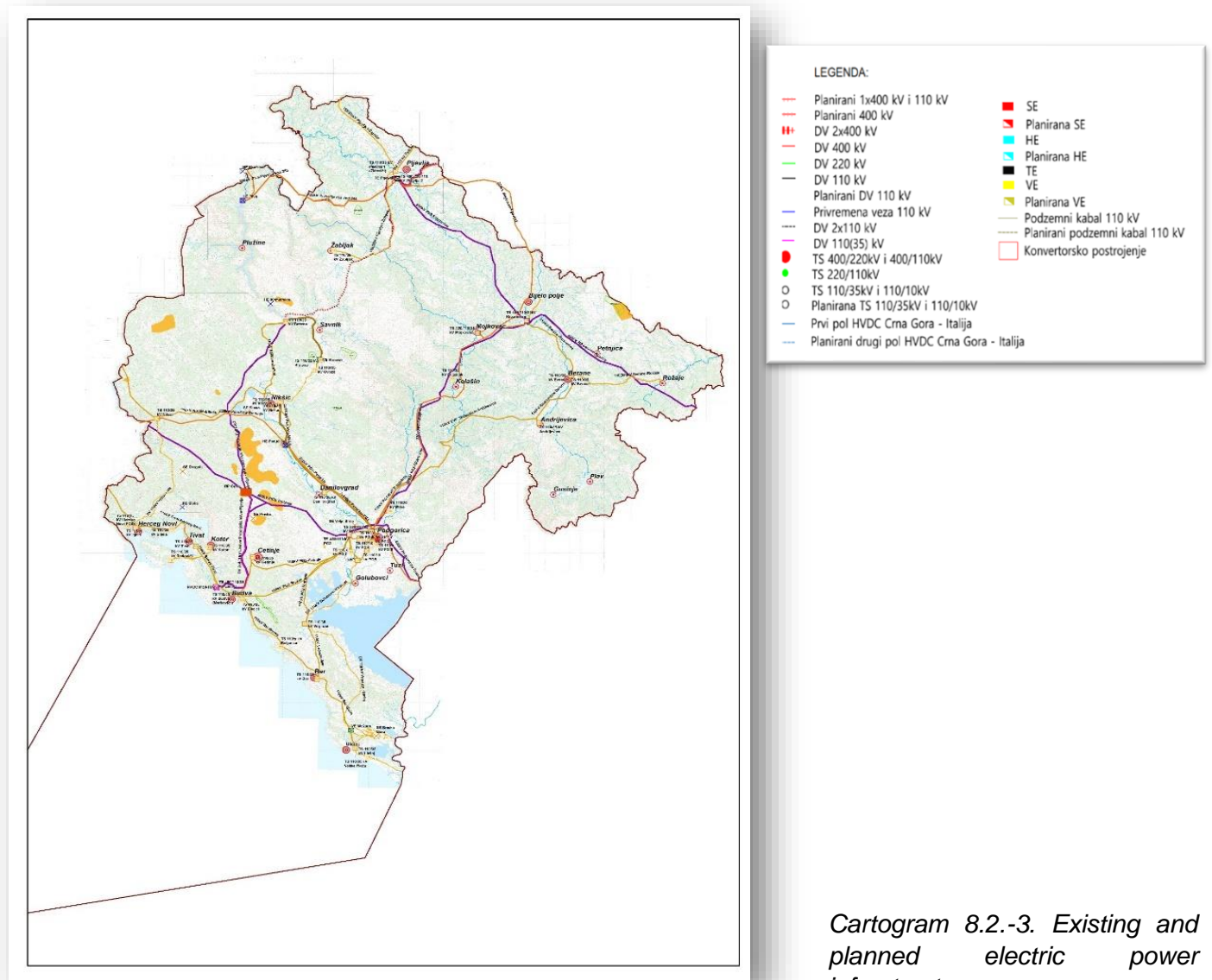
**New technologies affecting the electric power infrastructure:**

- **Electromobility** (sustainable traffic development with less environmental impact and infrastructure for charging electric vehicles)
- **Hydrogen** (Hydrogen is not actively considered in the existing energy plans and policies in Montenegro. The key driver of the growing interest in hydrogen in the EU is the determined commitment of policy makers towards a carbon-free future.

The EU aims to be an economy with zero net greenhouse gas emissions by 2050. This goal is at the centre of the European Green Deal and is in line with the Spatial Plan of Montenegro.

Montenegro is not connected to any existing gas pipeline system and does not have a domestic gas pipeline network. The lack of gas pipeline infrastructure that could potentially be adapted for the use of hydrogen means that this option for the introduction of hydrogen is also not available at this moment, but this option could be considered when the technical specifications of future network development are considered.

The potential for the use of hydrogen in Montenegro exists in the following areas: transport, energy-intensive industry (thermal energy), heating in the residential building sector.



Cartogram 8.2.-3. Existing and planned electric power infrastructure

## PROJECTION OF WATER INDUSTRY DEVELOPMENT

The Water Management Strategy (until 2035), adopted in 2017, defined strategic and development goals in all areas of water management.

- The strategic goal of water management is to achieve a comprehensive and harmonized water regime in the entire national territory by providing a sufficient amount of quality water, in a way that best suits a certain area and a certain time, while achieving maximum economic and social effects, in a fair and sustainable manner, but in compliance with international agreements.
- Through integral water management, it is necessary to ensure sufficient quality drinking water for the public water supply of the population; **ensure the necessary quantity of water of appropriate quality for various economic needs; to protect people and material assets from the harmful effects of water and to achieve and preserve good water status for the protection of water and water-dependent ecosystems.**

Based on the integral approach, it is possible to determine a number of operational goals and objectives that need to be achieved within the framework of water management.



