LEGAL ASPECTS OF THE RELOCATION OF DREDGED SEABED MATERIAL - CASE OF SLOVENIA

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Summary

The paper deals with the question of whether it is permissible to relocate the dredged material from the seabed from the port of Koper to another location within the territorial sea of the Republic of Slovenia. At first glance, the simple issue is considered from the point of view of the legal permissibility of such conduct, recognizing that it is a highly multidisciplinary issue. Aspects of international law, EU law, Slovenian law, and Italian law are discussed. The latter because Italy faces the same problems of dumping or relocation of dredged material in the Gulf of Trieste basin as Slovenia, unlike Croatia which does not have major ports in this area. The Slovenian and Italian regulation and experiences may be of interest to Croatia for its local ports or major ports in other parts of Adriatic.

Keywords: *dredging; dredged material; marine sediment; movement / relocation of dredged material; waste; environmental regulations.*

1 INTRODUCTION

In many EU ports, dredging is the only way to keep infrastructure functioning. The dredged material should be placed on land or relocated elsewhere in the sea. In doing so, port infrastructure operators in the European Union encounter three types of regulations: European law, international treaties, and local regulations. According to the provisions of the UNCLOS Convention, the Adriatic is a semi-enclosed sea. The north-eastern part of the Adriatic Sea is a particularly sensitive area within this semi-enclosed sea. There are no less than three ports in this area, namely in Koper in Slovenia and in Trieste and Monfalcone in Italy. So far, dredged material from the

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seabed has been relocated from positions near the Italian ports to other positions in the northern part of the Adriatic Sea. Until now it has been placed on land from the Slovenian port. Slovenia has adopted a maritime spatial plan. One of the important questions within this spatial plan, which so far only a handful of EU member states have, is how to regulate the issue of the transfer of excavated material. This is one of the conditions for relocating the dredged seabed material, but it is far from the only one. The research question for this paper is whether and under what conditions it is permissible to move dredged seabed material to another position in the sea, in accordance with the European Union, international, and Slovenian local regulatory frameworks.

Research papers and documents on dredging of seabed material are plentiful, but unfortunately not from the legal point of view. We shall mention in this introduction just those that are *lato sensu* important for the answers to the research question. Environmental Policy and Legislation on Dredged Material in the Baltic Sea Region, presented by Grazyna Sapota, Maritime Institute in Gdansk,[1] describes European legislation (water legislation, waste legislation, soil legislation and protected areas legislation), international conventions for protection of the marine environment and international guidelines and documents for the management of dredged material in the first part and regulation in nine Baltic Sea countries. For an overview of legislation in Italy, the Review of Legislation on Dredged Sediment Management[2] that has been published as a document within LIFE SUBSED - Sustainable Substrates for Agriculture From Dredged Remediated Marine Sediments: From Ports to Pots was used only as a signpost. When reviewing scientific and professional sources in the field of handling dredged material in the port of Koper, we came across only one paper. Baksa *et al.* researched possibilities of use of the dredged material in clay brick production.[3] The aim of that paper was to provide the answer whether the dredged material is environmentally friendly and as such suitable for use in the brick industry. Baksa *et al*. made analyses and determined that dredged material from the port of Koper is only conditionally suitable as a source material for the production of bricks.

We also studied the Italian regulations in the original text to prepare the paper. This paper is a study within the Development of a Sustainable "Green Port" growth model. Developing a Sustainable Model for the Growth of the "Green Port" research project is financed by Slovenian Research Agency.

1 Grazyna Pazikowska Sapota et al., "Environmental Policy and Legislation on Dredged Material in the Baltic Sea Region - Analysis," *Ocean: Past, Present and Future - 2012 IEEE/OES Baltic International Symposium* (2012): 1-15.

2 "Sustainable Substrates for Agriculture From Dredged Remediated Marine Sediments: From Ports to Pots," Thomson Reuters, accessed May 14, 2021, http://www.lifesubsed.com/wp-content/uploads/2019/03/SUBSED-Deliverable-A.1-Review-of-legislation-on-dredged-sediment-management.pdf.

3 Patrik Baksa et al., "An Evaluation of Marine Sediments in Terms of Their Usability in the Brick Industry: Case Study Port of Koper," *Journal of Sustainable Development of Energy, Water and Environment Systems* 6, no. 1 (2018): 78-88. DOI:10.13044/J.SDEWES.D5.0183.

2 METHODOLOGY

There are two countries - Italy and Slovenia - that have over three ports in this basin of the northeast Adriatic Sea with a rather similar seabed and to a certain degree different legal systems, but still with the same higher structure of environmental legislation. The methods used in this paper are descriptive, analytical, comparative, and applied legal research. The descriptive method was used in the *de lege lata* study of regulations of the research question. The analytical method was used particularly in determining the relationship between regulations in the field of the research question, their interdependence, superiority, and subordination of different regulations. The comparative method was used in examining the systems that is in force for relocation of dredged seabed material in Italy and Slovenia. The applied legal research was used to determine a specific case of the transfer of dredged seabed material from the port of Koper to other parts of the internal sea waters or territorial sea of the Republic of Slovenia.

3 RESULTS AND DISCUSSION

3.1 Legal Status of Marine Sediment (Marine Sludge) and Legal Possibilities for Its Movement within Surface Waters in Slovenia

The legal rules for the movement of marine sediment in Slovenia derive from international law, EU law, and Slovenian law. Despite the need for regular sea dredging and the economic importance of this activity,[4] international and specifically European laws regulate only some aspects of seabed dredging and, in this context, the movement of sea sediment within surface waters. International law does not specifically regulate the deepening of the seabed or the movement of marine sediment. As it is an activity affecting the seabed, international law deals with it in the context of the impact of activity in the sea on the marine environment; in EU law the deepening of the seabed or the movement of marine sediment is also (in general - in the context of activities affecting the environment) considered in terms of the impact of these activities on the environment (and in its context on nature).

