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FUNDING MECHANISMS FOR IMPLEMENTATION OF MARINE STRATEGY FRAMEWORK DIRECTIVE: EU EXPERIENCE

Over the past decade, there have been signs of improvement of the Black Sea. However, its unique water areas and coastline are still under serious threat. The Black Sea is unprotected from significant anthropogenic pressures, and has a low adaptive potential. If as the region's economy grows, these pressures will intensify, the problem will become more serious.

The implementation of the Directive 2008/56/EC establishing a framework for Community action in the field of environmental policy on the marine environment (Marine Strategy Framework Directive) are important for Ukraine. The use of the marine environment, taking into account the ecosystem approach and the principle of integrated management improves the environment, biodiversity, development of industries marine complex, especially commercial fish and shellfish, recreation and tourism.

Directive 2008/56/EC aims to achieve good environmental status of marine waters and to protect the marine resources that affect the economic and social activities. The main stages of the implementation of Directive 2008/56/EC include: 1) adoption of national legislation and designation the authority or authorities competent for the implementation of this Directive; 2) initial assessment of the current environmental status of marine waters; determine good environmental status for marine waters and establishment environmental targets and associated indicators; establishment of monitoring program for the development of ongoing assessment and regular updating purposes; 3) development programme of measures to achieve good environmental status.

Implementation of the MSFD requires more coordinated research, so that studies to evaluate benefits can be carried out across countries using comparable, state-of-the-art valuation methods. This could also include the combination of different valuation methods, e.g. of stated and revealed preference methods, to gain more reliable benefit estimates. Moreover, integrated modelling will be of utmost importance to link bio-geophysical and socio-economic systems and to trace the effects of changes in the marine environment to their impact on benefits.

Focus is on methodological questions related to a common understanding of the funding, technical and scientific implications of the Marine Strategy Framework Directive. In particular, one of the objectives of the strategy is the development of non-legally binding and practical documents, such as co-financing of MSFD measures.

Key words: marine strategy, funding mechanisms, implementation, directive, institutional background.

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МЕХАНІЗМИ ФІНАНСУВАННЯ ІМПЛЕМЕНТАЦІЇ МОРСЬКОЇ РАМКОВОЇ ДИРЕКТИВИ: ДОСВІД ЄС

За останнє десятиліття спостерігалися ознаки поліпшення стану Чорного моря. Проте його унікальні акваторії та узбережжя все ще знаходяться під серйозною загрозою. Чорне море незахищене від значних антропогенних тисків, і має низький адаптаційний потенціал. Якщо по мірі зростання економіки регіону ці тиски посиляться, проблема стане серйознішою.

Імплементация Директиви 2008/56/ЄС про встановлення рамок діяльності Співтовариства у сфері екологічної політики щодо морського середовища (Рамкова Директива про морську стратегію), оскільки використання морського середовища з урахуванням екосистемного підходу та принципу інтегрованого управління сприяє поліпшенню стану довкілля, збереженню біорізноманіття, розвитку галузей морегосподарського комплексу, перш за все рибальства, аквакультури, рекреації й туризму.

Директива 2008/56/ЄС спрямована на досягнення доброго екологічного стану морських вод і захисту морських ресурсів, від яких залежить економічна та соціальна діяльність. Основні етапи реалізації цього документа включають: 1) набуття чинності законами, підзаконними актами та адміністративними положеннями, необхідними для виконання Директиви 2008/56/ЄС; визначення уповноваженого органу (органів) влади, відповідального за її впровадження; 2) початкову оцінку сучасного стану морських вод; визначення їх доброго екологічного стану; встановлення екологічних цілей та індикаторів для морських вод; розробку програми моніторингу для здійснення поточної оцінки та регулярного оновлення цілей; 3) підготовку комплексу заходів для досягнення доброго екологічного стану.

Реалізація РДМС вимагає більш скоординованих досліджень, що мають проводитися в різних країнах, використовуючи порівняльні, найсучасніші методи оцінки. Це може також включати комбінацію різних методів оцінки, наприклад від заявлених та виявлених методів оцінки стану навколишнього середовища. Більше того, інтегроване моделювання матиме надзвичайно важливе значення для поєднання біогеофізичних та соціально-економічних систем та простежити вплив змін у морському середовищі.

Зосереджено увагу на методологічних питаннях, пов'язаних із загальним розумінням фінансових, технічних та наукових наслідків Рамкової директиви Морської стратегії. Зокрема, однією з цілей цієї стратегії є розробка не юридично обов'язкових та практичних документів, таких як співфінансування заходів РДМС.

Ключові слова: морська стратегія, механізми фінансування, імплементация, директива, інституціональні передумови.