<b>Water use</b>	
<b>Strategic goals</b>	
1	Provision of sufficient quantities of water of appropriate quality for public water supply of the population and for various economic needs, in a manner that does not endanger the environment.
<b>Operational objectives</b>	
1.1	Increase in the coverage by public water systems from the current 78% to approximately 95%
1.2	Reduction of losses in public water systems to less than 30%.
1.3	Protection of sources, research, protection and conservation of water resources that are used or intended for human consumption in the future
1.4	Rational use of water
1.5	Provision of water for industrial production
1.6	Provision of water for irrigation
<b>Water quality protection</b>	
<b>Strategic goals</b>	
2	Achievement and maintenance of a good status and good ecological potential of water bodies of surface and groundwater, in order to protect human health, preserve aquatic flora and fauna and meet the needs of water consumers.
<b>Operational objectives</b>	
2.1	Prevention of surface and groundwater pollution
2.2	Reduction of pollution input from concentrated sources of pollution
2.3	Reduction of the amount of pollution that reaches surface and groundwaters from undeveloped and unhygienic landfills
2.4	Reduction of pollution intake from dispersed sources of pollution
2.5	Establishment and use of protected areas in accordance with the Law on Water
2.6	Protection of the quantity and quality of groundwater
<b>Protection against waters</b>	
<b>3 Strategic goals</b>	
	Reduction of the risk of harmful effects of water
<b>Operational objectives</b>	
3.1	Development of the system of protection against flood caused by external waters
3.2	Development of watercourses in accordance with environmental conditions
3.3	Preservation and improvement of the water regime by dedicated exploitation of river sediments
3.4	Improvement of protection conditions against erosion and floods
3.5	Monitoring of the situation and maintenance of facilities and works

Table 8.3.-1.. Overview of water management goals by individual area<sup>7</sup> (given in detail in the Draft Spatial Plan of Montenegro)

Based on the planned development of tourism, by the end of the planning period for the fulfillment of the public water supply it is necessary to provide about 58 x106m<sup>3</sup>/year until 2025, or 65 x106m<sup>3</sup>/year until 2040 (without reserves to guarantee greater security of drinking water supply).

**Protection against waters** - Based on a preliminary flood risk assessment, through analysis of historical and hydrological data, 19 areas in the water area of the Danube Basin and 6 areas in the Adriatic Basin (APSF<sup>R</sup>) were defined.

The risk maps that will be presented in the GIS format and the restrictions prescribed by the law that must be respected should be taken into account in the lower level planning documentation. Construction restrictions in these areas will serve as a preventive measure and will result in reduction of the harmful effects of floods on human health, the environment, cultural heritage and the economy.

In the more detailed planning documentation, the data and maps from the mentioned project ("Support for the implementation and monitoring of water management in Montenegro") will be used.

In addition to the stated strategic goal in the area of protection against harmful effects of water, a larger number of operational goals have been defined, and the following are important for this plan:

<sup>7</sup> Water Management Strategy until 2035, 2017.

**Operational objective: Development of a system of protection against flood caused by external waters**

- Given the catastrophic consequences that can occur due to increasingly frequent floods caused by climate change, the implementation of all possible measures for protection against floods caused by external waters should be approached with great seriousness.

Measures for the achievement of the objective:

- protection against flood along the banks of watercourses, should be ensured by completion, extension, reconstruction and regular maintenance of the system of water facilities for protection against flood;
- ensuring the functionality of existing protective facilities against the harmful effects of water;
- support for planning and establishment of "multipurpose water systems" (where the effects of these facilities are manifested in a wider area and a larger number of significant economic and other facilities), with primary cooperation with the sectors of energy, agriculture and spatial planning.
- by preserving and improving the natural retention capacity of soil, watercourses and floodplains and natural wetlands in order to retain water that infiltrates into the soil and is available for future use, thereby ensuring favourable water regimes for aquatic ecosystems and at the same time reducing the risks of extreme floods.
- coordinated action of the water and agriculture sectors for the revitalization of the existing melioration systems and enabling their development in accordance with the plans and needs of agricultural consumers, and the needs for the protection of settlements from the negative effects of inland waters.

**Operational objective: Development of watercourses in accordance with environmental conditions -**

Although the protection of property and persons should be the basic principle of protection against floods caused by external waters, it is necessary to respect the conditions and criteria for the improvement and protection of the environment.

Measures for the achievement of the objective:

- develop watercourse beds on sections through settlements, in order to increase the permeability of the bed and ensure the stability of the banks, primarily on Bojana, Zeta, Lim, Tara and Ćehotina;
- when developing smaller watercourses outside settlements, allow only minimal hydromorphological changes, respecting the conditions and criteria for the improvement and protection of the environment and applying the principles of "natural regulation" to the greatest extent possible;
- develop watercourses through cities and settlements in accordance with local needs and urban plans;
- all new watercourse management projects must be proven from the aspect of economic-technical and ecological conditions and criteria, respecting the provisions of our laws and relevant valid interstate agreements and conventions.

**Operational objective: Preservation and improvement of the water regime through dedicated exploitation of river deposits**

Considering the damage caused by uncontrolled exploitation in the previous multi-decade period, the proposed measures should primarily aim at improving the water regime and preserving the stability of the banks.