The key ratified international treaties[5] and EU regulations, regulating issues addressed are incorporated into Slovenian law and therefore are not discussed in this paper.

4 Sapota et al., "Environmental Policy", 1-15.

5 These are in Slovenia: United Nations Convention on the Law of the Sea, 1982 (UNCLOS), Convention on the Prevention of Marine Pollution by Waste and Other Substances, 1972 and Protocol to the 1996 Convention, Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters, 1998 (Aarhus Convention), Convention for the Protection of the Mediterranean Sea against Pollution and Protocol for the Prevention of Pollution of the Mediterranean Sea by Diving Waste and Other Materials from Ships and Aircraft, and Protocol for Cooperation in Combating Pollution of the Mediterranean Sea by Oil and Other Hazardous Substances in the Event of an Accident (Barcelona Convention), Convention on Environmental Impact Assessment in a Transboundary Context, 2001 (Espoo Convention).

Slovenian law also does not explicitly regulate the deepening of the seabed and, in this context, the movement of sea sediment. The only exception is the Maritime Spatial Plan (MSP) of Slovenia which gives a solid legal basis from the perspective of spatial planning that was adopted with the Decree on the Maritime Spatial Plan of Slovenia and is in force since July 17, 2021. As we will show in the analysis of Slovenian law, the movement of marine sediment is an intervention that (may) be subject to legal rules governing water, spatial planning (land-use), environmental protection, waste, and cultural heritage protection.

3.1.1 Water Law

Water Act (hereinafter: ZV-1)[6] stipulates (in Article 7) that surface waters are inland waters located on the surface of the earth, such as streams, rivers, canals, lakes, and the sea. The sea consists of internal sea waters and the territorial sea. The bottom of the internal sea waters and the territorial sea to the outer boundary of the coast is the water land (seabed) of the sea owned by the state. Sea water land is also land created in the sea due to alluvium or water withdrawal. Marine sediment accumulates on the sea water land with the deposition of watercourses, as a result of erosion and other factors, and belongs to the alluvium (in accordance with Article 7 of ZV-1). Alluvium is permanent or temporarily deposited river, torrential, or sea sediment (sand, gravel) located on water or coastal land. Due to the need to maintain and deepen ports and waterways, marine sediment in certain parts of sea water land should be removed and deposited on land or relocated to other parts of sea water land. Sea dredging is the activity affecting the sea water land (seabed) which removes a certain amount of marine sediment from sea water land (within internal sea waters) and deposits the amount of marine sediment removed on land or relocates it to other parts of the sea water land. Sea dredging is part of the sea and sea water land exploitation for port activities - the management of the port[7] and port infrastructure for the performance of port activities.[8] According to the provision of Article 7 of ZV-1, the activity affecting

6 Water Act, Official Gazette of the Republic of Slovenia, no. 67/02, 110/02, 2/04, 10/04, 41/04, 57/08, 57/12, 100/13, 40/14, 56/15, 49/20, 65/20, 65/20, 80/20, 152/20.

7 Article 32 of the Maritime Code, Official Gazette of the Republic of Slovenia, no. 26/01, 21/02, 110/02, 2/04, 98/05, 49/06, 88/10, 59/11, 33/16, 41/17, 21/18, 31/18, 18/21, 21/21 (hereinafter: PZ). It stipulates that a port is a water and coastal area comprising an anchorage, built or unbuilt parts of the coast, breakwaters, devices and facilities intended for mooring, anchoring and protection of ships, construction and maintenance of vessels, boarding and the unloading of persons and cargo, storage and other operations with goods, production, processing, control and finishing of goods and for other economic activities which are in economic, transport or technological connection with these activities. The constructed parts of the coast intended for mooring ships, embarking and disembarking persons and cargo are operational shores.
Built shores, waters, breakwaters, approaches to piers, mooring devices, access roads, railway tracks, entrances, fences, sewerage and water supply network, electrical installations, lighting, other facilities intended for the purpose of navigation safety and safe mooring and uninterrupted implementation of port activities and other activities referred to in the first paragraph of this article, as well as telecommunication installations, are port infrastructure.

8 For more information on marine sediment removal see: Phaedra Dede, Eleni Sazakli, and Michalis Leotsinidis, "Dredges' Management: Comparison of Regulatory Frameworks, Legal

the waters is the activity affecting the environment and can be related to the general or special use of water, to water pollution, or to the water public services provides. According to the provision of Article 7 of ZV-1, a water right is a right to a special use of a surface water or groundwater or use of alluvium, except for water land. Article 72 of ZV-1 stipulates that the removal of alluvium is permitted only to the extent and in a manner that does not significantly alter natural processes, disrupt the natural balance of aquatic and riparian ecosystems or accelerate the harmful effects of water. Sediments can be removed for water management within:

- implementation of the public service of water and coastal land maintenance,
- special uses of water or marine resources from water bodies and facilities intended to contain alluvium, or
- from areas intended for the removal of debris, in the context of special use.

According to the described provisions of ZV-1, it is therefore necessary to consider the removal of marine sediment, which removes a certain amount of marine sediment from marine water land and transfers the removed amount of marine sediment to other parts of marine aquatic land for a land use, more specifically as a land use, which affects the physical structure of sea water land.[9] Such an activity is therefore not a special use of water (sea), since, according to the aforementioned provision of point 35 of Article 7 of ZV-1, it cannot refer to water land. Also, in our opinion, it is not about the use of alluvium, because marine sediment is not taken from marine land, but only moved from one part of the sea water to another part of the sea water. Therefore, it is not necessary to obtain a water right under the provisions of ZV-1 for such activity. Such activity is therefore a land use that does not include the construction of a building, so it is not necessary to obtain a building permit in accordance with the Construction Code. However, since this is an activity on water land, it is necessary to obtain a water consent in accordance with the described provisions of ZV-1.

