



Setback zone in the Republic of Croatia and in the Region of Istria

ICZM Protocol (Article 8)

WP3, action 3.2 (Final)



Javna ustanova
Zavod za prostorno uređenje Istarske županije
Ente per l'assetto territoriale della Regione Istriana

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1. Foreword

1.1. The main objective of Article 8 of the Protocol

According to *“Assessment of Impacts of the Ratification of the Mediterranean Protocol on ICZM on Croatian Legislation, with a Focus on Article 8, (September 2012)”* the starting points for the analysis of the implementation of the Article 8 of the Protocol are as follows:

- The Protocol as a “regional” law enters the field of spatial regional and urban planning that is usually within the sole jurisdiction of national legislation.
- The Protocol, with its demands, fits also into the principles and goals of some other international legal acts (UN Convention on Biological Diversity - CBD, the European Landscape Convention, and the UN Convention on the Law of the Sea). That requires of the countries to take into account the synergies of the effects of the implementation of these acts.
- The first step is to clearly define the coastline from which the coastal setback is measured. The coastline has to be defined by the competent national institution.
- The implementation of the setback line does not affect the existing legal construction.
- The coastal setback must be prescribed by a national legal act and cannot be delegated on to a lower level. The type of act or document is not defined, as long as it is adopted at the national level.
- The Protocol is implemented by the principle of obligation to produce results, and not by the obligation to make best efforts.
- The core demand is that the definition of the width of the setback corresponds with the principles and goals of the Protocol (Articles 5 and 6). Hence, every adjustment (exception) of the coastal setback to less than 100 metres must be guided by the principles and goals of the Protocol. One of the important demands is the application of the environmental impact assessment and prevention of the linear construction along the coastline.
- Adjustments or exceptions are for special cases, for example specific geographical or other local constraints (8-2-b-2). Adjustments may regard the situations of high population densities or social needs where particular projects, including housing, are provided for by national legal instruments. This is a rather flexible and insufficiently precise provision where the only defence against “abuse” is provided by the principles and general goals of the Protocol.
- The identification of the public interest leading to deflection from the mandatory setback is a very sensitive area. The public interest is both economic and social. It is beyond any doubt that adaptations must be affirmed by a national legal act, taking into account the principles and goals of the Protocol. In addition, the Vienna Convention demands that the signatories act in good faith and that they do not bend the contents, coverage and the “spirit” of the Protocol.
- Projects of public interest must be separated from those related to public services that, by their nature, have to be close to the coastline. For example, it is technically imperative that certain types of infrastructure are located within the setback zone due to the degree of coastal development. However, it is important to note that even in these cases it is important to perform environmental impact assessment.
- The exceptions from the setback can be conducted in two ways. The first one is by correcting the setback line, while the second does not correct the line but gives the right to an exception within the setback zone. However, in both cases the exception has to be in line with the objectives of the Protocol.
- It would be ideal if research could be conducted to determine consistent criteria and hence the setback line that could then be even larger than 100 metres (for example, the criterion of the implementation of a 100 year projection of climate change impact). Any adjustment also

demands a search for alternative solutions or evidence that there are no other realistic solutions.

- The adoption of the coastal setback is an unconditional obligation, while the implementation of the Protocol, in good faith, means that the adjustments (exceptions) are a possibility that must be defined by a national legal instrument, which includes a very clear definition of criteria that can be met in a very limited number of cases. In other words, the setback is a rule with exceptions given only in extreme cases.
- The monitoring of the implementation of the Protocol based on the reports will enable the signatories to develop better mechanisms of control and coordination of demands of the Protocol with the practices of a single country

The present document briefly illustrates the state/regional planning framework and the methodology assumed for the individuation of possible measures for the application of the ICZM Protocol, with a specific focus on a coastal setback zone (Art. 8).

2. Introduction

2.1. Geographical and social information

The Republic of Croatia (Figure 1), with the area of 56 594 km², is situated in the south-eastern part of Europe, surrounded by Alps in the west, Sava and Drava rivers in the north and east and the Adriatic Sea in the south. According to the results of Census 2011, (Croatian Bureau of Statistics) Croatia has 4.284.889 inhabitants with the average density of 76 inhabitants per km².

The country is divided into 20 counties and the capital city of Zagreb, of which seven are located along the Mediterranean seashore. The total length of the coastline is 6278 km, of which 1880 km belong to the coast of the mainland, and 4398 km to the island coasts, which makes the Croatian coast the second indented in the Mediterranean. Croatia has 1246 islands (79 islands, 525 islets, 642 rocks and reefs) The principal natural feature is the hilly karstic base.

Coastal sea consists of interior seawaters (from coast to basic line) and territorial sea (12 nm from the basic line in the open sea direction), according to the Coastal Sea Act from 1987.



Figure 1: The Republic of Croatia (source: www.croatia-charter.info)



Figure 2: The coastal counties in the Republic of Croatia
(adopted from: www.locations4business.com)

Croatia has a 7 coastal counties (Figure 2) where lives 33% of total state population, with population density of 57 inhabitant/km². In the coastal zone of the Adriatic there are 790 settlements (with around 1,050,000 inhabitants, 370,000 apartments and 190,000 secondary homes), around one hundred tourist zones detached from settlements (with about 430,000 beds), few dozen industrial zones and about one hundred big harbours and marinas (with 17,000 berths). Cities, settlements and other urbanised areas, according to the data from the year 2000, occupy about 850 km, or 15% of the total coastline.

