

Franci STEINMAN
Leon GOSAR

An island in front of Izola

1. Introduction

Historically speaking, coastal areas have always been the development focus of human society and will even in the future remain one of the areas with comparative development advantages in maritime countries. Even in the Republic of Slovenia the coastal area is (was) subject to strong development pressures, manifested in constant population growth, urbanisation and intensive development of activities tied to the sea. There are however numerous physical – water resource management and environmental conflicts, but also economic – governance conflicts in use of the continental and maritime environment and space. Un-harmonised approaches in sector development plans of coastal urbanism, agriculture, industry, transport, tourism, protection of cultural and natural heritage etc., are all reflected in overlapping conditions for use of the sea, coast and adjacent land. The concentration of functions in the narrow coastal strip, a limited space, is already causing irrational and mutually excluding (economic) uses or functions.

Sea management was in the past somewhat overshadowed by other contents of water management, mainly focusing on internal (continental) waters, including tributaries of the coastal sea. In fact, even globally, only recently has more attention been given to issues concerning sea management, comprehensively dealing with functional ties between the sea and continental environments. Although many issues are already covered by the recently adopted Directive for determining the action framework for the EU concerning water policy (in short Water Directive), goals concerning sea management within the EU are being listed and regulations for integral management of coastal areas are being prepared. The coastal sea and areas have specific characteristics that cannot be compared with continental water bodies, implying specific approach in pertaining legislature, water resource management and development planning.

Integration of waters from functionally tied continental areas with the sea (water) area in a uniform method for planning land uses and sea (water) uses, therefore remains the key instrument for enforcing water resource management contents in physical planning. Adequate expert guidelines (water resource basics, water resource plans) for water (sea) management and coastal areas with respect to principles of sustainability, are essential on all levels of physical planning and decision-making on development.

To tackle issues tied to the sea it is necessary to first analyse the consequences of legitimised uses and valid legislature on particular (physically defined) areas of the sea. For this reason these uses affecting the sea were first listed and then physically positioned, since they can practically limit any further uses. What surprises is that there is no common list of national and local legislature. Furthermore there is no synthesis of consequences of enforcement of other acts applying to particular areas with legitimised use or

conducting of activities. This is why we carried out an analysis of physical dimensions of legal regimes, as enforced in valid legislature as well as general and particular government documents.

Because of such massive scope only an area comparable to those dealt with abroad when dealing with integral management of coastal areas was scrutinised. The article presents results for the sea, whereby one has to pay respect to the fact that the sea is subject to legal regimes enforced for the sea, but also those applied to continental uses for pertaining water spaces. Valid legal regimes represent the legal limits or conditions for future planning and permitting of uses or development (ports, island in front of Izola etc.) on the sea and continent.

2. Legal regimes on the sea

2.1 The term legal regime

The legal regime is defined with a set of legal norms enforced by an act, whereby the method of exercising given rights of use and subsequent obligations (or limitations) is codified for a uniformly defined area. The legal regime is in general applied to property empowerment (e.g. persons of ordinary law) and therefore it can only be enforced when legal basis can be ascertained in a law, which also specifies criteria according to which a legal regime and the area to which it applies can be undoubtedly defined. Simultaneously the law has to define methods for granting adequate reimbursement.

Legal regimes can be applied on anyone; even a coincidental user (e.g. tourist) and therefore they should become common knowledge. Completely different question for example are, how many inhabitants of the coastal municipalities know, where on the Slovenian coast is sub aquatic diving prohibited or even how many visitors to the coast have knowledge about the enforced limitations that have been in effect for ages. Details about legal regimes on properties (buildings, land) should in the future be written as burdens on the property since they affect the scope of rights, obligations and limitations, which should be known not only to the owner, renter or property manager, but everybody (even potential buyer).

Emphasis should be given to the fact that legal regimes on property, albeit maritime or coastal, in general present limitations of use. They can nevertheless also affect other (e.g. neighbouring) maritime and coastal uses, but also other activities, even because of functional ties of the sea with other waters, the sea being a recipient of pollution etc. Despite the stated, open access to the sea has to be granted un-prohibitively with general use of the public maritime good (sea water, water area and coast), which is undoubtedly in public interest.

2.2 Legal regimes on the sea in the Republic of Slovenia

Alongside laws on waters and water management even sectorial laws applied to water can enforce additional areas with legal regimes. The water legislature enforces the well known water protection belts (areas) adjacent to water resources, riparian areas (rivers and streams) and coastal areas (standing water), maintenance belts along water infrastructure

(dykes etc.), flood retention areas, areas for reservoirs etc. The Water directive demands that protected areas, whose existence is conditioned by the presence of water or water management systems, are listed in water management guidelines, while areas, which should be protected in the future, have to be harmonised with water management plans. Thus the needs for water in protected areas (e.g. Škocjan backwater) will be formalised as granted water rights.