If such an activity is carried out in the context of the exploitation of part of the sea and marine water (port waters) and the management of the port and port infrastructure for the performance of port activities, it is an activity in the framework of port management which falls under Articles 27 to 31 of PZ and including the management of waterways. Applying the provision of Article 50 of ZV-1, which stipulates that the holder of a water right is obliged to regularly remove alluvium and collect alluvium in the part of the watercourse affected by the exercise of his/her water right, the holder of a water right to exploit the sea for the performance of port activities also has this obligation.

Gaps and Recommendations," *Global NEST Journal* 20, no. 1 (2018): 88-95.

9 In the laws of some EU Member States (Germany, Finland, Estonia, Denmark, and some other countries), the movement of marine sediment is explicitly regulated as one of the interventions in marine land for which an appropriate permit must be obtained. See more in: Sapota et al., "Environmental Policy," 1-15.

3.1.2 Land-Use Law

Removal of marine sediment, with which a certain amount of marine sediment is removed from marine (sea) water land and transferred to other parts of marine water land, is therefore a land use, which means that it is subject to land use law rules. The basic rule in land use arising from Spatial Planning Act (hereinafter: ZUreP-2)[10] is that the possibility of a specific land use on certain land must be provided for in the spatial implementation act - in the case of land use of state importance in the state spatial implementation act (State Spatial Plan - DPN), and if it is a land use of local importance in the municipal spatial implementation act (Municipal Spatial Plan - OPN).

Article 50 of the ZUreP-2 stipulates that all kind of land uses of state importance are, inter alia, all land uses in the area of marine water land, except for:

- ports intended for special purposes, with berths for up to 200 vessels, with associated port infrastructure, and ports not intended for international public transport with associated port infrastructure;
- floating pier up to 50 m in length and up to 100 m2 in area;
- bridging structure of footpaths or cycle paths;
- baths and built shores;
- breakwaters not exceeding 7 m in width above sea level;
- local utility and energy infrastructure.

Since the movement of marine sediment is a specific form of land use, the possibility of such a land use on the marine water land must be provided for in the state spatial plan. Given that the Ministry of the Environment and Spatial Planning prepared MSP of Slovenia as a special state spatial plan for the sea area, it latter stipulates the possibility of moving marine sediment from one part of the sea water land to other parts. As we have already emphasized, the transfer of marine sediment is a form of land use that does not include the construction of a facility, so it is not necessary to obtain a building permit in accordance with Construction Act (hereinafter: GZ),[11] but it is necessary to obtain water consent in accordance with the provisions of ZV-1.

3.1.3 Environmental Law - General

Removal of marine sediment, with which a certain amount of marine sediment is removed from marine water land and transferred to other parts of marine aquatic land, is as a land use, also activity, which affects the environment. Namely, in point 2 of Article 3, ZVO-1 stipulates that an activity which affects the environment is any human action or omission that may affect the environment in such a way as to harm human health, well-being and quality of life and the survival, health and well-being of other organisms. Article 40 of ZVO-1 stipulates that, in order to implement the principles of sustainable development, integrity and prevention in the

10 Spatial Planning Act, Official Gazette of the Republic of Slovenia, no. 61/17, 5/20.

11 Construction Act, Official Gazette of the Republic of Slovenia, no. 61/17, 72/17, 61/20, 65/20, 15/21.

process of preparing a plan, program, or other general act and its amendments, the implementation of which may significantly affect the environment, a strategic impact assessment of its implementation on the environment, should be performed (carried out).

According to described provisions of ZVO-1, it is therefore necessary to carry out a strategic environmental impact assessment procedure (regulated by ZVO-1 in Articles 40 to 48) for spatial implementation acts - i.e., also for the state spatial plan and of course for the Maritime Spatial Plan. Article 50 of ZVO-1[12] stipulates that before the implementation of an activity, which may have a significant impact on the environment, an assessment of its impact on the environment must be carried out and the environmental consent of the ministry responsible for the environment (in Slovenia, it is the Ministry for Environment and Spatial Planning - hereinafter: Ministry) must be obtained.[13] Article 51 of ZVO-1 stipulates that in the process of environmental impact assessment, long-term, short-term, direct or indirect impacts of the intended environmental impact on man, soil, water, air, biodiversity and natural values, climate and landscape shall be established and assessed, as well as on human immovable property and cultural heritage, and their interrelationships. For certain types of activities, which could affect the environment, due to their size, scope, location or other characteristics that may affect the environment, an environmental impact assessment is mandatory. For certain types of activities, which could affect the environment, in which significant environmental impacts may be expected due to the characteristics of the intended activity or its location, the Ministry shall carry out a preliminary procedure regulated in Article 51.a of ZVO-1, in which it determines whether the environmental impact assessment is mandatory for these interventions.

12 With ZVO-1, the following key EU directives were transposed into Slovenian law to address the following issues, namely:
- Directive 2001/42/EC of the European Parliament and of the Council of 27 June 2001 on the assessment of the effects of certain plans and programs on the environment, OJ L 197, 21.7.2001, p. 30, as last amended by Directive 2014/52/EU of the European Parliament and of the Council of 16 April 2014 amending Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment, OJ L 124, 25.4.2014, p. 1.
- Directive 2011/92/EU of the European Parliament and of the Council of 13 December 2011 on the assessment of the effects of certain public and private projects on the environment, OJ L 26, 28.1.2012, p. 1, as amended,
- Directive 2003/4/EC of the European Parliament and of the Council of 28 January 2003 on public access to environmental information by repealing Council Directive 90/313 / EEC, OJ L 41, 14.2.2003, p. 26,
- Directive 2003/35/EEC of the European Parliament and of the Council of 26 May 2003 on ensuring the participation of the public in the adoption of certain plans and programs relating to the environment and amendments relating to the participation of the public and access to justice Directive 85/337/EEC and 96/61/EC, OJ L 156, 25.6.2003, p. 17,
- Directive 2004/35/EC of the European Parliament and of the Council of 21 April 2004 on environmental liability with regard to the prevention and remedying of environmental damage, OJ L 143, 30.4.2004, p. 56. (hereinafter: Directive 2004/35/EC).