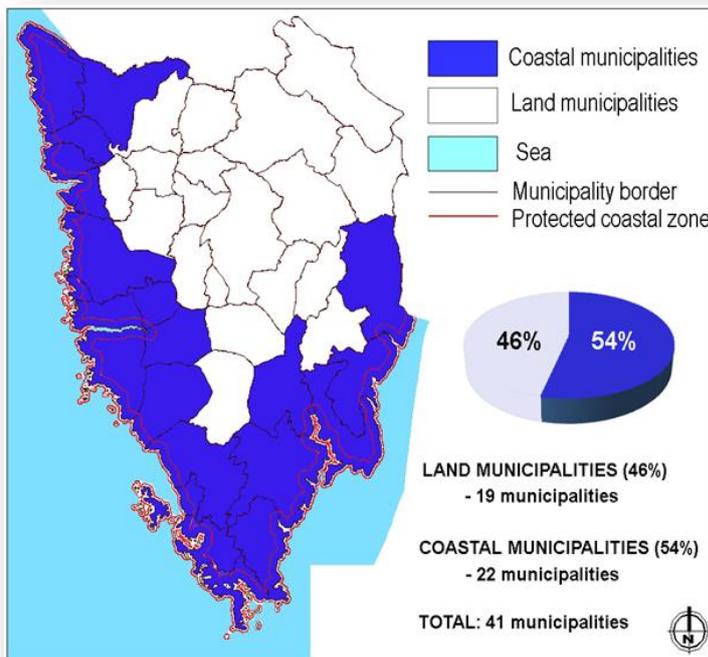


Figure 3: The Region of Istria
(source: Institute for Physical Planning Region of Istria)

The Region of Istria (Figure 3) covers an area of 2812, 97 km². The County of Istria was established by the Law on the Territory of Counties, Towns and Municipalities in the Republic of Croatia. The County consists of 41 units of local self-government (10 towns and 31 municipalities). The length of the Istria coast, along islands and islets is 524 kilometres. The population of Istria Region represents almost 5% of the population of the Republic of Croatia, with average population density of 74 inhabitants per square kilometres. The coastal part of the County consists of 22 units of local self-government and it is more densely populated (116 inhabitants per square kilometres). The regional coastal area can be subdivided in two main portions: the western and southern parts characterised by a dense urbanisation and the eastern part characterised by coastal urban settlements alternated by extended natural or semi-natural areas.

2.2. Competent institutions for setback zone

Integrated Coastal Zone Management in Croatia is in state jurisdiction. The main competent institutions for setback zone are **the Ministry of Construction and Physical Planning** and **the Ministry of Environmental and Nature protection**.

All physical plans within the protected coastal area need to be approved by the Ministry.

The coastal area is still characterised by a sectoral approach. In this respect, the following ministries should be taken into account:

- Ministry of Maritime Affairs, Transport and Infrastructure
- Ministry of Culture
- Ministry of Tourism
- Ministry of Economy
- Ministry of Entrepreneurship and Crafts
- Ministry of Agriculture