Measures for the achievement of the objective:

- establish adequate monitoring of the parameters of the quantity and quality of river sediments, in order to define the balance of sediments and assess the impact of anthropogenic activities on the status of water bodies of surface and groundwaters;
- perform exploitation of the river sediment, including commercial exploitation, from the water land only in certain localities, in order to preserve and/or improve the water regime, while respecting the conditions for protection of groundwater and the environment;
- determine the extent and dynamics of river sediment exploitation so that hydromorphological changes are reduced to the minimum, the natural balance of aquatic and coastal ecosystems is least disturbed, and rehabilitate the locations after the exploitation is completed;
- organize systematic monitoring of the regime of river sediment and morphological changes of watercourse beds where the exploitation of materials is exceeded;
- prohibit the exploitation of river sediments in parts of watercourses where the deterioration of the water regime and ecosystem balance has occurred or may occur;
- on medium and small watercourses, coastal development, protection of ruined banks and exploitation of coastal materials should be treated integrally, due to the direct connection of all aspects of the problem;

- strictly apply legal regulations in order to prevent illegal exploitation of river sediments and strengthen inspection control by strengthening capacities.

**Operational objective: Establishment of a legal framework for improvement of protection against erosion and floods** - In order to adequately implement measures for protection against erosion and floods, it is necessary to first create the legislative and urban-technical basis.

Measures for the achievement of the objective:

- adopt a bylaw on the criteria for determining the erosion areas;
- in the first ten-year period, develop a new erosion map of Montenegro, make the necessary studies and determine the erosion areas, with established conditions for their use and the necessary works and measures, respecting the requirements of the environment; the studies must be in accordance with the water management plan in the water area and must represent the basis for the preparation of the Plan for protection and rescue in emergency situations, regarding the protection against erosion and torrents;
- ensure the integration of erosion protection issues into spatial plans and forest and agricultural bases.

**Operational objective: Improvement of the conditions for protection against erosion and torrents** - In order to implement anti-erosion measures, it is necessary to inform as better as possible the interested parties about erosion and flash flood areas, as well as about how to act on them and apply the necessary measures.

Measures for the achievement of the objective:

- carry out preventive and technical and biological protective works and measures in accordance with the studies on the determination of erosion areas;
- create and carry out permanent updating of the cadastre of erosion processes and torrential flows and implemented measures and enter up-to-date data into the water information system;
- increase the efficiency of the inspection service and other competent authorities that take care of the state of erosion areas and torrential flows
- educate the population about the consequences of inadequate behaviour in the erosion area and in the torrential flow.

The development trend of a developed society is moving in the direction of comprehensive digitization, which in the developed world and in Montenegro is in its final phase. One of the strategic goals is the construction and modernization of the overall communication infrastructure as a necessary basis and support for the process of complete digitization of services in the multidisciplinary field of electronic communications. This process will have an accelerated development trend in the future and will be completely finished in the next few years, so that the phases of the implementation of this plan will be reflected in permanent technological improvements and digital transformations of electronic networks and services.

The field of fixed electronic communications throughout the country must move towards the accelerated construction and development of modern electronic communication networks, especially in the sphere of development of broadband networks and services, which in itself generates not only an increase in the quality of available services, but also an increase in the number of new ones, especially in the urban area of the state.

The goals have been defined

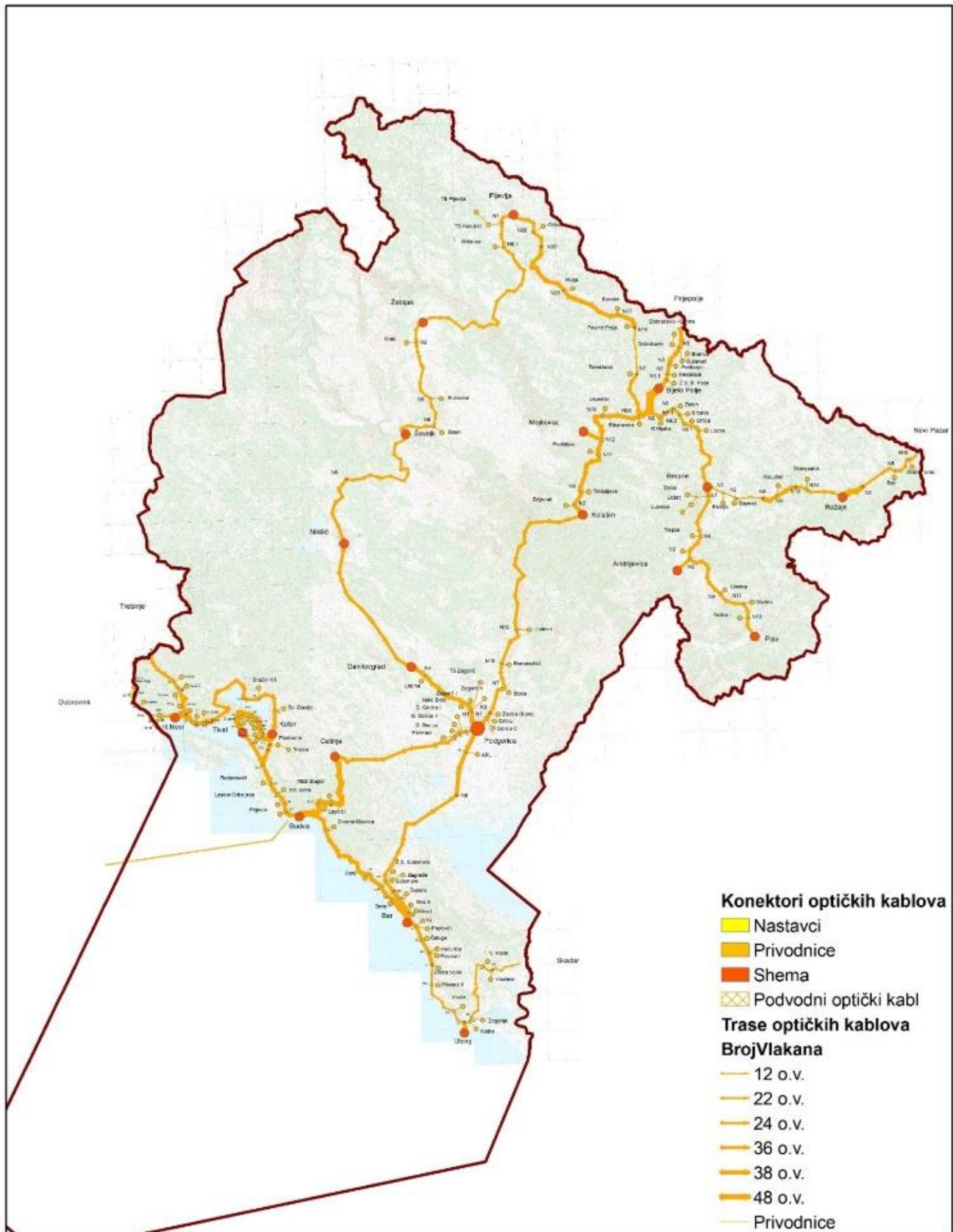
When implementing the concept of electronic communications development as a technologically and economically sustainable system in the planning period, it is necessary to achieve the following special goals:

- Completion of the construction of the communication infrastructure along the priority section of the Smokovac-Mateševo Highway, which was opened to traffic, as well as the continuation of the construction of the communication infrastructure on the remaining sections of the "Bar-Boljare" Highway during the period of implementation of this Spatial Plan.
- Planning of the construction of a new communication infrastructure along the planned "Adriatic Ionian" Highway, which according to the Plan intersects with the planned "Bar Boljare" Highway.
- Planning of the construction of communication infrastructure along all other, new international and national main roads;
- Construction of an underground optical communication infrastructure, along the existing road route towards Plužine and further towards the Republic of Srpska, that is, towards Bosnia and Herzegovina, as a missing communication link;
- Ensuring the reliable functioning of the international communication traffic of Montenegro by connecting it to international electrical communication networks (Serbia - via Pljevlja, Rožaje and Boljare, Bosnia and Herzegovina - via Nikšić and Plužine, via Herceg Novi and Bar by submarine international connections to Dubrovnik - Zagreb, Albania - via Plav and via Bar - by submarine and land connections, Italy - via Bar to Bari by submarine connections and via Bar and Corfu.
- Provision of sufficient capacity in the new communication infrastructure for the needs of a larger number of communication operators, the distribution of which will be addressed by competent bodies of state administration and local self-government through the issuance of appropriate permits and subsidies for construction, especially in rural areas.

Detailed guidelines are given for the development of the electrical communication infrastructure (page 191).

As part of the modernization of the communication sewerage infrastructure, it is planned to replace the worn out and damaged sewerage infrastructure with a new one, usually with a larger capacity, as well as the expansion of the existing functional sewerage infrastructure.

It is emphasized that the routes of new electronic communication infrastructure should, in principle, coincide with the routes of existing and planned roads, including the routes of access roads. New connection and communication resources should be built nearby, or on the main routes of new or modernized electronic communication infrastructure.



Cartogram 8.4.- 1 Map of electronic communication infrastructure

### INLAND WASTE MANAGEMENT

The planned development of Montenegro requires waste management through more efficient use of resources and reduction of the amount of waste. It is expected that the new Law on Waste Management, the

EU Directive on Packaging and Packaging Waste will be fully implemented in Montenegro, and the obligation of pre-selection of municipal waste at the point of generation will be implemented.

*An estimate of municipal waste generation in Montenegro by municipality until 2040 is given, estimated amount of recyclable components separated at facilities for secondary selection until 2040. The EU Directive on Packaging and Packaging Waste for waste minimization and reuse is mentioned.*

EU member states regulate the systems for the collection and utilization of packaging waste. In order to fulfill the goals explicitly stated in the original EU Directive, it is necessary to fulfill that:

- **50% (min.) – 65% (max.) of discarded packaging** (by weight) should be used again ("recovery");
- (according to the actualization, the following has been specified: from 30 June 2001, these parts should be used materially or thermally destroyed in MVA);
- **25% - 45% of packaging waste should be materially used**, whereby each packaging should be separately materially used with 1

**In the previous period, the following facilities have been built: regional landfills of non-hazardous waste** in Podgorica and Bar; **recycling centers** in Podgorica, Herceg Novi, Kotor and Žabljak; **waste vehicle treatment plant** in Podgorica (1), Berane (1) and Nikšić (3); **transfer stations** in Kotor (1), Herceg Novi (1) and Mojkovac (1); **recycling yard** with a sorting plant in Plav; **recycling yards** in Podgorica (6), Herceg Novi (1), Kotor (1), Budva (1) and Petnjica (1), **a medical waste treatment plant** in Berane (1) and Podgorica (1) and an **electrical and electronic waste treatment plant** in Bar.