13 This is the Ministry of the Environment and Spatial Planning - within its framework, this competence is exercised by the Environmental Agency of the Republic of Slovenia as a constituent body.

The Decree on activities which affect the environment for which an environmental impact assessment is to be carried out[14] determines the types of activities for which an environmental impact assessment is mandatory and the types of activities for which an environmental impact assessment is mandatory, if by the preliminary procedure regulated in Article 51.a of ZVO-1, it is determined that they could have significant effects on the environment. The mentioned Decree also lays down more detailed criteria on the basis of which it is determined in the preliminary procedure whether an environmental impact assessment is required for the intended activity. Annex 1 of mentioned Decree that sets out the types of activities for which an environmental impact assessment is mandatory and the types of activities for which a preliminary procedure should be carried out, states that there is no mandatory environmental impact assessment, nor is there a preliminary procedure for the removal of marine sediment and its transfer to other parts of the water land.

3.1.4 Nature Protection Law

Removal of marine sediment during which a certain amount of marine sediment is removed from marine water land and transferred to other parts of marine aquatic land, can be an activity that affects nature.

ZVO-1 in 1.2. point 3 of Article 3 stipulates that nature is the whole of the material world and the composition of natural and interdependent parts and processes, while the Nature Conservation Act (hereinafter: ZON)[15] stipulates in Article 1 that nature conservation is the conservation of biodiversity and the protection of natural values. Article 96 of the ZON stipulates that in the procedures of planning the use or exploitation of natural resources and spatial planning, effects of exploitation of natural resources or land use on nature must be taken into consideration and only those activities which are harmless to nature could be approved. Article 97 of the ZON stipulates that state and local bodies and other persons governed by public law who are responsible for the preparation of spatial acts and other acts of use of natural resources must obtain nature protection guidelines in the process of preparing

14 This decree further regulates the issues covered by Directive 2011/92/EU of the European Parliament and of the Council of 13 December 2011 on the assessment of the effects of certain public and private projects on the environment, OJ L 26, 28.1.2012, p. 1, with amendments.

15 Nature Conservation Act, Official Gazette of the Republic of Slovenia, no. 56/99, 31/00, 110/02, 119/02, 41/04, 61/06, 32/08, 8/10, 46/14, 21/18, 31/18, 61/20, 82/20 (hereinafter: ZON). With the ZON, the key EU directives were transposed into Slovenian law for the issues discussed, namely:
- Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds (OJ L 20, 26.1.2010, p. 7), as last amended by Council Directive 2013/17/EU of 13 May 2013 adapting certain directives in the field of the environment, by reason of the accession of the Republic of Croatia, OJ L 158, 10.6.2013, p. 193,
- Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora, OJ L 206, 22.7.1992, p. 7, as last amended by Council Directive 2013/17/EU of 13 May 2013 adapting certain directives in the field of the environment by reason of the accession of the Republic of Croatia, OJ L 158, 10.6.2013, 193.

these acts. Nature protection guidelines are professional material that defines the guidelines, starting points, and conditions for the protection of natural values and protected areas and the conservation of biodiversity for an area that has a special status on the basis of regulations in the field of nature conservation. In the nature protection guidelines, the plans for the use of natural resources state the guidelines, starting points, or conditions for the sustainable use of biodiversity components.

Article 101 of the ZON stipulates that for any plan or amendment of a plan adopted on the basis of a law by a competent state body or a competent body of a self-governing local community in the field of spatial planning, water management, forest management, hunting, fishing, mining, agriculture, energy, industry, transport, waste, and wastewater management, drinking water supply, telecommunications, and tourism that could have a significant impact on the protected area, special protection area, or potential special protection area by itself or in connection with other plans, an assessment of the acceptability of its impacts or consequences in relation to the protection objectives of these areas must be carried out. An acceptability assessment does not need to be carried out for those plans that are directly related or necessary for the protection of these areas. The assessment of the acceptability of the impact or consequences of the plan on the areas referred to in the previous paragraph shall be given by the Ministry in the process of a strategic environmental impact assessment, in accordance with the aforementioned provisions of ZVO-1.

According to the described provisions of the ZON, the acceptability of the removal of marine sediment, during which a certain amount of marine sediment is removed from marine water land and transferred to other parts of marine aquatic land, from the point of view of nature protection have to be assessed within the strategic environmental impact assessment procedure. Article 105 of the ZON stipulates that for the construction of a facility in an area which has a special status on the basis of regulations in the field of nature conservation, nature protection conditions and a nature protection consent must be obtained in the manner and according to the procedure specified for obtaining project conditions and consent through the (GZ). In accordance with the GZ, the opinion of the ZRSVN must be obtained for the construction of a facility in an area which has a special status on the basis of regulations in the field of nature conservation and for which a building permit must be obtained. For the construction of a facility in an area, which has a special status on the basis of regulations in the field of nature conservation and for which it is not necessary to obtain a building permit, a nature conservation consent must be obtained after 1 June 2018 in accordance with provisions 105 and 105a. of the ZON, for the issuance of which the Ministry for the Environmental Protection is responsible. Nature conservation consent must be obtained for the construction of a facility for which it is not necessary to obtain a building permit in an area that has a special status on the basis of regulations in the field of nature conservation.

According to above mentioned provisions of ZON, if the movement of marine sediment is carried out in the part of the internal sea waters in the Republic of Slovenia which belongs to one of the listed areas or in its immediate vicinity, it would be necessary to obtain a nature protection consent for this activity.

3.1.5 Waste Law

Legal rules governing waste management may also be considered for the movement of marine sediment.

Waste management in Slovenia is roughly regulated by ZVO-1 in Articles 20 and 21, and in more detail in particular in the Decree on Waste.[16] ZVO-1 stipulates in point 5 of Article 3 that waste is a substance or object that the holder discards, intends to discard or must discard.

