

PERFORMANCE AUDIT REPORT

MANAGING INTERVENTIONS IN CASE OF ACCIDENTAL POLLUTION OF THE ADRIATIC SEA

No: 01-02-10-11-7-322-18/20

Sarajevo, November 2020.



PERFORMANCE AUDIT REPORT

“Managing Interventions in Case of Accidental Pollution of the Adriatic Sea”

The Audit Office of the Institutions in the Federation of Bosnia and Herzegovina has conducted a performance audit in order to examine whether the relevant institutions in the FB&H have created the prerequisites for effective management interventions in the case of accidental Adriatic Sea pollution. The intention of the audit was to indicate the need for establishment of an adequate system of interventions in the case of accidental marine pollution, in order to reduce effectively the consequences for the environment that can permanently impair the quality of life and health of citizens.

The audit was conducted in accordance with the Law on Audit of the Institutions in the Federation of Bosnia and Herzegovina ("Official Gazette of FBiH", No. 22/06), International Standards of Supreme Audit Institutions and Performance Audit Methodology of Supreme Audit Institutions in B&H.

According to the subject of the examination and the competencies of the institutions, the audit covered the activities of the Federal Ministry of Agriculture, Water Management and Forestry; Federal Ministry of Environment and Tourism; Agency for Watershed of Adriatic Sea; Federal Civil Protection Administration; Federal Ministry of Transport and Communications; Federal Administration for Inspection Affairs; Ministry of Agriculture, Forestry and Water Management of the Herzegovina-Neretva Canton; Ministry of Trade, Tourism and Environmental Protection of the Herzegovina-Neretva Canton and the Municipality of Neum.

The results showed that the basic prerequisites for efficient management interventions in case of accidental marine pollution have not been established yet in the FB&H. Many factors have indicated the inefficiency of the relevant institutions in this area: the shortcomings of the existing regulatory framework, inadequate institutional prerequisites for water protection, non-compliance with the adopted regulations, and delays in the adoption of clear procedures for action.

Performance Audit Report was prepared and appropriate recommendations were provided, based on the established findings and conclusions. The Audit Office of the Institutions in the Federation of Bosnia and Herzegovina considers that the implementation of the given recommendations can adequately regulate the protection of the Adriatic Sea and can establish prerequisites for effective action in case of accidental marine pollution.

In line with the provisions of the Law on Audit of Institutions in the Federation of Bosnia and Herzegovina, the Audit Office of the Institutions in the Federation of Bosnia and Herzegovina has submitted the Draft Performance Audit Report to the institutions subjected to the audit for their comments. Out of the nine institutions to which the Draft Report was submitted, the Federal Ministry of Environment and Tourism, the Agency for Watershed of Adriatic Sea and the Federal Ministry of Agriculture, Water Management and Forestry submitted comments to the Audit Office. The submitted comments were carefully considered and included in the Performance Audit Report.

Sarajevo, 23. 11. 2020.

DEPUTY AUDITOR GENERAL

Dragan Kolobarić

AUDITOR GENERAL

Dževad Nekić



TABLE OF CONTENTS

FOREWORD	3
SUMMARY	4
1. INTRODUCTION	6
1.1. Background problem and motivation	6
1.2. Audit Objective and Audit Questions.....	7
1.3. Audit Scope and Limitations	7
1.4. Audit Criteria	8
1.5. Data Sources and Methodology.....	9
2. DESCRIPTION OF THE AREA	10
2.1. Legal Framework in FB&H Relevant to the Field of Audit.....	11
2.2. Relevant Institutions	13
2.3. Responding in Case of Accidental Marine Pollution	13
3. AUDIT FINDINGS	15
3.1 Regulatory and Institutional Prerequisites.....	15
3.1.1. Inadequately Regulated Sea Protection.....	15
3.1.2. Institutional Prerequisites for Marine Protection and Intervention Management	17
3.1.3. Lack of Strategic Goals for More Adequate Regulation of Marine Protection	20
3.2. Accidental Water Pollution Plans	20
3.2.1. Disadvantages of the Federal Operational Plan	21
3.2.2. Risk assessment of Accidental Pollution	23
3.2.3. Establishment of Functional Groups	24
3.2.4. Remediation of Accidental Water Pollution	25
3.2.5. Reviews of Intervention Procedures.....	26
3.3. Comments to the Draft Report	27
4. CONCLUSIONS	30
5. RECOMMENDATIONS	32
ANNEXES	35
REFERENCES	46



LIST OF ABBREVIATIONS

AWAS	Agency for Watershed of Adriatic Sea
B&H	Bosnia and Herzegovina
CAMP	Coastal Area Management Programme
FAIA	Federal Administration for Inspection Affairs
FB&H	Federation of Bosnia i Herzegovina
FCPA	Federal Civil Protection Administration
FOP	Federal Operational Plan for Accidental Water Pollution of Third Degree of endangerment
HNC	Herzegovina-Neretva Canton
MAP	Mediterranean Action Plan
MARPOL	International Convention for the Prevention of Pollution from Ships
MoAFWM HNC	Ministry of Agriculture, Forestry and Water Management of the Herzegovina-Neretva Canton
MoAWMF FB&H	Federal Ministry of Agriculture, Water Management and Forestry
MoCT B&H	Ministry of Communication and Transport of Bosnia and Herzegovina
MoET FB&H	Federal Ministry of Environment and Tourism
MoFTER B&H	Ministry of Foreign Trade and Economic Relations of Bosnia and Herzegovina
MoTC FB&H	Federal Ministry of Transport and Communications
MoTTEP HNC	Ministry of Trade, Tourism and Environmental Protection of the Herzegovina-Neretva Canton
REMPEC	The Regional Marine Pollution Emergency Response Centre for Mediterranean Sea

DIAGRAMS:

Diagram 1. Main Strategic, Regulatory and Planning Framework in the FB&H Relevant to the Subject Area

Diagram 2. Complexity of Water Protection System and Intervention Management in Case of Accidental Water Pollution in the FB&H

TABLES:

Table 1. Operational Plans foreseen by the Rulebook on Procedures and Measures in Case of Accidents on Waters and Coastal Water Land

Table 2. Elements to be included in operational plans

ANNEXES:

Annex 1. Basic Information on the Legal Framework Relevant to the Subject of Audit

Annex 2. EU Directives and International Conventions Relevant to Water Protection

Annex 3. Competences of Institutions Relevant to the Subject of the Audit

Annex 4. The Levels of Endangered Waters according to the Rulebook on Procedures and Measures in Case of Accidents on Waters and Coastal Water

Annex 5. Intervention Treatment in case of Accidental Pollution of the Neretva River

Annex 6. Organization of Procedures and Manner of Implementation of Measures According to the Federal Operational Plan for Accidental Pollution of the Third Degree of Endangerment

Annex 7. Intervention Action Plans in Case of Accidental Water and Sea Pollution in Republic of Croatia

Annex 8. Functional Groups Foreseen by the Federal Operational Plan



FOREWORD

The public sector audit performed by the supreme audit institutions is an important factor in initiating changes in the lives of citizens. The audit of government institutions and public administration bodies has a positive impact on trust in society because it encourages accountability mechanisms, which in turn leads to better decisions by the executive and legislature, as well as officials who manage public money. After the publication of the audit results, citizens have the right to demand the responsibility of the keepers of public money. Thus, SAIs promote efficiency, accountability, effectiveness and transparency of public administration. An independent, effective and credible SAI is therefore a key component of a democratic system in which accountability, transparency and integrity are an integral part of a stable democracy.¹

The Audit Office of Institutions in the Federation of Bosnia and Herzegovina (hereinafter referred to as: the Audit Office), in accordance with Article 14 of the Law on Audit of Institutions in the Federation of Bosnia and Herzegovina² has the right to review or examine a certain aspect of all or part of the institution, program or activity in respect of the economy, efficiency and effectiveness with which that institution is using its resources and reports on its resources. International standards of supreme audit institutions have been applied in conducting audits.

The principles of economy, efficiency and effectiveness are defined in accordance with ISSAI 300.11 as follows:

- **The principle of cost-effectiveness implies** reducing the costs of resources to a minimum. The resources used, should be available in a timely manner, in the right quantity and with the right quality, and at the best price.
- **The principle of efficiency** implies the best possible use of available resources. It is related to the relationship between the resources used and the output values achieved in terms of quantity, quality and time frames.
- **The principle of effectiveness** refers to meeting the set goals and achieving the intended outcomes. Another approach often used in performance auditing does not measure effectiveness itself, but it focuses on the conditions needed to ensure the effectiveness.³ These conditions may include good management practices and procedures to ensure accurate and timely implementation.

In addition to the term performance audit, in professional terminology and practice, other terms appear such as 3E audit (economy, efficiency and effectiveness audit) and value for money audit. Performance audit does not only provide an initiative for improvement and better performance, but it also promotes transparency and accountability of the public sector work. Performance audit is a way to inform taxpayers, investors, legislatures, the media, as well as the public, about the management and performance of the public sector institutions.

The public sector institutions endeavor to enhance efficiency in performing their functions. In that sense, greater attention is paid to providing better quality services with continuously finding ways of saving at the same time. Thus, in conditions of limited resources and when there is an evident gap between available funds and needs, and especially in terms of reform processes, performance audit acquires a special significance. Supreme Audit Institutions have been paying increasing attention to environmental issues. The focus on environmental protection in performance audit justifies the complex nature of these problems and their long-term impact. In designing and conducting this performance audit, the INTOSAI Guidelines relevant to the audit area were taken into account, such as the *GUID 5200 "Activities with an Environmental Perspective"* as well as the *ISSAI 5510 – The Audit of Disaster Risk Reduction*.

¹ INTOSAI - P 12 The Value and Benefits – Making a difference to the lives of citizens

² „Official Gazette of FB&H“ No 22/06.

³ GUID 3910 – Central Concepts for Performance Auditing



SUMMARY

The Audit Office of the Institution in the Federation of Bosnia and Herzegovina conducted a performance audit titled “**Managing Interventions in Case of Accidental Pollution of the Adriatic Sea**”. The audit objective was to examine whether the relevant institutions in the Federation of B&H have created prerequisites for efficient intervention management in the case of accidental pollution of the Adriatic Sea. The audit was conducted as part of a parallel performance audit project in which the Audit Office of the Institutions of B&H as well as supreme audit institutions from Croatia, Montenegro, Slovenia, Italy and Albania have also participated.