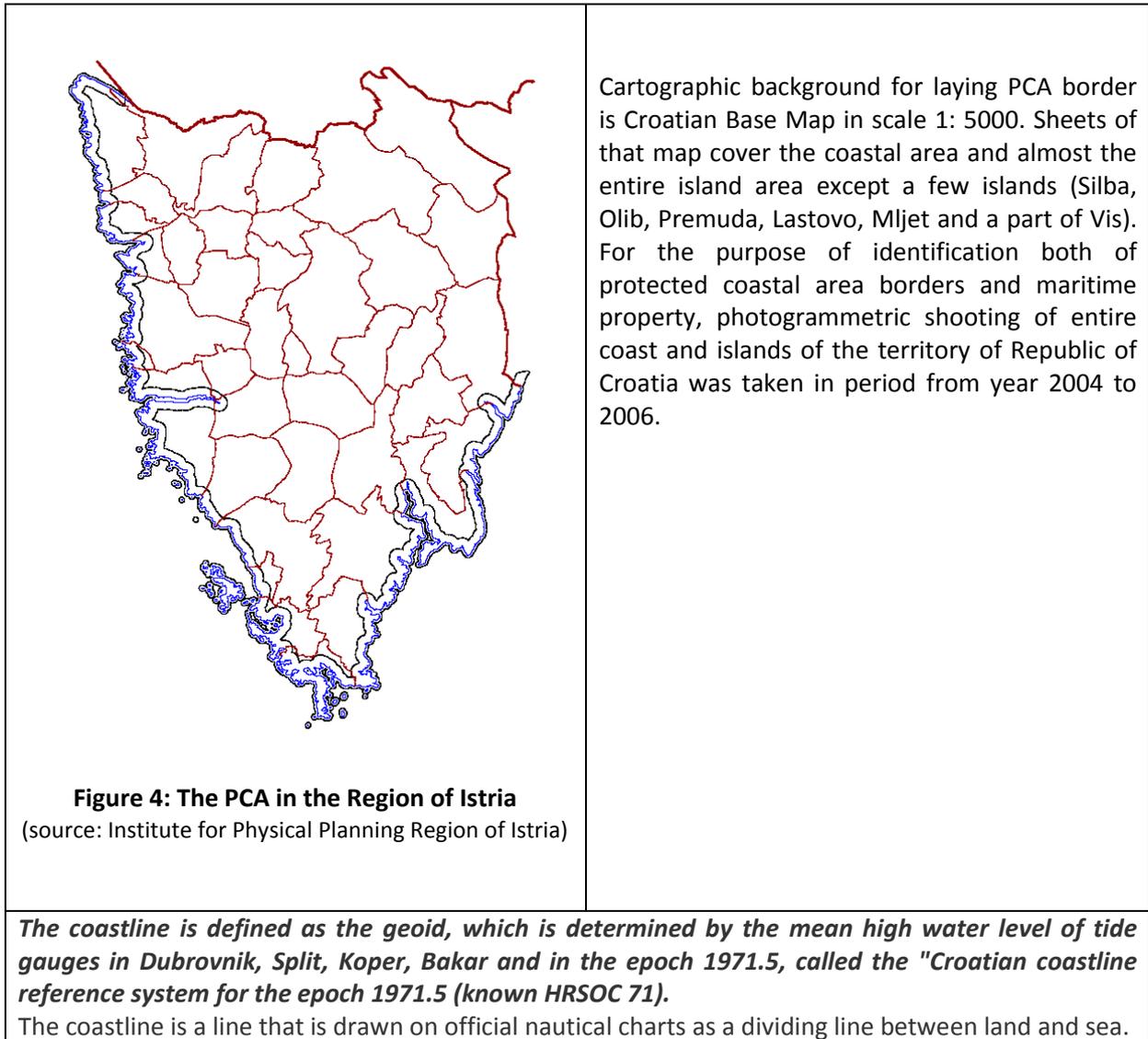
3. Analysis of coastal setback legislation and policy - Republic of Croatia, Region of Istria

3.1. Set-beck legislation and policy

The umbrella documents related to spatial planning in Croatia are the **Spatial Planning Strategy** of the State (1997) and the **Spatial Planning Programme** of the State (1999). Whereas the strategy defines the long-term objectives of physical development and planning, the programme defines specific measures and activities towards the implementation of the strategy. Both documents form the basis to develop physical plans either on national, county or municipal level.

The backbone of the legislation on physical planning in Croatia is the **the Physical Planning and Building Act** (OG no. 76/07, 38/09, 55/11, 90/11, 50/12). This act determines a **protected coastal area (PCA)** consisting of all islands, a 1 000 m wide mainland and a 300 m wide marine belt measured from the coastline. This protected coastal area represents an area of special interest for Croatia. With regard to the coastline definition, one should bear in mind the Article 4 of the **Public Maritime Domain and Sea Harbours Act** (OG no.158/03, 141/06, 38/09), which states that the line from which the coastal zone will be measured is the line of the medium high water line, to be defined by the Croatian Hydrographical Institute.

A majority of the Protocol's fundamental principles are also built into the land-use planning system for which physical planning is the basic instrument.



3.1.1. Criteria for planning development areas

The Physical Planning and Building Act defines the criteria for enlargement of development areas in the protected coastal zone. The permission to expand a development area is dependent of the degree of the already developed portion of the given area. In the protected coastal zone a development area can be expanded by not more than 20% of the surface area of its already developed part, if that part exceeds 80% of the total surface area of that development area, or it must be reduced to at least 70% of its surface area if its developed part accounts for less than 50% of the total surface area of that development area.

A new development area detached from settlements intended for production purposes can be planned only outside the area of 1000 m. Articles 50 and 51 ban new construction works within a belt from 70 to 100 metres from the coastline under certain conditions. Nevertheless, exceptions are provided for "construction works for utility infrastructure and underground power lines, accompanying facilities used for hospitality and catering and tourism purposes, construction works which by nature must be located on the coast (shipyards, ports etc.) and for development of public areas".

An important limitation is that the detached development areas of a settlement that are within the zone of 100 m from the coastline cannot be expanded nor can new ones be planned.

3.1.2. Planning tourism/catering and sports facilities

The criteria for planning tourism zones of the coastal area in the Republic of Croatia (June, 2009) have been elaborated as guidelines for the preparation of physical plans of the Adriatic coast and as an expert background document for the preparation of subordinate legislative documents. They are applied to the entire Adriatic area of the Republic of Croatia comprising the coast, the hinterland, islands and peninsulas. Based on these criteria, control and monitoring of physical plans – physical plans of counties and physical plans of local self-government units - shall be carried out. Through analysis of the physical planning documentation (physical plans of counties and physical plans of local self-government units) it is observable that tourism zones are prevalently planned in the protected coastal area, almost exclusively along the coastline. This fact has been one of the more significant incentives for the elaboration of these criteria, in order to conserve as much as possible of the most valuable coastal areas, to stimulate tourism construction in the hinterland (outside the protected coastal area) and to secure recognition for construction of high quality architecture and design.