Article 3, point 10 of the Decree on Waste stipulates that hazardous waste is waste that exhibits one or more of the hazardous properties listed in the Annex to Regulation 1357/2014/EU.[17] Similarly, the Decree on Soil Contamination by Introducing Waste,[18] which determines the conditions related to soil contamination by introducing waste and mandatory action in planning and implementing the introduction of excavation or artificially prepared soil to improve the ecological condition of the soil: Article 3 stipulates that shall not be used to pollute the soil, inter alia, with alluvial deposits which, in accordance with the regulations governing water, are moved within the surface water area for the management of water and waterways or to prevent floods or mitigate the effects of floods and droughts. Such may be moved within the water if they are not classified as hazardous construction waste in accordance with the regulation governing waste management.

Marine sediment or alluvium which is moved within surface waters for the management of water and waterways, to prevent floods or to mitigate the effects of floods and droughts or soil dehydration,[19] therefore does not fall under the rules governing waste management if it is not hazardous waste - if it does not show one or more of the dangerous properties listed in the Annex to Regulation 1357/2014/EU. We consider that, according to the described provision of the Waste Regulation, in case of movement of marine sediment and fulfillment of the described conditions from the Waste Regulation, marine sediment is not waste - Waste Regulation (and the same provision in Article 2 (3) of the Waste Framework Directive). In such a case, marine sediment is excluded from use.[20] In addition, marine sediment is not classified

16 Decree on Waste, Official Gazette of the Republic of Slovenia, no. 37/15, 69/15, 49/20, 129/20.

17 This is Commission Regulation (EU) no. 1357/2014 of 18 December 2014 replacing Annex III to Directive 2008/98/EC of the European Parliament and of the Council on waste and repealing certain Directives.

18 Decree on Soil Contamination by Introducing Waste, Official Gazette of the Republic of Slovenia, no. 34/08, 61/11, 44/22.

19 In all other situations where marine sediment is removed from marine aquatic land that does not fall within the scope of sediment transport for water and waterway management, flood prevention or flood and drought mitigation or soil dehydration, such marine sediment shall be considered as waste and management is governed by the rules governing waste management. For example, if marine sediment is to be deposited on land after extraction, the introduction of marine sediment into the soil is only possible if marine sediment is a component of artificially prepared soil that may only be introduced into the soil if it does not exceed the limit values laid down in the Decree on Soil Pollution by Entering Waste (in Annex 3 and Annex 4).

20 Certain other situations are exempted from the Waste Regulation, such as unpolluted soil and other naturally occurring material excavated during construction works, if this material

as waste in the case of relocation according to the mentioned provision ZVO-1: in the case of relocation, it is not a matter of discarding marine sediment, but only of moving it from part of the water land to another part.

In the present case, the operator of the cargo port of Koper plans to move marine alluvium (marine sediment) as part of its activity of managing waterways. The manager of the Koper cargo port performs this activity within the framework of the concession agreement on the management of the Koper cargo port, concluded with the Republic of Slovenia.[21] The basis for the management of the cargo port of Koper is the appropriate water right, which provides the basis for the exploitation of part of the sea and water land of the sea (port waters) for the performance of port activities. The movement of marine sediment would therefore be carried out by the operator of the Koper cargo port as part of the management of waterways, which means that the basic condition for exempting marine sediment from the rules applicable to waste is met - of course only if it does not show one or more of the dangerous properties listed in the Annex to Regulation 1357/2014/EU.

In the light of the above provisions of the Waste Regulation, it is therefore necessary to carry out an analysis of the marine sediment that the port operator intends to relocate in order to determine whether it exhibits one or more of the hazardous properties listed in the Annex to Regulation 1357/2014/EU. If the results of the analysis show that the marine sediment does not show these properties, it is not considered as waste and its movement is permissible. In such a case, the movement of marine sediment is considered to be an intervention in space (intervention in water land) that is permissible and for which a water consent must be obtained (but not an environmental consent) or in the event that the movement of marine sediment is carried out on that part of the internal sea waters in the Republic of Slovenia which belongs to one of the stated protected areas or in its immediate vicinity, also a nature protection consent.[22] However, in the event that analyses of marine sediment that a

is used in its original condition and without treatment for construction on the site where it was excavated, in accordance with the regulation governing the management of waste generated during construction works and the regulation governing the loading of soil with the introduction of waste - these substances are also not considered waste. Also in: "Guidance on the Interpretation of Key Provisions of Directive 2008/98/EC on Waste," European Commission, accessed May 14, 2021, chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://ens.dk/sites/ens.dk/files/Affald/guidance_on_the_interpretation_of_key_provisions_on_waste.pdf.

21 The legal basis for concluding a concession contract is the Decree on the Management of the Port of Koper, the Performance of Port Activities, the Granting of a Concession for the Management, Operation, Development and Regular Maintenance of Port Infrastructure in this Port, Official Gazette of the Republic of Slovenia, no. 71/08, 32/11, 53/13, 25/14, 3/18, 41/18, 62/19, 51/21.

22 Some EU Member States prescribe in their regulations for the transport of marine sediment the maximum permitted levels of certain pollutants in marine sediment. For example, Finland, Germany, Estonia and others - see more in: "Environmental Policy and Legislation on Dredged Material in the Baltic Sea Region Project Acronym: SMOCS Under the Project Sustainable Management of Contaminated Sediments, Baltic Sea Region Program Project," IEEE.org, accessed May 14, 2021, https://ieeexplore.ieee.org/abstract/

port operator intends to relocate show that it exhibits one or more of the hazardous properties listed in the Annex to Regulation 1357/2014/EU, marine sediment would be considered (hazardous) waste and would not be relocated; ZV-1 explicitly prohibits the dumping of waste on water land.[23] As we have already explained, the transfer of marine sediment is an intervention in space, so the possibility of such an intervention on the water land of the sea must be given, given that ZUreP-2 in the aforementioned provision of Article 50 stipulates that the state provided for the intervention in the national spatial plan.

3.1.6 Cultural Heritage Protection Law

Removal of marine sediment, during which a certain amount of marine sediment is removed from marine water land and transferred to other parts of marine aquatic land, may also be an activity affecting cultural heritage.