Legal regimes that stem from uses of the sea or the continent with adjacent uses functionally tied to the sea (Figure 1), are conditioned by particular sectors and their regulations:

- protected area – nature preservation (Law on nature, LN),
- protected area – preservation of cultural heritage (Law on protection of cultural heritage, LPCH),
- aquatory of ports, anchorages, shipping routes – reservation for shipping (Maritime Law, ML)
- beaches and bathing areas (managed or declared) – prevention from drowning (Law on prevention of drowning, LPD),
- fishing reserves and mariculture aquatories – fisheries (Law on maritime fishing, LMF).

Already a very brief summary of prohibitions, limitations or obligations that apply to beaches, bathing areas and aquatories of mariculture enables presentation of mutual interaction of their effects, conflicting uses or even general use of the sea. Abroad the later has the highest priority. Therefore general use is limited only under extreme conditions (e.g. national defence interests).

For **beaches and bathing areas** some of the regulations are:

- the pertaining water area of the beach or bathing area is only the area marked as such in view of valid regulation (LPD);
- bathing is allowed only on water surfaces intended for bathing (LPD);
- waters used by beaches and bathing areas have to be separated from water surfaces used for sports and other leisure time activities; separation has to be physical and marked with visible, connected buoys (LPD);
- Bathers can be at a maximum distance of 150 m from the beach or bathing areas, if not specified otherwise (LPD);
- The beach or bathing area manager has to specify in the beach ordinance, which activities can be conducted on or in the water (LPD);
- Boats can voyage no less than 50 m from the external boundary of the bathing area and always at least at a distance from the coast as specified according to type of vessel (ML);
- In the waters of the bathing area and in a 200 m belt along the coast used for bathing, fishing with an underwater rifle is prohibited (LMF).

For **mariculture aquatories** the legal provisions are (stated in LMF):

- users of the cultivation area are obliged to respect the boundary of the granted space and to position their facilities (equipment) within in such a way that they don't hinder or disallow access to functions in neighbouring plots;
- approaching cultivation buildings (objects) is allowed up to a distance of 100 m (for all, except for the owner of pertaining water rights).

For contents shown in figure 1, we have to emphasise again that enforced legal regimes determine conduct, even of coincidental users (local population, tourists, etc.). From

the remaining parts of the coastline, which are (still) outside areas with applied legal regimes (whereby free access to the sea is possible), one can see that such areas on the Slovenian coast are very few.

2.3 The consequences of legal regimes because of mariculture aquatories

We will show some of the consequences of enforced legal regimes stemming from the permit for (special) use of the sea for growing shell fish in the Strunjan Bay (figure 2), in which two legal regimes were enforced: The Strunjan landscape park and the fishing reserve.

The law protecting the Strunjan Bay, which is part of the Strunjan landscape park, doesn't proscribe limitations of uses in the bay, however all regulations proscribed by the Law on nature (LN) do apply. The question is whether when the permit for special (commercial) use was granted, proscriptions applying to public interest as stipulated in LN were applied, according to which in a protected landscape park:

- all development that could endanger the (established) protected area are prohibited,
- or for example
- all development in the sea that could change the living conditions for the fauna are prohibited.

The act establishes the fishing reserve to be used for growing shellfish and other sea animals. It also specifies that the user (or better still: concessionary) mustn't hinder or disable activities on neighbouring properties (the sea), i.e. outside the boundaries of the area marked as the plot for growing shellfish and stated as such in the permit) coordinates of the corners. Simultaneously the Law on maritime fishing (LMF) stipulates that approaching buildings (objects) for growing sea cultures (by swimming or sailing) to a distance less than 100 m is prohibited. These two limitations, if respected, show that the permit for a shellfish growing plant was unsuitable, because the plant itself affects a much wider area, than the granted aquatory.

The synthesis of areas for bathing and maricultures, shown for Strunjan Bay (figure 2), surprisingly show, that sailing along the coast in the bay is practically impossible, because:

- sailing is prohibited in a belt 100 m around the mariculture plant,
- sailing is prohibited in a 50 m belt around the bathing area.

By granting a permit for a (commercial) shellfish growing plant, general use of the sea (sailing etc.) has been prevented even outside the granted area. Can profit driven interests prevail over basic principles of general water use (the sea)? Definitely not! Can special use for shellfish growing really block all other activities in a part of the internal sea, coast or continental hinterland? No, this is prohibited by the stated condition from the Law on maritime fishing. Poorly thought out new uses, in this case the shellfish growing plant, disallow other acceptable uses and activities that need a maritime access in the part in front of the Strunjan salt pans, but also on the continent. Amongst them are activities that could be in the public interest (e.g. public maritime transport etc.). The responsible permitting body should therefore retract the inadequately issued permit.