Accidental pollution involves sudden spills of hazardous substances that can pollute or worsen the status of waters. Such situations are characterized by the fact that these types of pollution are unpredictable, also they can cause serious consequences to the environment, which means they require a good preparation and a quick reaction by the relevant institutions, in order to reduce the consequences as much as possible. **Due to the present risks of accidental marine pollution, and mandatory international cooperation in this area, adequate regulatory and institutional prerequisites, and established mechanisms of intervention are crucial for an adequate response in the case of this type of pollution.**

Despite the importance of the Adriatic Sea and its extreme sensitivity, **the conducted audit showed that the basic prerequisites for efficient management of interventions in case of accidental sea pollution and other waters have not yet been established t in the FB&H.**

It was determined that the adopted regulations in the field of environmental protection and water require additional improvements in order to define clearly the obligations of institutions in this area. **A special problem is the inadequately regulated protection of the sea, as none of the adopted regulations precisely defined the management of the sea and its protection.** Despite the fact that the relevant institutions for water and environment are aware of this problem, the audit found that they did not take more concrete actions and did not initiate a more adequate regulation of marine protection.

When it comes to the institutional prerequisites, the problem of inadequate organizational structure of the water sector was emphasized, considering that competencies related to the water protection and intervention are divided and intertwined between ministries responsible for water, ministries responsible for the environment, as well as a number of other institutions from different levels of government. Such organization significantly reduces the effectiveness of water protection, especially in the area of establishing an intervention system in which institutions from other departments are included. Inadequate institutional prerequisites are evident in the part of development and adoption of intervention plans in the case of accidental water pollution. In almost all institutions responsible for the water and environment, the problem of insufficient and inadequate human resources, present for many years, was emphasized.

The Rulebook on Procedures and Measures in Case of Accidents on Waters and Coastal Water Land does not prescribe the adoption of special plans for accidental marine pollution, but it foresees that plans for accidental water pollution shall also be used in the case of coastal seawater pollution. However, **significant delay in the adoption of operational plans for accidental water pollution was identified.**

The Federal Operational Plan for Accidental Water Pollution of Third Degree of Endangerment was adopted only in 2020. On the other hand, the Cantonal ministry responsible for waters (HNC) has



never even started drafting a **Cantonal Operational Plan for Accidental Water Pollution, which was supposed to be developed in cooperation with the Agency for Watershed of Adriatic Sea.**

The audit determined that the Plan for Protection Against Accidental Pollution from Ships and Coastal Zone of Inland Waters, which should have been adopted in accordance with the Law on Inland and Maritime Navigation, was not adopted. It was stated that this Law does not define precisely and clearly which institutions should adopt the mentioned Plan. However, it is important to emphasize that **the Federal Ministry of Transport and Communications, but also other institutions responsible for water protection, have not made efforts to resolve this issue, to regulate it more precisely and to start developing the Plan.**

As far as the adopted Federal Operational Plan is concerned, **it was determined that, despite the significant delay in its adoption, it does not contain all the elements defined by the Rulebook on Procedures and Measures in Case of Accidents on Waters and Coastal Water Land.** It was stated that certain inaccuracies in this Rulebook have left room to the relevant institutions for different interpretations of the required content of operational plans.

The audit findings indicate that there is **a lack of adequate risk assessment for the occurrence of accidental marine pollution.** It was also determined that there was **a delay in establishing functional groups,** which need to ensure coordination of all the relevant institutions. Within the functional groups, the participation of the Municipality of Neum, the Neum Port Authority, nor the Cantonal Ministries of Water and Environment, which should play a significant role in the case of sea accidents, was not foreseen.

Demonstration exercises, as a crucial element of the verification of intervention actions, which would test the planned procedures and measures, have not been organized so far. Therefore, **the readiness of all the relevant institutions for effective action in the implementation of the Federal Operational Plan is questionable.**

In accordance with the established findings and conclusions of the audit, recommendations were given whose application should be helpful in creating conditions for better protection of the sea from accidental pollution. **In order to regulate adequately the protection of the Adriatic Sea in cooperation and to establish an efficient intervention system at the sea it is necessary to achieve proactive cooperation with the institutions of B&H.** Although the focus of the audit was on the prerequisites for intervention in case of accidental marine pollution, the given recommendations in this Report shall contribute to the improvement of the water protection system in the FB&H in a broader sense.



1. INTRODUCTION

1.1. Background problem and motivation

The environmental protection, and thus the protection of water resources, is one of the most important global issues today, wherefore state and other borders should not limit the environmental protection. This is an area where regional and global cooperation is necessary, which has motivated the supreme audit institutions of the countries having access to the Adriatic Sea to launch a parallel performance audit titled "Managing Interventions in Case of Accidental Pollution of the Adriatic Sea." It is estimated that establishing the cooperation of all countries having access to the Adriatic Sea will enable more efficient joint actions in case of accidental marine pollution.

Although the Adriatic coastline that belongs to our country is relatively small and is only 24.5 kilometers long, this area is an extremely valuable resource and economic potential for B&H. There are many important economic activities related to the sea, such as tourism, transport, fishing, shellfish farming, as well as the use of seawater for medical and industrial purposes.

The Adriatic Sea is a closed sea, which makes it extremely sensitive, and various pollutants have increasingly endangered the water quality of the Adriatic Sea. The certain contaminants can be repaired relatively quickly if the sources of pollution are removed. However, in case of accidental pollution caused by the accident spill of hazardous substances into the sea, there is more serious and lasting pollution of the marine ecosystem. The category of hazardous substances includes a number of organic compounds, such as petroleum and petroleum products. Their common characteristic is that they are very difficult to decompose in nature, and that their accumulation, even in small quantities, can create large-scale pollution due to which it is extremely difficult or impossible to return the water ecosystem to its original condition.

The potential spill of hazardous substances into the sea can have an irreversible impact on the environment, tourism and fisheries, which demonstrate maritime accidents in the Mediterranean.⁴ Such situations require rapid interventions in order to repair the damage caused by effective measures and to reduce the negative consequences for the marine environment as much as possible.

At the international level, Bosnia and Herzegovina has undertaken obligations to protect the sea from various types of pollution and has committed itself to cooperation with other countries in this area. The Barcelona Convention,⁵ which entered into force in 1978,⁶ was taken from the former Yugoslavia by succession. This Convention were ratified with amendments in 2020. In this way, B&H has confirmed its commitment to take part in the implementation of the Action Plan for the Protection of the Marine Environment and Sustainable Development of Coastal Areas and to contribute to the prevention of the Mediterranean Sea pollution.

Despite the accepted international obligations and the fact that, according to the Law on Waters⁷, reduction of water pollution and prevention of water degradation has been determined as the goal of water management in the FB&H, **available data have indicated that there is a delay in establishing an appropriate intervention system in case of accidental water pollution in B&H, including the sea.**

⁴ Damage caused by the Prestige oil slick in 2002, which happened at the coastal areas of Spain and Portugal. This accident caused serious damage to coastline flora and fauna, the environment and local fisheries. About 22,000 dead birds were found immediately after the incident. Prestige spill estimates the coastal clean-up operation as costing billions of dollars.

Source: <https://repozitorij.vuka.hr/islandora/object/vuka%3A1248/datastream/PDF/view>.

⁵ <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=LEGISSUM:l28084>; Barcelona Convention.

⁶ „Official Gazette B&H”, No. 26/98.

⁷ Article 2. Of the Law on Waters (“Official Gazette of FB&H”, No. 70/06).



There are many risks that can lead to accidental marine pollution. Although Neum Harbor does not have a port or a dock for ships, the entry of ships into the bay is not rare. Therefore, the possibility of accidental situations on ships entering the bay is not excluded. In addition, it is important to point out that in the immediate vicinity of the Neum Bay is the Port of Ploče, which is intensively used in the international maritime traffic.

When it comes to land-based pollution, the relevant institutions have stated the risks related to traffic on the roads along the coast, but also the rivers of the Adriatic basin, as well as potential accidents in the work of business entities located near water. There are several examples of road traffic accidents that have occurred in previous years and that have caused accidental pollution of the Neretva river. Although in these cases it was not noted that the oil spilled into Neretva reached the sea, there is a possibility of sea pollution through accidents that are occurring on rivers.

These indications of the problem, as well as the initiative to conduct a parallel performance audit in this area, have led the Audit Office to conduct a performance audit titled “Managing Interventions in Case of Accidental Pollution of the Adriatic Sea”. The Audit Office of B&H Institutions, as well as SAIs from Croatia, Montenegro, Slovenia, Italy and Albania conducted this performance audit, within their competences.⁸

The parallel performance audit is a significant step towards sharing the SAIs experience in conducting performance audits aimed at disaster risk reduction. The advantages of conducting parallel and joint audits in this area are also emphasized in ISSAI 5510 - Disaster Risk Reduction Audit.

1.2. Audit Objective and Audit Questions

The audit objective was to examine whether the relevant institutions in the Federation of B&H have created prerequisites for efficient management of interventions in case of accidental pollution of the Adriatic Sea. In line with the objective set, the response to the following audit questions was sought:

1. Is there appropriate regulatory and institutional framework for managing interventions in case of accidental Adriatic Sea pollution?
2. Have the necessary intervention plans been adopted which enable efficient actions in case of accidental Adriatic Sea pollution?

1.3. Audit Scope and Limitations

The subject of the audit was regulatory, institutional, planning and organizational prerequisites for managing interventions in case of accidental Adriatic Sea pollution.

The first audit question has examined whether the existing regulations adequately regulate the sea protection from accidental pollution, and whether the obligations and responsibilities of individual institutions in the field of marine protection and the establishment of intervention management systems in the case of sea accidents are clearly defined. For better assessment and analysis, domestic regulations have been compared with those of neighboring countries. In addition, the adopted strategic documents were analyzed in order to assess whether specific goals were defined aiming to improve the protection of the sea from accidents.

The second audit question has examined whether appropriate plans and procedures for the intervention of the relevant institutions had been adopted and whether appropriate risk assessments had been carried out. It was analyzed whether functional groups had been established⁹ that ensure

⁸ Each of the SAIs will prepare a separate audit report and will address recommendations to the institutions within its competence.

⁹ Expert Group, Decision Making Group and Communication Group



the efficient coordination of all relevant institutions as well as the appropriate information exchange. Also, it was examined whether the intervention system was adequately tested through the periodic demonstration exercises.¹⁰

The audit have covered the activities of following institutions: the Federal Ministry of Agriculture, Water Management and Forestry, the Federal Ministry of Environment and Tourism, the Agency for Watershed of Adriatic Sea, the Federal Civil Protection Administration, the Federal Ministry of Transport and Communications, the Federal Administration for Inspection Affairs, the Ministry of Agriculture, Forestry and Water Management of the Herzegovina-Neretva Canton, the Ministry of Trade, Tourism and Environmental Protection of the Herzegovina-Neretva Canton and the Municipality of Neum. The focus of the audit was on the institutions' activities undertaken in the 2017-2019 period, noting that the analysis of activities establishing a regulatory framework considered a longer period. In the part of the intervention plans adoption, the activities undertaken in 2020 were also taken into account.

The audit had a combined approach, problem-oriented and result-oriented. In accordance with the International Standards of Supreme Audit Institutions,¹¹ this includes examining, verifying and analyzing the causes of certain problems or deviations from established audit criteria, as well as assessing whether the planned objectives have been achieved, or whether programs and services are functioning in accordance with the plan.