With regard to planning tourism/catering facilities in detached development areas outside the settlements, **the Physical Planning and Building Act** also defines the criteria for location of these facilities and important planning requirements:

- New accommodation capacities must be planned in areas of lower natural and landscape values, and designed in conformity with original urban and architectural values, while the type and capacity of accompanying facilities and public spaces is determined in relation to every phase of construction of accommodation buildings,
- The density must not exceed 120 beds/ha,
- The built-up area of a single building plot must not exceed 30% of the total building plot surface area, and the coefficient of use must not be bigger than 0.8, while at least 40% of the surface of each building plot has to be designed as parks and green areas,
- Waste waters disposal has to be via a closed sewerage system including waste water treatment,
- The number of berths in one or more adjacent marinas must not exceed 20% of the total number of accommodation units.

Within a development area of a settlement, the tourism/catering use is planned according to the following criteria:

- The total surface area intended for such use covers, at the most, 20% of the development area of that settlement,
- Accommodation buildings with the adjacent land must be outside the existing public areas along the shore.
- Any construction of residential or tourist buildings within PCA can take place only after the adoption of Regulatory development plan approved by the County Planning Institute, State Development Control Office and the Ministry. No construction can take place before the land for public spaces (streets, public facilities) has been allocated and equipped with the basic infrastructure
- New residential and tourist developments outside settlements are allowed outside 70-m coastal belt. Within this 70-m coastal belt allowed interventions include: open public spaces such as recreation areas, playgrounds, seafront promenades and beaches, tourist catering

and entertainment facilities, and coastal infrastructure (ports, dry marinas and other uses which by their very nature require coastal location)

As regards the existing buildings used for tourism/catering purposes, their reconstruction can be planned in such a way so that there is no increase of the current use density, construction density of the building plot, or the coefficient of usage, if those measures are bigger than those stated above.

The marinas inside the development area of a settlement, as well as in development areas detached from the settlement can be expanded by the county spatial plan, or a new one can be planned with the surface area of its aquatorium not exceeding 10 ha. Within marinas, commerce, service, sports and recreational facilities can be planned.

Camping sites can be planned in detached development areas (outside settlements) and in the development area of a settlement but within a tourism/catering area if its size is less than 15 ha², and respecting the current natural vegetation and coastal features. In camping sites accommodation units cannot have fixed links with the ground.

Development areas detached from the settlements used for sports and recreation can be planned on sites of lower natural and landscape values, taking in consideration that:

- the total surface area of the closed and covered buildings can account for up to 10% of the surface area of the sports fields and facilities,
- at least 60% of the total surface area of that development area has to be designated as parks and natural green areas,
- a golf course has to be removed from the coastline at least 25 metres.

The concept of **maritime property** is defined inside of PCA. The Croatian legislation defines the "maritime domain" as public property and it belongs to all people. Maritime property is universally property of special interest for Republic of Croatia, it has it is especially protection and it is in use providing and according to Maritime Domain and Seaports Act.

Inner sea and territorial sea, sea bottom and subsoil, and part of land witch purpose is general use or is it proclaimed such, as well as everything that is permanently attach to land on its surface or bellow it, make maritime property. As part of land, it is considered: sea cost, harbours, banks, shelves, cliffs, ridges, beaches, deltas of rivers that pour into the sea, channels connected to the sea and live and non-live nature's riches in the sea and sea subsoil.

The most important State and Regional planning instruments, summarized in the Table 1, mainly refer to concepts of sustainable development, rational use of land, management of complex coastal areas and land use and planning.

Table 1: State and Regional Planning instruments

Name of Planning Instruments	Sector	Reference to coastal setback zone
The Spatial Planning Strategy of the Republic of Croatia (1997)	Physical development and planning	NO
The Spatial Planning Programme of the Republic of Croatia (1999)	Physical development and planning	NO
The Physical Planning and Building Act (OG no. 76/07, 38/09, 55/11, 90/11, 50/12)	Physical planning	YES

The criteria for planning tourism zones of the coastal area in the Republic of Croatia (June, 2009)	Physical planning of tourism zones	YES
The Maritime Code (OG 181/04, 76/07, 146/08, 61/11),	Maritime property	partially
The Maritime Domain and Seaports Act, (OG 158/03, 141/06)	Maritime domain	partially
The Environmental Protection Act (OG 110/07)	Environmental protection	NO
The Nature Protection Act (OG 70/05, 139/08, 57/11)	Nature protection	NO
The Physical Plan of the Region of Istria (Official Gazette of the Istria County, No. 2/02, 1/05, 4/05, 14/05-consolidated text, 10/08, 07/10, 13/12)	Sustainable development and rational use of land	YES

3.2. Limitations to interventions

The Article 8-2-b allows the possibilities that regional or local **public interest projects** may be undertaken within the coastal setback, but requires enacting and regulating the adaptations in correspondence to “national legal instruments” on the State level. Such projects must comply with the objectives and principles of the Protocol by taking in consideration their conformity with “*rational planning of activities*” and “*ecosystem approach to coastal planning*” (Article 6c). In addition, they should be provided as a result of strategic formulation of land-use strategies, plans and programmes covering the urban development together with socio-economic activities and other relevant policies (Article 6f).