The **first composting plant** in Montenegro was opened in the Municipality of Kotor to address the issue of **green waste management** in the municipalities of Kotor, Tivat, Budva and Herceg Novi.

At the "Livade" landfill in Podgorica, **the construction of a leachate treatment plant** was completed in 2018, and **the fourth sanitary tub** in 2022.

The rehabilitation of the undeveloped landfill "Čarkovo polje" in the Municipality of Žabljak was carried out, as well as the rehabilitation of the undeveloped landfill "Vrtijeljka" in Cetinje, rehabilitation of the undeveloped landfill "Vasove vode" in the Municipality of Berane and "Zaugline" in the Municipality of Šavnik and rehabilitation of the undeveloped landfill "Komarača" in the Municipality of Plav.

**A company that manages an organized system of taking over, collection and treatment of waste packaging** is obliged to take measures to ensure recycling of at least 55% of the total mass of packaging by 31 December 2030, and by 2035 at least 65% of the total mass of the packaging that was placed on the market, with a defined percentage of different components. (glass, paper, cardboard, plastic, wood).

The Draft Spatial Plan of Montenegro provides for recycling centers, transfer stations, recycling yards, and green islands in all municipalities in the period up to 2040.

The selection of waste at the place of generation is planned according to the Law and the EU Directive. The industrial waste management is specifically planned, as well as space rehabilitation, management of medical waste, sewage sludge, construction waste, waste tires and rubber technical goods, waste vehicles and waste from electrical and electronic products, and waste batteries and accumulators.

## Overview of existing and planned waste treatment facilities

<b>Regional landfill - existing</b>	Bar, Podgorica
<b>Regional landfill - planned Bijelo Polje, Nikšić</b>	Bijelo Polje, Nikšić
<b>Recycling center - existing</b>	Herceg Novi, Kotor, Podgorica, Žabljak
<b>Recycling center - planned</b>	Bar, Bijelo Polje, Nikšić
<b>Recycling yard - existing</b>	Herceg Novi, Kotor, Podgorica
<b>Recycling yard - planned</b>	Andrijevića, Bar, Berane, Bijelo Polje, Budva, Cetinje, Danilovgrad, Gusinje, Kolašin, Mojkovac, Nikšić, Petnjica, Plav, Pljevlja, Plužine, Rožaje, Tivat, Tuzi, Ulcinj, Zeta, Žabljak, Šavnik,
<b>Transfer station - existing</b>	Herceg Novi, Kotor
<b>Transfer station - planned</b>	Šavnik, Berane, Bijelo Polje, Kolašin, Mojkovac, Pljevlja, Plužine, Rožaje



<b>Performed rehabilitation of industrial waste</b>	Bijela, Gradac
<b>Planned rehabilitation of industrial waste (KAP, Ironworks Nikšić, TPP Pljevlja)</b>	Nikšić, Pljevlja, Podgorica
<b>Sewage sludge thermal treatment plant - planned</b>	Bijelo Polje, Budva, Podgorica
<b>Defined locations for the disposal of non-hazardous construction waste</b>	Danilovgrad, Kolašin, Podgorica
<b>Locations for the disposal of non-hazardous construction waste to be defined in local communities</b>	Andrijevisa, Bar, Berane, Bijelo Polje, Budva, Cetinje, Gusinje, Herceg Novi, Kotor, Nikšić, Petnjica, Plav, Pljevlja, Plužine, Rožaje, Tivat, Tuzi, Ulcinj, Zeta, Žabljak, Šavnik
<b>Waste tire treatment plant - planned</b>	Bar, Bijelo Polje, Podgorica
<b>Waste vehicle treatment plant - existing</b>	Podgorica
<b>Waste vehicle treatment plant - planned</b>	Bar, Berane
<b>Electrical and electronic waste treatment</b>	Bar, Bijelo Polje, Podgorica
<b>Medical waste treatment</b>	Berane, Podgorica

## MARINE WASTE

The Draft Spatial Plan of Montenegro points out that coastal ecosystems, beaches, and river basins are under the negative impact of waste. This problem is faced by all countries and the environmental, economic, security, health and cultural impact is indicated. The need was pointed out to comply with the Barcelona Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean, the special Marine Strategy Framework Directive (MSFD), which is an obligation of Montenegro, Annex V of the MARPOL Convention (Montenegro is a signatory to the Convention for the Prevention of Pollution from Ships).

Especially threatened zones between Petrovac and Sutomore and between Bar and Ulcinj, Tanki Cape towards Kostanjica, the Verige area and Oštra Cape - Mirišta are highlighted.

The analysis of the national legislation in Montenegro, which specifically refers to marine waste and waste on beaches, has shown that there are no legal instruments that prohibit the disposal of solid waste directly into the sea and the coastal area, except for the Law on Prevention of Pollution from Ships (Official Gazette of Montenegro 20/11, 26/11, 27/14).

It is necessary to amend the legal regulations in Montenegro in order to reduce the amount of waste that reaches the sea and the coastal area, protect the marine environment and preserve the natural values of the area.

Following the analysis of the practice of more developed countries, as well as those less developed but aware of the issue of waste, the harmonization of legislation with the requirements of EU directives and recommendations of international conventions and strategies should be carried out as simply as possible, that is, the term "marine waste" should be included in one sector (waste management sector) and the implementation of measures and the definition of institutional responsibility in the country should be facilitated.