Given the fact that the audit was carried out as part of a parallel performance audit project that is closely focused on managing intervention in the case of accidental marine pollution, the subject of the audit did not cover a thorough analysis of water protection in a broader sense. Wastewater management and measures taken in the case of emergency water pollution have not been examined. Appreciating the importance and complexity of these issues, the Audit Office considers that they should be included in a separate performance audit, which will be conducted in one of the next audit cycles.

1.4. Audit Criteria

Criteria based on obligations arising from international conventions and agreements in the field of sea protection¹² were used to assess the subject matter of the audit, as well as the competencies of institutions and strategic commitments in the field of environment and water protection¹³, international guidelines for combating accidental sea pollution¹⁴ and good practices of neighboring countries.

The criteria for the first audit question are formulated as follows:

- Regulations that clearly and comprehensively regulate the protection of the sea and the management of interventions in case of accidental marine pollution have been adopted. Regulations in this area are harmonized with the EU regulations.

¹⁰ Demonstration exercises are conducted in order to test and verify the intervention mechanism and the readiness of the competent institutions in case of accidental water pollution.

¹¹ ISSAI 300.26 and 3000.40 International Standards of Supreme Audit Institutions – Audit Approach

¹² The Convention for the Protection of the Mediterranean Sea Against Pollution (Barcelona Convention), The Mediterranean Action Plan, United Nations Convention on the Law of the Sea

¹³ FB&H Environmental Strategy 2008–2018, FB&H Water Management Strategy 2010–2022, Program for Approximation of FB&H Regulations with the Acquis Communautaire in the Field of Environment

¹⁴ REMPEC – Guide for Combating Accidental Marine Pollution in the Mediterranean Sea



- Obligations and responsibilities of institutions in the field of marine protection are clearly divided. Also, an effective coordination has been established.
- Specific goals and measures aimed to ensure an adequate protection of the sea have been defined in strategic documents in the field of water protection as well as the establishment of an intervention systems in case of accidental marine pollution.

The criteria for the second audit question are formulated as follows:

- The relevant institutions have adopted appropriate plans that clearly define the procedures for action in case of accidental marine pollution. An adequate risk assessment of the incidents was performed. The activity holders have been identified and expert groups have been established in order to ensure the coordination of all relevant institutions.
- A list of available resources (equipment and human resources) that can be used in case of accidental marine pollution has been made.
- In order to test the established intervention mechanism, demonstration exercises are performed periodically.

1.5. Data Sources and Methodology

For the purposes of the audit, data were collected from several sources, which provided sufficient, reliable and relevant data, necessary for a comprehensive and objective examination of the audit subject. The primary data sources were audited entities. Also, secondary data sources were used to cover all relevant perspectives of the audit subject. In this regard, the information obtained from the analysis of laws and regulations, strategic documents, plans, reports, professional studies and international publications available on the internet, were used. This allowed the audit to obtain a broader picture of the undertaken activities in order to create prerequisites for effective action in case of accidental marine pollution.

Collection and analysis of data were performed by combining different methods:

- Questionnaire method;
- Interview method;
- Analytical method - analysis of regulations, planning documents and available documentation of audit subjects;
- Comparative method - comparative analysis of domestic regulations, plans and practices with regulations, plans and practices of other countries;

Interviews were conducted with representatives of the following institutions: the Federal Ministry of Agriculture, the Water Management and Forestry, the Federal Ministry of Environment and Tourism, the Federal Ministry of Transport and Communications, the Agency for Watershed of Adriatic Sea, the Ministry of Agriculture, Water Management and Forestry of the Herzegovina-Neretva Canton, the Federal Administration for Inspection Affairs and the Federal Civil Protection Administration. In addition to the conducted interviews, the Performance Audit Questionnaires were submitted to all mentioned institutions. Questionnaires were also submitted to the Municipality of Neum and the Ministry of Trade, Tourism and Environmental Protection of the Herzegovina-Neretva Canton.

Circumstances caused by the COVID-19 pandemic affected the organization of work in the institutions covered by the audit. Taking into account these circumstances, and with the aim of conducting the audit according to the planned dynamics and gathering sufficient audit evidences, certain interviews were conducted by telephone and also it was possible to electronically submit the information and documentation.

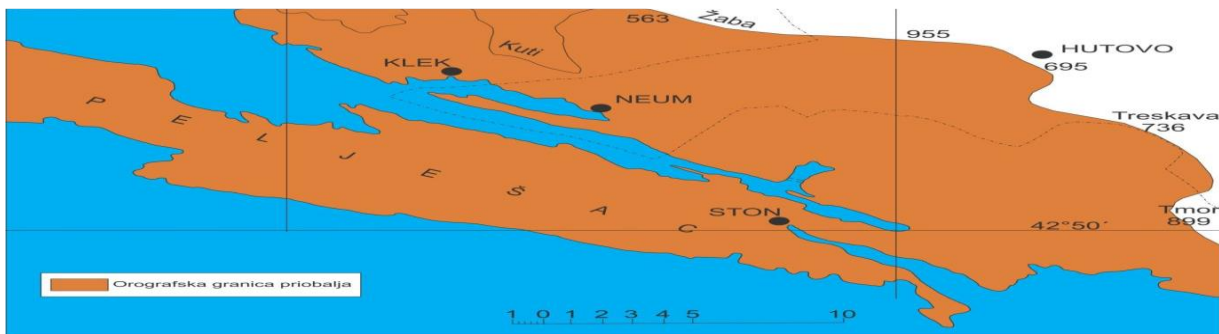
2. DESCRIPTION OF THE AREA

Waters are part of the environment and they represent a common good. Therefore, the Law on Waters¹⁵ defines that they are under a special protection of Bosnia and Herzegovina, the Federation, Cantons, Cities and Municipalities. These are surface waters, which include inland, transitional and coastal sea- waters and groundwater.¹⁶

The sea has an invaluable significance and role. Its benefits are multiple - it is a food producer, mode of transport, climate regulator and it is the habitat of many marine organisms that are crucial for the survival of humankind. Therefore, it is important to protect the sea.



B&H has a direct access to the Adriatic Sea, with a total length of about 24,5 kilometers of coastline¹⁷. In the geographical literature, when we talk about the length of the Bosnian-Herzegovian sea border, we mainly mean the continental part and part of the northeastern side of the Klek Peninsula, which is closed to the Neum Bay.¹⁸ It is a small bay located within the Mali Ston Bay, which is closed by the Klek Peninsula.¹⁹



The Water Management Plan for the Adriatic Sea in the Federation of B&H (for the period 2016-2021), officially defines one type of coastal water (PM1 – polohalas shallow coastal sea of fine-grained sediment) and only one water body (BA-NTRB_Neuz) which have been found to be comfortable with

¹⁵ Law on Waters ("Official Gazette of FBiH" No. 70/06)

¹⁶ In accordance with the Water Act (Article 4.), waters are defined as follow: surface waters are all inland waters, except groundwater, transitional and coastal seawater, except marine waters belonging to the territorial waters.

¹⁷ Feasibility Study of the CAMP Project for B&H

¹⁸ The morphological boundary of the Neum-Klek Bay in the narrower sense is represented by the coastline, which stretches from the Cape Međed in the north-west, along the mainland towards Neum, all the way to the Jazine Bay in the southeast. On the other hand, along the Pelješac peninsula, the coastal part of the Klek peninsula stretches from Cape Klek in the north-west to Gornji Klek (Stražica) in the southeast.

¹⁹ The Neum channel is 880 m wide. The length of the channel is 7,7 km, the maximum width is 1,3 km and the average is 1 km. The surface of the sea area is 7,7 km². The average depth in the bay is 22,6 m. Due to natural conditions, the sea of B&H belongs to the closed seas, which makes it especially sensitive.

(<http://geoubih.ba/pdf/vijesti/Peljeski%20most%20-%20limes%20suvereniteta%20BiH.pdf>)

the ecological condition. Due to its sensitivity and in an order to remain in good condition, this water body still needs to be protected by reinforced measures.²⁰

2.1. Legal Framework in FB&H Relevant to the Field of Audit

In accordance with the constitutional and legal framework²¹, regulations on waters in the Federation of B&H have been adopted at the level of the Federation of B&H and at the level of cantons. Water issues are a part of environmental policy and at the same time, they are covered by the notion of natural resources.

Diagram 1. Main Strategic, Regulatory and Planning Framework in the FB&H Relevant to the Subject Area

Federal level
FB&H Water Management Strategy for the Period 2010–2022.
Environmental Strategy 2008-2018.
Law on Waters („Official Gazette of the FB&H“, No. 70/06)
Law on Environmental Protection („Official Gazette of the FB&H“, No. 33/03, 39/09)
Law on Inland and Maritime Navigation („Official Gazette of the FB&H“, No. 73/05)
Law on Protection and Rescue of People and Material Goods from Natural and Other Disasters („Official Gazette of the FB&H“, No. 39/03, 22/06 and 43/10)
Decree on the Content and Manner of Making Protection and Rescue Plans against Natural and Other Disasters and Fire Protection Plans („Official Gazette of the FB&H“, No. 8/11)
Rulebook on the Content of the Report on the Security Situation, the Content of Information on Security Measures and the Content of Internal and External Intervention Plans („Official Gazette of the FB&H“, No. 71/09 i 102/18)
Rulebook on the Content of the Report on the Security Situation, the Content of Information on Security Measures and Content of Internal and External Intervention Plans („Official Gazette of the FB&H“, No. 68/05)
Rulebook on the Conditions and Criteria that Must be Met by a Specialized and Authorized Legal Entity for the Implementation of Measures to Eliminate or Prevent Water Pollution in Case of Accident Pollution or Danger of Accident Water Pollution and the Manner of Authorization („Official Gazette of the FB&H“, No. 6/11 i 93/13)
Water Management Plan for the Adriatic Sea Basin in the Federation of B&H (2016-2021)
Federal Operational Plan for Accident Pollution of the 3 rd Degree of Endangerment („Official Gazette of the FB&H“, No. 19/20)
Plan for Protection and Rescue of People and Material Resources from Natural and Other Disasters in FB&H in 2008.
Methodology for Conducting an Assessment of the Threat from Natural and Other Disasters („Official Gazette of the FB&H“, No. 35/04, 38/06, 52/09, 36/14)
Cantonal level – HNC
HNC Development Strategy for Period 2017 – 2020.
HNC Law on Water („Official Gazette of the HNC“, No. 6/13)
HNC Law on Environmental Protection („Official Gazette of the HNC“, No. 6/12)

²⁰ In the area of the Municipality of Neum, the area of the Klek peninsula called “Rep” has been placed under the protection as a nature reserve of the Mediterranean flora called “mediterraneum”. This area is an untouched part of the Mediterranean flora and it is an attractive tourist destination.

²¹ The provision of Article 3 Paragraph 2. Item c) and i) of the Constitution of Federation of B&H, has been defined that the Federation Government and Cantons are responsible for the policy of environmental protection and the use of natural resources, and Article 3 Paragraph 3 Part (1) and (2) has been defined the right to regulate policy and enact laws relating to these areas.



