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Executive summary

This report brings the overview of the currently applied costing and pricing schemes in the Danube ports of Austria, Hungary, Slovakia, Croatia, Serbia, and Romania (seaport of Constanta only).

Analysis of the applied tariff policies in the ports of the aforementioned countries began with the brief overview of status of ports in terms of legal treatment of port areas (land and infrastructure), as well as with the port governance status along with the port tariffs regulations. All of these aspects are important and have a crucial influence on the system of port pricing applied in different ports.

Furthermore, the participating project partners provided an insight into the track of port reforms in the recent past, as well as responsibilities, options and funding sources for financing of new investments in ports.

Various approaches to port pricing and applied port pricing principles are analysed, revealing an insight into the objectives of port pricing in each country. In addition, standard types if infrastructure fees were discussed and explained, including the unit basis for charging as well as differentiation methods currently in use.

Last, but not least, alternative pricing methods for charging the use of port infrastructure fees are proposed by project partners from participating countries. The reason for focusing on the infrastructure fees lays in the fact that services, usually charged by port operators, are already fully commercial fees and are, typically, aimed at creating reasonable profit margin after covering the fixed and variable costs related to the provision of port services. This means that the level of their flexibility and adaptability to market dynamics is already high. On the other hand, infrastructure fees are typically regulated fees, charged by public bodies (in most of the cases) with the aim which is not always purely commercial. Depending on the legal setup of port governance in each Danube country, port infrastructure fees are regulated by legal acts and are compulsory publicly available.

In *Austria*, having the port governance system fully commercialized, port tariffs are regulated by a specific law related to port and inland navigation. Applied pricing approach is economic, while port pricing is based on empirical intuition and past trends based pricing. In terms of proposed alternative pricing method for infrastructure use, Ennshafen proposed the so-called green incentives, offering various discounts to vessel using alternative fuels leaving near zero or zero emissions.

In *Slovakia*, port governance system is intended to match the landlord port management model, whereas the private operator owns both suprastructure and infrastructure, while the port land is owned by the state owned port authority. Infrastructure fees in public ports on the Slovak section of Danube are collected by port authority, state-owned VPAS in accordance with approved legislation. In existing ports, new investments are primarily made by private operator, while the port authority can invest in the port land which is not leased to any operator. Approach to port pricing is mixed, financial approach and public body approach. Port infrastructure fees are charged on a cost recovery basis. In terms of proposed

alternative pricing method for infrastructure use, VPAS proposed a mixture of cost-based pricing, value-based pricing and performance-based pricing.

In *Hungary*, the port governance system is extremely complex. There are public and private ports, whereas public ports are either leased to private operators or managed by an independent company (acting as a port authority) which, in certain cases, can lease port areas to private operators. Ports also differ in the type of services they provide to third parties. While public ports are open to the public, private ports do not generally provide transhipment facilities for third parties. While public service and freight ports focus primarily on the provision of public services, fully privatised ports serve the needs of the private sector. Leased ports have a mixed image, seeking to balance the interests of the public (port operators) and private (port companies). In the case of Centroport Dunaújváros, infrastructure fees, cargo related services fees and nautical-technical service fee are also the responsibility of the port operator. In the case of the Port of Budapest-Csepel, the infrastructure fees and the nautical-technical service fee are determined on the basis of the GKM Decree 49/2002 (XII. 28.), while the cargo related service fee is determined by the port operator at its own discretion. According to the GKM Decree, the fees payable for the use of the port, as well as the method and conditions of payment, must be published in a clearly visible place in the port. The operator may require advance payment of the port fees. Floating installations seeking shelter in the port in response to the contents of the storm and waiting for up to 30 minutes for the arrival of an authority for an official inspection are exempt from the payment of port fees. In terms of alternative pricing of port infrastructure, HFIP proposed a harmonization of vessel-related tariffs for larger ports, according to the typical vessel types. In addition, it is proposed that the differentiation is based on the environmental impact of vessels and that the port fees are calculated purely on the basis of maintenance and investment costs + profit.

In *Croatia*, inland ports are primarily organized as landlord ports, governed by port authorities (acting as landlords), while they are operated by independent public operators, largely private. In public ports, port authorities are obliged to ensure business sustainability and financial stability, taking into account the economic criteria for valuing the port services market. Port authorities in a public port must ensure, within the limits of available capacities, equal conditions for the use of services to all vessels and to all persons without discrimination. With regard to port charges, the maximum amount determined for port dues is defined by the ministerial order, and the amount of port dues is determined by the Port Authority up to the maximum amount defined by the order. The Port Authority charges port dues, while port tariffs (transhipment service) are charged by the concessionaire. In terms of alternative pricing schemes, PAV proposed the so called GREENCENTIVE - an incentive for the use of scrubbers and alternative fuel sources applied on the quay usage dues.

In *Serbia*, the port governance system is organized a landlord system where the State owns the port land (in designated port areas) and port infrastructure in several ports. In other ports, port infrastructure is owned by private operators. Ports are administratively governed by the Port Governance Agency (PGA), acting as a national port authority. Law on navigation and ports on inland waters regulate charging of Concession fees and fees for Operational usage of port, paid by Port Operators/Concessionaires. Basic parameters and principles for the methodology of the fee determination are given within the Law, but the exact fee determination is

elaborated/given in each Concession proposal or Licence for Port Operations. On the other hand, infrastructure fees are regulated by the Law on Charges for the Usage of Public Goods, which defines the Port Governance Agency as a fee regulating (and charging) institution, responsible parties for reporting and paying fee for the use of ports, types of fees, methodology of calculation and amounts. In terms of alternative pricing of port infrastructure, the PGA proposed the sliding fee scale for the wharfage fees for containers, differentiated according to the volumes (number of TEU), whereas the cargo owner (shipper or receiver) gets discounts when determined cargo volumes are reached. Moreover, a 20% discount is proposed for the wharfage fee and berth fee in case of vessels using alternative clean fuels.

In *Romania*, only seaports are analysed in this report, while no inputs were received for the Danube ports. Port of Constanta is a typical landlord port, being a public-private maritime port owned by the Romanian State which is responsible for its regulation and function. The National Company "Maritime Ports Administration" S.A. Constanta (MPAC) is a company under the authority of the Ministry of Transports and Infrastructure and acts as a corporatized port authority. The company's own sources are obtained from the distribution of the company's net profit and from the depreciation of the fixed assets in the company's records and are used to achieve the objectives of infrastructure, superstructure, endowments and modernizations in the port. The budget allocations are approved by the State Budget and are received at the company level through the budget sheet from the Ministry of Transport and Infrastructure and aim at port infrastructure objectives. Port fees are regulated by applicable laws and by-laws, and the port pricing principles are cost-based and performance-based. MPAC did not provide any proposals for alternative port pricing schemes for the use of port infrastructure.

No inputs were received from Ukraine, due to the ongoing conflict.

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3 Abbreviations

Abbreviation	Explanation
PA	Port authority
PO	Port operator
IWT	Inland waterway transportation
MPAC	Maritime Port Authority of Constanta
PGA	Port Governance Agency
HFIP	Hungarian Federation of Inland Ports
PAV	Port Authority of Vukovar
CBA	Cost-benefit analysis
VPAS	Verejné prístavy, a. s.

4 Introduction

4.1 Scope of the report

The focus of the report is actual data on the applied pricing principles by the participating port authorities and port operators, covering all Danube countries except Bulgaria and Moldova since the participation of project partners from these two countries was not planned for this deliverable. Unfortunately, partners from Ukraine were prevented to participate in the elaboration of this report due to current armed conflict in that country. The report encompasses the existing type of charges applied in ports, the entities responsible to levy different charges, entities who bear the costs generated by these charges and the methodology for determination and/or calculation of applied charges. In addition, an important part of the report is dedicated to the proposal for alternative pricing methods for infrastructure fees in ports.

4.2 Can port pricing be used as a tool for port development?

The reason for focusing on the infrastructure fees lays in the fact that services, usually charged by port operators, are already fully commercial fees and are, typically, aimed at creating reasonable profit margin after covering the fixed and variable costs related to the provision of port services. This means that the level of their flexibility and adaptability to market dynamics is already high. On the other hand, infrastructure fees are typically regulated fees, charged by public bodies (in most of the cases) with the aim which is not always purely commercial. Depending on the legal setup of port governance in each Danube country, port infrastructure fees are regulated by legal acts and are compulsory publicly available. In many countries, not only of the Danube region but also globally, ports are rightly treated as strategic objects of national transport infrastructure. As such, ports are subject to public sector regulation in terms of governing, developing, exploitation (operation) and charging policies. Whereas contemporary ports are largely open to private sector, or to various forms of public-private partnerships, in the aspects of operation, the governance aspects of ports are, rightfully reserved for the public sector. Port governance may take various forms. In the Danube area, virtually all port management models are represented: from fully public ports to fully private ports, where the latter are an exception rather than a rule. Port governing bodies, typically known as port authorities, in the Danube area range from governmental bodies or agencies to publicly owned commercialized or corporatized port authorities, with the exception of Hungary where links to governmental overwatch are very weak, and no public port authorities as such exist in any form. However, as already mentioned, the Hungarian case is an exception rather than a rule and therefore will be treated as such.

Apart from providing an insight into different port pricing schemes applied in the Danube region, this deliverable will attempt to provide different views on potential alternative pricing methods for port infrastructure fees, in order to make them less rigid and more flexible and adaptable to dynamic changes at the waterborne transport market. These dynamic changes may be caused by market volatility,

physical restrictions of navigation or even induced by strategically planned focus on, say, exports of certain type of goods using waterborne transportation. This is necessary in order to keep the existing port users loyal to ports and to the option of waterborne transport, as well as to attract new users and therefore trigger additional potentials for port development thanks to the increased cargo volumes handled in ports. Doing this, dynamic and flexible port pricing will become a tool for the development of ports and, consequently, hinterland transport.

5 Port pricing in Austria

5.1 Status of ports

There is no special legal status for ports in Austria, they are organized in form of a "GmbH" according to Austria law, even if the owners of these GmbHs (the shareholders) are coming from the governmental or municipality spheres.

Beside the fact that the ports are of "regional importance" of a region or municipality as a necessary and infrastructure element (an important factor of business settlement and development in general) they have no special status. All official departments (ministry, region, ...) have close contacts with ports, even in strategic items, but formally there is no special level for the ports, the current status derives only from long-period good permanent cooperation.

Legislation: In Austria the main legal regulation governing ports is the Federal Navigation Law (Schifffahrtsgesetz). It consists of several individual parts and governs all regulatory aspects of Austrian navigation and port law. For the purpose of this report the most relevant part is the third part, which stipulates rules for the construction and operation of shipping facilities such as ports. The application of the Navigation Law depends on the type of body of water concerned. The Navigation Law applies i. a. to the Danube which is defined as waterway pursuant to Article 1 (1) in connection with Article 15 (1) Navigation Law and Article 2 (1) Water Rights Act (Wasserrechtsgesetz3).

On the level of secondary legislation, the most important regulations are the Shipping Facilities Ordinance (Schifffahrtsanlagenverordnung4) and the Waterway Traffic Ordinance (Wasserstraßen-Verkehrsordnung5). Both ordinances were passed by the transport ministry and specify primary legislation. The Shipping Facilities Ordinance regulates, in particular, the operation and use of shipping facilities as well as port fees. The Waterway Traffic Ordinance, inter alia, lays down general rules for the navigation of the Danube and also stipulates rules for ports.

5.2 Port governance status

In Austria, there is no general governance system for all ports. Austria has 4 public ports (which have differences in their ownerships) and several private ports. The ownership of ports is not defined in Austrian legislation.

For example, the situation für Ennshafen port is as follows: Ennshafen OÖ GmbH – a company owned by the federal district of Upper Austria – is the owner of the port and do all the administration of the port; Ennshafen port has the PPP-principle (public, private partnership) as a core part of the business strategy, therefore only responsible for the building the basic infrastructure, the superstructure is invested by private companies, who have got special contracts with EHOO (license contracts and shipment contracts); as well the core parts of the Ennshafen port (quays) are part of a greater mixed area, were a lot of other private companies are owners of ground, buildings and transshipment facilities;

However, in practice in Austria a clear distinction has to be made between "port owner" and "port shareholder". In Austria the Danube ports are owned by companies and not directly by the state or municipality. Some of the shareholders of these companies are, however, "state bodies".

In the Ennshafen port, due to the legal situation the port companies (Ennshafen OÖ GmbH and Ennshafen NÖ GmbH) are the owners of all the licenses and the assets, etc. – so these companies are the "owner"; but in some other aspects the "owner" shall characterize the ownership of the company (state owned). Therefore, the shareholders of Ennshafen OÖ GmbH and Ennshafen NÖ GmbH is the province of Upper Austria (via other shareholder companies) and the province of Lower Austria (via another company).

For the ports of Vienna, Linz and Krems there are in principle similar constructions of ownerships in the governance (via the corresponding shareholder- companies of their municipalities).

Hafen Wien GmbH is a member of a public company Wien Holding which has 95% of ownership of Hafen Wien GmbH, while the Vienna Economic Chamber (Wirtschaftskammer Wien) has a 5 percent share in the company. Hafen Wien GmbH is the owner of the port facilities comprising real estate, buildings, wharf equipment, and manages the harbours in Freudenau, Albern and Lobau. Apart from ownership and operation of all storage and vehicle facilities and all real estate that is not directly located in the port, the company Hafen Wien GmbH is responsible for all crane operations required for cargo handling. It also manages the holdings WienCont and TerminalSped. Since 2020, the Port of Vienna is called Hafen Wien GmbH. Both former operating companies, Wiener Hafen GmbH & Co KG and Wiener Hafen und Lager Ausbau- und Vermögensverwaltung GmbH & Co KG have been integrated into Wiener Hafen Management GmbH. As a result, Management GmbH was renamed to Hafen Wien GmbH.

5.3 Track record of port reforms

There has been no port reform in Austria. The ports have been founded as GmbH according to Austrian public law and as such entities are free to develop in their relevant market circumstances as others (land lease, operating contracts, …). It is a question of decision of the ports governance bodies (shareholders) to allow something for the port company or not (under the framework of the respective law). Each port is free to decide using modern management tools, outsourcing, cooperation contracts, reengineering of business processes, etc. Only in the ports companies function as port authority they are fixed by the respective Austrian law.

Each port decides what is the best for his development and takes decisions based on this strategy (with or without accompanying by external advisors or experts).

5.4 Port tariffs regulation

AUSTRIAN LEGAL BASES

- Federal Act on Inland Navigation /Shipping Act – ["SchFG / Schifffahrtsgesetz"]
- Ordinance of the Federal Ministry of Transport, Innovation and Technology on shipping facilities and other installations and works on waterways ["SchAVO / Schifffahrtsanlagenverordnung"]
- Tariff regulation of each port (based on above legal acts)

Shipping Act [SchFG] of 2015-07-23 (BGBl. I No. 62/1997 idgF)

In the 6th main section of the SchFG, the port charges are regulated in sections 68 to 70, which are summarised in extracts as follows:

Port charges for public and private ports (in cases of emergency and winter status):

(1) For the use of public ports by vehicles or floating objects, port charges may be charged only on the basis of tariffs which apply in the same way to everyone.

(2) The following services are covered by the payment of the port fee:

- Use of the port for handling or demurrage purposes
- Use of waste and waste oil collection points
- Use of sanitary facilities intended for the crew of the ship and drinking water supply
- Facilities of keeping the port free of ice

(3) The person entitled to use the vehicle or floating object and the skipper are obliged to pay the port fees.

(4) Determination of tariffs by legislated ordinance pursuant to § 70

(5) Publication of tariffs

Determination of port charges is made by issuing regulations on the determination of services to be compensated by port charges:

(1) Fee types (shore fee, demurrage fee and winter fee)

(2) Basics of the calculation of port charges, taking into account the handling of goods and the type and size of vehicles or floating objects

(3) Determination of port tariffs

(4) Exemption for vehicles in the public interest or of vehicles or floating objects used for port operations

(5) the claim of the fees and the date of the maturity of the port charges

Shipping Systems Ordinance [SchAVO] of 2015-07-23 (StF BGBl. II No. 298/2008)

In the 5th and 6th part of SchAVO the port charges for the use of public or private ports by vehicles or floating objects are regulated and summarized in extracts as follows:

Part 5 – Port charges for public ports (§§ 41 – 51)

Types of port fees

I) Shore fee

is payable for the use of the port for transshipment purposes due after completion of the handling. In the case of transshipping from vehicle to vehicle, half of the shore fee must be paid for each vehicle.