According to provisions of ZVKD-1,[24] it is necessary to assess the acceptability of the activities which affect the environment envisaged in the MSP, and in this context as part of the comprehensive environmental impact assessment procedure from the point of view of cultural heritage protection.

If the movement of marine sediment was carried out on that part of the internal sea waters in the Republic of Slovenia where registered archeological sites are located or in their immediate vicinity, it would be necessary to obtain cultural consent for this intervention, if so, determined by the relevant spatial act - hence the Maritime Spatial Plan.

3.2 Port of Koper Case

3.2.1 The Need to Move Marine Sediment (Marine Sludge)

In the area of the Port of Koper, all those who, due to their activities, carry out occasional deepening of the sea by dredging up sediment to ensure the safety of navigation and carry out investments related to increasing depths, have the need to move this marine sediment. Due to the lack of available land areas, all marina and mandrake operators are also interested parties.

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document/6249171?section=abstract.

23 In such a case, it would not be permissible to introduce marine sediment into the soil, nor to dispose of it in a non-hazardous waste landfill in accordance with the Landfill Regulation, but to treat it as hazardous waste - in accordance with the Waste Regulation and the Disposal of Waste in Landfills, for example, its processing into a product would be possible - see more details on the possible use of excavated marine sediment in so-called dredged material in "Sustainable Substrates for Agriculture From Dredged Remediated Marine Sediments: From Ports to Pots," Research Gate, accessed May 14, 2021, http://www.lifesubsed.com/wp-content/uploads/2019/03/SUBSED-Deliverable-A.1-Review-of-legislation-on-dredged-sediment-management.pdf.

24 Cultural Heritage Protection Act, Official Gazette of the Republic of Slovenia, no. 16/28, 123/08, 8/11, 30/11, 90/12, 111/13, 32/16, 21/18. (hereinafter: ZVKD-1).

3.2.2 Legal Possibilities of Port of Koper Concerning the Movement of Marine Sediment (Marine Sludge)

Luka Koper, d.d. is the operator of the Port of Koper. According to the described provisions of ZV-1, the removal of marine sediment by which a certain amount of marine sediment is removed from the sea water land to other parts of the sea water land should be considered as a land use, more specifically as a land use, which affects the physical structure of sea water land. According to the described provisions of ZV-1, such an activity is therefore not a special use of water (sea), nor is it the use of alluvium, because marine sediment is not removed from marine land, but is only transferred from one part of the marine aquatic land to another part of the marine aquatic land. Therefore, it is not necessary to obtain a water right under the provisions of ZV-1 for such an activity. Since the movement of marine sediment constitutes a land use, the possibility of such a land use should be included in state spatial plan. This condition was fulfilled as the MSP of Slovenia came into force in July 2021. In MSP there is the possibility of moving marine sediment from one part of the marine aquatic land to other parts. For the need of dredged material relocation, the MSP envisages two potential relocation sites reduced by the area of remote impact on protected natural areas and areas of cultural heritage protection. The reduced marine sediment relocation area at the anchorage represents the location for conducting the test dredged material relocation. Test dredged material relocation is limited in quantity, space, and time; further dredged material relocation at either potential site is only possible if it can be demonstrated that there will be a non-significant impact to the environment in the test area. For the test relocation area, the investor of the intervention must provide more detailed analyses of the environmental factors that influence the extent and nature of the impact of the relocation on the environment, nature, and underwater archaeological heritage.[25]

Since the removal of marine sediment is a land use, which does not include building construction, it is not necessary to obtain a building permit, but it is necessary to obtain water consent in accordance with the described provisions of ZV-1. In accordance with Annex 1 to the Regulation on the Types of Activities Affecting the Environment, the marine sediment removal does not require an environmental impact assessment. If the movement of marine sediment will be carried out in that part of the internal sea waters in the Republic of Slovenia which belongs to one of the listed protection areas according to nature conservation regulations, or in its immediate vicinity, it would be necessary to obtain nature protection consent. If the movement of marine sediment was to be carried out in that part of the internal sea waters in the Republic of Slovenia, where registered archaeological sites are located or in their immediate vicinity, it would be necessary to obtain cultural consent. Marine sediment or alluvium which is moved within surface waters for the management of water and waterways, to prevent floods or to mitigate the effects of floods and droughts or soil drainage, does not fall under the rules governing waste management, if it is not hazardous waste. If such is the case, marine sediment is not considered as a waste and its movement shall be permissible.

25 Annex to the Decree on the Maritime Spatial Plan of Slovenia, p. 30.

However, in the event that analyses of marine sediment that a port operator intends to relocate exhibits one or more of the hazardous properties listed in the Annex to Regulation 1357/2014/EU, marine sediment would be considered as (hazardous) waste and its movement would not be permissible, because ZV-1 in that provision explicitly prohibits the dumping of waste on water land.

3.3 Italian Regulation

Slovenian and Italian starting points on the relocation of dredged material differ in two main respects. The first is that Italy is a founding member of the EU and therefore has been bound by European legislation for a longer period of time, and the second is that Slovenia has a lesser need to dispose of dredged material from a relatively smaller area than Italy, which has more such areas that are very different and where the initial conditions for dealing with dredged material on the seabed can vary greatly from case to case. Against this background, the point of this comparison is that at least some ports, namely the ports of Trieste and Monfalcone, face a relatively similar seabed and similar conditions to those in the port of Koper.

There is one important difference between the Italian and Slovenian legal systems that in our opinion should be considered - i.e., three different manifestations of law in Italy: [26] the ordinary law (L.), the legislative decree (LG.D.) and the decree law (D.L.). L. is adopted by parliament. LG.D. is used when parliament delegates the exercise of the legislative function to the government. This can be used for a limited period of time. Parliament provides principles and guidelines that the government must follow. The government then has the right to issue an act with the force of an ordinary law (LG.D.). In an exceptional case, the government has the right to enact a decree (DL) that later loses its force if it is not passed as a law by Parliament within 60 days.[27]

In the Slovenian legal system, there are in practice only ordinary laws.[28] It is true that the Slovenian Constitution does have a decree with legislative force, which is applied in exceptional cases when the parliament is unable to convene, but on the other hand, this has not yet occurred in practice.