Plan for Protection and Rescue from Natural and Other Disasters at HNC in 2018.

Local level – Municipality of Neum

Integrated Development Strategy of the Municipality of Neum (2014 – 2024.)

In addition to the regulatory and planning documents presented in the Diagram 1, it is important to note that the Feasibility Study also covers the subject area for Coastal Zone Management Program-CAMP of Bosnia and Herzegovina, adopted by the Council of Ministers of B&H. The Municipality of Neum, on behalf of the Council of Ministers of B&H, has signed the Agreement for the CAMP project B&H²² in 2020.

The procedures and measures taken in events of accidents on waters and coastal water land, in order to protect water and seawater in events of extraordinary and accidental pollution²³, are defined by the **Rulebook on Procedures and Measures in Case of Accidents on Water and Coastal Water Land**. The occurrence of accidents on waters and coastal water land, in terms of the application of the Rulebook, is divided into two types of dependence on the mode of occurrence, namely extraordinary pollution²⁴ and accidental pollution.

Pursuant to the Rulebook, accidental pollution occurs when there is a sudden spill of hazardous substances and other substances that may worsen the established water condition, or if they can pollute surface, groundwater or the sea due to the land-based pollution. In case of accidental pollution, it is necessary to report immediately the occurrence of accidental pollution, and to respond appropriately to prevent the spread, prevent the occurrence of harmful consequences or minimize them and remove the resulting pollution.

In case of accidental pollution, the individual measures and methods of implementation should have been determined by the operational plans for accidental pollution. The following table shows the operational plans adoption defined by the Rulebook on Procedures and Measures in Case of Accidents on Waters and Coastal Water Land.²⁵

²² The Mediterranean Action Plan (MAP), operating under the auspices of the United Nations Environment Program (UNEP), is based on the Coastal Area Management Program (CAMP). CAMP projects have been implemented in Mediterranean countries with the basic goal of providing assistance, knowledge and experience in order to solve urgent environmental problems. These problems are related to integrate coastal zone management (ICZM) as a basic means of achieving sustainable coastal zone development. After the B&H Council of Ministers / MoFTER B&H adopted the Feasibility Study, the organization of the CAMP B&H program will be carried out in accordance with the operational manual. The Agreement was signed on June 29, 2020 by the Municipality of Neum and the Center for Regional Activities of the UNEP/MAP, Priority Action Program.

²³ Article 1 in Rulebook on Procedures and Measures in Case of Accidents on Water and Coastal Water Land („Official Gazette of FB&H“, No. 71/09 and 102/18).

²⁴ If there is a danger due to the reduced flow or other circumstances then an extraordinary pollution occurs. Also, this phenomenon occurs when the determined condition of the water in the watercourse or other receiver into which the wastewater goes is discharged.

²⁵ Article 9 of the Rulebook on Procedures and Measures in Cases of Accidents on Water and Coastal Water Land („Official Gazette of FB&H“, No. 71/09 and 102/189)

Table 1. Operational Plans foreseen by the Rulebook on Procedures and Measures in Case of Accidents on Waters and Coastal Water Land

Operational plan	Implementation degree of threat	Area of Action	Preparation, Adoption and Implementation of the Plan
The Federal Operational Plan for Accident Pollution of the III Degree of Endangerment	III degree of endangerment	Corresponding water area	Prepared and implemented by water agencies, adopted by the Federal minister responsible for the environment with the consent of the Federal minister responsible for water.
Cantonal Operational Plan for Accidental Pollution of I and II Degree of Endangerment	I and II degree of endangerment	Cantonal area	Prepared by the cantonal ministry in charge of water in a cooperation with the competent water agency, conducted by the civil protection centers in a cooperation with the Agency and at the proposal of the cantonal minister for water, issued by the cantonal minister responsible for the environment.
Individual operational plans for accidental pollution	I, II and III degree of endangerment	Area of operation of the legal entity	Prepared and implemented by the legal entity

Thorough information on the most important regulations, EU directives and international conventions for water protection has been provided in Annexes 1 and 2 of the Report.

2.2. Relevant Institutions

The FB&H Constitution stipulates that the Federal Government and Cantons are, among other issues, responsible for environmental protection policy²⁶. Waters are parts of the environment, in addition, they are a public good, so the Law on Waters²⁷ defines them as strips under special protection of B&H, the Federation B&H, Cantons, Cities and Municipalities. Therefore, all the levels of government in the FB&H are responsible for water protection. The key institutions in the Federation of B&H, which have competencies in the field of water protection are: the Federal Ministry of Agriculture, Water Management and Forestry, the Federal Ministry of Environment and Tourism, Agency for Watershed of Adriatic Sea as an expert institution, the Ministry of Agriculture, Forestry and Water Management of the Herzegovina-Neretva Canton and the Ministry of Trade, Tourism and Environmental Protection of the Herzegovina-Neretva Canton. In addition to the mentioned institutions, the following are also important for the topic of audit: the Federal Civil Protection Administration, the Federal Administration for Inspection Affairs, the Federal Ministry of Transport and Communications and the Municipality of Neum. The competencies of the institutions relevant to the audit subject have been provided in Annex 3 of the Report.

2.3. Responding in Case of Accidental Marine Pollution

The risk of environmental accidents due to their specificity requires an adequate preparedness of all the relevant institutions and bodies. Environmental accidents have the following characteristics:²⁸

- **They are unpredictable** in terms of time, type and location;
- **They are specific** with regard to possible consequences and the manner of remediation;
- **They require the immediate execution of the intervention procedure**, according to the known organization, system, competencies and prepared plans.

²⁶ Constitution of FB&H Article 3 Paragraphs 2 and 3

²⁷ Law on Waters („Official Gazette of FBiH“ No. 70/06)

²⁸ Čavrak B, Simončić V., „Proposed Mode of Action in Ecological Accidental Situations“, Proceedings, Conference: Ship Rescue and Prevention of Pollution of the Adriatic Sea, Split, 1990, pages 115–123.



Any delay in remedial measures, ignorance of the nature of hazardous substances and /or lack of properly equipped intervention teams are increasing the risk and may cause damage. The spillage of hazardous substances into water (especially oil and its derivatives) are specifically dangerous, as they are often manifested as an **environmental shocks or even environmental disasters**.

It is necessary for operational (crisis) plans to respond quickly and effectively in case of accidental marine pollution.²⁹ In each specific accident of water pollution, certain questions need to be answered on the spot and many unpredictable factors should be kept in mind when making operational decisions in order to ensure an efficient response and to achieve optimal results.

The professional literature in the subject area emphasizes the importance of acting in accordance with the carefully planned and clearly defined steps. In the process of establishing an efficient system for responding to accidents at the sea, it is necessary to develop clear procedures for action, which will be harmonized with the general environmental policy as well as with the legal and administrative organization of the water management system.

The most visible and well-known type of marine pollution is one that has been caused by oil spills into seawater. The consequences of such accidents are often catastrophic, multiple and long lasting. Chemicals that end up in the sea can poison plankton, fish eggs, mollusks, and have carcinogenic effects on fish and more species in the food chain and ultimately on humans. The biological consequences of such pollution are presented for decades after the accident.

The biggest oil pollution of the European coast occurred in November 2002, after the sinking of the tanker Prestige, on the coast of Spain, which was transporting 77.000 tons of oil. The accident has caused a pollution of hundreds of kilometers of Spanish and French coasts. The open sea cleaning operation removed 50.000 tons of oil-sea mixture, but due to the sensitive area, it was not possible to prevent extensive coastal pollution of about 1.900 km. Therefore, more than 5.000 military and local personnel, along with volunteers, took part in the cleaning of the Spanish coast. The cost of the sea cleaning and the coastal zone was estimated at around 100 million euros.

The “excluded fishing zones” were established immediately after the accident and they have covered 90% of the coast of Galicia, which were abolished only in October 2003. In addition to the fish stock, the spilled oil has endangered seabirds also, and it had a similar impact on sea otters.³⁰

²⁹ REMPEC (2000), Guide for Combating Accidental Marine Pollution in the Mediterranean Sea.

³⁰ Source: Popović M., Kurtela, Ž., „Analysis of Major Tanker Accidents”; Bralić, T., Slišković, M., „The Biggest Tanker Accidents “

3. AUDIT FINDINGS

The findings presented in this chapter are representing deviations from the established audit criteria and they are structured in a relation to the audit questions.

3.1 Regulatory and Institutional Prerequisites

3.1.1. Inadequately Regulated Sea Protection

The field of water protection has been regulated through the several regulations in the FB&H, which on the one hand is regulating water management³¹, and on the other hand environmental protection.³² The available data are indicating that the adopted regulations require improvements in order to be harmonized with each other and to determine adequately the obligations of individual institutions in the field of water protection.³³ In addition, it was determined that the adopted regulations are not fully harmonized with the EU regulations.³⁴

A special problem represents the inadequately regulated issue of marine protection, since the existing regulations governing water management and their protection have not precisely regulated the protection of the Adriatic Sea. Unlike the surrounding countries, there is no special regulation in B&H whose central subject is the sea and which regulates the protection of this valuable natural resource in a more thorough way.

The Adriatic Sea, respectively, coastal sea waters³⁵ are not specifically categorized within the classification of surface waters in the Federal Law on Waters³⁶, while in the Law on Waters HNC it is stated that the **coastal sea waters belong to a second category of waters**. However, this Law does not regulate the issue of management and protection. Available data indicate that none of the regulations specifically regulate the protection of the Adriatic Sea in B&H, nor are the boundaries between coastal seawaters and the territorial sea clearly defined.³⁷

The authorities from the institutions covered by the audit are united in their opinion that the issue of management and protection of the Adriatic Sea needs to have adequate legal and institutional framework in B&H. Among the reasons why this has not been done so far, they stated that **they are waiting for state-level institutions to undertake activities within their competences in terms of ratification of protocols and implementation of obligations under the international treaties and conventions**, in order to define specific obligations of institutions in FB&H and to harmonize domestic regulations. They believe that the issue of the Adriatic Sea, as a part of B&H territory, and transboundary waters should be regulated in a way that the regulatory and institutional preconditions for these issues are primarily established at the level of B&H institutions. In particular, they emphasized the need to establish a competent authority for the sea, to transpose the Marine Strategy Framework Directive, in order to fulfil international obligations and to adopt implementing regulations and operational plans.

³¹ The Federal and Cantonal Water Laws and Bylaws

³² The Federal and Cantonal Laws on Environmental Protection and Bylaws

³³ With its conclusions from 2011 and 2012, the House of Representatives of the FB&H Parliament has requested amendments to the Law on Waters. The requests for improvement stated, among other things, the need for harmonization of the Law on Waters with the Law on Environmental Protection, as well as to more clearly define the competencies of individual institutions.