Basis of assessment: quantity of goods transshipped in tons.

II) Demurrage fee

is payable for the use of the port except during the winter period or the period without charge and is due before departure from the port.

Free berthing time includes:

- The day of arrival into the port for the purpose of transshipment and the following day. If this day is a Sunday or other public holiday, the end of the next working day marks the end of the free berthing time.
- The time necessary for the transshipment process and time spent waiting for the transshipment or time during which the transshipment is interrupted – provided that the holder or a third-party authorized by them pays port fees for the transshipment and the lawful holder of the vehicle or floating object is not responsible for the delay.

Basis of assessment:

- maximum cargo capacity in tons for vehicles intended to transport
- goods or maximum water displacement at the deepest permitted immersion for vehicles not intended to transport goods.
- demurrage time in days.

III) Winter fee

is payable for the use of the port as one-off-amount during winter period from 15th December to 15th March, unless the calculation of the demurrage fee is more favourable to the payer, and is due before departure from the port.

Basis of assessment:

maximum cargo capacity in tons for vehicles intended to transport goods or maximum water displacement at the deepest permitted immersion for vehicles not intended to transport goods.

For the calculation of port tariffs, the port administration shall be granted access by the payers to the ship and loading documents.

The port charge tariffs shall be determined by the port authority, taking into account the average cost of a period of five years for the maintenance, operation, interest and amortization of the construction costs of:

- port basins
- mooring facilities
- waste and waste oil collection points
- sanitary facilities, drinking water sampling points and water abstraction points for ship crew
- facilities for keeping the port free of ice

The demurrage fee must amount to the twentieth part of the shore fee (in relation to the assessment unit).

The winter fee must correspond to the demurrage for 20 days.

Part 6 – Port charges for private ports (§§ 52 – 53)

Port charges (demurrage and winter fee) for the use of private ports due to flooding, ice or other adverse circumstances or official orders may not exceed the tariffs approved for a public port at most.

The special tariff regulations of the ports have to be approved by the local authorities ("Bezirksverwaltungsbehörden").

Regarding the service fees in ports there is no special law. Each port can decide these figures based on commercial considerations (drinking water supply, electricity supply, handling fees, storage fees, lease payments, ….).

5.5 Financing of new investments

In Austria, the new investments are done by the ports, as the ports are free business entities ("GmbH") according to Austrian law. The decision for this construction was done decades ago, as the ports have been founded in the form of own legal entities.

The new investments have to be financed out of the ports business assets, special subsidies for these investments and bank loans. Therefore, business cases are necessary for each new investment (CBA, amortisation rates, …) as each port is measured against the strict business KPIs (equity ratio, debt repayment period) like each other company on the market.

5.6 Financing of maintenance of existing infrastructure assets

For the maintenance of infrastructure there is the same situation as for investments: it has to be paid by the port itself and is part of the yearly income status document (see 5.5).

5.7 Public subsidies for ports

Port companies can apply for subsidies as each other (private) company in special open national programs of the founding agencies of the Austrian ministries – simply the same for application on EU-level). It depends on the details for what the applicants are applying: for investments the applicants get normally direct cash or sometimes loans (e.g. "ERP-funds"); for R&D-projects the applicants may even get payments for supporting staff cost (similar to international programs like DTP).

However, there is no "automatism" to get the subsidies as a port – port companies have to apply to open national (or international) programs and calls like anybody else in Austria. It is competition on the "subsidies market".

The based regulations are several: either transport or energy or … - but all national funding programs in Austria are based on behind legal acts and are in accordance with the European state aid rules.

5.8 Approach to port pricing

Infrastructure fees:

The main approach for this field of fees is the economic approach. The effects to all involved parties are considered in behind to find a balanced level of price, which should be acceptable to the clients. By this, a good averaged way is expected which will also boost cargo transport ton inland waterway while not be only a public body approach.

Service fees:

The main approach for this field of fees is the economic approach. The effects to all involved parties are considered in behind to find a balanced level of price, which should be acceptable to the clients.

Nautical-technical service fees:

Even this kind of fees does not have real relevance for Ennshafen port, an economic approach would be selected if it is applied. As described under "infrastructure fees" an average way is selected to keep the system in balance.

5.9 Port pricing principles

For all types of port tariffs the pricing principles applied are the empirical intuition and trends based pricing.

Port pricing principles *(mark X where applicable)*	Infrastructure fees	Service fees (cargo)	Nautical-technical services
Cost recovery base			
Performance base			
Value (for the user) base			
Empirical intuition and past trends based pricing	X	X	X

Table 1: Port pricing principles in the Ennshafen port

Inland waterway business in Austria suffers from great competition against other modes of cargo transport, especially trucks and even railway, where possible. The most critical influence comes from the fact, that the reliability of water transport is low (compared to other modes) and has sometimes of the year really great problems due to low water – Austria is influenced of the great Danube problem zone Straubing-Vilshofen, which brings up negative influence each year (additional cost, down-time, ...). Therefore, it is necessary to find a good "averaged way" in pricing, both to recover cost of the infrastructure and to give attraction to users, otherwise clients will leave waterway business. The statistics of waterway cargo transport in Austria show permanent decrease of the last 10-years-period, so you have to be very carefully in pricing not to destroy the waterway business.

5.10 Standard types of infrastructure fees

Current types of infrastructure fees	Paid by		
	Ship owner	Cargo owner[1]	Other (explain)
berth fees / use the wet side of the quay, ship related	x		
wharfage fees / use the dry side of the quay, cargo related		x	

[1] Shipper or receiver or forwarders on their behalf.

Current types of infrastructure fees	Paid by		
	Ship owner	Cargo owner[1]	Other (explain)
idle ship laying fees (ships not loading/unloading)	x		
train use (all kinds)		x	

Table 2: Standard types of infrastructure fees in the Ennshafen port

In Austria the fees for using the port assets for ship traffic are defined in legal papers (as described in chapter 5.4). Therefore, there is no choice for a port, you have to fulfil these papers. Wharfage fees are part of the port business based on commercial considerations.

Even for railway systems this fee-based system is derived from respective legal papers.

5.11 Unit basis for charging of infrastructure fees

Infrastructure fees	Unit basis
berth fees, wharfage fees	ton of cargo loaded/unloaded
idle ship laying fees	time used
train usage	ton of cargo

Table 3: Unit basis for the infrastructure fees in the Ennshafen port

Even for the items of above table there is no choice for the port; the unit basis is defined in legal documents.

5.12 Price differentiation methods for service fees

Price differentiation methods / Infrastructure fees	Type of vessel	Type of cargo	Value of cargo	Trade direction (export/import)	Direct/indirect transshipment	Quantity of cargo (volume rebates)	Number of port calls/year	Time used/spent	Other (explain)
Vessel loading/unloading		x				x			
Wagon loading/unloading		x				x			
Warehousing / storage		x				x		x	
Yard handling								x	

Table 4: Price differentiation methods for infrastructure fees in the Ennshafen port

These service fees are fixed by different operators and are a product of market (supply and demand, orientation on competition and other logistic places). No further comments can be published due to competition reasons.

In the Austrian "Ordinance of the Federal Ministry of Transport, Innovation and Technology on shipping facilities and other installations and works on waterways ["SchAVO / Schifffahrtsanlagenverordnung"] there is fixed in § 48 the following procedure:

Port fee rate (§46)

1. The port administration shall fix the tariff rates applicable to the tax bases in a port charge scale for each port separately or for several ports operated by it. Port administrations may also form a collective tariff for all or part of their ports with the effect of applying the same port tariff within that community. For the purposes of fixing tariff rates, the average costs over a period of five years for the maintenance, operation, interest and amortisation of construction costs shall be:

1.the harbour basin;

2.mooring facilities;

3.waste and waste oil collection points;

4.sanitary facilities and drinking water taps intended for the ship's crew; and

5.the facilities for keeping the port ice-free

to be used. For the interest on the construction costs, the effective interest rates must be taken into account in the case of debt financing, otherwise the imputed interest. With regard to imputed interest, the basis of assessment shall be the residual carrying amount of the investments and the average interest rate of the issues of federal bonds in the individual years. For the amortization of construction costs, normal

depreciation according to the lifetime is recognized, for those assets that are still in operation after one hundred percent depreciation, amortization rates in the amount of the usual normal depreciation are recognized. Amortisation and interest on construction costs may only be taken into account to the extent that they have been borne by the Port Administration. Nevertheless, the principle of proportionality between remuneration and performance must always be respected when setting port charges.

(2) The winter standard allowance shall correspond to the demurrage for 20 days; the demurrage shall amount to the twentieth part of the bank allowance in relation to the design units.

5.13 Alternative pricing methods for infrastructure fees – a proposal

Infrastructure fee: berth fee
Proposed alternative method: According to the targets of Green Deal and the respective deployment for Austria (fit for 55, mobility master plan, …) vessels shall reach a status of “zero emission” until 2040. Therefore, vessels which fulfil this future standard may have significant reduction of berth fee in an Austrian port. There could be a reduction of 80 % of the actual value for a period of 3 years, then probably 50 % for additional 3 years, then other 30 % for the next 3 years, …. [the figures are only examples, there could be developed a very sophisticated system with between-levels, ….., percentual CO2-reduction ,….] Meaning that in the first appr. 10 years of coming with “clean vessel” into Austrian ports the ship owners really save money and get a benefit of being a frontrunner as sustainable vessel user. But the Austrian ports need this money (for CAPEX, OPEX), therefore the ports shall get back the money of the government, financed by funding of CO2-emission trading and tax systems. In total the emission trading system shall enable vessel business to become more greener by a solution, which is cost-neutral to the vessel owners, who are responsible for paying the berth fee. In order not to make it too complicated there should not be installed a bonus-malus-system, only a “positive approach” via bonus (the “malus part” part of the deal is taken by the CO2-pricing). Remark: this proposal is to foster the approach on ship owners towards environmentally friendly “floating business” of vessels. Beneath that, for the “resting business” of vessels within the port the OPS-solution is still valid (the pricing system

for OPS is currently under development on EU-level – tax !). After finalizing of this open discussion and ongoing discussions regarding CAPEX-founding for OPS-installations in ports a similar system for incentives of OPS may be developed.
Explanation/justification: please explain your reasons, what do you want to achieve with it and what are the effects on different port stakeholders. Inland waterway business will only survive if the "weakest element in the chain" (regarding profitability) – this is the vessel owner – will get enough support during the change process to reach Green deal targets. There are so many different approaches: new engines, end-of-pipe technologies, new fuels, …. – but all of them cost money. On the other hand, there is a "strong call" of NAIDES-3 (and other programs) to enhance IWW-cargo (25 % by 2030 and 50 % by 2050) – but in a lean way (zero emission). So the only way will be to find a solution which can make IWW-cargo more cleaner and not to increase cost. Otherwise, nothing will happen and targets will be only paper figures. By a new system (as described above – or something similar to this) this will create a framework which boost both cargo and sustainability for everybody within this logistic chain.
What needs to be done: explain here what needs to be done in order to implement the proposed alternative pricing method Presentation and discussion of the idea in Austrian gremial boards (IGÖD, PDA, ….) and ministerial departments, even on Danube Region levels.

Table 5: Proposed alternative pricing method for berth fee in Austria

6 Port pricing in Slovakia

6.1 Status of ports

Port authority role over three public ports on the Slovak section of Danube, Bratislava, Komárno and Štúrovo is executed by Verejné prístavy, a.s. (Public ports, JSC / hereinafter "VPAS"). Company was established by Act No. 338/2000 Coll. on Inland Navigation and on the amendment and supplementation of certain laws as amended (hereinafter "Act No. 338/2000 Coll."). The state placed its property into the company VPAS, becoming the 100 % shareholder of the company. Act no. 338/2000 Coll. claims that prioritized investment property ("PIM") shall be determined in public ports and handled so as to enhance the function of public ports. This also brings the limitation of funding opportunities for potential investment stocks, given that PIM cannot be the subject of a pledge right (for example, as credit guarantees).

6.2 Port governance status

Land in ports is owned by state-owned joint-stock company VPAS. Infrastructure (power lines, roads, railways) and superstructure (immovables, warehouses, transhipment facilities) are owned by port operator, private joint-stock company SPaP. VPAS leases land and collects port fees. Between Port authority and Port operator there are long-term lease contracts for the land.

6.3 Track record of port reforms

- 1996
  - Decision of the Ministry for Administration and Privatization of National Property of the Slovak Republic no. 111 of 16 August 1994 on the privatization of part of the companies Slovenská plavba dunajská š.p. (EN Slovak Danube Navigation, state enterprise) and the Štátna plavebná správa Bratislava š.p. (EN State Navigation Administration Bratislava, state enterprise) in accordance with Act no. no. 92/1991 as amended.
  - Establishment of SPaP
- 2008
  - adoption of Act 500/2007 Coll., amending and supplementing Act no. 338/2000 Coll. on Inland Navigation and on Amendments to Certain Acts, as amended
  - Establishment of VPAS

6.4 Port tariffs regulation

Service fees in ports are collected by private port operator SPaP based upon particular agreement with an individual partner, mostly cargo broker or cargo transporter.

Infrastructure fees in public ports on the Slovak section of Danube are collected by por authority, state-owned VPAS in accordance with approved "Tariff for payments for use of public ports on the waterways in the Slovak Republic."[2]

This Tariff states as following:

3. Article [3] PUBLIC PORTS
   - 3.1. Payment shall be made for the use of public ports on the waterways of the Slovak Republic, which include the following ports on the Danube River
     - 3.1.1. port of Bratislava,
     - 3.1.2. port of Komárno,
     - 3.1.3. port of Štúrovo.
4. Article [4] FORM OF PAYMENT
   - 4.1. The amount of payment is determined and calculated based on:
     - 4.1.1. the length of stay of the vessel in the public port (per each commenced day) and the dimensions of the vessel specified in the ship's certificate or other document replacing the certificate,
     - 4.1.2. the quantity of unloaded or loaded goods in the public port indicated in the Bill Of Lading in tonnes (for each tonne, even incomplete).
   - 4.2. Payment for the use of public ports by vessels shall be paid by:
     - 4.2.1. wired payment based on an issued invoice,
     - 4.2.2. cash payment (except port of Štúrovo),
     - 4.2.3. electronic means of payment (except port of Štúrovo).
   - 4.3. The amount of the payment for the stay and handling of the vessel shall, as a general rule, be paid upon departure or check-out of the vessel from the public ports

6.5 Financing of new investments

Financing of new investment to the infrastructure and superstructure is independent business decision of port operator SPaP. Investments of port operator are mostly focused on maintenance of existing infra- and superstructure.

However, port authority VPAS may provide any investment to the new infrastructure and superstructure on the land owned and not leased to the port. New investments of the port authority are currently in planning / pre-project phase (strategical documents, waste management, planned container terminal, Alternative fuels terminal, Port monitoring system etc...).

[2] https://www.portslovakia.com/_files/ugd/7a0d69_b5974500da0d4d949a1fa2d7638a4385.pdf

Legal status of both, port operator and port authority, is joint-stock company. Their operation in not linked to public financing in any way. Exceptions are project co-financed by either state or European Union. In such projects, companies have the same status as any other eligible applicant. Any other public financing would be considered as unlawful state aid, as defined by art. 107-109 of Treaty on European Union.

6.6 Financing of maintenance of existing infrastructure assets

In terms of maintenance of port assets in existence, situation is the same as for new investments. Private port operator provides maintenance of existing infra- and superstructure based on it´s independent business decisions. As a private company, profit-making potential is taken into consideration when it comes to such decisions.

6.7 Public subsidies for ports

As mentioned in chapter 6.5 any public financing, except from co-funded projects, would be considered as unlawful state aid, as defined by art. 107-109 of Treaty on European Union.