The first Italian regulation to mention is the LG.D. n. 22/97, which identifies

26 In this context, the law is to be understood as the most widespread general and abstract legal act with the force of law, passed by the parliament of the country in question. A detailed comparative analysis of the hierarchy and legal system of Italy and Slovenia is beyond the scope of this paper. The main difference we describe here is that Slovenia knows only one type of law (zakon/zakonik - the only difference is in the scope of regulation), while Italy knows three different types of laws.

27 "Legal Systems in Italy: Overview," Thomson Reuters, accessed May 14, 2021, https://uk.practicallaw.thomsonreuters.com/w-007-7826?transitionType=Default&contextData=(sc.Default)&firstPage=true.

28 There are actually two types of the general and abstract act with a legislative force that are adopted by parliament in the Republic of Slovenia (Državni zbor). Nevertheless, the difference in comparison to that of the Italian system is minor. The first one is called a code (e.g., Maritime Code): it is a regulation that comprehensively regulates a complete legal area. The second is narrower in content and simply referred to as an act (e.g., Water Act).

dredged sediments as waste.[29] Once a material is defined as waste, any manipulation with it is severely restricted and highly limited. Later LG. D. 152/2006[30] was adopted, which defines in Article 184 - ter. that a waste ceases to be such when it has undergone a recovery operation, including recycling and preparation for reuse, and in compliance with the following conditions: (i) the substance or object is intended for use for specific purposes; (ii) there is a market or demand for that substance or object; (iii) the substance or object meets the technical requirements for specific purposes and complies with the legislation and standards applicable to products; (iv) the use of the substance or object does not lead to overall negative impacts on the environment or human health. Article 184 - Quarter of LG.D. defines the use of dredged material. Under this provision, it ceases to be waste when it is used in compliance with the following requirements and conditions: (i) it does not exceed the values of the contamination threshold concentrations or, in the case of direct use in a production cycle, it meets the technical requirements, (ii) the destination is fixed and the materials are used directly, including for the purpose of environmental reuse or reconstruction, without posing risks to the environmental matrices concerned and, in particular, without causing contamination of groundwater and surface water. On the other hand, in the case of direct use in a production cycle, they must comply with the technical requirements for the aforementioned purposes, the existing legislation and standards for products and raw materials and, in particular, they must not lead to higher or qualitatively different emissions into the environment than when using products and raw materials for which the permit to operate the installation was granted.

M.D. 05/02/1998 (Identification of Non-Hazardous Waste Subject to Simplified Recovery Procedures under Articles 31 and 33 of Legislative Decree 5 February 1997, no. 22)[31] establishes the general technical standards that identify the types of non-hazardous waste and establish the conditions for each type of waste and for each activity and method of its recovery. M.D. 05/02/1998 represents the only legislation for the reuse of dredged material inland and refers only to inland waters and is therefore not relevant to this paper.

Another important rule from LG.D. 152/2006 is Article 184 bis.[32] which defines the conditions that must be met for a substance or object to be a by-product and not a waste: (i) the substance or object originates from a production process of which it is an integral part and the main purpose of which is not the production of that substance or object; (ii) it is clear that the substance or object is used by the manufacturer or by third parties during the same or a subsequent production or use process; (iii) the substance or object can be used directly without further treatment beyond normal industrial practice; (iv) the further use is lawful, i.e. the substance or object fulfills all relevant product and health and environmental protection requirements for the

29 Research Gate, "Sustainable Substrates."
30 Decreto legislativo no. 152/2006, Norme in materia ambientale, Official Gazette of Italian Republic, no. 88/06.
31 Research Gate, "Sustainable Substrates."
32 Research Gate, "Sustainable Substrates."

specific use and will not lead to overall negative impacts on the environment or human health.

Article 184 bis. of LG.D. 152/2006 grants the competent Ministry to establish, in one or more Ministerial Decrees (M.D.), the qualitative or quantitative criteria to determine the specific typology of the state or objects that are considered by-products and not waste. This was later done in M.D. 10/08/2012, n. 161 (Regulation on the use of excavated earth and rocks), which contains provisions for excavated earth and rocks in cases where these earth and rocks may be reused as a by-products and not characterized as waste. LG.D. 21/06/2013, n. 69 (later transitioned into Law 09/08/2013, no. 98) regulates simplifications for excavated earth and rock not exceeding 6000 cubic meters and cases not covered by M.D. 10/08/2012.

A lengthy regulation that is connected with many facets is L. n. 27/2012,[33] which places art. 5-bis (provisions on dredging), which amends par. 11-bis to 11-sexies of art. 5 of L. n. 84/94. The amendments deal with materials deriving from the dredging activities of port and marine-coastal areas located where reclamation is in the national interest. The latter are defined in article 252 of L.D. n. 152/2006. The precondition for the relocation of the dredged material provides for a project approved by a successive decision, firstly by the ministry responsible for infrastructure and secondly by the ministry responsible for the environment. The latter is required to obtain the opinion of the commission in accordance with Article 8 of LG.D. 152/2006, which decides whether or not the project must be the subject of an environmental impact assessment. If the dredged material (i) has physical, chemical, and microbiological characteristics similar to the natural background in relation with reference to the sampling site and suitable in relation to the destination site, and (ii) does not have positive ecotoxicological tests, it may be discharged or returned to the water bodies from which it originated, or it may be used for beach renovation, coastal land formation or to improve the condition of the seabed through capping activities.

One more act that is important and should be mentioned[34] is M.D. 264/2016. It was passed for two main reasons: the first is the fact that the terms "waste" and "by-product" were interpreted in a non-homogeneous way and the second to facilitate the use of by-products of substances and objects derived from a production process.