³⁴ In order to harmonize domestic legislation with the EU regulations, taking into account the weaknesses identified in the 2003 Environmental Protection Act, MoET FB&H has drafted and submitted a new Environmental Protection Act to the parliamentary procedure. Regarding the subject of this audit, the authorities from the MoET FB&H emphasized the need to harmonize the Law on Environmental Protection and Bylaws with the Directive SEVESO III 2012/18/EU on the control of major-accident hazards involving hazardous substances.

³⁵ Coastal sea waters are surface waters on the land side, bounded by a line of which each point is one nautical mile from the boundary line measuring the breadth of the territorial waters and, where applicable, from the outer boundary of the transitional waters.

³⁶ The sea and coastal seawaters are not specifically categorized within the classification of surface waters in the Federal Law on Waters. However, Article 5 of this Law states that all remaining waters belong to the second category of waters, which means that coastal seawaters are also classified as waters of the second category of waters.

³⁷ Every country has the right to establish the breadth of its territorial sea up to a limit not exceeding 12 nautical miles, measured from baselines. According to the United Nations Convention on the Law of the Sea (UNCLOS), the baseline is measured at the lowest water level, except in the area along the mouths of estuaries and bay peaks, where it goes over open water.

Despite the established competencies in a part of proposing policies in the field of environmental protection and water management, it was determined that MoAWMF FB&H and MoET FB&H did not take more concrete activities and did not initiate the more adequate regulation of marine management and protection. Although activities have been initiated in the previous years to amend the Law on Waters and the Law on Environmental Protection,³⁸ these amendments do not provide a more specific definition of competencies in the field of coastal seawater protection. Also, it was not proposed to adopt a special regulation in cooperation with B&H institutions, which will regulate the issue of management and protection of the territorial sea in an appropriate manner. Amendments to the laws in question are still in parliamentary procedure.³⁹

- **Intervention Actions in Situations of Accidental Water Pollution**

The Law on Waters of the FB&H generally regulates the procedure in situations of accidental water pollution in the FB&H, while it is more thoroughly defined by the **Rulebook on Procedures and Measures in Case of Accidents on Waters and Coastal Water Land. The Rulebook was adopted in 2009, but due to the identified shortcomings in 2018, it was amended.**⁴⁰ The amended Rulebook more precisely defines the obligation to adopt operational plans for accidental pollution. However, the authorities from the AWAS have pointed out that they were not consulted during the amendments to the Rulebook, and they consider that the amended Rulebook is vague and unclear in terms of purpose, as it contains many elements of the Operational Plan.

It was stated that **the definition of accidental pollution, stated in the Rulebook, limits its occurrence only to the land area.**⁴¹ Thus, the definition does not recognize the other ways of accidental pollution's occurrences that can occur on the waters themselves (accidents on ships discharge of pollutants from ships, etc.).

The Rulebook does not determine special procedures and measures in situations of sea pollution or the obligation to adopt plans for interventions at the sea. Also, representatives of relevant institutions have stated that procedures and measures provided for water should be applied in case of accidental pollution of the sea or coastal seawaters. Considering such an attitude of the authorities, it was stated that the Rulebook does not regulate precisely certain issues that are characteristic of a marine pollution. For example, the levels of water endangerment defined in the Rulebook are given in general, which is different from the exact criteria for activating intervention plans in case of accidental marine pollution applied in the surrounding countries. Namely, the amount of oil or other substances spilled into the sea is used as a criterion for activating certain plans in the surrounding countries, which is in accordance with the official REMPEC guidelines.⁴² Degrees of water endangerment in events of accidental pollution defined by the Rulebook have been given in Annex 4 of the Report.

Also, the Rulebook stated ambiguities regarding the mandatory content of operational plans for accidental pollution. However, the mandatory content of operational plans prepared by institutions (Federal and Cantonal operational plans) and those prepared by individual legal entities has not been specifically defined. The determinants of the Rulebook defined on this way have left room to the

³⁸ According to available information, the House of Representatives of the FB&H Parliament has adopted the Draft Law on Environmental Protection of the FB&H in 2019. The House of Peoples of the FB&H Parliament has not yet considered this proposal.

³⁹ Draft Law on Amendments to the Law on Waters was considered by the House of Representatives of the FB&H Parliament in September 2019 and accepted as a good basis for the preparation of proposals. The House of Peoples of the FB&H Parliament has not yet considered this Draft. Regarding the Law on Environmental Protection, the House of Representatives of the FB&H Parliament adopted this Law in 2019, but the House of Peoples of the FB&H Parliament has not yet considered it.

⁴⁰ Following the accidental pollution of the Spreča River in 2018, the Government of the FB&H, at its 153rd session, held on 17 August 2018, adopted the Conclusion (V. number: 1056/2018) instructing the Federal Ministry of Environment and Tourism, with the consent of the Federal Ministry of Agriculture, Water Management and Forestry, approaches to amendments to the Rulebook on Procedures and Measures in Case of Accidents on Waters and Coastal Water Land ("Official Gazette of FB&H", No. 71/09), in terms of defining the competencies for the adoption of the Federal Operational Plan for Accidental Pollution, i.e. cantonal plans and elimination of other identified shortcomings.

⁴¹ Article 2, Paragraph 3. of the Rulebook on Procedures and Measures in Cases of Accidents on Waters and Coastal Water Land.

⁴² For example, the Croatian National Plan is activated if the amount of oil spilled into the sea is greater than 2000 m³, while cantonal operational plans are activated if the amount of spilled oil is less than 2000 m³.



relevant institutions for different interpretations of the required content of operational plans⁴³.

- **The Protection of Coastal Sea Waters from Pollution Caused by Vessels**

The Law on Waters stipulates that the protection of coastal seawaters from pollution caused by vessels will be regulated in accordance with a special regulation governing the area of maritime transport.⁴⁴ The water transport is regulated by the Law on Inland and Maritime Navigation⁴⁵ in the FB&H. This Law defines an obligation that “relevant ministries, bodies and authorities in FB&H and cantons, shall adopt a plan of defense against sudden pollution from ships and coastal inland waters, for the purpose of timely and organized measure undertakings and actions in case of pollution.”⁴⁶

It was stated that the Law on Inland and Maritime Navigation **does not define precisely which institutions should adopt the mentioned plan that resulted in non-compliance with this legal provision.** The authorities from the MoTC FB&H and other institutions responsible for water protection have not made efforts to resolve this issue and define it more adequately in order to start drafting the Plan. **This situation indicates insufficient harmonization of domestic regulations governing these issues, non-compliance with the adopted regulations, as well as inadequate cooperation and coordination of relevant institutions in this area.**

3.1.2. Institutional Prerequisites for Marine Protection and Intervention Management

Environmental and water protection as well as the interventional treatment are the responsibility of a several Federal and Cantonal institutions and local government units, while international cooperation in the field of environment, as well as maritime transport, is the responsibility of B&H institutions (MoFTER B&H and MoCT B&H). It was stated that **divided and intertwined competencies between a large number of institutions and levels of government have left room for shifting responsibilities, insufficient commitment to marine protection and inefficiency in establishing of intervention system in case of accidental marine pollution.**

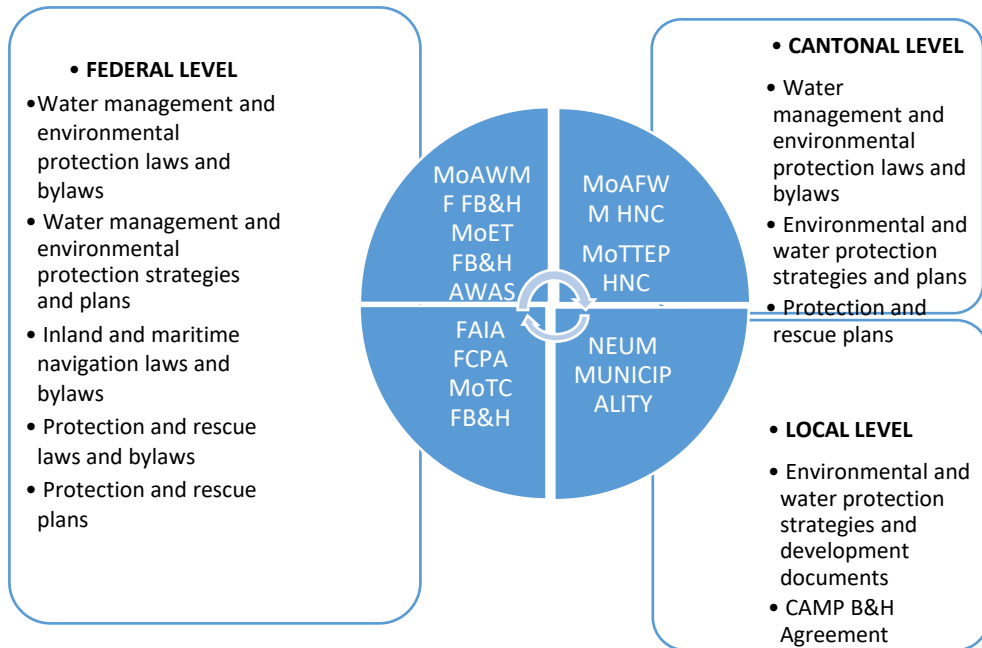
⁴³ Authorities from the AWAS believe that Federal and Cantonal Operational Plans cannot have the same elements as the operational plans of individual operators.

⁴⁴ Article 57 of the Law on Waters

⁴⁵ This Law, among other issues, regulates the conduct and safety of navigation, navigation accidents, the work of captaincies and control of waterways on inland waters and the Adriatic Sea, which territorially belongs to the FB&H.

⁴⁶ Article 5 of the Law on Inland and Maritime Navigation

Diagram 2. Complexity of Water Protection System and Intervention Management in Case of Accidental Water Pollution in the FB&H



** Diagram 1: A thorough overview of laws and bylaws relevant to the subject area*

The officials from the MoAWMF FB&H have pointed out the inadequate organizational structure of the water sector as a special problem, considering that the activities and competencies are intertwined between the ministries responsible for water and the ministries responsible for the environment, both at the FB&H and cantonal levels. They believe that this situation significantly reduces the efficiency of work in the field of water protection. Also, invoking the need for harmonization with the EU regulations, they have stated that the water sectors should be an integral part of the ministries of environment and not within the ministries in which they are now (MoAWMF FB&H and MoAFW M HNC). With insight into the practices of the surrounding countries, it was stated that for example, the water sector in Croatia, which was part of the Ministry responsible for Agriculture, Water Management and Forestry, was placed under the authority of the Ministry responsible for the Environment in 2016.