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МЕХАНИЗМЫ ФИНАНСИРОВАНИЯ ИМПЛЕМЕНТАЦИИ МОРСКОЙ РАМОЧНОЙ ДИРЕКТИВЫ: ОПЫТ ЕС

За последнее десятилетие наблюдались признаки улучшения состояния Черного моря. Однако его уникальные акватории и побережья все еще находятся под серьезной угрозой. Черное море незащищено от значительных антропогенных воздействий, и имеет низкий адаптационный потенциал. Если по мере роста экономики региона эти давления усилятся, проблема может усилиться.

Имплементация Директивы 2008/56/ ЕС об установлении рамок деятельности Сообщества в сфере экологической политики по морской среде (Рамочная Директива о морской стратегии) имеет важное значение, поскольку использование морской среды с учетом экосистемного подхода и принципа интегрированного управления способствует улучшению состояния окружающей среды, сохранению биоразнообразия, развития отраслей морехозяйственного комплекса, прежде всего рыбного промысла, аквакультуры, рекреации и туризма.

Директива 2008/56/ЕС направлена на достижение хорошего экологического статуса морских вод и защиты морских ресурсов, от которых зависит экономическая и социальная активность. Основные этапы реализации этого документа включают: 1) вступления в силу законов, подзаконных актов и административными положениями, необходимыми для выполнения Директивы 2008/56 / ЕС; определение уполномоченного органа (органов) власти, ответственного за ее внедрение; 2) начальную оценку современного состояния морских вод; определения их хорошего экологического состояния; установление экологических целей и индикаторов для морских вод; разработку программы мониторинга для осуществления текущей оценки и регулярного обновления целей; 3) подготовку комплекса мероприятий для достижения хорошего экологического статуса.

Основное внимание уделяется методологическим вопросам, связанным с общим пониманием финансовых, технических и научных последствий Рамочной директивы о морской стратегии. В частности, одной из целей стратегии является разработка не имеющих обязательной юридической силы и практических документов, таких как софинансирование мер РДМС.

Ключевые слова: морская стратегия, механизмы финансирования, имплементация, директива, институциональные предпосылки.

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Problem definition. In the European Union (EU) there is a framework that requires EU Member States to develop strategies to achieve 'good environmental status' in their marine waters by 2020. This objective aims at having clean, healthy and productive seas. This framework is set

through a legal instrument known as the "Marine Strategy Framework Directive" (Directive 2008/56/EC). Over the first six years of implementation EU Member States had to assess the status of their marine waters; determine 'good environmental status' on the basis of 11 descriptors (such as biodiversity, commercial fisheries, marine litter or seabed integrity); set targets, develop and implement monitoring programmes; and finally develop and implement measures to achieve this objective. The ecosystem approach to the management of human activities having an impact on the marine environment is intrinsic to the framework, thereby integrating the concepts of environmental protection and sustainable use. Importantly, this framework requires Member States to work together in a regional context, thereby ensuring coherence in the actions that are being taken by Member States given the transboundary nature of impacts on the marine environment. EU Member States therefore often work together with the Regional Sea Conventions covering the marine waters of EU Member States and Ukraine.

According to the MSFD, Member States are required to identify measures that contribute to the achievement or maintenance of the Good Ecological Status (GES) set out in their Marine Strategies and that will address the predominant pressures and impacts identified in the initial assessment of their marine waters (initial assessment). There should be a direct link between the proposed measures and the established national targets and financial mechanisms.

Where relevant it is possible that measures may address several descriptors, relating to different targets / pressures, economic sectors and activities. There is no definitive nor an exhaustive way in which measures may be presented. In the following section the classification according to MSFD is used.

The analysis of recent research and publications. Some scoping studies have been carried out that examine the economic requirements of the MSFD and review the existing literature on marine ecosystem goods and services and their valuation. Qiu (2013) identifies explicit and implicit economic requirements of the MSFD and assesses the possible role that economic analysis can play in its implementation [1]. Atkins et al. (2011) present different methodological tools that can be used to analyze the role of socio-economic drivers and responses in environmental-economic systems and provide an overview of valuation studies on marine ecosystem services in European countries [2]. Marine and coastal ecosystems are important for humans in multiple ways. They provide a number of goods and services which are used directly and indirectly by humans [3-4]. These goods and services include the provisioning of food, energetic and mineral resources but also the regulation of important ecological functions such as the climate system. Moreover, the ocean offers transport routes and recreational opportunities. However, marine and coastal ecosystems – and thus the benefits they create for humans – are subject to increasing pressures and competing usages [5-6]. These pressures result e.g. from intensified fishing efforts, nutrient enrichment, increasing maritime transport, pollution, noise, sediment sealing and increasing ocean acidification caused by anthropogenic CO₂ emissions. Despite their great importance, goods and services provided by marine and coastal ecosystems have received far less attention than those provided by terrestrial ecosystems – maybe due to the difference in access and direct experience [7-8].