Projects of public interest must be separated from those related to public services that, by their nature, have to be close to the coastline. For example, it is technically imperative that certain types of infrastructure are located within the setback zone due to the degree of coastal development. However, it is important to note that even in these cases it is important to perform environmental impact assessment.

Article 19 of the Protocol provides that “the Parties shall ensure that the process and related studies of **environmental impact assessment** for public and private projects likely to have significant environmental effects on the coastal zones, and in particular their ecosystems, take into consideration the specific sensitivity of the environment and the inter-relationships between the marine and terrestrial parts of the coastal zone”.

The Ordinance on Nature Impact Assessment (OG 89/07) establishes projects, which are subject to mandatory nature impact assessment, the content, timeframe and manner of establishing the nature impact assessment, the method of informing the public and the method of calculating the security for elimination of possible impacts on nature.

The Physical Planning and Building Act does not permit construction of one or more new individual buildings in the development areas of a settlement in which less than 50% of the existing buildings are being used for housing by the individuals with a permanent residence in the settlement, as well

as in the development areas detached from the settlement within a coastal belt of at least 70 m from the coastline. In detached development areas outside the settlements construction is not allowed in the coastal belt of at least 100 metres from the coastline, except for the utility infrastructure network and underground energy infrastructure, tourism/catering facilities, structures that, by its nature, demands location on the coast (shipyards, harbours, etc.), and public surfaces.

The latest revision of the Act, in force since 10 August 2010, has changed the above provision when it comes to construction for the needs of registered family agricultural business and for providing rural tourism/catering services. It has now been made possible to issue a site permit or building permit if the building is on a plot with a surface area of at least 3 ha and removed from the coastline by at least 100 metres, or 50 m in the islands, and provided that the gross surface area of the building ground floor does not exceed 400 m². Thus, the most important modification, apart from the size of such a building, is that in the islands it can be located 50 m from the coastline.

In a protected coastal zone, with a few minor exceptions, there can be no construction, nor can the site permits or building permits be issued for structures intended for:

- Research and exploitation of raw minerals,
- Exploitation of wind energy for electricity generation,
- Storage, processing and disposal of waste, unless it is demanded by the natural conditions and terrain configuration,
- Blue fish farming,
- Small-scale economic purposes (storages for tools, machinery, agricultural equipment, etc.),
- Docking and harbours for nautical tourism and land reclamation along the coast outside development areas,
- Mooring, unless the mooring location is published in official maritime publications.

When it comes to the exceptions to the above in the protected coastal zone, with regard to the exploitation of raw minerals, it may be allowed to perform research and exploitation of sea salt, raw materials for energy production (oil and natural gas), mineral and geothermal water, and exploitation of stone for construction purposes on the islands in the area with a surface of up to 0.5 ha and a yearly production of up to 5,000 m³, as well as stone excavation with the purpose of continuing the traditional activities in the island of Brač.

Furthermore, the provisions of the Physical Planning and Building Act allow for the issuing of site permits and building permits in the protected coastal zone for the buildings needed by registered family business in agriculture and rural tourism/catering services provided that the surface area of the plot is not less than 3 hectares, and is at a distance from the coastline of at least 300 metres, (100 metres on the islands), and provided that the gross surface area of the building ground floor does not exceed 200 m².

3.2.1. Limitations in Istria County

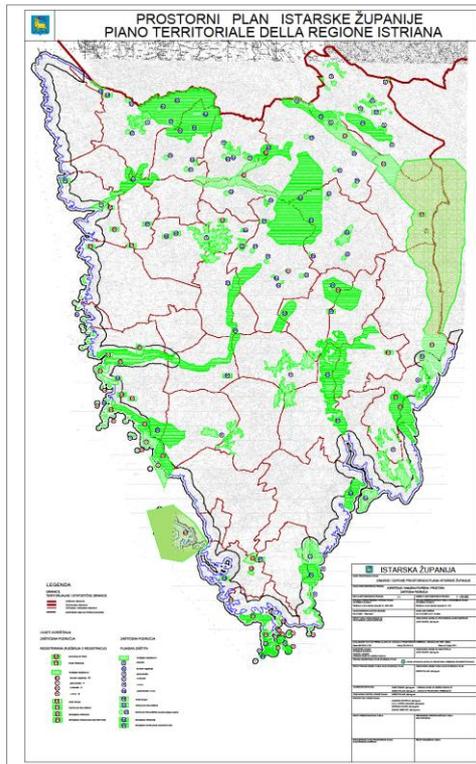


Figure 5: The Protected areas in the Region of Istria (graphical map no. 3.1.)
(source: www.istra-istria.hr)

The delimitation of protected natural heritage areas done by according an expert base proposal drawn up by the State Institute for Nature Protection.

Protected areas are: strict nature reserve, national park, special nature reserve, nature park, regional park, nature monument, important landscape, forest park, park landscaping monument.