6.8 Approach to port pricing

- **Infrastructure fees / nautical-technical services fees**

Financial approach is applied by the port operator, since it is a private entrepreneur where the profit is main motivation.

- **Service fees**

Public body approach is applied. Despite port authority not being a public body as such, it´s main purpose defined in legislation is development of public ports in general. Motivation is to maximize throughput, provide modern services.

6.9 Port pricing principles

Port pricing principles *(mark X where applicable)*	Infrastructure fees	Service fees (cargo)	Nautical-technical services
Cost recovery base	x		
Performance base		x	
Value (for the user) base			x
Empirical intuition and past trends based pricing			

Table 6: Port pricing principles in the Slovak public ports

Infrastructure fees are charged by Port authority. Objective is to maximize the use of port and assure the fee for usage of publicly owned strategical place, such as inland ports.

Service fees (cargo) are charged by Port authority and Port operator. Fees are calculated by the time spend in the port, volume of transhipped cargo and dimension of vessels.

Nautical-technical service fees are charged by port operator and "Value based pricing" approach is present. Objective is income but also the coverage of operation, staff and other costs.

6.10 Standard types of infrastructure fees

Current types of infrastructure fees	Paid by		
	Ship owner	Cargo owner[3]	Other (explain)
Berth fees (use of wet side of the quay – ship related) charged by Port Authority	X		
Idle ship laying fees (ships not loading/unloading)	X		

[3] Shipper or receiver or forwarders on their behalf.

Current types of infrastructure fees	Paid by		
	Ship owner	Cargo owner[3]	Other (explain)
charged by Port Authority			
Other commercial activities (photo, video) charged by Port Authority			X (requestor)
Truck entrance/exit charged by Port Operator			x
Truck parking for trucks not loading/unloading charged by Port Operator			x
Train entrance/exit charged by Port Operator			x
Train use of rail infrastructure for loading/unloading charged by Port Operator			x
Train use of rail infrastructure other than for loading/unloading charged by Port Operator			x
Vessel loading/unloading charged by Port Operator	x		
Wagon loading/unloading charged by Port Operator			x
Truck loading/unloading charged by Port Operator			x
Warehousing / storage charged by Port Operator			x
Towage (port tugs) charged by Port Operator	x		

Table 7: Standard types of infrastructure fees in the Slovak public ports

6.11 Unit basis for charging of infrastructure fees

Infrastructure fees	Unit basis
Berth fees (use of wet side of the quay – ship related) charged by Port Authority	• 1 commenced day length of stay of the vessel in the public port (per each commenced day) – • m2 dimensions of the vessel specified in the ship's certificate or other relevant document • 1 ton quantity of unloaded or loaded goods (for each tonne, even incomplete)
Idle ship laying fees (ships not loading/unloading) charged by Port Authority	• 1 commenced day length of stay of the vessel in the public port (per each commenced day) – • m2 dimensions of the vessel specified in the ship's certificate or other relevant document
Other commercial activities (photo, video) charged by Port Authority	• 1 commenced day length of the activity
Truck entrance/exit charged by Port Operator	• 1 truck number of trucks
Truck parking for trucks not loading/unloading charged by Port Operator	• 1 truck number of trucks
Train entrance/exit charged by Port Operator	• 1 wagon number of wagons
Train use of rail infrastructure for loading/unloading charged by Port Operator	• 1 wagon number of wagons
Train use of rail infrastructure other than for loading/unloading charged by Port Operator	• 1 wagon number of wagons
Vessel loading/unloading charged by Port Operator	• m3 / ton / TEU usual unit depending on the substance • number of units
Wagon loading/unloading charged by Port Operator	• 1 wagon number of wagons
Truck loading/unloading	• 1 truck

Infrastructure fees	Unit basis
charged by Port Operator	number of trucks
Warehousing / storage charged by Port Operator	• m2 square footage covered / open-air
Towage (port tugs) charged by Port Operator	• 1 maneuver berthing, vessel replacement etc...

Table 8: Unit basis for the infrastructure fees in the Slovak public ports

6.12 Price differentiation methods for service fees

Price differentiation methods / Infrastructure fees	Type of vessel	Type of cargo	Value of cargo	Trade direction (export/import)	Direct/indirect transshipment	Quantity of cargo (volume rebates)	Number of port calls/year	Time used/spent	Other (explain)
charged by Port Authority						X		X	
charged by Port Operator		X			x				N. of units (ref. 6.1.1)

Table 9: Price differentiation methods for infrastructure fees in the Slovak public ports

Infrastructure fees charged by Port Authority are related to time spent in port, dimensions of vessels and quantity of cargo transshipped. For further purposes, transshipped cargo is divided by substance to solid and liquid. Crucial factors therefore are quantity of cargo and time spent. Special category is “other commercial activity not related to transshipment” which is charged by fixed price 300Eur for each commenced day.

Fees charged by Port Operator are related to type of cargo. Final prices re based on particular agreement between parties, but general approach is that there are different fees depending on type of cargo (wheat/coal/iron etc.). Since Port operator is owner of transshipment equipment, direct/indirect transshipment plays role because the working time of machinery and personnel must be considered. Other fees are calculated by units (one wagon / one car / one truck etc.)

6.13 Methodologies for price calculation of infrastructure fees

Current setup of Tariff for payments for use of public ports dates back to 2013. Tariff is approved by the Ministry of transport and construction of the SR. Unfortunately, exact calculations behind are not available anymore. However, the new pricing in preparation will consider at least the inflation rate for past years and consideration of new port services, if available in the meanwhile.

6.14 Alternative pricing methods for infrastructure fees – a proposal

Infrastructure fee: Obstacle / Danger fee
Proposed alternative method: Cost based pricing
Explanation/justification: In recent history of ports there have been cases when some vessels only by its technical condition or position in port caused restriction or danger to port operation or to safety and security of other vessels, cargo, equipment or personnel. Objective of this fee is to have a measure to calculate and shift risk and costs towards the responsible vessel owner/operator.
What needs to be done: Tariff for payments for use of public ports on the waterways in the Slovak Republic to be updated and approve by Ministry of transport and construction of the SR.

Table 10: Proposed alternative pricing method for being obstacle / causing danger

Infrastructure fee: Stay fee
Proposed alternative method: Value based pricing
Explanation/justification: This is considered change of current Tarif that charges each commenced day. If the vessel enters the port minutes before midnight or leave few minutes after, two days will be charged / invoiced. Intent is to charge this fee for every 24 hours completed.
What needs to be done: • Tariff for payments for use of public ports on the waterways in the Slovak Republic to be updated and approve by Ministry of transport and construction of the SR. • Automated registration of entrance must be in place. Either through RIS, port monitoring system or independent direct registration (mobile app, QR code etc.)

• Direct integration of DAVID form to invoicing software • Notifications for Port authority

Table 11: Proposed alternative pricing method for Stay fee

Infrastructure fee: Passenger fee
Proposed alternative method: Performance based pricing
Explanation/justification: This fee is relevant for passenger transportation. Currently the Port authority charges only fixed stay fee for cabin vessel. Capacity of the vessel or number of passengers aboard is not relevant. Idea is to adopt generally used approach to implement fee mirroring either capacity of the cabin vessel or number of passengers onboard.
What needs to be done: • Tariff for payments for use of public ports on the waterways in the Slovak Republic to be updated and approve by Ministry of transport and construction of the SR. • Automated registration of entrance must be in place. Either through RIS, port monitoring system or independent direct registration (mobile app, QR code etc.)

Table 12 Proposed alternative pricing method for Passenger fee

7 Port pricing in Hungary

7.1 Status of ports

Centroport Dunaújváros:

This port has the status of:

- Special importance in the country's development strategies
- Pure profit entities
- No special status

The Dunaújváros DUNAFERR Public Port is located in Dunaújváros on the right bank of the Danube between 1580 and 1579 km. It is located 3 km from the M6 motorway, 10 km from the M8 motorway and 2 km from the main road 6. The nearest inland port is 17 km to the north in Adony and 8 km to the south in Dunavecse. It is a public port, open on weekdays from 6 a.m. to 10 p.m. and on weekends by special order.

Port of Budapest-Csepel:

This port has the status of:

- Strategic assets of transport infrastructure, based on applicable law(s)
- Special importance in the country's development strategies
- National Public Port (Országos Közforgalmú Kikötő – OKK)

Csepel Free Port is located in Budapest at 1640+500-1639+500 km, on the left bank of the Danube. It is only 7 km from the motorway and 20 km from the nearest inland port. It is a TEN-T port, where goods are transported. It receives ships day and night. The average annual number of employees in the port was 1,100 in 2018.

Act XLII of 2000 established national public ports, which are operated by the State through a company owned by the State.

7.2 Port governance status

Ports can be classified into different types according to their ownership structure and operating model. The distinction is based on:

- the provision of services at public, private and mixed levels,
- ownership of infrastructure elements (including land and real estate),
- ownership of facilities and equipment,
- the status of port workers and managers.

Ports also differ in the type of services they provide to third parties. While public ports are open to the public, private ports do not generally provide transhipment facilities for third parties. While public service and freight ports focus primarily on the provision of public services, fully privatised ports serve the needs of the private sector. Leased ports have a mixed image, seeking to balance the interests of the public (port operators) and private (port companies).

The following concepts are used in the field of port operations and management:

- Port owner: the owner of a public port is the owner of the port area or its agent. The national public port area is owned by the State or managed by a company with a predominantly public majority. In Hungary there are both public and private ports.

- Port manager: the port manager is a business company or organisation responsible for maintaining the overall port in a condition necessary for its proper operation and for its coordinated operation and development - either as the owner of the port in the case of public ports as defined in Act XLII of 2000 on Water Transport, or as a party entitled to operate the port under a contract or any other title.

Port operator: public ports are usually operated by a commercial company. A port operator is the owner of the facility/port and any party who is entitled to operate the facility/port under a contract or any other title. That is, this may include the owner of the port, the port managers and the port operators of the (public) port.

In Hungarian ports there are a number of port operators. Only the operator of a public port can be a port manager. The majority of Hungarian port operators are private and state-owned companies.

7.3 Track record of port reforms

Port of Budapest-Csepel:

Owner of the port

The owner of the public port is the owner of the port area and the beneficiary of the project to be implemented in the Csepel Free Port, the Budapest-based MAHART-SZK.

MAHART-SZK was established on 26 May 2005 as a wholly state-owned company. Its main task is to operate the real estate it owns and to maintain and supervise the status of the port.

Until 19 November 2014, MAHART-SZK was established by the Hungarian National Asset Management Company. Currently, MAHART-SZK is 100% owned by the Hungarian State, with the Minister of National Property (NVTNM) exercising the ownership rights. According to MAHART-SZK's articles of association, the company's activities include, inter alia, the leasing and operation of its own leased property, but currently, on the basis of the privatisation and operation contract concluded for a period of 75 years, BSZL is entitled and obliged to perform the port's operation tasks.

BSZL is currently responsible for the operation of the Csepel Free Port under the contract with the Company. Under the privatisation and operation contract, BSZL has committed itself not only to operate the port but also to maintain the port in accordance with its OKK status.

The port operator

The operator of a public port is the company or organisation which, in the case of a public port as defined in Act XLII of 2000 on Water Transport, is responsible for the maintenance, coordinated operation and development of the port as a whole, as the owner of the port or as the person entitled to operate it under the contract or under other legal title.

Responsibilities of the operator:

- Operational tasks including:
  - organising, operating and managing the port logistics activities;
  - organising, coordinating and managing the service activities in the port. o organising, coordinating and managing the logistics activities in the port. o organising, coordinating and managing the logistics operations in the port;
  - the operation, maintenance, upkeep and refurbishment of the port's facilities, as specified in the contract;
  - managing the environmental protection of the port;
  - organising and operating the port's logistics information system;
- Carrying out tasks related to the use contracts;
- Development and management of the port, in particular the development of the port's development principles
- Carrying out marketing tasks

As the winner of a nationwide open privatisation tender in 2005, BSZL manages the operation and management of the public port of Budapest Free Port. The company's main profile is the management and development of the port's real estate and lease management, with logistics activities and services provided by the tenants of the port's individual areas.

Operator of the port

According to § 87.§40 of Act XLII of 2000, the "operator" is the owner of the floating facility/port and the person entitled to operate the floating facility or port on the basis of a contract or other legal title. In our case:

- owner - MAHART-SZK
- operator - BSZL, which has the right to operate the harbour and has a beneficial interest in the harbour, having won the right to operate the harbour in an open privatisation procedure
- tenants - there are a number of companies in the Csepel Freeport which rent space for logistics activities. ArcelorMittal, Masped Logisztikai Kft., Ekol Logistics Kft., Ghibli Kft. and Mahart Container Center (MCC) Szolgáltató Kft. are among the main tenants of Csepel Freeport and carry out most of the logistics and goods handling activities.

7.4 Port tariffs regulation

In the case of Centroport Dunaújváros, infrastructure fees, cargo related services fees and nautical-technical service fee are also the responsibility of the port operator

In the case of the Port of Budapest-Csepel, the infrastructure fees and the nautical-technical service fee are determined on the basis of the GKM Decree 49/2002 (XII. 28.),

while the cargo related service fee is determined by the port operator at its own discretion.

According to the GKM Decree, the fees payable for the use of the port, as well as the method and conditions of payment, must be published in a clearly visible place in the port. The operator may require advance payment of the port fees. Floating installations seeking shelter in the port in response to the contents of the storm and waiting for up to 30 minutes for the arrival of an authority for an official inspection are exempt from the payment of port fees.

Detailed operational rules on the regime of use shall be laid down by the operator in port regulations for ports and in regulations for other navigational facilities, subject to the approval of the navigation authority. The operating rules shall provide for the use of the port and its area, and the services provided, and the related fees, which shall be set on a market basis.

7.5 Financing of new investments

In the case of Centroport Dunaújváros, new investments such as the port infrastructure, the port's internal road and rail network, the suprastructure and the port facilities can be implemented by the port operator or the concessionaire.

In the case of the Port of Budapest-Csepel, new investments may also take the form of public investments if they concern the port's infrastructure or the port's internal road and rail network, and the concessionaire may also contribute to the development of these elements.

New investments in port superstructure are the responsibility of the concessionaire. For investments in port assets, the concessionaire is responsible on the one hand and the port operator on the other.

It is important to mention that in the Port of Budapest-Csepel area, a major construction project worth more than HUF 10 billion is in the implementation phase.

7.6 Financing of maintenance of existing infrastructure assets

In the case of Centroport Dunaújváros, maintenance of existing infrastructure such as the port infrastructure, the port's internal road and rail network, the suprastructure and the port facilities can be implemented jointly by the port operator and the concessionaire.

In the case of the Port of Budapest-Csepel, the concessionaire is responsible for the maintenance costs of the existing infrastructure in all cases, and in the case of port equipment, the port operator is also responsible.

7.7 Public subsidies for ports

In the case of Centroport Dunaújváros, no form of public subsidies has been involved in the operation of the port so far.

From a state aid perspective, the Port of Budapest-Csepel, as a National Public Port, has already received state aid in the past, in terms of infrastructure, suprastructure and equipment.

7.8 Approach to port pricing

For both ports presented, port fees are determined from a financial approach. Prices set on the basis of accounting costs, to recover fixed and variable costs and to provide an adequate rate of return and certain profit.

7.9 Port pricing principles

Centroport Dunaújváros:

In the case of Centroport Dunaújváros, there is scope for more flexible pricing, given that it is not an OKK status port. In practice, this means that it is not obliged to apply an open, non-discriminatory tariff, and its ability to react to market price changes is better. The port has the possibility to apply specific tariffs for strategic customers or in case of particularly large orders, etc. The port therefore applies value-based pricing.

Port of Budapest-Csepel:

Due to its status as an OKK, the port applies a public tariff, which is reviewed annually, and is therefore slower to react to certain market developments and demands, and therefore has a cost recovery base pricing.

7.10 Standard types of infrastructure fees

Current types of infrastructure fees	Paid by		
	Ship owner	Cargo owner[4]	Other (explain)
Berth fees (use of wet side of the quay – ship related)	X		
Wharfage fees (use of the dry side of the quay)		X	
Idle ship laying fees (ships not loading/unloading)	X		
Train use of rail infrastructure other than for loading/unloading		X	

Table 13: Standard types of infrastructure fees in the port of Centroport-Dunaújváros

[4] Shipper or receiver or forwarders on their behalf.