Introduction of new areas with legal regimes is therefore much more demanding than the present practice of proposing new protected areas. The first attempt at producing a plan for integral management of coastal areas in Slovenia, dealing with the functionally tied area of the sea and tributary area of coastal waters, has already been executed. The approach that has already been used in water resource management planning will have to be applied in other planning procedures and supported with new legislature.

3. Building in the sea – an island in front of Izola

Several authors have so far entertained the idea of building one or more islands in the Slovenian sea. This last one is a substitute for the former island of Izola, a determining factor for the site's selection, while enforced legal regimes are added factors of choice (Figure 3). The proposal presents multifunctional use of harmonised and compatible uses on the island in public interest, their suitability for covering maintenance costs of the island (buildings) during their working lifespan, possibilities for applying measures for diversifying animal and plant life and technical feasibility.

Figure 3 shows that in the Municipality of Izola there are very few sites with unhindered access to the sea, but also that the proposed site doesn't infringe on rights granted to others or areas with enforced legal regimes (with limitations). Building the island could be justified by public interests with maximum priority, while the application of common principles of partnership would ensure long-term existence of the island.

Uses that are in public interest are shown in figure 4, namely:

- the island lies practically on the extended line of the existing sewer running from the town into the sea, implying the possibility of building a sewage treatment plant for one or more coastal municipalities;
- regulations require a level of cleaning refuse water on the island, whereby the treated water can be used for watering plants in the botanical garden on the island. The garden, together with small lakes of fresh water adjacent to the plant brings landscape enrichment, while the animal and plant life are simultaneously indicators of adequate operation of the plant;
- instead of the rather poor seabed (on present depths), the island brings new biotopes to the sea (shallow parts of the underwater seashore, shelters among the seawall rock reinforcement etc.), as well as the island itself.
- recreation surfaces provided on the island connected to the continent with a narrow footbridge could stimulate leisure activities and their development in the wider area;
- the footbridge allows access to moorings in a local, communal port on the island, since their number is too small for all local inhabitants or users living off the sea;
- the new building on the sea requires a lighthouse, which should be built adjacent to the office building of the sewage treatment plant and to which office space for the national Maritime transport administration would be added, thus directly tying the office to the sea;
- and last but not least:
- on the coast there are excessive quantities of building material dug up during the construction of the highway, port basin dredging etc. Instead of dumping this material in

valleys and depressions in the coastal hinterland, all unique geographical sites, it could be used to build an island.

The proposal isn't hindered by second thoughts whether we should build in the sea or not. A review of occurrences in the coastal belt (sea and land) show, that development in the sea is happening, while the procedure of spatial development (water, environment) is known.

The island's concept contains elements of maritime construction. Because of sea currents the understatement is that the island above the sea level has the shape of a dolphin, also emphasising its anthropomorphic background. It lies North of the peninsula with the town of Izola at a distance of 500 to 770 m, where the depth of the sea is 16,0 to 18,3 m. It is protected from the South wind, while the dolphin shape also protects it from the North winds (bura). On the sea level the island is 500 m long and 320 m wide, its volume wouldn't exceed 1,3 million m³, its surface on the seabed would be 8 ha and 4,4 ha on the sea level. In cross section it would have an asymmetrical shape, the highest point being 10 m above sea level on the north side, where it would assume the shape of the steep cliffs on the continent. The length of the water line (at average tide level) would be approximately 2 km, thus lengthening the contact area of the land with the sea, thus also providing more shallow water, which is of importance for plant and animal life. Such development would be a challenge for various professionals, although domestically and abroad such construction is supported by substantial knowledge.

The proposed island would somewhat change the image of the Slovenian coast, as we know it today, although islands on this side of the Adriatic Sea aren't a peculiarity. Discussion should show whether it would be better to design the island from the point of view of landscape planning or to emphasise its anthropomorphic nature, whether to design it as part of a cliff or to imitate the form and image of islands prevailing several kilometres away on the Croatian coast etc.

An economic feasibility estimate would also be interesting, after all it will be necessary to calculate the value of new recreation and leisure surfaces, attractiveness of the botanical garden, increased attraction of the coastal area (for living, tourism) etc. It will also be necessary to calculate the value of land on the continent reserved for the construction of one or more sewage treatment plants which will be substituted on the island, land with limited use in the influential areas of such plants, that could be used for other development in the municipality or several municipalities (if a joint plant was built), the value of communal moorings, whose value will only increase if new sites aren't provided, but also the ecological enrichment brought by the island.

4. Conclusions

The presented legal regimes show that the sea surface is not an empty space, therefore enforcement of integral planning of water, land and natural resources (the sea) is essential. This doesn't mean that expanding planning of existing land use on the continent to the sea would be enough. Abroad corporations are emerging that connect subjects of public and ordinary law, thus creating formal and informal ties between states, self-government (municipalities), associations of water users, the public, affected individuals etc. according to principles of partnerships.