Before establishing waste management measures on beaches and the marine environment, it is necessary to set goals and priorities, taking into account the national and regional political and socio-economic context. Considering the situation in Montenegro, that is, the absence of legislation regulating the issue of marine waste, it is realistic to propose and initially implement less strict goals and measures.

It is necessary to establish long-term monitoring mechanisms, as well as additional education and training of people who will be responsible in the management system (especially in control) and the implementation of relevant practices.

Detailed analysis and description of national, international and regional instruments that deal with the issue of marine waste represent a representative presentation of a wide range of relevant instruments. In addition, there are numerous documents, examples of good practices, results of international projects, etc., which point to the fact that there is an established framework for addressing the issue of marine waste and the necessity for the establishment of management measures.

Management measures have to be divided into several most important categories:

- Prevention
- Reduction
- Removal
- Change of behaviour patterns

## **SPATIAL ORGANIZATION - DIVISION INTO ZONES**

The Draft Spatial Plan of Montenegro until 2040 retains the division into development zones defined in the Spatial Plan of Montenegro until 2020, whereby the newly formed municipalities became an integral part of the corresponding zone.

Planned and controlled use of development potentials is proposed, as well as implementation of priority activities in all regions and their development zones in a sustainable manner, through protection of all segments of the environment and strengthening of the capacity of local self-governments for the implementation of development policies.

**For all planning zones and their subzones (municipalities), the Draft Spatial Plan of Montenegro specifies the resources and potentials, development priorities and defines the utilization regimes. (pp. 206 – 214 Book 2).**

### **DEVELOPMENT ZONES OF THE COASTAL REGION AND SUBZONES**

- Development Zone of the Bay of Kotor (H. Novi, Kotor, Tivat)
- Budva-Petrovac Coast Development Zone
- Bar-Ulcinj Coast Development Zone

### **DEVELOPMENT ZONES OF THE CENTRAL REGION**

- Development Zone Podgorica, Danilovgrad, Tuzi, Golubovci, (Zeta-Bjelopavlići zone)
- Nikšić Development Zone
- Cetinje Development Zone
- Skadar Lake Development Zone

### **DEVELOPMENT ZONES OF THE NORTHERN REGION**

- Gornje and Srednje Potarje Development Zone (Kolašin, Mojkovac)
- Polimlje – Plav Development Zone (Plav, Gusinje, Andrijevisa, Berane, Petnjica)
- Rožaje Development Zone),
- Bijelo Polje Development Zone
- Piva (Šavnik, Plužine), Development Zone
- Durmitor Development Zone - Žabljak
- Pljevlja Development Zone

**The Draft Spatial Plan of Montenegro gives balances and capacities, as well as an overview of natural resources and potentials. (page 215).**

**Terms of use for general categories of land and sea use are defined (page 236 of Book 2.)**

The Spatial Plan of Montenegro defines the general use of areas and the use of space and provides general rules/mandatory guidelines for their use. In the graphic attachment, the Use of areas is shown in R 1:100000.

**GENERAL LAND USE (according to the Rulebook on Detailed Contents and Format of the Planning Document):**

1. Construction areas;

2. Agricultural areas;
3. Forest areas;
4. Inland water areas;
5. Sea areas;
6. Areas for special purposes;
7. Other natural areas; and
8. Infrastructure areas.

The conditions/rules, general guidelines for all mentioned land uses are given separately.

### **Construction areas**

- During detailed planning, plan construction areas in accordance with natural conditions and respect all limitations expressed with regard to natural conditions, geomorphological, hydrological and climatic, such as terrain slope, groundwater level, terrain exposure, presence of meteorological inversions, and other aspects of the suitability of the terrain.
- Plan construction areas in accordance with the carrying capacity of the space (and individual location), especially from the aspect of urban equipping and adequate traffic and other technical infrastructure.
- Construction areas should be planned in such a way as to provide the necessary social and public facilities.
- Construction areas should be planned in such a way as to provide adequate green areas.
- When preparing detailed development plans, first examine spatial reserves within the existing construction area, especially zones where construction has been started but not completed.
- Plan new construction areas or expansion of the construction area according to the existing infrastructure and provided public functions.
- Determine spatial reserves within the existing construction area.
- Adapt the planned housing density to the type of settlement and the objective needs of the population.
- Priority in the planning of construction areas should be given to areas that have previously been built on (brownfield).
- Avoid dispersedly planned construction areas that are difficult to equip with infrastructure.
- Avoid oversized (unrealistically expanded) construction areas that most often remain unrealized or enable dispersed construction without adequate infrastructure equipment.
- At the municipal level, determine the real needs for the surfaces of construction areas and the permitted density of housing, while the specific spatial conditions of the municipalities must be taken into account.
- Determine at the municipal level the zones of illegal construction and the level of infrastructural equipment.
- Define urban planning parameters in accordance with the carrying capacity of the space/zone.
- Define adequate tourism capacities when planning construction areas for the development of tourism, in accordance with the capacity of the space/zone and infrastructure equipment.