The aim. The aim of this paper is to discuss the challenge to institutional development for funding of implementation of EC Marine strategy framework directive.

Presenting main material. Marine ecosystems have been recognized as one of the most important natural resources as they offer a wide range of ecosystem services (Beaumont et al, 2007; Atkins et al, 2011; Burkhardt, 2011) [9-11]. This makes their conservation and management highly valuable for human well-being.

Although the majority of seas zone combine protection and the sustainable development of activities, their ultimate vision is to conserve biodiversity, habitat structure and the functioning of the ecosystem. When designing the tactical and operational objectives for running seas zone to achieve visions, goals and targets in these areas, frameworks should be considered (Sarda et al, 2014) [12].

Beyond its territorial sea, a coastal state may claim an exclusive economic zone (EEZ) that extends up to 200 nautical miles from the baseline (Art. 55, 57). Since the Black Sea is quite small

and all the riparian states have declared EEZs, it is completely divided between them (Black Sea Commission). Thus, there are no areas that lie beyond national jurisdiction (high seas/the Area) [13-16].

From the Birds Directive to the MSFD, a clear trend of mainstreaming environmental concerns into wider planning and development programmes can be recognized in European legislation (Qiu and Jones, 2013) [17]. Right in line with that trend, the MSPD has recently been adopted, constituting a milestone in European legislation with regard to spatial planning. The EU for the first time includes not only individual spatial planning elements in environmental regulations [18]. In particular because of the increasing and uncoordinated use of coastal and maritime areas that leads to an inefficient and unsustainable use of marine and coastal resources, the Directive rather aims to cover all policy areas with an impact on coasts, seas and oceans (EC, 2013) [19].

The Directive, however, does not set new sectoral policy targets. Through maritime spatial plans, the objectives defined by national or regional sectoral policies are to be integrated and linked, and steps taken to prevent or alleviate conflicts between different sectors and to achieve the Union's objectives in marine and coastal related sectoral policies (EC, 2013) [19]. The operational objectives of the Directive are thus procedural in nature. It supports ongoing implementation of sea-related policies in Member States through more efficient coordination and increased transparency (EC, 2013) [20].

Consequently, the Directive only establishes a 'framework' for maritime spatial planning (Art. 1(1)). The EU has opted for such a 'framework-type' Directive to provide flexibility and to allow the Member States to develop their own national policies. The Directive is deliberately not aimed at assigning a new planning task to the EU or at reshaping the different national spatial planning systems (Schubert, 2015) [18].

The Marine Strategy Framework Directive (MSFD, 2008/56/EC) sets the target of reaching Good Environmental Status (GES) in all EU waters by 2020. The situation of the European Seas will improve significantly if this strategic goal can be achieved, or at least if the trend towards its achievement triggers effective conservation measures. In order to characterise good environmental status (GES), the Member States define a set of characteristics for the good environmental status of their marine waters. Such a definition implies the determination of the desired states. The relevant characteristics should be based around the initial assessment and the 11 descriptors as qualitative descriptions of the GES, which in their entirety are indicative of environmental status. These include marine biodiversity, food webs and the sea-floor, as well as key anthropogenic pressures on the marine region, such as eutrophication, pollutants, fisheries, invasive species, litter, and the introduction of energy (including noise) [23].

The EU COM Decision of 1 September 2010 (2010/477/EU) on "criteria and methodological standards on good environmental status of marine waters" lists a total of 29 criteria and 56 indicators designed to facilitate a more precise analysis of the 11 state and pressure descriptors.

The Member States are required to determine the relevant GES for these individual criteria/indicators, coordinated within the relevant marine regions; in other words, they should define corresponding thresholds or trends at which GES is achieved. As the EU COM itself states in its Decision, in most cases the indicators are not defined in sufficient detail as to allow the corresponding scientific data collection techniques and assessment procedures to be automatically derived. As such, the Member States will still need to operationalise these indicators specifically for their marine regions. This also includes a fundamental analysis of the practicability and usability of the individual indicators ("viability analysis").

Environmental targets are the targets to be achieved with the programme of measures developed under the MSFD. These should be defined for the individual components of good environmental status (GES) that have already been established (Article 9), with due regard for the actual states ascertained in the initial assessment and the anthropogenic pressures identified in

accordance with Annex III of MSFD. Environmental targets formulated for individual descriptors can often be also relevant for other descriptors.

The number of environmental targets is therefore likely to be significantly lower than the number of criteria and indicators to describe GES in accordance with Article 9. Definition of GES is based on the 29 criteria and 56 indicators specified by the EU COM (2010/477/EU) for the 11 descriptors for state-based and pressure-based (pale blue) GES components. The GES components in the right-hand box form the basis for the establishment of environmental targets.