The Italian regulation is more detailed than the Slovenian one, but ultimately leads to the same result. Time will tell whether the Italian approach is more reasonable than the Slovenian one with respect to the practical problems of implementing regulation. In this sense, it seems useful to further study the Italian experience and compare it with the Slovenian one when the rules on the dredged seabed material will be applied. If the Italian approach proves to be better, it would make sense to follow the Italian example.

33 Legge no. 27/12, Conversione, con modificazioni, del decreto-legge, no. 1/12: Misure urgenti in materia di concorrenza, liberalizzazioni e infrastrutture, Official Gazette of Italian Republic, no. 71/12.

34 Research Gate, "Sustainable Substrates."

4 CONCLUSION

The research question for this paper is whether and under what conditions it is permissible to move dredged seabed material (marine sediment) to another position in the territorial sea, in accordance with the European Union, international and Slovenian local regulatory framework. The scientific contribution of this paper is to provide a thorough analysis and synthesis of the results of the analysis in a clear and coherent manner in one place. Crucially, the paper took a horizontal approach to the problem of the moving of dredged seabed material and the finding that it is a complex web interweaving of legal sources that were created to a large extent independently of each other. The paper thus provided a clear answer to the research question posed. We found that the legal rules in the Republic of Slovenia in the areas of water, land use, environmental, nature protection, waste and cultural heritage law are harmonized, where is expected, with international and European legislation, and that at the present time there is no need for legislative action on the relocation of dredged seabed material. At the same time, we should also note that the legal framework in Slovenia is not tailored for the movement of marine sediments, except for MPS, but by interpreting the existing legislation we can find a solution for the movement. Italy has taken a slightly different approach. Unlike Slovenia, Italy explicitly refers to the dredged seabed material in its regulations. Interestingly, the end result is the same as in Slovenia. It often happens that various stakeholders expect a new legal framework and legal bases for each new topic or activity. We believe that such an approach is not good and leads to overregulation. The multitude of regulations often obscures a specific challenge instead of solving it. This is exactly the case with the legal areas mentioned above. It is a difficult undertaking to work through all these regulations. Each regulation on its own may be clear and concise, but all of them together represent an impenetrable jungle of interlocking legal rules, and not just at first glance. Therefore, we believe that new legal rules for moving the dredged seabed material are not necessary and that the existing ones, under certain conditions of course, allow for this activity.

The findings of this paper could be summarized in three contents. The first finding is that removal of marine sediment by which a certain amount of marine sediment is removed from the seawater land to other parts of the seawater land, should be considered as land use, more precisely as land use that affects the physical structure of the seawater land. According to EU and Slovenian law, such activity is not a special use of water (sea), nor is it the use of alluvium, since the sea sediment is not removed from the marine aquatic land, but only transferred from one part of the marine aquatic land to another part of the marine aquatic land. Therefore, it is not necessary to acquire a water right for such an activity. Since the movement of marine sediments constitutes a land use, the possibility of such land use has been included in the Slovenian State Maritime Spatial Plan (MSP). Within the framework of this plan, the permissibility of the movement of marine sediments should also be examined in terms of nature protection and protection of cultural heritage. The second finding is that since marine sediment removal is a land use that does not involve the

construction of buildings, a building permit is not required, but a water consent is. No environmental impact assessment is required for marine sediment removal. If the movement of marine sediments is carried out in the part of the internal sea waters or territorial sea of the Republic of Slovenia that belongs to one of the listed protected areas according to the nature protection regulations, or in its immediate vicinity, a nature protection consent is required. If the movement of marine sediments is to be carried out in the part of the internal sea waters or territorial sea of the Republic of Slovenia where registered archaeological sites are located or in their immediate vicinity, a cultural consent would be required. The third finding is that marine sediment or alluvium moved within surface waters for the management of waters and waterways, to prevent flooding or mitigate the effects of floods and droughts, or for land drainage is not subject to waste management regulations if it is not hazardous waste. If this is the case, marine sediments are not considered waste and their movement is permitted. However, if analyses of marine sediments that a port operator intends to relocate shows one or more of the hazardous properties listed in the Annex to Regulation 1357/2014/EU, the marine sediments would be considered waste (and hazardous) and their movement would not be permitted.

We note that in Slovenia, at this stage, it is not necessary to add the special normative part related to the movement of dredged seabed material. The key will be to monitor this activity and then we will see if the practice brings some challenges that we cannot foresee now. That will certainly be evidenced by the monitoring of the implementation of MSP. This paper did not analyze the possibility of relocation of the dredged seabed to other parts of the seabed outside the territorial waters. This could be researched as these other parts of the seabed are subject to different regime than the seabed in territorial waters, which is under the full sovereignty of a coastal state.

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Sažetak

PRAVNI ASPEKTI PREMJEŠTANJA JARUŽANOG MATERIJALA S MORSKOG DNA U REPUBLICI SLOVENIJI

Rad se bavi pitanjem dopustivosti premještanja iskopanog materijala s morskog dna iz luke Kopar na drugo mjesto unutar teritorijalnog mora Republike Slovenije. Na prvi pogled jednostavno pitanje razmatra se sa stajališta pravne dopuštenosti takvog ponašanja, uvažavajući da je riječ o izrazito multidisciplinarnom pitanju. Raspravlja se o aspektima međunarodnog prava, prava Europske unije, slovenskog i talijanskoga nacionalnog prava. Potonje se razmatra jer se Italija suočava s istim problemima odlaganja ili premještanja iskopanog materijala u bazenu Tršćanskog zaljeva kao i Slovenija, za razliku od Hrvatske koja nema većih luka na tom području. Međutim, slovenska i talijanska regulativa i iskustva mogu biti zanimljiva i korisna Hrvatskoj za njezine lokalne luke ili veće luke u drugim dijelovima Jadrana.

Ključne riječi: *jaružanje; jaružani materijal; morski sediment; premještanje iskopanog materijala; otpad; ekološki propisi.*

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