### **Optimization of spatial use** - excerpt from the Plan

- For the future development period, optimization of the use of (limited) space, as a development resource, remains one of the key challenges of sustainable development planning. It is necessary to innovate and apply standards and rules in spatial planning and to define additional **quality control mechanisms for planning, spatial planning and construction of structures**. This is also required by the regulations of the European Union, with which the spatial planning system in Montenegro should be harmonized.
- In the planning documentation of a more detailed level, the previous parameters for construction in all local communities will be reviewed (by reviewing the existing planning documentation) and the rules of construction and development by zone will be defined (parameters/indexes), the basis of development of rural areas, and detailed urban solutions for zone determination will be provided.

### **Agricultural areas**

- Use arable agricultural land for the purpose of agricultural production.
- Conversion of arable agricultural land for the purpose of urbanization is not allowed.

- Agricultural areas (land) that, in accordance with the Law, are temporarily used for non-agricultural purposes, must be technically, chemically and biologically recultivated after that period and brought back to their original use;

### **Forest areas**

- Ensure the preservation of forest areas, especially protective forests in the zones of protected areas and use them in accordance with the relevant law. When planning facilities and infrastructure, do not endanger forests that are under a special protection regime.

### **Inland water areas**

- Use these areas in accordance with the guidelines given in the section Water Management, which refer to the water use and protection and protection against waters.

### **Sea areas**

- Sea areas are areas determined in accordance with the law regulating the sea. On the sea areas, facilities can be planned that are used for the purpose of research, exploitation of potentials, protection and preservation and improvement of natural marine resources (living and non-living), and resources on the seabed for economic activities, in accordance with the Law on the Sea.

**Special purpose areas** - areas of interest for defense, areas for protection and rescue, areas of mineral raw materials, areas of the exploitation field, extraterritorial areas.

**Guidelines:** Plan and use these areas in accordance with legal solutions, especially in the area of defense of the country. Preserve the areas of mineral raw materials from other uses that could limit future exploitation, and during exploitation respect all spatial and environmental protection regimes. Within this use, the military locations provided by the competent Ministry of Defense are specified. (detailed in the Plan - page 238 of Book 2).

**Other natural areas** - include barren lands, rock creeps, rocky areas, steep rocky slopes, rocky shores, sandy and pebble beaches, etc.

**Guidelines:** It is possible to plan different uses on other natural areas, in such a way as not to ensure compatibility with other uses and protect the environment.

**Infrastructure areas** - include areas and corridors of traffic and other infrastructure determined by the Law.

**Guidelines:** Plan the infrastructure in accordance with the spatial needs, in such a way as to ensure functionality between different systems and integrate the space, while at the same time ensuring as little negative impact on the environment and areas as possible.

## **USE OF THE SEA**

**Vision of development of the sea area** - By adoption of the Spatial Plan of Montenegro, amendments to the Law on Coastal Zone and other regulations in addition to the already adopted strategic documents related to the sea and the coast, the regulatory framework will be completed according to which the administration in this area should be reformed and preconditions for quality planning will be created for quality marine and coastal planning and management (definition of protected areas, construction of new and reconstruction of existing maritime/coastal infrastructure facilities; preserved quality of the marine environment, built and developed maritime infrastructure (ports, moorings, places of first load out) and manufacturing facilities, development of fisheries and mariculture. The use of gas and oil takes place with maximum safety measures for the environment and with the application of the most efficient technologies, protection and revitalization of beaches and construction and development of new bathing areas.

### **Goals and strategic commitments**

**General goal:** established in the Law on the Sea, which, in addition to the basic division of marine and submarine space, states that "Montenegro protects, preserves and improves the marine environment".

**The main goal:** determine the rational use, development and use of the sea and the coast in accordance with the principles of sustainable development with the application of international regulations and good practice.

**Special conditions are provided relating to climate change, fisheries, the area covered by the Coastal Zone, use of the sea for mariculture, free access to the coast, infrastructure network and further development of coastal infrastructure.**

**The needs for space in the area of the Coastal Zone are defined: mariculture and fisheries, maritime infrastructure - ports/marinas, wharves, moorings, pontoons and small closed ports, anchorages and nautical berths, beaches and bathing areas, potential oil and gas exploitation zones, protected marine areas - natural and cultural heritage. (page 241 of Book 2).**

#### SEA USE CATEGORIES AND GUIDELINES/TERMS OF USE

Based on the analyses carried out by the special project "GEF Adriatic", with the aim of rational planning and use of the marine area, 10 categories of sea use with several subcategories were defined. In the Draft Spatial Plan of Montenegro, the uses and conditions of use are proposed in accordance with the mentioned project.

1. Maritime transport (maritime navigation and ports)
2. Marine fisheries and mariculture
3. Tourism
4. Submarine cables and pipelines
5. Exploitation of mineral raw materials
6. Deepening of the seabed and depositing of the material
7. Protective coastal structures
8. Military use
9. Protected marine areas
10. Protected areas of submarine cultural heritage

*The guidelines for use primarily concern the organization of uses in the sea area, as well as the ensuring of spatial needs and defining the conditions of use. Detailed and comprehensive conditions of use in the broadest sense (including environmental protection conditions), which are prescribed by national regulations and are specific for certain sea uses, apply to all sea uses.<sup>8</sup>*

Binding guidelines for detailed planning documentation have been given for the mentioned sea uses (page 242 of Book 2).

#### GUIDELINES FOR THE IMPLEMENTATION OF THE PLAN

In order to ensure safety and efficiency in the implementation of the strategic provisions of the Spatial Plan of Montenegro, it is necessary to create institutional and legal conditions for synchronized work and application of rules, measures and guidelines after the adoption of the Spatial Plan of Montenegro.