In the case of Centroport-Dunaújváros, the imposition of wharfage fees is charged by the port operator. In addition, idle ship laying fees and the train use of rail infrastructure for loading/unloading fees are charged by the port authority.

Port of Budapest-Csepel:

Current types of infrastructure fees	Paid by		
	Ship owner	Cargo owner[5]	Other (explain)
Berth fees (use of wet side of the quay – ship related)	X		
Wharfage fees (use of the dry side of the quay		X	
Navigation aid fees	X		
Idle ship laying fees (ships not loading/unloading)	X		
Truck parking for trucks not loading/unloading			X
Train use of rail infrastructure for loading/unloading			X
Train use of rail infrastructure other than for loading/unloading			X

14**. Table: Standard types of infrastructure fees in the port of Budapest-Csepel**

In the case of Port of Budapest-Csepel, vessel owners also pay berth fees, navigation air fees and idle ship laying fees, which are in all cases imposed by the port authority.

The port authority also imposes wharfage fees, which are paid by the cargo owner, and is responsible for truck parking fees and railway fees.

There are two types of charges applied by all ports in principle, one is the wharfage fee or loading fee and the other is the berth fee. In addition, the availability and the price of extra services are determined by the port's characteristics.

7.11 Unit basis for charging of infrastructure fees

Infrastructure fees	Unit basis
Berth fees (use of wet side of the quay – ship related)	EUR 0.035/DWCC(dead weight cargo capacity t) of vessel/cday
Wharfage fees (use of the dry side of the quay	EUR 0,35 pmto (per metric tonne) basis cargo

[5] Shipper or receiver or forwarders on their behalf.

Infrastructure fees	Unit basis
Idle ship laying fees (ships not loading/unloading)	50% of port dues
Train use of rail infrastructure other than for loading/unloading	on lumpsum basis

Table 15: Unit basis for the infrastructure fees in the port of Centroport Dunaújváros

Port of Budapest-Csepel:

Infrastructure fees	Unit basis
Berth fees (use of wet side of the quay – ship related)	Ship lenght
Wharfage fees (use of the dry side of the quay	ton of cargo loaded/unloaded
Navigation aid fees	
Idle ship laying fees (ships not loading/unloading)	
Truck parking for trucks not loading/unloading	
Train use of rail infrastructure for loading/unloading	
Train use of rail infrastructure other than for loading/unloading	

16. Table: Unit basis for the infrastructure fees in the port of Centroport Dunaújváros

The main difference between the two ports studied is in the unit of measurement of the charges, with one port setting infrastructure charges based on the carrying capacity of the vessel and the other on the length of the vessel.

7.12 Price differentiation methods for service fees

Centroport Dunaújváros

Price differentiation methods / Infrastructure fees	Type of vessel	Type of cargo	Value of cargo	Trade direction (export/import)	Direct/indirect transshipment	Quantity of cargo (volume rebates)	Number of port calls/year	Time used/spent	Other (explain)
Vessel loading/unloading		X			X	X			
Wagon loading/unloading		X			X	X			
Truck loading/unloading		X			X	X			

Price differentiation methods / Infrastructure fees	Type of vessel	Type of cargo	Value of cargo	Trade direction (export/import)	Direct/indirect transshipment	Quantity of cargo (volume rebates)	Number of port calls/year	Time used/spent	Other (explain)
Warehousing / storage		X				X		X	
Towage (port tugs)									No. of shifts

17. Table: Price differentiation methods for infrastructure fees in the port of Centroport Dunaújváros

Port of Budapest-Csepel

Price differentiation methods / Infrastructure fees	Type of vessel	Type of cargo	Value of cargo	Trade direction (export/import)	Direct/indirect transshipment	Quantity of cargo (volume rebates)	Number of port calls/year	Time used/spent	Other (explain)
Vessel loading/unloading	x								
Wagon loading/unloading						x			
Truck loading/unloading						x			
Warehousing / storage			x			x		x	
Towage (port tugs)									x
Line handling (fasting/unfasting a vessel)								x	

Table 18: Price differentiation methods for infrastructure fees in the port of Budapest-Csepel

In the case of the ports examined, it can be seen that the cost elements in the determination of loading and storage charges may be made up of different parts. For example, in the case of Centoport Dunaújváros, the warehousing /storage fee is determined on the basis of three fee components: type of cargo X quantity of cargo (t) X time used (days). In contrast, the Port of Budapest-Csepel takes a different approach in determining its warehousing/storage fee, taking into account the following elements: value of cargo X quantity of cargo (t) X time used (days).

7.13 Methodologies for price calculation of infrastructure fees

Basically, a distinction is made between port dues and berth/quay dues in Hungarian ports. Another important distinction in the pricing methodology is whether the port is a National Public Port or a Public Port.

In the case of Centroport-Dunaújváros, the authorization for placing in service has to be renewed every 10 years, incurring planning and procedural fees, and maintenance work on the quays has to be carried out at the same time. These works, including all the elements of the authorisation procedure, cost the port approximately €60,000 and are included in the infrastructure charges.

The tariffs applied in Hungarian ports can be classified on the basis of the port operation model. In National Public Ports, tariffs are always public and non-discriminatory. In the case of public ports, the tariff may be unique, depending on the volume and frequency of the order. In both cases, the tariff is set by the port operator and is usually reviewed annually.

Port dues: The port usage fee is paid by the shipowner or his representative (master, agent). EUR 0,035 / DWCC (may vary from port to port) per tonne per day or basis of the main particulars of the vessel (length, etc.)

Berth/Quay dues: The quay usage fee is paid by the owner/shipper of the goods but is usually included in the handling fee. EUR 0,40 / mto (may vary from port to port) based on the weight of the goods loaded/discharged.

Other services: barge roof lifting, boat adjustment, water, electricity, wintering, barge guarding, barge loading, tug boat service, etc.

7.14 Alternative pricing methods for infrastructure fees – a proposal

Infrastructure fee: Charges based on cargo capacity
Proposed alternative method: Fees for typical vessel types could be harmonised in the larger domestic ports (cca. 30 port)
Explanation/justification: Tariffs in domestic ports would be more predictable
What needs to be done: A higher level of cooperation between ports is needed

Table 19: Proposed alternative pricing method for Carges based on cargo capacity

Infrastructure fee: Differentiation based on the environmental impact of vessels
Proposed alternative method: We can make a distinction based on the environmental impact of the vessel, if the vessel is more than x years old, you will have

to pay a 5-10% surcharge. The opposite might be that if the boat is a "green boat", i.e. hybrid powered, using shore power you get some discount on the fees.
Explanation/justification: Transport companies may be more motivated to make their fleet more sustainable.
What needs to be done: Further elaboration of the proposal is needed, calculating exact charges for different types of vessels.

Table 20: Proposed alternative pricing method for environmental impact of the vessels

Infrastructure fee: The investment and maintenance costs of the port determine the tariffs.
Proposed alternative method: Port fees are calculated purely on the basis of maintenance and investment costs + profit.
Explanation/justification: For example, the dredging of a harbour costs HUF 20 million every 10 years, which is normally the cost of the port operator, but it may not always be paid by the port operator. So, if there is one, it can be included in the cost and divided by the turnover so that all vessels contribute equally to the use of the port at the same quality. Where dredging costs are not paid by the port operator, there are no such costs.
What needs to be done: It is necessary to calculate the financial and economic impact of such a measure.

Table 21: Proposed alternative pricing method for investment and maintenance costs based pricing

8 Port pricing in Croatia

8.1 Status of ports

The development of inland navigation, water transport, waterways and inland ports are of economic interest to the Republic of Croatia and have its special protection.

The strategy for the development of river transport in the Republic of Croatia is adopted by the Croatian Parliament.

Croatia's legislative framework differentiates seaports and inland waterways' ports. General legal status of the ports in the Republic of Croatia is determined by the Maritime Domain and Seaports Act. According to the law, a seaport is generally defined as "ground space immediately linked to the sea, with built and non-adopted shores, devices, machinery and other objects prepared for docking and protection of ships, yachts and boats, loading and unloading of goods and passengers, warehousing and other manipulation of goods, production, improvement and completing goods and other economic activities that are related to those activities in mutual economic, transportation or technological connection."

According to the Law on Navigation and Inland Ports, a port is defined as a ground space immediately linked to the aquatic area, intended and equipped for mooring, anchoring, protection of the vessels, embarkation, disembarkation, transshipment or storage of goods and/or embarkation and disembarkation of passengers. Various complementary activities are performed in the port that are in direct economic, traffic or technological connection with the goods or the vessel.

An inland waterway vessel, other than a warship, is an inland waterway vessel intended exclusively or predominantly for navigation in inland waters of 20 meters or more in length, or a product of length, width and draft is 100 m3 and more, or authorized to carry more than 12 passengers. An inland waterway vessel can be used for towing (tug), pushing (pusher) or moving side compositions on inland waters regardless of length and volume, or can be defined as a floating plant.

A union ship is a vessel flying the flag of a Member State of the European Union. A third country ship is a vessel that does not fly the flag of the Republic of Croatia or the flag of another EU Member State. A state waterway is a waterway on which vessels flying the flag of the Republic of Croatia or the flag of another EU Member State are allowed to sail without a permit.

An interstate waterway is a waterway on which the navigation of domestic vessels and vessels flying the flag of the border state on that waterway is permitted, while international navigation is navigation from any Croatian port to a foreign port and vice versa or navigation between foreign ports or navigation on international waterways in foreign countries.

The Law on Navigation and Inland Ports regulates water transport in the inland waters of the Republic of Croatia, safety of navigation in inland waters, legal status, protection of water from pollution from vessels, management of waterways, ports and

harbours of inland waters, material legal relations connected to inland navigation facilities, registration procedures for vessels and floating facilities, transport operations and contracting of transport, inspection and other issues related to navigation and inland ports.

8.2 Port governance status

The regulatory powers for all Croatian ports are mainly vested in the central authority, which is the Ministry of Maritime Affairs, Transport and Infrastructure, seated in Zagreb.

Public ports are managed by port authorities in accordance with the provisions of the Law on Navigation and Inland Ports. In public ports, port authorities are obliged to ensure business sustainability and financial stability, taking into account the economic criteria for valuing the port services market. Port authorities in a public port must ensure, within the limits of available capacities, equal conditions for the use of services to all vessels and to all persons without discrimination.

The Port Authorities of Vukovar, Osijek, Sisak and Slavonski Brod are public institutions that manage the port areas of public ports and real estate owned by the Republic of Croatia located in the port area of public ports.

The Ministry of Maritime Affairs, Transport and Infrastructure is in charge of the overall national transport policy.

Port authorities are in charge of:

1. construction and maintenance of port buildings
2. management of public water resources in the port area and granting the right to lease, establish easements or construction rights on public water resources in the port area
3. management of the free zone in the port area in accordance with the regulations governing free zones
4. ensuring permanent, uninterrupted and continuous performance of port activities, port traffic as a whole, technical and technological compliance and safety of navigation
5. harmonization and supervision of the work of concession holders who perform port activities in the port area
6. enforcement of order in the port and protection of the port area from pollution
7. granting a concession for the economic use of a public or other good, for the construction of port facilities and the performance of port activities in the port area
8. adoption and publication of port dues
9. confirmation and publication of port tariffs
10. the right to inspect the business and financial documentation of port users

11. keeping a list of providers of shipping agent services, freight forwarding services and quality control and sampling services

12. other activities determined by this Law

The harbourmasters are appointed by the Minister of the Maritime Affairs, Transport and Infrastructure. The harbourmaster offices are, in fact, branches of the Ministry and their tasks include, among other duties:

- control of navigation;
- search and rescue activities;
- navigation safety inspections;
- vessel registration;
- tonnage measurements;
- issuing documents required for navigation; and
- establishing the level of proficiency for professionals employed in maritime transport.

As of 1 January 2019, the entirely new Act on Harbourmasters' Offices is in force and it has brought upgrades in the provisions concerning safety of navigation, territorial and internal organization of harbourmasters' offices and implementation of international standards in providing of the public services.

8.3 Track record of port reforms

In the late 1990s and early 2000s, the Croatian government initiated a number of steps to reform port operations, including adopting a new seaports law, creating landlord port authorities and initiating port concessions.

The port enterprises that, during the socialist era, were 'socially owned' and in charge of the overall port business (management, investments and operations), have been mostly transformed into state-owned companies and, to some extent, companies owned by a number of small shareholders (mostly employees). These companies were granted the priority concessions; that is master concessions to operate the ports. Some of the priority concessions are still in force. Meanwhile, the privatization process continues through the sale of shares of port operators and their subsidiary companies, as well as by announcing open tenders upon the elapse of priority concessions.

The principal port model in Croatia continues to be the landlord model.

8.4 Port tariffs regulation

In Croatia, the term 'port tariffs' is a general term that entails both port dues and port charges that the operators collect from port service customers.

While respecting the appropriate differentiation of laws, it is important to acknowledge that according to the Law on maritime domain and seaports, port dues are determined and collected by the port authority and include quay dues, wharfage and berthage and on the other hand, according to the Law on Navigation and Inland Ports, port fees are issued and published by the Port Authority, with the consent of the Ministry, based on the criteria for determining the amount of port fees

With regard to port charges, the maximum amount determined for port dues is defined by the Minister by order, and the amount of port dues is determined by the Port Authority up to the maximum amount defined by the order. The Port Authority charges port dues, while port tariffs (transhipment service) are charged by the concessionaire. Port tariffs are determined by the concessionaire, and the port authority only confirms them. In practice, the operators usually pay dues regard to other formally published port charges in competing ports along the coast, including ports in nearby countries.

There are no restrictions relating to the currency applied to the tariffs. However, the concession fees payable by a port operator to the port authority have to be paid in the local currency (Croatian kuna). There are no other specific currency conditions imposed on port operators.

Croatia applies concession fees that consist of fixed and variable parts. The fixed part is usually calculated based on the surface area occupied by the concessionaire, and the variable part as a percentage of the revenue realized by the operator. The concession fee may be subject to indexation.

CONCESSIONS

Pursuant to Articles 136a and 136b of the Inland Navigation and Ports Act (Official Gazette 109/2007, 132/2007, 51A / 2013, 152/2014 and 144/21), the Minister of Maritime Affairs, Transport and Infrastructure introduces Rules on criteria for determination of fees for concessions in ports and harbours of inland waters.

The criteria for determining the concession fee shall be applied if the feasibility study of the concession, i.e., the analysis of the concession, determines that the planned revenues from the provision of public services are higher than the costs arising from the provision of public services.

The concession fee for the provision of port services in public ports consists of a permanent and a variable part. The amount of the permanent part of the concession fee is determined according to the type and scope of port services for which the concession is awarded according to the formula:

$$Fix = B \cdot \frac{n}{k_1 \cdot k_2 \cdot \ldots \cdot k_n}$$

where the:

Fix - the amount of the permanent annual concession fee

B - base

k1, kn - coefficient for each group

n - number of belonging groups of services for which the concession is granted

The basis of the permanent part of the concession fee is determined by the competent port authority according to the unit of gross area of the port area used for each port service, based on the results of the feasibility study, concession analysis or public-private partnership project proposal.

The gross area of the port area represents the land area of the port area and the area of the waters of the port area that is constantly used to perform port activities.

The coefficients k for each group of activities are determined in the following table:

Group	Type of service	Coefficient
A	- Mooring and unmooring of ships and vessels, - Boxing. - Receiving and serving vessels at anchor. - Supply of vessels, crew and passengers.	0,9
B	- Acceptance of waste from the vessel - Boat repair	1,0
C	- Embarking, disembarking, transshipment, transfer and stowage of cargo regardless of type. - Storage, disposal and transfer of cargo at the multipurpose terminal. - Storage and transfer of general cargo, containers and Ro-Ro units at a specialized terminal.	0,2
D	- Storage, disposal and transfer of bulk cargo at a specialized terminal.	0,3
E	- Storage, deposit and transfer of liquid cargo at a specialized terminal.	0,3
F	- Storage, deposit and transfer of other unmentioned types of cargo at a specialized terminal.	0,3
G	- Preparation and consolidation of cargo for transport as an independent service	0,5
H	- Passenger reception and dispatch services as an independent service	0,5
I	- Other (parking, quality and quantity control of cargo, repackaging, trade, etc.)	0,5

Table 22: Coefficients for the determination of the concession fees

8.5 Financing of new investments / Public subsidies for ports / State aid

Financing of infrastructure with public funds if it is used for economic purposes is subject to the provisions of Articles 107 and 108 of the Treaty on the Functioning of the European Union (hereinafter: TFEU). This means that the rules on state aid also apply to public financing of port infrastructure intended for commercial use or whose use is charged, as is the case with other infrastructure, but also with other activities that are placed by public (state funds) in a more favorable position in the market.