Each Member State is required to assess the current state of its marine environment, to define the desirable 'good environmental status' of its region and to establish detailed environmental targets as well as monitoring programmes.

The MSFD can be interpreted as applying the 'hard' sustainability approach, of which ecosystem conservation is the basis. The taking into account of all relevant impacts constitutes a novel, holistic approach to environmental protection at the EU level, through which many of the sectoral efforts of the past can be complemented or even replaced. Together with the Water Framework Directive (WFD, 2000/60/EC), the MSFD provides for an integrated environmental management system that stretches from the basin catchment area through the coast to the open sea (Qiu and Jones, 2013) [1].

Part of the financing of these MSFD measures and activities can be derived from EU funding mechanisms.

In view of the outcome of the high level inventory of potential funding mechanisms in section 3 as well as the background of Article 22 of the MSFD, the focus in this co-financing guidance is on the following EU-funding mechanisms for MSFD implementation: EU Structural and Investment Funds (ESI Funds) (European Maritime and Fisheries Fund (EMFF) and EU Regional Funds: European Regional Development Fund (ERDF), Cohesion Fund (CF); EU Programme for the Environment and Climate Action (LIFE); EU Framework Programme for Research and Innovation (Horizon 2020).

The European Maritime and Fisheries Fund - EMFF provides several opportunities to finance the Common Fisheries Policy and the Integrated Maritime Policy. Specifically, dedicated support is provided for the management, restoration and monitoring of coastal and marine Natura 2000 sites. In addition, support is also made available for the management, restoration and monitoring of other marine protected areas (MPAs) to support the implementation of MSFD. Also the improvement of the knowledge on the state of the marine environment (establishing monitoring programmes) and the PoMs foreseen in the MSFD in line with the obligations established in the Directive, are eligible to funding by EMFF.

The European Regional Development Fund (ERDF) and the Cohesion Fund are both instruments of the EU Cohesion Policy. General information on the Cohesion Policy is available at INFOREGIO.

The European Regional Development Fund (ERDF) aims to strengthen economic and social cohesion in the European Union by correcting imbalances between its regions. The ERDF supports regional and local development by co-financing investments in R&D and innovation, climate change and environment, business support to SMEs, services of common economic interest, telecommunication, energy and transport infrastructures, health, education and social infrastructures and sustainable urban development. Concerning the issue of environment and resource efficiency, opportunities exist for Member States for co-financing MSFD-measures.

The Cohesion Fund is one of the EU (financial) instruments of the overall EU Cohesion Policy. The Cohesion Fund (CF) provides a financial contribution to projects in the fields of environment and trans-European networks in the area of transport infrastructure. Following the environment focus, also here possibilities exist for specific Member States to co-fund MSFD measures.

The main objective of the LIFE Programme is to improve the implementation of EU environment and climate policy and legislation. Though in principle supported through all major EU funding programmes, these do not address all environmental and climate needs. LIFE helps

coordinate various sources of funding for environment and climate action, and fills gaps by addressing environmental issues that are not dealt with by other EU Funds, focusing on providing and disseminating solutions and best practices to achieve environmental and climate goals, and by promoting innovative environmental and climate change technologies.

Horizon 2020 is the largest EU Research and Innovation programme ever with nearly €80 billion of funding available over 7 years (2014 to 2020). Horizon 2020 will cover activities from research to market with a new focus on innovation-related activities, such as piloting, demonstration, test-beds, and support for public procurement and market uptake. It will include establishing links with the activities of the European Innovation Partnerships (EIP).

Conclusions. The cooperation towards the setting up of the Common Maritime Agenda is a bottom-up process between the participating countries, with the involvement of the relevant stakeholders. Participation in the activities which will be undertaken under this cooperation remains voluntary, depending on the needs to be addressed and as appropriate.

The cooperation towards the setting up of the Common Maritime Agenda complements the work of the existing regional structures such as BSEC, BSC and capitalizes on their achievements. This cooperation is targeted at inclusive growth, marine and coastal environment protection, knowledge exchange, technology transfer, upgrading of skills, job creation and enhancing access to sustainable financing. Further synergies and mutually reinforcing agendas are to be actively explored in the future.

The aim of the Marine Strategy Framework Directive (MSFD) is to protect more effectively the marine environment across Europe. Member States - cooperating with other Member States and non-EU countries within a marine region - are required to develop strategies for their marine waters. These marine strategies must contain a detailed assessment of the state of the environment, a definition of "good environmental status" at regional level and the establishment of clear environmental targets and monitoring programs. Article 22 of the MSFD stipulates that the implementation of the Directive shall be supported by existing Community financial instruments in accordance with applicable rules and conditions.

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