In the absence of adequately established institutional prerequisites, it happened that institutions in the FB&H have not appointed their representatives to participate in certain projects in the field of marine protection in recent years, although this has been required from them. Therefore, the opportunity for useful international cooperation in this area has been missed for many years.⁴⁷

In the part of development and adoption of intervention plans in case of accidental water pollution has been evident insufficiently efficient institutional structure, as well as in the participation of individual institutions in the implementation of plans. Namely, the Rulebook on Procedures and Measures stipulates that one institution should prepare each of the intervention action plans, another

⁴⁷ The letter from the MoFTER B&H, which was sent to the MoAWMF FB&H in 2013, has requested that representatives from the FB&H should also be appointed for participation in the MARPOL project. In that way, B&H would be active participant in activities within the Barcelona Convention and the Mediterranean Law Enforcement Network related to MARPOL Convention (the International Convention for the Prevention of Pollution from Ships). In the response, the MoAWMF FB&H has stated that this Ministry does not have jurisdiction over issues related to marine pollution and marine management, and that the letter does not specify which profile of the expert is required for appointment, what are the tasks and roles, and whether they are within the competence of the Water Sector in FB&H.



institution should provide the consent to the plan, while the third institution should adopt the plan.⁴⁸ Such an organization makes it difficult to adopt plans, and the officials from the institutions have pointed out the problems in harmonizing individual positions. The system of intervention in case of accidental water pollution is further complicated by the fact that certain competencies of the water, environment and civil protection sectors overlap, which reduces the readiness to respond in the event of accidents.

Regarding the capacity to take measures in cases of accidents on the waters, it was stated that no specific tasks have been identified to individual institutions about their participation in the implementation of operational plans. Also, activities have not been undertaken in order to determine the capacity to implement measures. For example, the Rulebook, as well as the adopted Federal Operational Plan, do not define the role of MoTC FB&H, i.e. the captaincy. Also, no action has been taken to make a list of necessary and available equipment that could be used during the intervention.

Considering the scope of the audit, the subject examination did not deal with a human resources management within the institutions responsible for waters. However, it is necessary to mention that **the authorities in almost all the institutions covered by the audit have stated the problem of insufficient and inadequate capacities for water protection.**⁴⁹

By analyzing the Water Management Strategy 2010–2022 it was stated that the mentioned problems have been present for many years. Despite the fact that more than ten years have passed since the development of the Strategy, the available data indicate that no progress has been made in terms of improving the institutional and personnel prerequisites for adequate water management.

Human resources in the Federal and Cantonal ministries of the water sector, as well as within the accompanying professional institutions, are insufficient to meet all the necessary tasks. The personnel structure of human resources indicates the inadequate representation of certain experts. In particular, this is related to the cantonal ministries, which will face increasingly complex requirements in the future, because the local staff development is the basis for successful water management. It should have been noted that the process of adapting domestic legislation and institutional structure to the organization of water management in EU countries implies different personnel profiles than it is currently the case. There is an obvious lack of multidisciplinary professional staff. Also, in sustainable water management the key issue is professional and trained staff in all professional disciplines required in water management processes. (Water Management Strategy 2010-2022)

The audit found that the relevant water institutions have not anticipated the specific role of the Municipality of Neum in managing interventions in case of accidents on the waters. It is important to point out that the CAMP project in B&H⁵⁰ emphasizes the importance of local community development

⁴⁸ For example, the Federal Operational Plan is prepared by water agencies, approved by the MoAWMF FB&H and adopted by the MoET FB&H. The Cantonal Operational Plan is prepared by the cantonal ministry in charge of water in cooperation with the AWAS, and is adopted by the cantonal ministry in charge of the environment.

⁴⁹ Officials from the MoET FB&H have pointed out that the Ministry is without capacity when it comes to a water protection and preservation in the FB&H, and that only one employee is responsible for these tasks, who is employed in another workplace. In the relevant Ministry of Water of the HNC (MoAFWM HNC), none of the employees have been assigned to tasks related to water protection management, and this Ministry has not dealt with this issue in previous years. Also, the audit interlocutors from the MoAWMF FB&H have pointed out that this Ministry does not have sufficient capacity to respond to the needs of water protection and conservation, and that the Water Sector does not have an adequate position in this Ministry. The situation is similar in the FAIA, which, according to the authorities, has focused more on water use in recent years due to insufficient capacity, while water protection has been put "in the background". Authorities from the AWAS also have pointed out the problem of insufficient human resources, and that the current number of employees in the Department of Water Protection has not been sufficient to perform all defined tasks.

⁵⁰ The Municipality of Neum and the Centre signed the agreement on June 29, 2020 for Regional Activities of the UNEP / MAP Priority Action Program.



and its role in protecting of the sea and responding to pollution. However, the CAMP Project Feasibility Study has pointed to the problems of "limited capacities of the Municipality of Neum for integrated maritime management in terms of human and technical resources, financial resources, as well as knowledge and practical experience". The evidence about concrete actions, which have been taken in the Municipality of Neum in order to address these issues and to create the prerequisites for effective action in case of accidental marine pollution, have not been presented to the audit.

3.1.3. Lack of Strategic Goals for More Adequate Regulation of Marine Protection

The analysis of the Water Management Strategy in the FB&H concluded that **none of the goals set by this Strategy are specifically aimed to improve maritime management and marine protection**. The strategy elaborates the water protection in general, **without distinguishing the sea as a special category**, which is required by its position of belonging to international waters. When it comes to accidental pollution, the Strategy deals with waters as a whole, emphasizing the need of drafting a bylaw that will elaborate procedures and processes for action in case of accidents, as well as a need for an enhanced inspection system.

Strategic issues and goals of water and environmental protection in the HNC are not defined in the special strategic documents, but they are a part of the HNC Development Strategy. In the HNC Development Strategy, though, **the goals** related to ensure more adequate marine protection and to prevent negative consequences related to accidental water pollution **have not been determined**.

Although, in the Integrated Development Strategy of the Municipality of Neum 2014 – 2024, the Municipality of Neum has stated the problem of unresolved marine management and its protection, within the development goals of the Environmental Protection Sector no specific measures have been envisaged aiming to protect the sea from accidental pollution.

3.2. Accidental Water Pollution Plans

The first few hours after the incident on the waters, it is crucial to eliminate the consequences of pollution. The action system must be efficient, ready in each of its segments, with clearly defined steps, coordination and cooperation of all relevant institutions, which are obliged to act in these situations. The action system must be easy to implement, precise, supported by appropriate equipment and human resources, as well as previously verified by demonstration exercises.⁵¹

The relevant institutions have not undertaken activities to develop an intervention plan in case of accidental pollution caused by vessels, despite the fact that, according to the Law on Inland and Maritime Navigation, the obligation to adopt the **Defense Plan from Sudden Pollution from Ships and Coastal Inland Waters** was defined 15 years ago. It was determined that the MoTC FB&H has not planned to start with drafting this plan in the coming period, and as reasons for this they have stated that maritime traffic has to be regulated by the Law on Maritime Transport at the level of B&H, in which the obligations and competencies of institutions would have been clearly defined as well as the plans that should be adopted.⁵²

Authorities from the **MoAWMF FB&H, the MoET FB&H and AWAS** have stated that **they have not been even aware of the obligation to develop this Plan**. Also, they believe that the procedures and measures provided in the Rulebook on Procedures and Measures in Case of Accidents on Waters and Coastal Water Land can be applied in case of accidental marine pollution.

⁵¹ Ivan Čanjevac, „Oceans, a Global Landfill“, 2005.

⁵² The B&H Council of Ministers established the Draft Law on Inland and Maritime Navigation, but it was never passed.



The audit found that, **despite the fact that since 2009 the Rulebook on Procedures and Measures has prescribed the obligation to adopt Federal and Cantonal Operational Plans for accidental water pollution, all the foreseen plans have not yet been adopted.**

The Federal Operational Plan for Accidental Water Pollution of Third Degree of Endangerment was adopted in 2020⁵³ (hereinafter referred to as: the Federal Operational Plan). On the other hand, **the relevant Ministry of Water of the HNC has not even started to draft a Cantonal Operational Plan for Accidental Water Pollution**, which should have been developed in a cooperation with the AWAS, and eventually should be adopted by the Ministry of Trade, Tourism and Environmental Protection of the Herzegovina-Neretva Canton. Therefore, the further action procedures for accidental pollution of first and second degree of endangerment are still not defined in the FB&H.⁵⁴

In the absence of plans for accidental water pollution, it was determined that **the relevant institutions did not have clear procedures for dealing with accidental water pollution in the FB&H, which occurred in previous years.** As a result, **the manner of communication, coordination and action of the institutions' representatives has been insufficiently regulated.** Namely, the relevant Federal water inspector has stated that the inspectors, when determining the intervention measures, were guided by their experience and their own assessments of the situation on the ground. The authorities provided similar answers from the Adriatic Sea Water Agency, emphasizing that they did not have a defined procedure, but that in situations of accidental water pollution, which occurred in previous years, the institutions have acted spontaneously and in accordance with the Law on Waters. Taking into account that the relevant institutions do not have information and documentation on accidental marine pollution, a description of the actions during accidental pollution of the Neretva River that occurred in 2013 has been provided in the Annex 5 of this Report.

3.2.1. Disadvantages of the Federal Operational Plan

Despite the fact that the Federal Operational Plan was adopted after a long delay, it was found that not all the prerequisites for its effective implementation still have been provided, considering that, **the established action procedures have not been tested yet.** In addition, it was stated that **the plan does not envisage the participation of all relevant institutions important for the sea protection**, primarily the Port Authority of Neum and the Municipality of Neum.

A thorough analysis of the Federal Operational Plan which was adopted in 2020 stated that the provisions defined by the Rulebook on Procedures and Measures have not been consistently followed during the preparation of the Plan, because the Plan does not contain a number of elements defined by the Rulebook.

⁵³ The Federal Operational Plan was developed by the water agencies and adopted by the MoET FB&H with the consent of the MoAWMF FB&H.

⁵⁴ Prior to the amendments of the Rulebook, the Agency for Watershed of Adriatic Sea has adopted the Operational Plan of Measures in Case of Extraordinary and Accidental Water Pollution of First Degree of Endangerment in 2007. After the adoption of the Rulebook on Amendments to the Rulebook on Procedures and Measures in Case of Accidents on Waters and Coastal Water Land, this Plan is no longer in force.



Table 2. Elements to be included in operational plans

No.	Elements defined by the Rulebook	Federal Operational Plan
1.	Assessment of possible ways of occurrence and intensity of accidental pollution	No
2.	Water risk assessment from accidental pollution	No
3.	Preventive measures for preventing the occurrence of a such pollution	No
4.	Organization of procedures and the manner of implementing measures in case of accidental water pollution	Yes
5.	Responsible persons and necessary experts for the implementation measures	Partially*
6.	Required equipment list and resources for implementing measures	No
7.	Plan for the participation of other natural and legal persons in the procedures for implementing the necessary measures and interventions	Yes
8.	Expert training program	No
9.	Verification program of operational plan implementation	No
10.	Manner and means of informing the public about accidental pollution	Partially**
11.	Financial resources required for the implementation of operational plans	Yes

* *Functional groups are consisted of appointed representatives of relevant institutions that participate in the implementation of the FOP. The Plan does not envisage the engagement of other experts, apart from the appointed representatives of the institutions.*

** *The Plan has foreseen that the Main Centre shall inform the public about the taken actions and the termination of the measures implementation. FOP does not specify the manner and means of information.*

As presented in the previous table, according to the Rulebook, the Federal Operational Plan should contain 11 elements, but this Plan does not contain six of them. It was stated that the identified shortcomings in the Federal Operational Plan have been partly caused by the certain inaccuracies in the text of the Rulebook itself. Namely, the authorities from the AWAS believe that the mandatory content of operational plans defined in the Rulebook refers only to operational plans prepared by the legal entities, and not to the Federal Operational Plan. Their opinions are that most of these requirements cannot be fulfilled under the Federal Operational Plan.