On the other hand, public financing of infrastructure, including port infrastructure, which is not intended for use for economic purposes, i.e., commercial use, is not subject to state aid rules. This refers to the infrastructure that the state builds and maintains in order to exercise its public authority, such as military and police, customs, inspection, firefighting and similar facilities, which, among other things, may be located in the area of infrastructure intended for commercial use. In such cases, the rules on state aid do not apply to the construction of infrastructure or its parts used to exercise the stated public powers of the state.

In cases of simultaneous use of certain infrastructure for economic and non-economic purposes, the application of state aid refers exclusively to the costs of financing its construction in the part relating to the costs associated with the performance of economic activity. If a certain mixed infrastructure is used almost exclusively for non-economic activities, and only marginally (maximum 20% of the annual capacity) and for economic activities, then the state aid rules do not apply to its financing.

State aid provided by the Law on Navigation and Inland Ports is granted with the aim of improving services and economic growth in inland waterway transport.

State aid can be granted for:

- inland waterway transport,
- improvement of infrastructure and systems of economic activities in port and port area,
- environmental protection,
- energy efficiency,
- navigation safety,
- research and development,
- employment and training of professional staff,
- social support for transport,
- innovation,
- sustainable forms of renewable energy and
- the use of alternative fuels and for damage caused by certain natural disasters.

The Ministry may, through assistance programs to local and regional self-government units, co-finance the costs of current and / or capital investments in vessels for the purpose of transport connections on inland waterways. Financial resources for this type of assistance are intended for investments in vessels for the purpose of transport connectivity of populated areas where transport infrastructure (bridges) has not been built.

The Ministry is responsible for the preparation of programs and the implementation and allocation of state aid and assistance by providing funds in the state budget of the Republic of Croatia.

In case of consequences of natural disasters in inland navigation, the Ministry will participate in the proposal of measures and programs for mitigation and partial elimination of the consequences of damages from natural disasters. The Ministry, as the competent body for water transport, will propose criteria for the allocation of aid funds and participate in activities and procedures of assessment and confirmation of damage, allocation and payment of aid funds for mitigation and partial elimination of damage from natural disasters. Aid for mitigation and partial elimination of the consequences of damage from natural disasters is implemented on the basis of regulations establishing rules for mitigation and elimination of the consequences of natural disasters and regulations establishing rules for granting state aid.

PUBLIC FINANCING OF PORT INFRASTRUCTURE

As confirmed by a number of European Commission decisions over the past few years, the construction, relocation, renovation or modernization of commercial port infrastructure (seaports and inland waterway ports) is an economic activity, whether publicly or privately owned. Therefore, the rules on state aid generally apply to public (state funds) financing of port infrastructure. The latter is due to the fact that ports often compete with each other in attracting traffic (cargo or passengers) and due to this fact, it is considered that public funding of infrastructure of these ports may affect trade between Member States or distort competition. However, investing in the infrastructure necessary for a particular port system to function at all and fulfill its public and legal functions falls within the competence and responsibility of the state and the exercise of public powers of the port authority. Therefore, it does not fall under the application of state aid rules, i.e., it is not subject to state aid control (for example: maritime traffic control, police and customs, fire service, etc.). Also, public funding for the construction, maintenance or modernization of access infrastructure to a particular port area (access roads, railway infrastructure, canals, etc.) used free of charge and available without discrimination and under the same conditions to all actual or potential users is considered general a measure or obligation for which the competent state bodies are responsible within the performance of their tasks, especially related to the planning and development of maritime transport. Moreover,

in the case of public funding of access infrastructure located outside the area of a particular port, if access is provided to all interested users and the local community without any restrictions, this public funding does not contain an element of state aid, and the cost of its maintenance can be financed without any restrictions.

In contrast, public funding of access infrastructure (road, rail, electricity, etc.) located within a port area, which contributes to commercial use or encourages the economic use of that port, is generally subject to state aid rules, and only exceptionally in In specific cases, there are possibilities that the construction of certain infrastructure with public funds within the port area has features that allow deviation from this rule and are a condition for exemptions from the application of state aid rules.

In the case of financing the investment development of ports of county and local importance, it is necessary to keep in mind the above rules and decisions of the European Commission on the state aid element, and it is especially important that the impact on trade is considered and assessed, it is not about financing that can be implemented through the application of de minimis aid rules. For example, in the case of ports of local importance, it is possible that certain measures of financial support for the development of such ports have limited, exclusively local significance and consequently do not affect or could not affect trade between Croatia and other EU member states. apply exclusively to domestic users (residents and the economy), so it is unlikely that this could significantly affect cross-border investment conditions or business conditions. However, in each individual case, such a conclusion will be possible only after a careful analysis of data on the use of port infrastructure by users from other Member States and an assessment of the impact of this measure on cross-border investments.

When considering the specific position of each port of county or local importance that will be the subject of financial support, it is necessary to keep in mind the following: if the port authority allows a certain service in the port to entrust such a service to a third party, and in such cases the possibility of distortion of competition and impact on trade between the Republic of Croatia and other members is not excluded, so the rules on state aid also apply to such a case.

Also, during the implementation of this project and the assessment of each individual case, it will be necessary to consider public funding or the effects of this funding in terms of possible support to infrastructure operators (concessionaires) providing services to end users of port infrastructure. otherwise, you should pay the concession fee in accordance with market conditions. Only and exclusively if the concessionaires of a certain port are selected on the basis of a competitive, transparent, unconditional non-discriminatory tender procedure in accordance with the principles of public procurement, market advantage is excluded, i.e., it will not be state aid. In the absence of such a tender procedure, you need to use other methods (if allowed by the domestic economy related to the issue of port financing and selection of

concessionaires) such as benchmarking or other standardized methodology to determine whether fees are market or contain an element of support or not.

In order to provide financial support for the development of counties of county and local importance from the point of view of compliance with state aid regulations, especially when it comes to determining the economic / market advantage, in certain cases it will be necessary to consider the application of rules of general economic interest. within the meaning of Article 106 TFEU, or a set of regulations detailing this issue, adopted by the Union institutions. In doing so, it will be important to determine whether this is a specific case of the concessionaire entrusted with the provision of the service on the basis of one or more acts of the competent authorities, whether the definition of the service is detailed and clearly specified. transparent manner, and compensation (compensation) set at a level that covers the net cost of the service provided to ensure that the service is provided at the lowest cost to the community or that the fee does not exceed a certain amount on the principle of efficient business.

Given the current state aid rules in the EU, the possible granting of state aid to concessionaires and / or port service users is not subject to notification (notification) to the European Commission in accordance with Article 108 (3) TFEU only in the case of granting:

I. De minimis aid in accordance with Commission Regulation (EU) no. Commission Regulation (EU) No 1407/2013 of 18 December 2013 on the application of Articles 107 and 108 of the Treaty on the Functioning of the European Union to de minimis aid and Regulation 360/2012 of 25 April 2012 on the application of Articles 107 and 108 of the Treaty on the Functioning of the European Union to de minimis aid to undertakings providing services of general economic interest
II. State aid in the form of compensation for the provision of services of general economic interest pursuant to the Commission Decision of 20 December 2011 on the application of Article 106 (2) of the Treaty on the Functioning of the European Union to State aid in the form of public service compensation undertakings entrusted with the provision of services of general economic interest, i.e., if the conditions laid down in this Decision are met and if the annual turnover is less than 300000 passengers.

In all other cases, if the financing of county and local ports is found to involve State aid within the meaning of Article 107 (1) TFEU, it will be necessary to notify the aid to the European Commission in accordance with Article 108 (3) TFEU, taking Article 107 as legal basis. (3) subparagraph (c) TFEU, which constitutes the appropriate legal basis for the granting of aid for the development and promotion of certain economic activities or certain economic areas compatible with the common market. When applying for possible State aid in accordance with the said TFEU Article, it is important to demonstrate that it is State aid that meets objectives of common interest, is

proportionate and necessary to achieve those objectives and has an incentive effect and does not distort competition and trade between Of the Republic of Croatia and the Member States.

It is important to emphasize that a public debate was launched in the European Commission in March 2016 on the adoption of amendments to Commission Regulation (EU) no. 651/2014 of 17 June 2014 on the assessment of certain categories of aid compatible with the internal market in the application of Articles 107 and 108 of the Treaty, which would also relate to the granting of state aid for investment in seaports and aid for investment in ports of inland waterways, in such a way as to allow these investments to be granted aid which, up to a certain "investment threshold", would be exempted from the obligation to notify the European Commission under Article 108 (3) if the conditions laid down in the Regulation are met.

8.6 Financing of maintenance of existing infrastructure assets

Given the complexity of setting the exact demarcation of which parts of the infrastructure are financed from which sources, the following text will in parallel explain the intentions and sources of financing envisaged for inland waterway ports.

The medium-term plan for the development of waterways and inland ports of the Republic of Croatia for a period of ten years is one of the documents defining, among other things, objectives, measures and investments whose implementation over the next ten years will result in a competitive, highly efficient and modernized inland navigation system. which will be fully integrated into the European transport network.

The medium-term plan also envisages models and possible sources of financing the necessary planned investments, and determines the priority list of projects.

The medium-term plan for the current period was drafted after the Ministry conducted the tender, and the only thing left is for the Government of the Republic of Croatia to adopt it.

As part of the current plan, special emphasis in the further development of inland navigation is placed on increasing energy efficiency and environmental sustainability, which includes the use of alternative fuels in inland waterway transport and meeting the requirements for infrastructure for alternative fuels and waste disposal in Croatian ports.

Assumptions to take into consideration when describing the current system, means and sources of financing in Croatia:

From 2021, port authorities will become budget users, and in this sense the category of sources of funding "state budget" refers to budget funds that will be planned within the section of the Ministry of the Sea, Transport and Infrastructure for port authorities.

For those investments and projects for which grant agreements have been concluded through OPCC or CEF with planned completion by 2023, the costs are broken down by year so that part of the cost incurred before 2021 is excluded and the rest of the cost is allocated by years. In terms of sources of funding, costs are shared in accordance with the grant agreements concluded between EU funds, the state budget and, where applicable, loans.

For those investments and projects for which co-financing from EU funds is envisaged in the programming period 2021-2027, a co-financing rate from EU funds of 85% of the total estimated costs was applied (in accordance with the conclusions on the recovery plan and multiannual financial framework Adopted on 21 July 2020 by the European Council for the programming period 2021-2027), and the remaining 15% of the total estimated costs were allocated to long-term sources - mainly the state budget and loans. Investments included in the draft National Recovery and Resilience Plan (equipping ports with waste management infrastructure) provide for 100% EU funding from the Recovery and Resilience Mechanism. For projects for which there is a plan to apply for calls that will be open in the coming period within the programming period 2014-2020, the co-financing rate from EU funds in the amount of 85% of the total estimated costs was applied. The actual EU co-financing rates will depend on the terms of each call for projects.

For investments related to the superstructure, financing by concessionaires is envisaged, since it is also true that port administrations and the Ministry invest in port infrastructure, and concessionaires invest in superstructure in accordance with their concession agreements and investment plans.

For investments in passenger ports, financing from the source of the city / municipal budget is provided in full or the cost is divided between the source "state budget" and the source "city / municipal budget". As the planned passenger, tourist and sports ports are not intended for public regular passenger transport, the possibility of EU co-financing from national operational programs covering the inland waterway sector or from the CEF is unlikely, except exceptionally (e.g., Vukovar Port Authority participates in EU implementation co-financed project "Archaeological Park Vučedol" within which the construction of a new passenger port Vučedol is planned). Funds from other EU co-financed programs and instruments, such as INTERREG, may be available for passenger, tourist and sports ports, which should certainly be used as much as possible. However, as it is difficult to predict the context and eligible activities of specific calls to be published through such instruments, under this Medium-Term Plan for Passenger, Tourist and Sports Ports, costs are not allocated to EU funds as a source of funding, which does not mean that this source will not be possible to use for these investments as well.

The costs of maintaining the port infrastructure are planned based on the average values of these costs in the period from 2016 to 2019, which arise from the annual financial reports of each port authority. Maintenance costs have not been increased

compared to planned capital investments, but it is emphasized that an increase is expected and more detailed assessments will be made in lower-level documents (e.g., master plans for individual port development, annual work plans, etc.). project-technical documentation and studies for individual projects).

8.7 Approach to port pricing

Port authority Vukovar was established in 2001. by the Republic of Croatia, Ministry of maritime affairs, transport and infrastructure. Port authority Vukovar is an unprofitable legal organization, and as u such, it must oblige to certain rules and legislation requirements in order to meet the criteria. When it comes to port pricing approach, few assumptions have to be taken into consideration.

Infrastructure fees require a public body or public good approach, meaning that the ultimate aim has to be to foster local development and economic activities (maximize throughput, maintain certain level of port services as a part of public good in public interest). To reach this and to keep the expenses in an acceptable range, some interventions such as subsidies are required.

Service fees and Nautical-technical services require a different approach which is more focused on the financial aspect as any healthy functioning organization. Financial approach encompasses prices set on the basis of accounting costs in order to recover fixed and variable costs and to provide an adequate rate of return and certain profits.

8.8 Port pricing principles

Port tariffs and port pricing principles do not have a unanimous model in Croatia. General rules and principles will be described used across the ports in country.

Port tariffs are pre-prescribed monetary duties that are collected directly or indirectly for the use of port infrastructure or the delivery of port services. Port tariffs are divided into port fees and port charges according to the reason for collection.

Port dues are, by their nature, parafiscal revenues collected by port authorities on the basis of law, and these revenues are spent earmarked for:

- construction and maintenance of port infrastructure and superstructure,

- equipping the port with equipment for protection of the sea from pollution from ships,

- maintenance of depth in the port and at the anchorage of the port,

- operating costs of the port authority.

Port fees can be charged directly or indirectly, but they are always the revenues of the port authority. Irrespective of whether the port infrastructure is at the disposal of the port authority or the concessionaires, the port fee is originally and unquestionably the revenue of the port authority and cannot be transferred to another. This restriction may be subject to review as the port charges are intended for the construction and maintenance of infrastructure. If the infrastructure is built by a concessionaire on the basis of a concession contract, it would be logical to charge a port fee on that infrastructure by the concessionaire. However, the existing legislative framework does not provide for this possibility, so maintenance and depreciation are covered by the price of services, while in order to maintain price competitiveness for end users, some port authorities reduce or abolish the port tax on such infrastructure.

It is noted that the Minister responsible for maritime affairs did not prescribe the criteria for determining the port fee, but the Ordinance on the criteria for determining the purpose of each part of the port, payment methods, conditions of use and maximum fee and distribution revenue determined the maximum amount of port duty. The Ordinance only partially touches on the criteria that can be reconstructed from its contents (length of the ship, yacht or boat, number of passengers, indivisible meter, starting day, etc.). However, these criteria are not established in the function of determining the criteria for determining the amount of the fee, but are included in the administrative decision on the maximum allowable amount.

The analysis of the Ordinance shows a lack of logical methodology for determining port dues, and some criteria are not consistent with the characteristics of navigation (regular and occasional coastal maritime passenger traffic; international and national navigation; diversity of vehicle categories, etc.).

In addition to port dues, ports pay non-regulatory fees that are outside the regulation of port authorities (lighting, fees for receiving and collecting waste, etc.) and are the cost of a ship, yacht or boat that port authorities cannot take into account when determining the amount their fees in relation to the total financial burden of the ship, yacht or boat.