This chapter provides basic guidelines for the implementation of the planning document - the Spatial Plan of Montenegro. In view of the current amendments to the Law on Spatial Planning and Construction of Structures, in further work on the Plan until its adoption, harmonization with the current legal amendments will be carried out.

The recommendations refer to:

- Strengthening of institutional capacities, definition of priority activities, such as the adoption of Amendments to the Law on Spatial Planning and Construction of Structures, analysis of compliance of the existing Special Purpose Spatial Plans and harmonization of planning projections of SUPs that are being developed, with strategic commitments defined in the Spatial Plan of Montenegro. Special attention should be paid to the creation of conditions for the construction of infrastructure facilities, social infrastructure facilities and key projects in the field of tourism and agriculture development.
- In accordance with the Draft Amendments to the Law on Spatial Planning and Construction of Structures, recommendations are made for the aspects of institutional support for the implementation of the Spatial Plan of Montenegro.

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<sup>8</sup> GEF Adriatic Project

- The guidelines for the implementation of the Plan defined and adopted in the Draft Spatial Plan of Montenegro can be elaborated in detail through a specific Programme (or Study) and competences and obligations of authorities and institutions can be defined.
- The institutional and organizational aspect of the implementation the Spatial Plan of Montenegro is of particular importance. This requires both inter-institutional cooperation and inter-sectoral support, because no development aspect can be observed in isolation, but rather causally and consequentially with other sectoral policies. All development policies cause certain spatial changes, and that is why the role of the line Ministry, which is responsible for spatial planning, development, use and protection is exceptionally important (spatial dimension of state development).
- The role of monitoring through the selected indicators is a way to recognize problems and delays in development in a timely manner and take adequate activities to address development thresholds.
- When monitoring the implementation of the Spatial Plan of Montenegro until 2040, it is necessary to pay special attention to the development by sector in which the previous projections were not realized, or were only partially realized. This refers to the problems in the structure of spatial development, insufficient utilization of natural potentials and man-made resources, insufficient spatial integration and territorial mismatch in economic and socio-economic terms.
- When monitoring the implementation of the Plan, the focus should be on specific problems of the protection of nature and cultural values, seismic risk, degradation of agricultural land and valuable forests, insufficient control in the spatial planning and construction and shortcomings in the area of land policy.
- A particularly important aspect is the monitoring of the development of demographically threatened areas and the implementation of activities and measures aimed at stopping negative demographic trends. This consequently affects the settlement system and network and the realization of the polycentric model in the functioning of settlements.
- In sectoral development, it is necessary, from the level of competent institutions, to implement Programmes and measures (or Action Plans), which will be institutionally prepared for the realization of development projections for each sector individually and synchronized in the mutual cooperation of Government institutions. The sectors that have a strong impact on development are transport and energy, which, along with tourism and agriculture, contribute directly to the development of the country and all its local communities.

**On the basis of the unrealized projections of the development of regions and municipalities in the previous period, it is necessary to focus attention on sensitive sectors and pronounced environmental problems, in order to preemptively react to potential difficulties in the upcoming planning period.**

**That approach should be acceptable to all local communities, with an emphasis on public interest in determining the spatial purpose and use.**

**Special attention should be paid to specific areas that are protected by some form of international and national legislation, as well as to areas that have been degraded or threatened in their previous use.**

**Proposals for legal solutions from the Draft Amendments to the Law on Spatial Planning and construction of Structures are provided.**

**The institutional framework for the implementation of the Plan has been defined regarding the competence for planning documentation in Montenegro (state and local level), which will be harmonized with the current amendments to the Law on Spatial Planning and Construction of Structures in the work on the Proposal of the Plan.**

## **IMPLEMENTATION PHASES**

The Spatial Plan of Montenegro (*after carrying out the procedure of consideration of the Draft Plan, Public Consultation, adoption of the Proposal of the Plan and its adoption*), will be implemented through professional institutional support, with the provision of harmonized legal regulations in all areas, synchronized approaches in development strategies and responsible guidance from the level of the Government of Montenegro. For



the implementation of the Plan, it is useful to prepare the Programme of implementation of planning solutions, (or Implementation Study), with a detailed overview of activities and obligations.

The implementation will be carried out through consideration and adoption of strategic goals and given binding guidelines, through sectoral planning documents and planning documentation of a more detailed (regulatory) planning level. For all large investment projects, especially for capital infrastructure facilities, it is necessary to verify the justification and feasibility of projects from the Government level, from the aspect of socio-economic benefit and from the aspect of spatial distribution and impact on the space and the environment.

The dynamics of implementation will depend on internal and external factors. If the development planning period is viewed as a harmonious process of continuous improvement in spatial and economic development, the implementation period can be viewed in 3 phases:

1. 1. Phase of intensive development and strict control of nature and environmental protection (initiation of key development projects in all sectors) - initial period
2. Phase of finalization of started projects and upgrading - harmonization
3. Phase of completion of planned projects - mature phase of development and realization of the planning vision

It is necessary to regard the phases of implementation in the context of guidelines aimed at defining priorities for individual activities. Depending on the actual state of the implementation process, the guidelines need to be adapted to the situation, and the possibility of parallel implementation of several complementary activities is not excluded.

The Draft Spatial Plan of Montenegro recommends the activities by phase in key development sectors, which will be considered and agreed upon in the Public Consultation process in the process of communication with the competent Ministries and Government Institutions and proposed in the phase of the Draft Spatial Plan of Montenegro.