According to The Nature Protection Act (article 70), the protective measures relate to prohibition or restriction of projects in the space: building infrastructure objects; building new transit, utility, power, telecommunication and traffic facilities; excavation or filling in of land, excavation or extraction of stones, minerals, raw materials or fossils; disposal of waste and discharging wastewaters; modifying water regimes; removal of deposited matter; economic utilisation of natural resources; land-improvement projects; removal of hedges and other components of nature; planting monocultures; collecting fungi and plants and parts thereof; disturbing, killing or capturing animals; hunting; fishing; circulation; sport and recreational activities; posting advertising or other signs; visiting and touring; and other activities which endanger a protected natural asset.

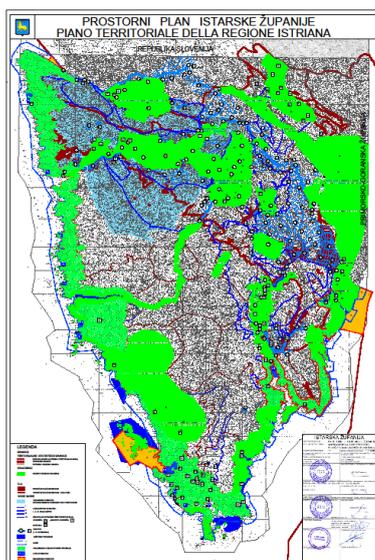


Figure 6: The Special value in the Region of Istria

According to Article 10 and 15 of **the Physical Plan Region of Istria** the delimitation of areas of special value – landscapes, the categories of the protection of the sea, as well as the categories of the protection of the waterworks are determined by Physical Plan Region of Istria on graphical map no. 3.3. This map shows the coastal area of the Region of Istria, also. The Coastal area is a part of land which is specially exposed to sea and represents special landscape entity-*the coastal area of Istria with a rank of special limitation on usage, and which is determined with combination of criteria of altitude (50 m) and distance from sea shore line (2000 km).*

The recreational zones are included the parts of aquatory close to shore and they are intended for swimming and water sports. On that parts of the coast, the zone for swimming and sports is minimally 300 meters in width, and in urban plan documents for city and municipality that

(graphical map no. 3.3.)
(source: www.istra-istria.hr)

zone can be augmented, but in a way that it does not interfere with seafaring routes on inner and international routes.

The **general objective of protecting coastal ecosystems and landscapes** must be respected when adapting the principle of Article 8-2-a.

3.3. Prevent natural risks and adapt to climate change

As in the area of the East Adriatic Coast, tides are of mixed type with pronounced inequalities in height. Chartist defined as geoids surface which is determined as Mean Lower Low Waters of Spring Tide on the tide gauges Dubrovnik, Split, Bakar, Rovinj and Koper in the epoch 1971.5, called "Hrvatski referentni sustav dubina mora za epohu 1971.5 - HRSDM71". Chart is defined on the days of syzygy from the same series of tide records as the one used for the calculation of Mean Sea Level. Tidal predictions are computed for meteorological conditions without wind and a barometric pressure of 1013 hPa (1013 millibars). Changes in meteorological conditions will cause corresponding differences between the predicted and the actual tide. Variations in tidal heights are mainly caused by strong or prolonged winds (Figure 7) and by unusually high or low barometric pressure.