Port authorities in the country have a rather heterogeneous approach to defining and prescribing port tariffs. Some port administrations combine port tax and port fee (drinking water supply services; electricity supply services, etc.), which in a unified, tax-relieved base, combine both port tax and port fee, which is inconsistent with the regulations governing taxes for sale of goods and provision of services and income taxes.

Port pricing principles *(Mark X where applicable)*	**Infrastructure fees**	**Service fees (cargo)**	**Nautical-technical services**
Cost recovery base			
Performance base			
Value (for the user) base		**X**	**X**
Empirical intuition and past trends-based pricing			

Table 23: Port pricing principles in the port of Vukovar

Furthermore, the methodology for calculating port tariffs is very heterogeneous and differs from one port authority to another. The criteria for calculating the fee vary from the indivisible meter of the vessel overall identical in relation to all categories of vessels regardless of length, to the establishment of the classes within which these categories apply; then the number of passengers; then the nationality of the vessel, etc.

Although the right of the port authority to independently prescribe port tariffs in accordance with their financial plans and needs in the construction and maintenance of port infrastructure facilities and operations should be recognized, the methodology for determining tariffs should be harmonized and uniform so that port users can understand the costs of using ports and the price of port services in a transparent way.

Transparency should be a determinant of the collection of all public benefits. According to the previously stated analysis, in some port authorities, the user does not actually know the structure of this cost when collecting the port fee. Combining the collection of the port fee and the port dues does not transparently show what share of these costs the user pays for the general maintenance of the port, and how much for the price of the service provided to him. Also, it is not possible to determine in the analysis of expenditures which part of the port fee is intended for the construction and maintenance of the port, and which for the operations of the port authority itself. This data could not be read or derived from the collected data due to the different methodology of port tariffs.

The port tariff system is administratively determined by determining the maximum amount of port tariffs regardless of the coverage of costs to be covered by them. Determining the maximum amount of port fees, primarily in the communal part of the port, is not adequate for maintenance costs, let alone construction of new port

infrastructure facilities. In some port authorities, these revenues are not generated at all, and for those who generate these revenues, they are not adequate to cover the costs of infrastructure maintenance.

Therefore, it is reasonable to conclude that infrastructure is maintained and built either through budget funds or by allocating surplus funds generated by revenues from other types of fees, thus burdening the port utility segments used for own use on passengers, instead of to berth users.

PORT PRICING PRINCIPLES IN PORT OF VUKOVAR

Pursuant to,

- Article 136 of the Inland Navigation and Ports Act (Official Gazette 109/2007, 132/07, 51/2013 and 152/2014),

- Article 8 of the Decree on the Management and Administration of Inland Port Authorities Official Gazette "No. 100/2008, 76/2012)

- Ordinance on the criteria for determining the amount of port dues in ports and inland ports (" Official Gazette "No. 124/2015 and 128/2015)

Fee for the use of the shore or pontoons

The fee for the use of the shore or pontoon shall be paid for a vessel using a port or harbor for the purpose of embarking and / or disembarking cargo or passengers, supplying the vessel with fuel, lubricants, water or foodstuffs.

The fee for the use of the shore or pontoon is not paid by Croatian public and military vessels.

The person liable to pay the fees is the owner of the vessel or the shipowner. Fees are charged directly, through an agent or other person representing the shipowner. The shipowner, his agent or another person representing the shipowner is obliged to provide credible information about the cargo or passengers to the Port Authority in writing (bill of lading, etc.)

The fee for the use of the coast is calculated and paid on the gross weight of the cargo, i.e., on the indivisible ton of cargo loaded / unloaded.

The fee for containers is expressed in TEU.

The fee for passenger vessels is calculated and paid according to the number of passengers.

The fee for the use of the coast or pier for passenger vessels is determined according to the number of passengers embarking or disembarking from the vessel in the case of passenger vessels for the transport of passengers on panoramic navigation routes. If a passenger vessel transporting passengers on panoramic navigation route unloads or embarks less than 10 passengers on that occasion, a fee of 10 passengers may be set. If a cruise ship carries less than 30 passengers, a fee of 30 passengers may be set.

The fee for the use of the shore or pier applies to vessels moored to the shore or passenger pontoon, and vessels moored to the side of another vessel, provided that other vessels can be moored to their side. If other vessels cannot be moored on shore-based vessels or passenger pontoons, the fee may be increased up to 100% of the basic fee listed in the annexes listed below.

The cancellation fee in international navigation is not paid in case of extraordinary circumstances and force majeure (in case of death, illness or to provide medical assistance to persons on board, in case of adverse weather conditions - bad weather, ice, low or high-water level or suspension of navigation from competent authorities and if there is any danger to boarded persons or floating objects.

The fee for vessels that use the shore or pier exclusively for the supply of fuel, lubricants, water and food is determined according to the indivisible meter of the length of the overall.

Demurrage

Demurrage shall be paid for a vessel using a public port or a public harbour for purposes other than the above operations or when using the port for the above services longer than the time required to depart after transshipment operations or, for a passenger vessel, after the port published (announced) sailing schedule.

For vessels staying in the port due to bad weather, repairs, accidents or due to the closure of the waterway, a berth in the amount of 50% of the basic amount may be determined.

For vessels permanently located in the port for the purpose of performing economic activities, the berth may be determined on the basis of a special contract, increased to 100% of the maximum amount.

There is no charge for boxing vessels used by the port or port concessionaire.

Mooring/Berthing fee

The mooring fee is paid by the vessel that uses the public port permanently (annually) or occasionally (daily or monthly).

A berth fee of up to 50% of the full amount may be set for vessels in storage.

A user of a public port who does not own a vessel, and has booked a berth in a public port, pays the berth fee at a flat rate. If he takes possession of the vessel during the year or sells the vessel, the lump sum will be calculated in proportion to the number of days in the year for which he has a reservation.

ANNEX 1

FREIGHT VESSELS			
Nr.	**BASIS FOR FEE CALCULATION**	**UNIT OF MEASURE**	**MAXIMUM AMOUNT (kn)**
1.	**LOADING / UNLOADING BULK CARGO**		
	a) Coal, iron ore and other ores, clay, kaolin, bitumen, fireclay, cement, coke, petroleum coke	indivisible tone	2,60
	b) Fertilizers, phosphates, salts, sulfur	indivisible tone	2,60
	c) Scrap iron and waste	indivisible tone	2,60
	d) Natural gravel, gravel and stone aggregates, iron slag, sand	indivisible tone	2,30
	e) Cereals and oilseeds in grain and in normal conditions after industrial processing	indivisible tone	2,60
	f) Other bulk cargo	indivisible tone	2,60
2.	**LOADING / UNLOADING LIQUID CARGO**		
	a) Petroleum and petroleum products, bioethanol, ethanol	indivisible tone	5,20
	b) Wine, vinegar, wine distillates, liquid bitumen, edible oils, lubricants and fats of vegetable and mineral origin, latex, chemicals and molasses	indivisible tone	3,40
	c) Other liquid cargoes	indivisible tone	3,00
3.	**LOADING / UNLOADING GENERAL CARGO**		

	a) Concrete iron, pipes, angle iron, sheet metal in packages, coils, steel billets, ingots, raw iron	indivisible tone	3,40
	c) Wood, including logs, sawn timber, wood products	indivisible tone	3,70
	d) Packed loads (packages, cartons, boxes)	piece	4,10
	e) Palletized cargo	indivisible tone	11,80
	f) Loads in bags	indivisible tone	8,90
	d) Vehicles, motorcycles	indivisible tone	22,20
	h) Containers - full	TEU	80,00
	i) Containers - empty	TEU	50,00
	i) Heavy loads over 40 t	indivisible tone	36,90
	j) Other general cargo	indivisible tone	7,40
4.	**LOADING / UNLOADING OF DANGEROUS GOODS (EXCLUDING FUEL)**	indivisible tone	18,50
5.	**VESSEL SUPPLY**	length meter	18,50
PASSENGER VESSELS			
1.	**ACCEPTANCE / DEPARTURE OF PASSENGERS IN INTERNATIONAL NAVIGATION**	passenger	18,50
2.	**ACCEPTANCE / DEPARTURE OF PASSENGERS IN DOMESTIC NAVIGATION**	passenger	2,00
3.	**VESSEL SUPPLY**	length meter	18,50
4.	**RESERVATION CANCELLATION IN INTERNATIONAL NAVIGATION**	vessel	1.500,00

Table 24: Fee mount table for the use of shore/pontoons

ANNEX 2

DEMURRAGE		
ITEM	**BASE**	**MAXIMUM AMOUNT (kn)**
Cargo transport vessels	According to the indivisible day of 24 hours and the indivisible length of the vessel	30.00 x m x number of days
Passenger vessels on cruises in international navigation	According to the indivisible day of 24 hours and the indivisible length of the vessel	50.00 x m x number of days

Table 25: Demmurage calculation table

ANNEX 3

PERMANENT BERTH (ANNUAL)			
Nr.	**ITEM**	**BASE**	**MAXIMUM AMOUNT (kn)**
1.	Vessels up to 5 m long	vessel	600,00
2.	Vessels from 5 to 12 m long	vessel	900,00
3.	Vessels from 12 to 20 m long	vessel	1200,00
4.	Vessels over 20 m long	indivisible length meter of the vessel	150,00 x m
MOORING WITHOUT VESSEL (ANNUAL)		lump sum	900,00
OCCASIONAL BERTH (MONTHLY)			
1.	Vessels up to 5 m long	vessel	200,00
2.	Vessels from 5 to 12 m long	vessel	300,00
3.	Vessels from 12 to 20 m long	vessel	400,00

PERMANENT BERTH (ANNUAL)			
4.	Vessels over 20 m long	indivisible length meter of the vessel	50,00 x m
OCCASIONAL BERTH (DAILY)			
1.	Vessels up to 5 m long	vessel	100,00
2.	Vessels from 5 to 12 m long	vessel	200,00
3.	Vessels from 12 to 20 m long	vessel	300,00
4.	Vessels over 20 m long	indivisible length meter of the vessel	30,00 x m

Table 26: Berth fee calculation table

8.9 Standard types of infrastructure fees

Standard infrastructure fees in port of Vukovar encompass berthing fees, idle ship laying fees, truck parking for idle trucks and towing service where all of the dues are paid by the ship owner.

Current types of infrastructure fees	**Paid by**		
	Ship owner	**Cargo owner[6]**	**Other (explain)**
Berth fees (use of wet side of the quay – ship related)	**X**		
Idle ship laying fees (ship not loading/unloading)	**X**		
Truck parking for trucks not loading/unloading			**X** Truck owner
Towing service	**X**		

Table 27: Standard types of infrastructure fees in the port of Vukovar

[6] Shipper or receiver or forwarders on their behalf.

8.10 Unit basis for charging of infrastructure fees

Port dues differentiation has evolved in a market-driven, competitive environment. It has been proven to contribute to certain development goals, but always in combination with other flanking measures. It could even be said that differentiation of port dues is a flanking measure within a wider policy-based approach.

Port infrastructure fulfils a facilitating role in meeting the demands of world trade; its availability has important repercussions for trade, economic development and the competitiveness of economies. As a result, the pressure for port infrastructure development is high. Decisions on how this infrastructure is managed and where it is located.

In general, ports are no different from any other multiproduct industry offering a range of services and operating under different environments and organizational structures. However, the port sector is neither standardized nor homogenous in regards to ownership, organization, competitive framework or management. Furthermore, ports vary in size, functions and geographical location. Despite the fact that basic scaling factors used for price differentiation are somewhat similar, the operational scheme of a port (public-sector, concessioned or 100% privately-operated) has a significant impact on the charges levied because of the different degrees of regulation and supervision involved. To understand differentiation schemes for port charges it is necessary to understand the general objectives of a port and its current pricing principles.

In the example of Vukovar port, couple of things about mentioned infrastructure fees have to be addressed. Port Authority Vukovar is in charge of infrastructure within the port area. Fees charged in the port area would have to have basis of providing sufficient resources to fund the new and maintain the existing infrastructure. In the Vukovar port, infrastructure fees encompass due for using quay and demurrage due as the fees mentioned reflect on the need of infrastructure upkeep.

Truck parking for trucks doing the operations and truck parking for trucks remaining idle are also listed in this table, but thing that is important to note is that these fees are charged by the concessionaire. Same thing goes for the towing service provided by the port. Infrastructural requirements have to be on-par with the existing demand, putting pressure on the port while not having the direct access to the funds as they are charged by the concessionaire in the port.

Infrastructure fees	**Unit basis**
Berth fees (use of wet side of the quay – ship related)	Indivisible ton

Infrastructure fees	Unit basis
Idle ship laying fees (ship not loading/unloading) - demurrage	According to the indivisible day of 24 hours and the indivisible length of the vessel (30 x m x Nr. days)
Truck parking for loading/unloading at loading/unloading bay	Truck/day - paid to a concessionaire
Truck parking for trucks not loading/unloading	Truck/day - paid to a concessionaire
Other services such as towing	Per vessel / service - paid to a concessionaire

Table 28: Unit basis for the infrastructure fees in the port of Vukovar

8.11 Price differentiation methods for service fees

As a general rule of thumb in Croatia, infrastructural fees are being charged by port authorities, while the service fees and nautical-technical services are charged by concessionaires.

As mentioned previously in the beginning of the document (port pricing principles), different rates of dues and fees are categorically explained, hence pointing out that differentiation occurs with different types of cargo. Other fees fall under the category of services which are charged by the concessionaire by their own rates.

Price differentiation methods / Infrastructure fees	Type of vessel	Type of cargo	Value of cargo	Trade direction (export/import)	Direct/indirect transshipment	Quantity of cargo (volume rebates)	Number of port calls/year	Time used/spent	Other (explain)
Vessel loading/unloading		X							
Wagon loading/unloading		X							
Truck loading/unloading		X							
Warehousing/storage		X				X		X	
Yard handling		X							
Other (towage)									X Per vessel

Table 29: Price differentiation methods for infrastructure fees in the port of Vukovar

8.12 Methodologies for price calculation of infrastructure fees

As already mentioned in the Questionnaire, only infrastructure fees charged by the Port Authority Vukovar are dues for using the quay and the demurrage due.

Metrics explained below:

DUE FOR USING QUAY – Dues are calculated for the gross weight of cargo, that is, for the loaded/unloaded indivisible ton of cargo

DEMURRAGE DUE – Indivisible 24-hour day and indivisible meter of the vessel length

8.13 Alternative pricing methods for infrastructure fees – a proposal

Infrastructure fee: Due for using quay
Proposed alternative method: Due for using quay – incentive for use of scrubbers and alternative fuel sources – GREENCENTIVE
Explanation/justification: Since the port dues differentiation has been the subject of a market driven and very competitive environment, it is necessary to focus on strategic differentiation to understand the current practises and to identify potentials for reaching local environmental goals and standards. In this context, port infrastructure charges and their strategic differentiation might be an intermediate step, creating incentives at the local level to improve environmental performance and encourage more environmentally sound behavior on the part of port users. The concept of strategic differentiation of infrastructure charges to encourage more environmentally sound behavior, reduce emissions or promote technological change can be used as a tool for moving towards a greener economy. Keeping this in mind, a proposed measure for the Vukovar port in this instance would be an incentive programme rewarding port users which are in compliance with green(er) energy alternatives. Measure such as an installed scrubber on a ship would bring a 20% discount on the due for using quay, whereas ships which are completely fueled by an alternative energy source such as hydrogen would benefit with as much as 30% discount. The proposed measures aim at incentivization of first-movers in the sector where the rest following would cause a highly desired environmental shift towards zero-carbon society and sustainability of a port and industry in general.
What needs to be done: The approach to differentiated port charges can be driven by a port's own strategic decision or can be voluntary in order to anticipate developments driven by external influences (such as environmental policy at the

national level). The main difference between strategic and voluntary differentiation is that, in theory, a voluntary differentiation scheme has to be revenue-neutral to be attractive for implementation and should not negatively impact competitiveness with other ports. For this idea to come to fruition, Port Authority Vukovar would have to revise their currently applicable Decision on the amount of port dues in ports and harbours.