A thorough analysis of the Rulebook, as well as its amendments, could not confirm that the mandatory content of operational plans defined by the Rulebook explicitly refers only to operational plans of legal entities, and not to operational plans prepared by institutions. Furthermore, it is important to point out that the previously adopted operational plan of the AWAS (Operational Plan of AWAS Measures in Case of Extraordinary and Accidental Water Pollution), which was repealed after the amendments to the Rulebook in 2018, was more substantial, although the content of operational plans was equally defined. This plan included, among other things, assessments of possible ways of occurrence and intensity of pollution, assessment of water endangerment and preventive measures.

Within the arguments due to which the Federal Operational Plan does not contain all the mentioned elements defined by the Rulebook, the authorities from the AWAS additionally have stated that the national plans of neighboring countries, specifically, the National Plan of Measures in Case of Extraordinary and Sudden Water Pollution in Croatia has not been more substantial than the adopted Federal Operational Plan. In this context, it is important to mention that in addition to operational plans governing accidental water pollution, special operational plans also have been adopted in neighboring countries, regulating emergency response to accidental marine pollution.⁵⁵ These plans are harmonized with international agreements in the field of marine environmental protection and they contain important elements such as identification of possible sources of pollution, prevention and

⁵⁵ Operational Plan of Measures of Croatian Waters in Case of Extraordinary and Sudden Water Pollution, Intervention Plan in Case of Sudden Sea Pollution of the Republic of Croatia, Intervention Plan in Case of Sudden Sea Pollution in the Dubrovnik-Neretva County

risk assessment measures, verification of the effectiveness of the adopted plans, protected areas list, training of persons involved in implementing measures, etc.

With regard to adequate sea protection, the audit interlocutors from the AWAS and the MoAWMF FB&H have underlined that **regardless of the Federal Operational Plan development, for adequate sea protection it is necessary to adopt the National Intervention Plan for Accidental Sea Pollution**. This National Plan, in accordance with the CAMP study and determined competencies, should have been developed by B&H institutions. The Audit Office respects the standpoint of the competent institutions that a synchronized approach and cooperation with the institutions of B&H have required the establishment of an adequate system of sea interventions. However, considering the fact that the Federal Operational Plan is intended to be used in case of accidental sea pollution, i.e. coastal sea waters, it is important to emphasize that its development did not follow the guidelines and practices that have been used in developing action plans at the sea.⁵⁶ Information on intervention plans in case of accidental water pollution in the Republic of Croatia has been provided in Annex 7 of the Report, noting that information on these plans has been presented as an illustration of how neighboring countries have organized this area, without assessing the adequacy of these plans. It is important to emphasize that citing the practices of neighboring countries should not be interpreted as a recommendation to transpose the practices from these countries into domestic regulations, considering that each country needs to have a special approach aligned with the specifics of the water protection system and intervention procedures.

3.2.2. Risk assessment of Accidental Pollution

Risk assessment is one of the preconditions for readiness and adequate action in case of accidents. It is necessary in order to have prepared personnel, equipment, and appropriate procedures in accordance with the real needs and priorities. It contributes to the prevention of major consequences for the environment and human health, in terms of eliminating the consequences of accidents.

The audit has found that **the competent institutions did not assess the risk of accidental marine pollution. The assessment of this type of risk has not been adequately addressed in documents in the field of protection and rescue, such as the Plan for Protection and Rescue from Natural and Other Disasters of FB&H⁵⁷, the Assessment of Vulnerability to Natural and Other Disasters in FB&H⁵⁸, Plan for Protection and Rescue from Natural and Other Disasters of HNC⁵⁹, nor during the development of the Federal Operational Plan for Incidental Water Pollution of the Third Degree of Endangerment**. The opinion of authorities from the AWAS is that the risk assessment should be carried out in accordance with the regulations from the field of protection and rescue, and therefore, this activity was not foreseen during the development of the Federal Operational Plan.

The audit found that the Assessment of Vulnerability to Natural and Other Disasters in the FB&H recognizes the risks in the conduct of water transport in the waters of the FB&H, but it did not go into

⁵⁶ According to the Guidelines for Combating Accidental Pollution in the Mediterranean Sea - REMPEC intervention plans should consist of local - level 1, district - level 2 and national (state) plan - level 3. Depending on the conditions, the development of local plans can be assigned to the local government or local industries. Local plans should include a list of available local staff, equipment, application of selected cleaning techniques, storage instructions, transport and disposal of collected waste material. District intervention plans are the link between the national plan (level 3) and local plans (level 1). Regional plans are based on combining resources listed in local plans as well as on detailed information on each locality in the district, as well as additional resources available at the regional and national levels. National plans should have defined a comprehensive strategy for responding to accidental sea pollution. These plans should be consisted of district plans.

⁵⁷ It was adopted in May 2008. A new Federal Plan has been drafted and it is in the parliamentary procedure.

⁵⁸ „Official Gazette of FB&H“, No. 95/14

⁵⁹ The Plan generally defines the measures that shall be implemented in case of radiological, chemical and biological accidents (fire, presence of gases, aerosols, leakage of chemicals into the environment or into riverbeds, etc.), however, measures for sea accidents have not been specified.



details with defining the risks for accidental pollution of the Adriatic Sea. This assessment has not been updated since its adoption in 2014.⁶⁰

Despite the fact that the existing acts in the field of protection and rescue do not contain a risk assessment of accidental marine pollution, even during the preparation of the Federal Operational Plan, the risk assessment of this type has not been performed, so none of these acts have identified risks of accidental marine pollution, which is basic precondition for planning adequate procedures and measures of intervention.

It is important to emphasize that in accordance with the International Guidelines for Combating Accidental Marine Pollution⁶¹, the need for appropriate risk assessment was emphasized in order to plan adequately measures and procedures. Also, this practice is present in neighboring countries.⁶² Considering the fact that the Federal Operational Plan is intended to be used in case of accidental pollution of coastal seawaters, it is expected that the guidelines in the subject area have been followed in its development.⁶³

The audit found that in previous years, **adequate data storage on accidental water pollution in the FB&H was not ensured**, and there is no detailed and reliable data on trends, frequency, most common causes and consequences of accidental water pollution. These data are needed for adequate risk assessment.

3.2.3. Establishment of Functional Groups

Considering that the coordination of a number of institutions is necessary for efficient intervention management in case of accidental water pollution, **the Rulebook has defined the obligation to establish joint functional groups that include representatives of several institutions (Communication Group, Expert Group, Decision Making Group) back in 2019**. It was found that functional groups had not been established in previous years. **The Federal Operational Plan, which was adopted in 2020⁶⁴, has re-established the obligation to found functional groups and the institutions that should participate in them have been determined**. However, the establishment of groups was significantly delayed because not all the institutions have appointed their representatives within the the set time frame.⁶⁵ Information on the established functional groups has been provided in Annex 8 of the Report.

Considering the fact that the Plan has determined the procedures and measures at the level of functional groups, and that a number of institutions shall participate in the activities of each of the functional groups, it was concluded that their individual tasks and roles have not been precisely

⁶⁰ The adopted threat assessment is subject to mandatory analysis at least once a year, assessing the need to update and upgrade it, and if in the area for which the threat assessment was made certain changes that significantly affect the change of the assessed situation, the threat assessment is updated immediately after learning of the occurrence of these changes - Provision of item 20 of the Methodology for the Preparation of the Assessment of the Threat from Natural and other Disasters ("Official Gazette of FB&H", No. 35/04).

⁶¹ REMPEC – Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea

⁶² For example, the Croatian Intervention Plan for Sudden Sea Pollution has covered the risks and threats of the sea pollution. Also, the Risk Assessment and Sensitivity of the Area of Action of the Intervention Plan is an integral part of the Intervention Plan for Sudden Sea Pollution of the Dubrovnik-Neretva County.

⁶³ The state point of the AWAS given in the Statement on the Draft Report was not accepted, in which it was written that the Federal Operational Plan should not contain elements that do not contain the National Plan of Measures in case of extraordinary and sudden water pollution in Croatia, considering that the Federal Operational Plan is used in case of accidental pollution of coastal sea waters, while the mentioned Plan from Croatia does not include coastal sea waters.

⁶⁴ The Decision on the Proclamation of the Federal Operational Plan for Accidental Pollution of Third Degree of Endangerment in the Federation of Bosnia and Herzegovina (No. 04-23-476/19, February 26, 2020, Sarajevo) and the Federal Operational Plan for Accidental Pollution of Third Degree of Endangerment were published on March 11, 2020 ("Official Gazette of FB&H", No. 19/20).

⁶⁵ Namely, the Federal Operational Plan has stipulated that functional groups shall be formed within 30 days from the day of publication of this Plan, and their appointments shall be published in the Official Gazette of FB&H, which was not done within the set time frame. The Functional Groups were appointed only in September 2020 - Decisions on the Appointment of the Functional Groups no. 04-23-476-I/19, 04-23-476-II/19 and 04-23-476-III/19, dated 21 September 2020 and published in the Official Gazette of the FB&H on October 9, 2020.



defined.⁶⁶ Although the interlocutors of the audit in certain institutions believe that the obligations and roles of institutions arise from their umbrella laws and powers,⁶⁷ it is important to emphasize the significance of a clear determination of the individual institutions tasks in the realization of the Plan, in order to ensure efficiency in the implementation of the established procedures and measures.

A thorough analysis of information about participants in functional groups has shown that the participation of representatives of MoTC FB&H has not been planned, which includes captaincies, as well as lower levels of government, primarily the relevant Ministries of Water and Environment of HNC and the Municipality of Neum, which could have a significant role, especially in case of sea accidents.

The authorities in the institutions have agreed that it is necessary to include representatives of these institutions in the situations of sea accidents, and according to this, the plan would probably need to be supplemented.

3.2.4. Remediation of Accidental Water Pollution

The Federal Operational Plan stipulates that remediation of damage in case of water accidents shall be performed by authorized companies based on the Rulebook on Conditions and Criteria that must be performed by a Specialized and Authorized Legal Entity in order to implement measures to eliminate or prevent Water Pollution in Case of Accidental Water Pollution or Dangerous of Accidental Water Pollution.⁶⁸ The Rulebook determines the conditions that must be met by a legal entity that institutions hire in situations of accidental pollution. However, the Rulebook and the Federal Operational Plan do not define the manner of supervision over the implementation of measures for the remediation of the resulting pollution, nor do they define the places of disposal of hazardous substances.