Water management entails management (administration) and use, thus it will be necessary even in the field of water management to formalise use as well (water itself, sediments, property – land, buildings, infrastructure). One of the first steps of the state when dealing with its own property according to principles of good management is the establishment of a comprehensive inventory of sea uses, water rights on the sea and functionally connected land. An important aspect is the implementation of principles of sustainable development and the principle of integral dealing with the sea and continent when planning uses for the coastal area. Functional ties between activities on the sea and those on the continent (e.g. manipulation surfaces for maricultures) or vice versa (e.g. water surfaces for bathing) demand harmonised planning of both.

Building an island was proposed because of activities that are in public interest and can be mutually balanced. The programme of functions can nevertheless be enlarged, with some functions being substituted by others if better sites for them are found elsewhere. We have to emphasise that the island restitutes the former natural condition (from which when even the town Izola got its name), while simultaneously bringing significant benefits.

A spin-off result of the analysis where the established consequences of poorly thought out enforced legal regimes, which demand serious recollection about the future granting of special rights or limiting areas with legal regimes. The article proves that we already have at our disposal tools that can be used as the basis for future planning or permitting of uses in the sea and coastal land, with respect to functional ties between the sea and continent. When preparing water management guidelines they can be used as a state of technique or knowledge of the water management profession, although they are not proscribed as such by law. Using these tools benefit other professions as well, although one would hardly expect the legal profession when preparing legal acts to use engineering tools.

Prof. Franci Steinman, Ph.D, civil engineer, Leon Gosar, M.Sc., civil engineer, University of Ljubljana, Faculty for civil engineering and geodesy, Chair for hydromechanics with laboratory, Ljubljana.

E-mail: fsteinman@fgg.uni-lj.si; lgosar@fgg.uni-lj.si

Illustrations:

Figure 1: Areas with enforced legal regimes – tied to use of the sea or as pertaining functional areas of permitted uses and continental activities (map TK50 – Surveying office of the Republic of Slovenia; data on regimes – KMTe, FGG).

Figure 2: Legal regimes on the sea in the Strunjan Bay – because of shell fish cultivation, access to the coastline by boat is prohibited (map DTK25 – Surveying office of the Republic of Slovenia; other data – KMTe, FGG).

Figure 3: Position of the island and legal regimes on the sea – there are very few areas (white) where open access to the sea is possible!

Figure 4: Programmes on the island (the recreation and maintenance path around the island is not shown).

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Fedja KOŠIR

The knot of absurdities

1. Introduction

Professor Ravnikar once wrote an article with the futuristic title Ljubljana in 50 years. In view of the date of publication, those 50 years are almost gone. It was published in a magazine that is also long gone (TT, 04. 11. 1954). Let's take a look at what was most urgent – with it he began the article:

»... How will Ljubljana be ... in 50 years? We don't know that precisely, but surely it will be, and that is simultaneously most pleasing and frightening, what we want it to be. In 50 years it won't change into a beautiful city overnight, if we don't build it every day, even with the most apparently unimportant acts that indirectly in various ways affect its future image.

The aldermen of our city comfort us in the papers that everything will flow better and by itself when the railways issue i.e. the infamous Ljubljana knot, is solved. But will it? Aren't these only ... helpless dreams? After all one who thinks like this, only shows that with an important detail, an extremely complicated entity, which we still haven't fully understood, would be solved.

There are many things, which build the future Ljubljana that, have nothing in common with the railway, but we don't tackle them. They are evident, if one ponders for a while, what we could do although the railway issue isn't resolved and is being dealt with by a separate commission. At the end of the day, we should be attentive that valuable elements of the future Ljubljana won't be ruined because of incompetence ... In 50 years maybe we won't ponder about Figovec, but about the whole city instead...«

Similar ideas follow – this one amongst other:

»... We could immediately take care of many more things, but above all we should approach the »relieving« railway knot in a more intelligent way. The knot won't be solved because of the trains, but because of the people. After all even a railway which is smoothly led where it is not necessary, cannot compensate albeit the bad, that benefits the inhabitants. The railway in Ljubljana is an urban planning problem and should be dealt with accordingly ...«

A special virtue of the article is its mocking irony used to construct some purposely awkward sentences: » ... Although the railway issue hasn't been resolved, and is being dealt with by a special commission...« It was published much before the infamous debates about the underpasses began in daily and professional periodicals (1957/1963). We can observe that even today we can, exactly as Ravnikar did earlier when he eventually got involved in the mess, albeit never independently as a planner or designer, but in cooperation with students, say that in the last 50 years absolutely nothing happened, that could change the issue.