Table 30: Proposed alternative pricing method for Vukovar

9 Port pricing in Serbia

9.1 Status of ports

In 2010 the new Law on navigation and ports on inland waters was adopted by the Parliament and ports are declared as a public good. In the period from 2010 onwards, landlord port model was set as the ultimate objective of the reform, for its well-known efficiency of the public and private cooperation.

The Law on navigation and ports on inland waters had three main objectives in relation to ports:

- To establish the landlord port model;
- To assist and direct in the cases of resolving issues of property rights, and
- To establish the Port Governance Agency as a central port authority which would implement the Law and monitor the performance of the reform process.

9.2 Port governance status

In 2013 Government of the Republic of Serbia established the Port Governance Agency as a central port authority for all inland ports in Serbia, in charge of management and development of all ports and harbours in the Republic of Serbia. In line with the Law on navigation and ports on inland waters, Port Governance Agency has the regulatory role, the administrative role and the development role.

Ports are operated by licensed Port operators/Concessionaires, separate entities from Port Governance Agency

9.3 Track record of port reforms

Until the end of 90's all ports in the Republic of Serbia were state owned and performed both roles, port authority and port operator. Even though almost ten ports were open for the international traffic, most of them were part of the large industrial facilities, and only ports in Belgrade, Novi Sad and Pancevo had really commercial role and were open for all users.

Transitional period brought unprepared privatisation of ports, where in certain cases infrastructure was sold together with other port assets. Ports continued with operations, but administrative gap became more and more visible.

In 2010 the new Law on navigation and ports on inland waters was adopted by the Parliament. Governance and operating functions were separated, and landlord port model was introduced. Public sector retained the role of port governance through the establishment of Port Governance Agency, while the port operations were left to independent companies (public and private) through the model of operations authorisation or concession.

9.4 Port tariffs regulation

Public charges

Law on navigation and ports on inland waters regulate charging of Concession fees and fees for Operational usage of port, paid by Port Operators/Concessionaires. Basic parameters and principles for the methodology of the fee determination are given within the Law, but the exact fee determination is elaborated/given in each Concession proposal or Licence for Port Operations.

On the other hand, infrastructure fees are regulated by the Law on Charges for the Usage of Public Goods. Articles 166-179 define regulating (and charging) institution (Port Governance Agency), responsible parties for reporting and paying fee for the use of ports, types of fees, methodology of calculation and amounts. Following three categories are foreseen by the law:

- Wharfage, paid by the owner of cargo (receiver or sender), based on the quantity of cargo, or number of passengers in case of passenger ship.

- Berthing, paid by the ship owner, based on the time spent in port (loading/unloading operations) and power (pushers) or cargo capacity (self-propelled vessels). For passenger ships, based on the time spent in port and LOA.

- Ship laying fee, paid by the ship owner, for every indivisible 24h spent in port (reasons other than loading/unloading), based on the LOA.

Port services charges

Article 233 of the Law on navigation and ports on inland waters regulates that Port Operators/Concessionaires are charging fees for the port services they are providing. Since this is pure commercial category, it is up to each Operator/Concessionaire to create own price policy. However, the same article regulates that these prices must be in line with the common Tariff book, brought by the Port Governance Agency with the agreement of the ministry in charge of transport and port operators. This Tariff book defines the lowest level of port service fees for different categories of goods and services, in order to prevent price dumping.

9.5 Financing of new investments

In the Republic of Serbia, port infrastructure, as well as the port land are state owned. Usually, the state is financing new investments in port infrastructure, whether through the PGA or Ministry of construction, transport and infrastructure (for capital investments). Large-scale projects are financed from the state budget, loans and grants from different international finance institutions (EIB, EBRD, WB, WBIF etc.), while smaller projects along with the elaboration of technical documentation are financed directly from the PGA budget (collected infrastructure fees).

However, Law on navigation and ports on inland waters introduced the possibility for Concessionaires and Port Operators to invest in port infrastructure, but the ownership of the infrastructure remains unchanged (state owned). Value of the newly constructed infrastructure is considered in the Port operations contract or Concession agreement.

9.6 Financing of maintenance of existing infrastructure assets

Maintenance of existing and new port infrastructure is the obligation of the port operator/concessionaire. As the party which is commercially exploiting these assets, they are responsible for their maintenance. These terms and conditions are part of the Port operations contract or Concession agreement.

9.7 Public subsidies for ports

There are no subsidies for ports or any other kind of state aid.

9.8 Approach to port pricing

Infrastructure fees in the Republic of Serbia are charged by PGA and Public body approach has been applied. Major infrastructure projects are financed from other sources (state budget, loans, grants).

9.9 Port pricing principles

Port Governance Agency applied Empirical intuition and past trends based pricing. With the approximate method, the goal was to establish well balanced infrastructure fees compared to other Danube ports. Cost recovery could not be taken into account due to the different sources of financing port infrastructure in the past, complicated ownership and other issues.

Port pricing principles *(mark X where applicable)*	Infrastructure fees	Service fees (cargo)	Nautical-technical services
Cost recovery base			
Performance base			
Value (for the user) base			
Empirical intuition and past trends based pricing	X		

Table 31: Port pricing principles in the ports of the Republic of Serbia

9.10 Standard types of infrastructure fees

Port infrastructure fees are charged by the Port Governance Agency. There are three standard fees:

- Wharfage, paid by the owner of cargo (receiver or sender), based on the quantity of cargo, or number of passengers in case of passenger ship.

- Berthing, paid by the ship owner, based on the time spent in port (loading/unloading operations) and power (pushers) or cargo capacity (self-propelled vessels). For passenger ships, based on the time spent in port and LOA.

- Ship laying fee, paid by the ship owner, for every indivisible 24h spent in port (reasons other than loading/unloading), based on the LOA.

Current types of infrastructure fees	Paid by		
	Ship owner	Cargo owner[7]	Other (explain)
Wharfage		X	
Berth fee	X		
Ship laying fee	X		

Table 32: Standard types of infrastructure fees in the ports of the Republic of Serbia

9.11 Unit basis for charging of infrastructure fees

Articles 166-179 of the Law on Charges for the Usage of Public Goods are regulating types of fees and methodology of calculation, while amounts are given in the Annex 8 of the same law, divided by categories, types of goods and appropriate measurement units.

Infrastructure fees	Unit basis
Wharfage	Ton of cargo loaded/unloaded, m3 of cargo loaded/unloaded, TEUs, number of vehicles, number of passengers

[7] Shipper or receiver or forwarders on their behalf.

Infrastructure fees	Unit basis
Berth fee	Engine Kw/time spent in port, NT/time spent in port, LOA/time spent in port
Ship laying fee	LOA/time spent in port

Table 33: Unit basis for the infrastructure fees in the ports of the Republic of Serbia

9.12 Price differentiation methods for service fees

Service fees are charged by service providers/port operators, so the methods of creation of each service fee differ from operator to operator and type of service.

Infrastructure fees, as already described in previous chapters, are charged in accordance with the parameters given in the Law on Charges for the Usage of Public Goods.

Annex 8 Table 1 defined the Wharfage exact amounts for the measurement unit, for each category of cargo (cereals, oilseeds, coil, ore, sand, gravel, stone aggregates, fertilizers, scrap, other dry bulk, general cargo, wood, steel products, containers, passenger and cargo vehicles, oil and oil products, other liquid bulk) and passengers, for the import cargo and in domestic traffic.

Table 2 of the Annex 8 define the Wharfage amounts for the same categories for export. Mostly, 10% discount has been applied.

Table 3 of the Annex 8 define the Berth fee amounts per day and calculation unit (Engine Kw/ NT/ LOA) for different kind of vessels (pusher, self-propelled, passenger), while Table 4 define Ship laying fee for all vessels per their LOA and time spent in port.

Price differentiation methods / Infrastructure fees	Type of vessel	Type of cargo	Value of cargo	Trade direction (export/import)	Direct/indirect transshipment	Quantity of cargo (volume rebates)	Number of port calls/year	Time used/spent	Other (explain)
Wharfage		x		x					
Berth fee	x							x	
Ship laying fee	x							x	

Table 34: Price differentiation methods for infrastructure fees in the ports of the Republic of Serbia

9.13 Methodologies for price calculation of infrastructure fees

As described in previous chapters, Port Governance Agency applied Empirical method, benchmarking and past trends-based pricing, in order to establish sustainable system of infrastructure fees, well balanced with fees charged in other Danube ports.

9.14 Alternative pricing methods for infrastructure fees – a proposal

Unlike port operators who are commercially oriented companies with certain level of flexibility and whose service fees are defined in line with the market conditions (even though this sector market is becoming more restricted with the definition of the lowest and highest prices), port administrations are limited with very strict rules mostly prescribed by the law. Also, infrastructure fees usually are not directly connected with the quality of services (performance of the operator, technology used, etc.).

However, some kind of "stimulation" for frequent users and types of cargo could be applied. A form of sliding fee scale could be applied for containers for instance.

Even though the deployment and use of alternative fuels in shipping is not depending on ports, incentives for cargo shipped in vessels using alternative fuels could contribute to the achievement of European Green Deal goals and Fit for 55 plan.

Infrastructure fee: Wharfage, transhipment of containers
Proposed alternative method: Sliding fee scale
Explanation/justification: In order to stimulate multimodality and bring more containers on waterways, some kind of discount could be applied. Example: If the user/client has transhiped more than 1000 TEUs he gets 5% discount, for 3000 he gets 10%, etc. Since these could not be applied retroactively, achieved numbers would entitle user/client for the discount on next year throughput.
What needs to be done: change of the Law on Charges for the Usage of Public Goods

Table 35: Proposed alternative pricing method for Wharfage for containers

Infrastructure fee: Wharfage
Proposed alternative method: 20% discount for all cargo shipped by vessels using alternative fuels
Explanation/justification: In order to stimulate achievement of European Green Deal goals and Fit for 55 plan, discount should be given to all users/clients using vessels on

alternative fuels.
What needs to be done: change of the Law on Charges for the Usage of Public Goods

Table 36: Proposed alternative pricing method for Wharfage for cargo shipped by vessels using alternative fuels

Infrastructure fee: Berthing
Proposed alternative method: 20% discount for all vessels using alternative fuels
Explanation/justification: In order to stimulate achievement of European Green Deal goals and Fit for 55 plan, discount should be given to all vessels using alternative fuels.
What needs to be done: change of the Law on Charges for the Usage of Public Goods

Table 37: Proposed alternative pricing method for Berthing of vessels using alternative fuels

All incentives should be noted and evidenced as State aid.

10 Port pricing in Romania [8]

10.1 Status of ports

The port of Constanta (including Midia zone), its satellite port Mangalia and also the Tomis Marina are public-private maritime ports owned by the Romanian State which is responsible for their regulation and function. The National Company "Maritime Ports Administration" S.A. Constanta (MPAC) is a company under the authority of the Ministry of Transports and Infrastructure.

Within the Port of Constanta the maritime and cargo related services are mainly carried out by private companies in a competitive environment, applying the free market principles. The Commission in charge to coordinate for the movement of maritime and river vessels in Constanta, Midia and Mangalia Maritime Ports is carrying out its activity in the Port of Constanta being responsible for the traffic coordination of maritime and river vessels, the order settlement of arrival/departure and transit of the maritime and river vessels in Constanta, Mangalia and Midia Ports, as well for berth allotment. The Commission works on a daily basis The day-to-day running of the ports is looked after by. The presidency and secretariat of the Commission is carried out by MPA who is also responsible for the daily publication on a paper support and electronic format of the Newsletter of the maritime and river vessels which contains data regarding the maritime and river vessels identification, port operation progress and goods identification. Authorization of public port services is transparent, nondiscriminatory, objective and public. The Romanian Naval Authority issues authorization for safety public services and services of great importance for the port, such as loading - unloading, bunkering and supplying. For authorization of activities that use the port infrastructure, notification from MPAC is compulsory required. For other activities that do not need an authorization from the Romanian Naval Authority, MPA SA Constanta issues operation permits within the port area, granted in following specific procedure. National Company "Maritime Ports Administration" S.A. Constanta (MPA SA Constanta) was set up through the Romanian Government Decision no.517/1998, altered and completed by Government Decision no.464/2003, through the reorganization of the former Autonomous Enterprise "Constanta Port Administration". MPA is a joint stock company assigned by the Ministry of Transports and Infrastructure to develop activities of national public interest in its capacity of a port administration. The company fulfills the port authority function for Constanta (including Midia zone), Mangalia port and Tomis Marina.

10.2 Port governance status

National Company "Maritime Ports Administration" SA Constanta (MPA SA Constanta) was set up as national company in 1998, through the reorganization of the former public interest corporation "Constanta Port Administration" and changed its name from "Maritime Ports Administration Constanta SA" to "Maritime Ports Administration" SA Constanta in 2003. It is a joint stock company assigned by the

[8] This section contains only the analysis for the seaport of Constanta. No contributions and inputs were received on "fluvial" and "maritime" Danube ports from any of the Romanian project partners.

Ministry of Transports and Infrastructure to develop activities of national public interest in its capacity of port administration. The company fulfills the port authority function for Constanta (including Midia zona, Mangalia Port and touristic Tomis port).

10.3 Track record of port reforms

In order to fulfill the port authority function and in its capacity as administration, the company performs the following tasks:

- 1. Drawing up of development plans for the maritime ports according to the policy and development programs elaborated by Ministry of Transport and Operational Rules for Maritime Ports.
- 2. Coordination of the activities allowed to be performed within the maritime ports.
- 3. Implementation of the development programs regarding the maritime ports infrastructures.
- 4. Issuing permits in order to authorize companies that are developing activities of naval transport within the maritime ports.
- 5. Approval of performing activities within ports, other than those subject to the authorization of Ministry of Transport by issuance of operational permits;
- 6. Providing operational, administration, repair and maintenance services for maintaining minimal technical characteristics of the naval transport infrastructure that have been given under concession or administration, as well as the owned property in the ports of Constanta (incl Midia zone) and Mangalia port, and make it available to users in a non-discriminatory manner, according to the regulations in force.
- 7. Establishing the order of arrival and departure for the vessels in the maritime ports, berths allotment and issuance of berthing permits.
- 8. Performing controls to vessels operation, forbidding or stopping them in cases specified by regulations in force.
- 9. Rendering of services and performing of operations and works in order to fulfill the commitments the Romanian State assumed by international agreements and conventions Romania took part in, such as: search and rescue, case of pollution fight and prevention.
- 10. Representing the Ministry of Transport in relation with the concessionaires of naval transport infrastructure or safety services.
- 11. Supervision of loading and unloading, transport and transit of dangerous substances or dangerous cargo in the maritime ports.
- 12. Rendering the hydro-technical constructions to the port operators for berthing or handling vessels.

National Company "Maritime Ports Administration" S.A. Constanta (MPA SA Constanta) was set up through the Romanian Government Decision no.517/1998, altered and completed by Government Decision no.464/2003, through the reorganization of the former Autonomous Enterprise "Constanta Port Administration".

MPA is a joint stock company assigned by the Ministry of Transports and Infrastructure to develop activities of national public interest in its capacity of a port administration. The company fulfills the port authority function for Constanta Port (including Midia zone), Mangalia port and Tomis Marina.

10.4 Port tariffs regulation

CN APM SA practices tariffs and rents for services performed in the ports it manages: Constanta (Constanta, Midia and Basarabi areas) and Mangalia. The instruments for implementing the tariff policy are the port tariffs, on the one hand, and the legal regulations underlying the elaboration of these tariffs, on the other hand.

The legal regulations underlying the elaboration of tariffs are the following:

Company Statute, annex to GD no. 597/2009 for the amendment and completion of the Government Decision no. 517/1998 on the establishment of the National Company "Maritime Ports Administration" - S.A. Constant;

Law no. 235/2017 for the amendment and completion of the Government Ordinance no. 22/1999 on the administration of ports and waterways, the use of public transport infrastructure belonging to the public domain, as well as the development of shipping activities in ports and inland waterways;

Regulation (EU) 352/2017 of the European Parliament and of the Council establishing a framework for the provision of port services and common rules on the financial transparency of ports,

Competition law no. 21/1999;

Law no. 227/2015 on the Fiscal Code, with subsequent amendments and completions;

Other domestic and international legal regulations specific to safety, port security and environmental protection activities: ISPS Code, Regulation no. 725/2004 of the Council of Europe, Directive 59/2000 on port installations for the reception of ship-generated waste and cargo residues, etc.