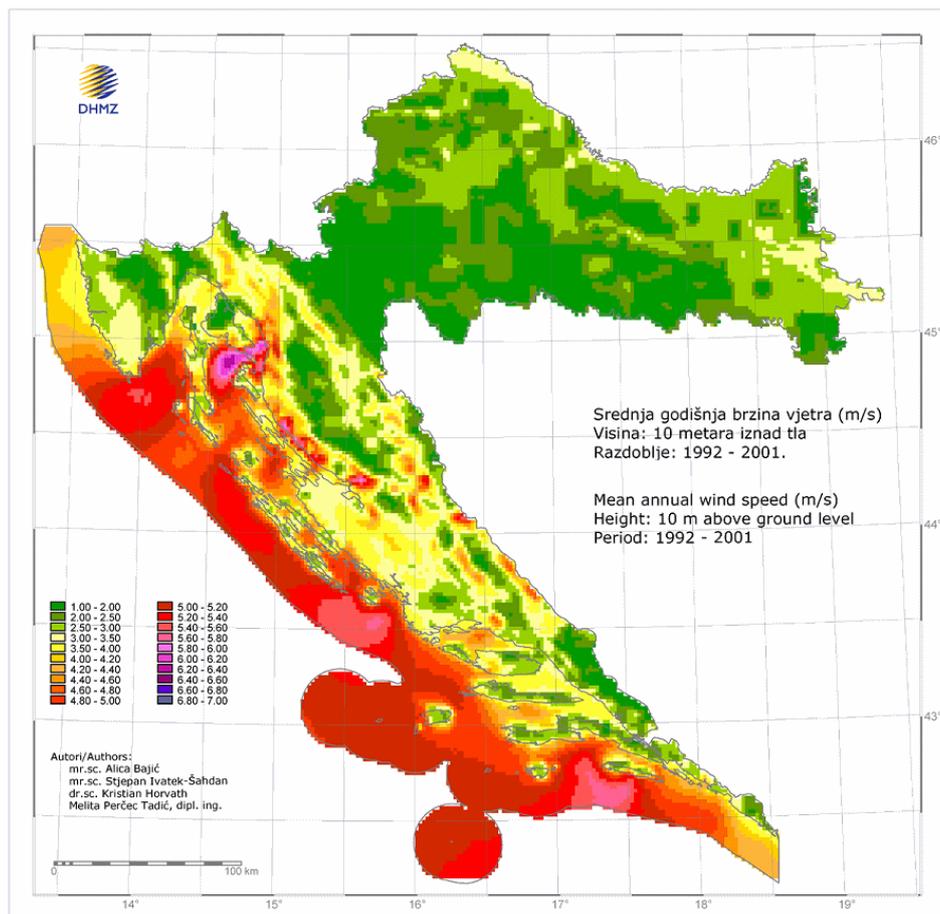


Figure 7: Mean annual wind speed (m/s) for period 1992-2001-Republic of Croatia
(source:www.dhmz.hr)

During the preparation of Human Development Report (UNDP), the area and the type of land which would be covered by sea water or would be at risk of a flood, was analyzed according to two different sea-level rise scenarios – 50 cm and 88 cm. Preliminary results of the analysis for the **first scenario (sea-level rise of 50 cm)** show that more than 100 km² of the mainland will be flooded, and in the case that **sea-level rises for 88 cm (second scenario)**, additional 12.4 km² will be under water. One of relatively new studies (Baric, Grbec, Bogner, 2008.) identified several areas, which will probably be vulnerable to a sea level increase at the Croatian coast, as it follows:

- cities (Nin, Zadar, area of Šibenik, Split, Stari Grad on the island of Hvar, Dubrovnik),
- rivers (*the Raša*, the Cetina, the Krka, the Zrmanja, the Neretva),
- lakes (Vransko jezero on the island of Cres, Vransko jezero near Biograd),
- *western Istria coast*,
- the island of Krapanj

Significant sea level-increase could endanger numerous commercial and fishing ports, contaminate coastal freshwater sources in karstic zone, disrupt touristic and recreate activities depending on coastal areas, etc. The existing system for the collection of data relating to the sea level changes, sea current directions and forecasts of wind waves along the eastern Adriatic coast is to be improved.

The Geophysics Institute in Zagreb carries out research in the field of physical oceanography within the framework of domestic projects such as, for example, "**Interactions of the Atmosphere and the Sea**" and "**System of Atmospheres – the Adriatic**". The research work was focused on physical processes in the Adriatic and their dependence on atmospheric effects, and evolved from the empirical and theoretical analysis into the first attempts to forecast processes in the Croatian coastal zone. The *Croatian Hydrographic Institute in Split* is implementing the project entitled "**Web Presentation of Tides and Sea Levels along the Croatian Coast of the Adriatic Sea and Construction of the Corresponding Database**" and providing the users with information on real (measured) sea level at the tide gauge station in Split and with scientific analyses of data measured.

The rocky coastlines, which is characteristic for the Istria County, could also be areas of high vulnerability to erosion and natural hazards. Therefore, attention should be paid to the delimitation of the non-building zone which should be extended beyond 100 metre when the vulnerability of the area so requires. In particular, special studies should be conducted in order to determine precisely the rate of detachment of the cliff (Figure 8, Figure 9) and the exposure to natural hazards, especially mudslides. The same caution should be taken in planning **coastal lagoons**, particularly exposed to natural disasters and climate change impacts.



Figure 8: Hitting the south wind of the rocky coast of Istria (source: Institute for Physical Planning Region of Istria)

The effect of wind on sea level is very variable and largely depends on the topography of the area, as well as on the wind direction (Figure 8), speed and duration. In general, it can be said that in the area of the East Adriatic a strong wind blowing straight onshore will cause high waters to be higher than predicted, while winds blowing off the land will have the reverse effect.



Figure 9: Coastal erosion in Region of Istria (community of Ližnjan) (source: Institute for Physical Planning Region of Istria)

The erosion is not a specific for Istria County because most of the eastern and western coast of Istria is a rocky coast (limestone).

In view of climate change impacts and the sea level rise, the coastal area management requires preparation of detailed scientific and expert studies to estimate the maximum area of the coast that will be overflow or periodically flooded, the population exposed to flooding effects and the penetration of salt water into freshwater reservoirs. These outputs must be used to formulate a national strategy and action plan for the prevention and mitigation of negative socio-economic effects, which should be adopted by competent government bodies. The strategy and action plan is to cover two main areas: protection of existing natural assets and man-made structures and facilities and instructions for the construction of new structures and facilities in the coastal zone.

The creation of setbacks is also providing to be a useful tool for the **adaptation of coastal zones to climate change**, by protecting populations against the risks of submersion and erosion and by reducing pressure on biodiversity and ecosystem services that are already under considerable threat.

4. Conclusion

The coastal setback zone must be done in accordance articles dealing with natural heritage protection, natural risks and environmental assessments.

Most of the principles on which the Protocol is based are already built in the existing system of land-use planning of which physical planning is the basic instrument.