With the entry into force of EU Regulation 352/2017, its provisions apply to the Port of Constanta (Constanta, Midia and Basarabi areas), as it is part of the trans-European transport network. In order to implement the provisions contained in the Regulation, GEO no. 160 / 10.09.2020 for the amendment and completion of GO no. 22/1999, as well as for the completion of art. 25 paragraph (1) of the Competition Law no. 21/1996.

10.5 Financing of new investments

The company's investment projects have as a source of financing European funds, the company's own sources as well as budget allocations.

1. Projects financed by European funds

Accessed programs:

POIM - LARGE INFRASTRUCTURE OPERATIONAL PROGRAM

POT - TRANSPORT OPERATIONAL PROGRAM

CEF Transport - Connecting Europe Facility

2. Own company sources

The company's own sources are obtained from the distribution of the company's net profit and from the depreciation of the fixed assets in the company's records and are used to achieve the objectives of infrastructure, superstructure, endowments and modernizations in the port.

3. Projects from budget allocations

The budget allocations are approved by the State Budget and are received at the company level through the budget sheet from the Ministry of Transport and Infrastructure and aim at port infrastructure objectives.

10.6 Financing of maintenance of existing infrastructure assets

Own company sources

The company's own sources are obtained from the distribution of the company's net profit and from the depreciation of the fixed assets in the company's records and are used to achieve the objectives of infrastructure, superstructure, endowments and modernizations in the port.

10.7 Public subsidies for ports

The budget allocations are approved by the State Budget and are received at the company level through the budget sheet from the Ministry of Transport and Infrastructure and aim at port infrastructure objectives.

10.8 Approach to port pricing

MPAC

1. Tariffs for services ancillary to water transport shall be based on the vessel (gross tonnage, vessel length, voyage time, ton capacity, horsepower).

The place of application of the tariffs is represented by the port aquarium given for use according to the concession contract concluded between CM APM SA and MTI, Chapter VI, art. 5, paragraph (1), (2) and (3):

(1) "The concessionaire has the right to exploit, directly at his own risk, the goods covered by the concession contract."

(2) "The concessionaire has the right to use and collect the fruits of the goods which are the subject of the concession."

(3) "The concessionaire has the right to use and collect the fruits resulting from the exploitation of the goods subject to the concession according to the objectives established by the parties, through this contract, in conditions of economic efficiency, in compliance with the legal regulations in force."

The goods whose costs are included in the tariffs are the following:

- public goods: dams, quays, basins, waterways;

- own goods: port basins made from own sources, naval equipment used for interventions in the repair of dams, beacon signaling system, depollution ships, ships and equipment for performing hydrographic measurements, software licenses.

For all ships, the following documents are accepted as a basis for calculating port charges: International Tonnage Certificate - 1969 (ITC) and Certificate of Registration or Nationality.

The characteristics of the ship used to substantiate the tariffs are defined as follows:

L max (LOA): the maximum length measured in meters horizontally, in the diametrical plane, between the extreme points of the ship (m

TB: gross tonnage of the vessel entered in the documents referred to in the Certificate of Registration of the vessel;

UTB: gross tonnage unit;

TC: maximum cargo capacity of inland waterway vessels, expressed in tonnes (t)

CP: horsepower.

For ships that have not registered the TB in the documents, the gross tonnage will be replaced using the calculation formula established in accordance with “Rule 3 - gross tonnage, within the International Convention on Tonnage Measurement of TONAGE Ships - 69”, adopted by Romania by Decree no. 23/1976, as follows:

TB = (0.2 + 0.02 log10 V) x V,

where V = L x B x D x 0.9

V = hull volume (m3)

L = length (m)

B = width (m)

D = draft (m)

2. Passenger Terminal Fares

The fare per passenger is based on the number of passengers transiting the terminal, based on the list of passengers, transmitted by the security officer (employee of CN APM SA) and confirmed by the master of the ship / ship's agent.

3 Superstructure tariffs

This tariff category is the tariffs charged for the use of the port superstructure and applies to all operators who use it.

4 Tariffs for road use

The tariffs for the use of roads apply to all motor vehicles that use the roads located in the ports managed by CN APM SA Constanta, the car access being allowed based on the documents issued by CN APM SA Constanta.

The place of application of the tariffs is represented by the roads / roads given for use according to the concession contract concluded between CM APM SA and MTI, Chapter VI, art. 5, paragraph (1), (2) and (3):

(1) "The concessionaire has the right to exploit, directly at his own risk, the goods covered by the concession contract."

(2) "The concessionaire has the right to use and collect the fruits of the goods which are the subject of the concession."

(3) "The concessionaire has the right to use and collect the fruits resulting from the exploitation of the goods subject to the concession according to the objectives established by the parties, through this contract, in conditions of economic efficiency, in compliance with the legal regulations in force."

The goods whose costs are included in the tariffs are the following:

- public goods: roads, platforms, ramps, bridges, road passages;

- own goods: buildings gates, barriers, gates.

5 Port Branch Energy Tariffs

The Port Energy Branch (without legal personality) has the main attributions:

- ensures the distribution of electricity, production and distribution of heat, for this purpose organizing the operation and repair of facilities for the supply and distribution to port operators and the company of electricity, heat and hot water to ensure their operation continuous, safe and efficient;

- supplies electricity to Romanian and foreign ships;

- pursues the rational use of electricity and heat on the whole and on consumers, carrying out works to rationalize consumption of any kind, aiming at capitalizing on secondary energy resources, reducing losses and eliminating waste;

- provides the necessary technical assistance in the energy field;

- ensures the maintenance of the natural gas pipelines belonging to the company;

- provides assistance in the field of electronic communications.

The place of application of the tariffs is represented by the distribution networks, according to art. 24 para. (1) lit. d) of Government Ordinance no. 22/1999:

“(1) The port administrations provided in art. 23 mainly have the following obligations:

... d) to provide economic operators, at their request, with the supply or distribution of utilities, in compliance with the rules laid down by the competent regulatory authorities; "

6 Tariffs Branch Services Port

The Port Services branch (without legal personality) has the main attributions:

- ensures the maintenance of the buildings, roads and port platforms in the company's patrimony;

- ensures the maintenance of the water and sewerage installations under the management of the branch;

- ensures the maintenance, operation and repair of the means of transport and of the equipment within the company;

- ensures the provision of water / sewerage services to the operators operating in the port territory and of Romanian and foreign ships;

- ensures the performance of specific services and services to third parties, with the equipment provided;

- ensures the development of the technical activity organized at the branch level;

- ensures the application of environmental protection rules on the port territory.

The place of application of the tariffs is represented by the ships, according to art. 19 para. (1) lit. c) point 1 of GO no. 22/1999:

"1. For the purposes of this Ordinance, shipping activities in ports and inland waterways shall be classified as follows:

... c) activities ancillary to shipping activities, comprising:

1. activities relating to the maintenance and repair of shipping infrastructure, coastal and floating signals for navigation, maintenance dredging to ensure depths in ports and inland waterways, assistance to ships in the operation of dangerous goods, recovery of waste and sewage from ships, taking over rubbish and household waste from ships; "

Waste management in the Port of Constanta is the environmental component of the Project on Environment and Infrastructure in the Port of Constanta. The purpose of the project was to align with the obligations of the International Convention for the Prevention of Marine Pollution. The need for this component was due to the continuous development of the Port of Constanta.

Both ships using the port and operators within the port generate different types of liquid and solid waste. In order to collect and store this waste, it was necessary to design and build an ecological system inside the port with the following components:

- Ecological ramp;

- The incinerator;

- Wastewater treatment plant;

7 Tariffs Technical Ships Port Branch

The Port Technical Ships branch (without legal personality) has the main attributions::

- ensures the performance of services to third parties, with equipment;

- ensures the depollution of the Romanian seaports' aquariums, extinguishes fires on ships and dries up the water, - provides the specialized structures of the company with the ships and equipment necessary for hydrographic measurements.

Solid waste coded based on GD no. 856/2002 on waste management records and for the approval of the list of wastes, including hazardous waste code - 15.02.02 - cloths, absorbents, oil filters, protective clothing contaminated with hazardous substances, come from the operation of ships and are taken over by collecting vessels, in the endowment of the branch, from the ships transiting the ports.

The tariffs practiced by CN APM SA Constanta, under the incidence of GO no. 22/1999, whose substantiation norms are subject to the approval of the CSDN (Naval supervision competition council)

The setting of charges levied by port authorities and inland waterways shall be carried out in a non-discriminatory manner on the basis of data from management accounts. Any change in rates shall be made only in the last quarter of the current year for the following year.

The expenses included in the substantiated tariff structure are closely related to the service provided / the administration's consideration.

The elaboration and consultation of the norms for substantiating the tariffs practiced by CN APM SA Constanta is regulated by the provisions of art. 37 of Government Ordinance no. 22/1999, as follows:

„(1) For the provision of the services provided in art. 36, as well as for other activities and services provided by them, the administrations set tariffs in a non-discriminatory manner.

(2) The establishment of tariffs is made on the basis of substantiation rules drawn up by the administrations on the basis of the data from the management accounting of the respective administration, following the prior consultation of the economic operators.

(3) Any modification of the tariffs provided in par. (1) shall be made only in the last quarter of the current year for the following year. "

Mangalia port rates

As the port of Mangalia is not part of the trans-European transport network, the tariffs charged in this port are based on Government Ordinance no. 22/1999, the substantiation norms being endorsed by the Naval Supervisory Board.

The place of application of the tariffs is represented by the land and the port aquarium given for use according to the concession contract concluded between CM APM SA and MTI, Chapter VI, art. 5, paragraphs (1), (2) and (3):

(1) "The concessionaire has the right to exploit, directly at his own risk, the goods covered by the concession contract."

(2) "The concessionaire has the right to use and collect the fruits of the goods which are the subject of the concession."

(3) "The concessionaire has the right to use and collect the fruits resulting from the exploitation of the goods subject to the concession according to the objectives established by the parties, through this contract, in conditions of economic efficiency, in compliance with the legal regulations in force."

The goods whose costs are included in the tariffs are the following:

- public goods: land, dams, quays, basins, waterways;

- own goods: port basins made from own sources, naval equipment used for interventions to repair dams, beacon signaling system, depollution ships, ships and equipment for performing hydrographic measurements, software licenses, authorized vehicles for transporting waste (garbage).

Vessels shall be required to deliver the full amount of waste on board to the sanitation team on board.

The transport of garbage, selected by categories, taken from the ships to the place of final disposal, is done by authorized means of transport for waste. Garbage from recyclable categories is handed over to authorized collectors.

10.9 Port pricing principles

Port pricing principles *(mark X where applicable)*	Infrastructure fees	Service fees (cargo)	Nautical-technical services
Cost recovery base	x	x	
Performance base	x	x	
Value (for the user) base			
Empirical intuition and past trends based pricing			

Table 38: Port pricing principles in the port of Constanta

10.10 Standard types of infrastructure fees

Current types of infrastructure fees	Paid by		
	Ship owner	Cargo owner[9]	Other (explain)
BASIC PORT TARIFFS	x		
The access tariff	x		
The key tariff	x		
The basin tariff	x		
SPECIAL TARIFFS	x		
Tariff for safety and security during the operation of ships in the port	x		
Passenger ship Terminal usage fee by Passenger ship from ships	x		
Scanner maintenance fee	x		
SINGLE TARIFFS FOR THE USE OF PORT INFRASTRUCTURE BY CERTAIN CATEGORIES OF SHIPS	x		
TARIFFS FOR SPECIFIC PORT UTILITIES AND SERVICES	x		
TARIFFS FOR THE INSTALLATION OF ANTI-POLLUTION DAMS	x		
TARIFFS FOR TAKING OVER GARBAGE AND HOUSEHOLD WASTE FROM SHIPS	x		
Maritime Ship Pilotage Tariffs	x		
Maritime Ship towing Tariffs	x		

Table 39: Standard types of infrastructure fees in the port of Constanta

[9] Shipper or receiver or forwarders on their behalf.

10.11 Unit basis for charging of infrastructure fees

Infrastructure fees	Unit basis
BASIC PORT TARIFFS	
The access tariff	EURO/UTB
The key tariff	EURO/m-day
The basin tariff	EURO/m-day
SPECIAL TARIFFS	
Tariff for safety and security during the operation of ships in the port	EURO/UTB
Passenger shipi Terminal usage fee by Passenger shipii from ships	EURO / Passenger ship
Scanner maintenance fee	euro / container - is charged for containers that are the subject of import operations through the port of Constanţa Sud
SINGLE TARIFFS FOR THE USE OF PORT INFRASTRUCTURE BY CERTAIN CATEGORIES OF SHIPS	EURO / 100HP-day / EURO / UTB-day
Tariffs for technical vessels	EURO / 100HP-day;
Tariff for other inland waterway vessels	EURO / 100TC-day;
Tariff for fishing vessels	EURO / m-month
Tariffs for ships under repair near the dock	EURO / m-day
TARIFFS FOR SPECIFIC PORT UTILITIES AND SERVICES	EURO / 100HP-day / EURO / UTB-day
The water supply tariff	euro /t
The electricity supply tariff	euro / kwh
TARIFFS FOR THE INSTALLATION OF ANTI-POLLUTION DAMS	euro / linear m / day

Infrastructure fees	Unit basis
TARIFFS FOR TAKING OVER GARBAGE AND HOUSEHOLD WASTE FROM SHIPS	euro / ship
Maritime Ship Pilotage Tariffs	EURO/UTB/ maneuver
Maritime Ship towing Tariffs	EURO/m

Table 40: Unit basis for the infrastructure fees in the port of Constanta

10.12 Price differentiation methods for service fees

Price differentiation methods / Infrastructure fees	Type of vessel	Type of cargo	Value of cargo	Trade direction (export/import)	Direct/indirect transshipment	Quantity of cargo (volume rebates)	Number of port calls/year	Time used/spent	Other (explain)
The access tariff							x		
The key tariff	x						x		
The basin tariff	x						x		

Table 41: Price differentiation methods for infrastructure fees in the port of Constanta

10.13 Methodologies for price calculation of infrastructure fees

No info available.

10.14 Alternative pricing methods for infrastructure fees – a proposal

No info available.

11 Conclusions

Aside from providing an insight into different port pricing schemes applied in the Danube region, this deliverable provided different views on potential alternative pricing methods for port infrastructure fees, in order to make them less rigid and more flexible and adaptable to dynamic changes at the waterborne transport market. The adaptability of the port infrastructure fees is required due to the market volatility, physical restrictions of navigation or even induced by strategically planned focus on, for example, exports of certain type of goods using waterborne transportation.

The level of dynamism of the proposed alternative pricing methods is limited. Proposals range from those focused on boosting the alternative clean fuels usage, via CPV (cost, performance, value) based tariffs, to harmonization of port fees in larger ports and offering discounts in wharfage fees for the certain types of cargoes and their volumes. None of the proposals took into account various nautical hindrances that may occur throughout the year. This dynamic nature of the port infrastructure fees could have been achieved on the basis of, say, maximum payload that can be loaded at a given water level – meaning that if, due to the low water period, ship operators can load, say, 25% less cargo than usual (at normal water levels), this would lead to a proportional reduction of port fees charged by port authorities. In such way, port authorities would help cargo owners and ship operators to cope with financial losses due to restricted loading capacity during low waters. These sliding fees, or the market based pricing, require care that must be taken to ensure that the full rate traffic is not diverted to the lower rate in an endeavour to generate a higher volume of business. Existing tariff levels, costs, competition, agreements with shipowners and market sensitivity should be carefully evaluated. For example, there is nothing to be gained by offering a 40 percent off season discount for particular traffic, if the market is insensitive to price. Finally, market pricing should be avoided if it leads to a tariff war. It may generate additional traffic, but the average rate will fall and there may be little prospect of increasing revenue.

Quite surprisingly, no proposals were received for the port fees to be used for promotion of specific objectives, such as maximization of use of the facility, attraction of a particular type of cargo, promotion of exports of certain cargoes, etc. This requires further analysis in potential follow up of this project.

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