PCA has been defined in Croatia (Physical Planning and building Act) for the purposes of protection, sustainable, workable and economically effective exploitation and it includes all the islands, and the area that spreads 1000 m from the coastline inland and 300 m in to the sea.

New tourism zones in physical plans of counties are planned in protected coastal areas, almost exclusively along the coastline. It is of almost importance **to move tourism zones away from the coastline**, in order to free the coast from construction, particularly sub-standard construction – regardless whether this refers to organised tourism construction or spontaneous construction. New

construction has to be planned as far away from the coast as possible, i.e. on the border and/or outside the protected coastal area.

Urbanisation in a non-built area located in the 100 metre fringe could therefore be useful in order to limit the impacts of the touristic pressure on coastal ecosystems: building a car park in a highly frequented area can, for example, prevent cars from parking on coastal grass or dunes and therefore help to preserve these ecosystems.

The **concept of Maritime Public Domain exist in Croatia**. The maritime property is defined inside of PCA. The Croatian legislation defines the "maritime domain" as public property and it belongs to all people. Maritime property is universally property of special interest for Republic of Croatia, it has it especially protection and it is in use providing and according to Maritime Domain and Seaports Act.

The project of public interest must be relevant regarding the rational planning of activities (Article 5-a of the ICZM Protocol) and the ecosystem approach to coastal planning (Article 6-c of the ICZM Protocol).

The plan of the setback zone must be updated, according to changes in the coastline, whether due to erosion, progradation or sea level rise caused by climate change.

The following activities are recommended:

- Development of a Strategy on Integrated Management of Coastal Areas (in compliance with the demands of the Protocol),
- Integrated development planning in the coastal zone of Croatia is not formally defined by the law. Therefore, an institutional framework for preparing and implementing formal strategies and policies is missing for the time being. It is necessary to define it. However, most of the principles of the Protocol and most of the instruments it proposes do, more or less, exist or are already in use in Croatia. They can be found in a number of laws and other legal acts, as well as in strategies, plans and programmes that, from different perspectives, deal with the coastal zone.
- Establishment of the State Institute for Spatial Development (priority task of the Ministry of Construction and Physical Planning)
- Ensure institutional coordination in order to avoid sectoral approaches and facilitate comprehensive approaches,
- Organize appropriate coordination between the various authorities competent for both the marine and land parts of the coastal zones, in different administrative services, at the national, regional and local levels,
- Organize close coordination between national authorities and regional and local bodies in the field of coastal strategies, plans and programmes and in relation to the various authorizations for activities that may be achieved through joint consultative bodies or joint decision-making procedures.

In PCA it is, by enforcement of area planning, required:

- to preserve and regenerate threatened areas of natural, pertaining to the history of culture and traditional values of coastal and behind-coastal region and encourage natural renewal of forests and autochthonous cultivar
- to define protection measures of environment ashore and in sea and especially protection of resources of drinking water
- to provide free access to the coast, passage way close to coast and public interest in usage, especially maritime property
- to preserve unsettled islands and islets prior for agricultural production, recreation, organised attendance, research and free of building areas
- to cause development especially public infrastructure by protection and preservation of landscape value

- to restrict both expansion of construction area and connection between themselves, with reference to plan a new construction area out of area of forests
- to improve conditions of both evacuated exploitation field of mineral source materials and production areas prior by landscape planting or by gastronomy- tourist and sport- recreation purpose.

Proposals for the harmonisation of the provisions of the Article 8 of the Protocol in Istria County

The setback zone is established at a minimum of 100 m from the coastline. In accordance with the requirements from the Protocol, in the case of low-lying coasts exposed to erosion and coasts exposed to the risks relevant to sea level rise, as well as parts of the coast of a high ecological value, this setback might be insufficient. It would be ideal if research could be conducted to determine consistent criteria and hence the setback line that could then be even larger than 100 metres (for example, the criterion of the implementation of a 100 year projection of climate change impact).

In view of climate change impacts and the sea level rise, ***the coastal area management for Istria County***, requires preparation of detailed scientific and expert studies to estimate the maximum area of the coast that will be overflow or periodically flooded, the population exposed to flooding effects and the penetration of salt water into freshwater reservoirs. Increase zone offset construction at more than 100 meters must be in areas of the county with high ecological values (protected areas, endangered and rare coastal habitats, future NATURA 2000 areas, and areas of national ecological network). Establishing a setback zone clearly contributes to biodiversity protection. By preventing construction at the land-sea interface, which is by nature extremely fragile, setback zones ensure the protection of coastal species, ecosystems and habitats such as dunes, wetlands, sea grass meadows and coastal forests. Establishing a setback zone helps to maintain ecosystem services. The **Habitats Directive**, which aims to preserve natural habitats in the Union and to create the Natura 2000 network, setting out strong, efficient and preventive means of protection. The **general objective of protecting coastal ecosystems and landscapes** must be respected when adapting the principle of Article 8-2-a.

Given the planning system and relative legal framework arrangement in Republic of Croatia, the proposals for the introduction of Art. 8 provisions should be acknowledged first in the state level planning instrument and rules, in order to be introduced in the regional instruments and then in the town/municipal level instruments – where such provisions should find their actual implementation.

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