The audit has established that only one company in the FB&H is authorized to repair the damage in case of accidents on the waters. It concerns the company "DELTA Petrol" d.o.o. Kakanj, which has been engaged in previous accidental pollution that has occurred on the waters in FB&H. According to the available information, the company has equipment for the remediation of pollution on the rivers. However, in conversations with the audit team the company's officials have pointed out that **the remediation of accidental sea pollution would require additional equipment, which this company does not have at its disposal.**

The MoAWMF FB&H officials have stated that the Federal Operational Plan for Accident Pollution of the Third Degree of Endangerment envisages the possibility of hiring the Federal Civil Protection Administration or authorized companies from neighboring countries that can repair accidents in B&H in events when an authorized company is unable to repair the accident.⁶⁹ However, **the Plan has not set out the steps in hiring process of an authorized company from neighboring countries, and the Plan has not contained a necessary and available equipment list for the implementation of measures.**

⁶⁶ By reviewing the defined procedures in the intervention plans of neighboring countries, it was concluded that the roles of individual institutions are defined specifically in these plans.

⁶⁷ Comment on the Draft Report of the AWAS, Act No. 22-1/21-15-109-4/20 dated 2 November 2020

⁶⁸ „Official Gazette of FB&H“, No. 6/11 i 90/13

⁶⁹ Article 24 of the Law on Protection and Rescue of People and Material Goods ("Official Gazette of FB&H", No. 39/03, 22/06 and 43/10) - consolidated text (At the proposal of the Federal Civil Protection Headquarters, the Government of FB&H submits a request to the B&H Council of Ministers seeking international assistance for the needs of the Federation, which is done after the declaration of a state of natural or other disaster at the territory of the Federation.)



3.2.5. Reviews of Intervention Procedures

Emergency interventions require a good preparation, clearly divided roles of all actors and channels of communication. In order to review the procedures, it is extremely important to conduct demonstration exercises to correct any ambiguities and to improve the prescribed procedures and measures.

The competent institutions did not conduct demonstration exercises in order to test the procedures and measures that were envisaged to be taken in situations of an accidental water pollution. It was determined that the Federal Operational Plan does not envisage the performance of demonstration exercises, although the Rulebook on Procedures and Measures defines a verification program as a mandatory content of operational plans for accidental pollution.

From the presented documentation it was evident that the authorities from the MoAWMF FB&H have been proposed to the water agencies to include the Inspection Program in the Federal Plan. However, the relevant water agencies have not accepted this comment, and ultimately the Plan was adopted without this significant element.⁷⁰ It is important to mention that the regulations of the surrounding countries have stipulated the obligation to organize and conduct demonstration exercises. Also, good practices have shown that other countries have been periodically implementing these exercises.

Based on the conversations with the representatives of FCPA, it has been stated that in 2019 the Directorate⁷¹ has conducted one demonstration exercise, which included the scenario of an accident on a boat that was aground on the shore in Neum Bay. However, from the presented documentation it has been stated that the exercise was aimed at rescuing people on boat, while the issue of sea protection from pollution has not been addressed. During its implementation, the FCPA did not take the procedures and measures provided by the Law on Waters, i.e. by the Rulebook on Procedures and Measures, which defines the obligation to implement water protection measures in case of accidental pollution. Namely, the realization of the exercise has not envisaged the involvement of a water or ecological inspector nor other institutions responsible for water in order to determine the measures that need to be taken to protect the sea from pollution. According to the statements of the FCPA authorities, during the exercise, the Directorate was not acquainted with the Rulebook on procedures and measures, nor with information on the development of the Federal Operational Plan, although according to the Plan it has been envisaged that the Directorate's representatives shall participate in each functional group.

The organization of procedures and the manner of implementation of measures according to the Federal Operational Plan for Accidental Pollution have been provided in Annex 6 of the Report.

⁷⁰As reasons why the Federal Operational Plan does not envisage the conduction of demonstration exercises, the authorities from the AWAS have stated that the FAIA has not responded to the submitted Draft Plan, which is why it was not possible to determine the obligation of conducting demonstration exercises in their name.

⁷¹The demonstration exercise was conducted in a cooperation with the HNC Civil Protection Operations Centre.



3.3. Comments to the Draft Report

The Draft Report was submitted for comments to nine audit entities. Out of nine audit entities only three of them have been submitted their comments to the audit: the MoET FB&H, the AWAS and the MoAWMF FB&H. The submitted comments were carefully considered, therefore, reasoned and adequately documented comments were incorporated into the final Report.

The MoET's FB&H⁷² comments were referred to the information on the subsequent establishment of functional groups provided by the Federal Operational Plan. According to the available evidences and these information were incorporated into the final Report.

Authorities from the AWAS in their comments on the draft report⁷³ have stated that they agree with the findings, and that there is a room for improving the Managing Interventions in Case of Accidental Pollution of the Adriatic Sea, and they believe that it is necessary to adopt examples of good practice of neighboring countries, and to regulate the system in accordance with the EU directives. In the submitted comments they have provided remarks and explanations for the parts of the Draft Report that referred to a regulatory and institutional assumptions for accidental marine pollution, identified deficiencies in the Rulebook and Federal Operational Plan, information on previous accidents in the Adriatic basin, and obligations of the AWAS, development of the Cantonal Operational Plan for Accidental Water Pollution.

Reasoned comments were incorporated into the Report, by adding data on insufficient human resources of the AWAS, the regulatory framework was complemented, with information on the Plan for Protection and Rescue from Natural and other Disasters in the HNC, explanations of the AWAS on the shortcomings of the Rulebook, the mandatory content of the Federal Operational Plan and the roles of individual institutions in the implementation of the Plan, information about obligations of the AWAS in the part of drafting the Cantonal Operational Plan have been provided more precisely, information on dealing with accidental pollution of the Neretva river were complemented with additional information from the documentation submitted by the AWAS.

Below are information related to AWAS comments that could not be accepted:

- The comment stating that the issue of water protection in a broader sense shouldn't be included in Performance Audit Report could not be accepted because audit results have indicated that the insufficient efficiency in an intervention system establishment in case of accidental marine pollution is caused in a large part by regulatory and institutional shortcomings in the area of water protection. It is important to emphasize, that in accordance with the International Standards of Supreme Audit Institutions,⁷⁴ the examination of a certain problem includes the examination and analysis of the causes of its occurrence. Accordingly, the conclusions and recommendations of this Report include the established causes of the analyzed audit problem.

- Comments regarding the need that the regulations in the field of protection and rescue shall be presented in the Performance audit report in a more detailed way did not require significant changes, because of the fact that most of these regulations were already listed in the Report. Considering the fact that these regulations have not been regulated the intervention procedure in case of accidental marine pollution in a more precise way, it was not necessary to present their thorough analysis in the Report. The findings are complemented with additional clarifications related to risk assessments for accidental pollution.

⁷² Act number: 4-11-6-158/20 dated 20 October 2020

⁷³ Act number: 22-1/21-15-109-4/20 dated 2 November 2020.

⁷⁴ ISSAI 300.26 and 3000.40 International Standards of Supreme Audit Institutions - Audit approach

- Comments related to the content compliance of the Federal Operational Plan with the provisions of the Rulebook on Procedures and Measures in Case of Accidents on Waters and Coastal Water Land, have not required changes in the findings and conclusions because the re-analysis of the Rulebook and Rulebook on Amendments⁷⁵ couldn't confirm that the defined content of operational plans refers only to the operational plans of legal entities.⁷⁶ Accordingly, the audit recommended that the obligations in the Rulebook should be more precisely determined, and based on that the amendments to the Federal Operational Plan shall be made. In addition, the comment on the need to correct the stated findings that the Rulebook on Procedures and Measures shall be limited to accidental pollution of inland waters was not accepted. However, the definition of accidental pollution provided in Article 2 of the Rulebook does not state that this pollution also refers to accidents caused by pollution from the sea.⁷⁷ The interlocutors of the audit from MoAWMF FB&H have also pointed out this limitation of the Rulebook.

- The comment stating that the obligations in the water sector should not be duplicated in terms of risk assessment (because regulations in the field of protection and rescue have defined risk assessment and methodology for developing intervention plans) did not require changes in conclusions and recommendation. However, it was established that within the relevant documents in the field of protection and rescue,⁷⁸ an adequate risk assessment of accidental pollution of the Adriatic Sea has never been performed nor has the same been done in drafting the Federal Operational Plan. Recognizing the fact that the Federal Operational Plan was intended to be used in case of accidental pollution of coastal sea waters, it was stated that its development did not follow the guidelines and good practices in the field of development of intervention plans at sea, which indicate the importance of risk assessment.

MoAWMF FB&H officials in their comments to the Draft Report⁷⁹ have stated that the lack of the submitted Draft is that it views the issue of marine pollution in B&H as the original competence of the FB&H authorities, HNC and Neum Municipality, while the competencies and role of state level bodies are not sufficiently covered.⁸⁰ In addition, it was stated that this Ministry will not be able to implement the audit's recommendations and that this issue should be first regulated at the state level. They believe it is possible to inform the FB&H Government about this issue as well as to send a proposal to the state level in order to organize the regulatory and institutional regulation of maritime management, sea protection and intervention management in case of accidental sea pollution in B&H. This Ministry provided a suggestion that the Report shall be complemented with a recommendation to design a project at the B&H level which will elaborate and propose efficient solutions in this area, and for whose implementation the international support shall be provided.

⁷⁵ Rulebook on Procedures and Measures in Case of Accidents on Water and Coastal Water Land ("Official Gazette of FB&H" No. 71/09), and Rulebook on Amendments to the Rulebook on Procedures and Measures in Case of Accidents on Water and Coastal Water Land ("Official Gazette of FB&H" No. 102/18).

⁷⁶ The chapter "Operational Plans" in the Rulebook defines: Individual measures in case of accidental pollution and methods of implementation are determined by the Operational Plans for Accidental Pollution. Articles 9 and 11 are defining the obligations of Cantonal Operational Plans adoption, the Federal Operational Plan and the operational plans that legal entities are obliged to prepare. Article 12 defines the elements that shall be contained in the Operational Plan, and nowhere has been stated that this Article refers only to the operational plans of legal entities (Article 11) and not to other operational plans covered in the chapter "Operational Plans".

⁷⁷ Accidental pollution occurs when there is a sudden spill of hazardous substances and other substances that can worsen the identified water condition, or if they can pollute surface and groundwater or the sea due to pollution from land.

⁷⁸ FB&H Plan for Protection and Rescue from Natural and Other Disasters, Assessment of Vulnerability to Natural and other Disasters in FB&H, Plan for Protection and Rescue from Natural and Other Disasters of the HNC.

⁷⁹ Act number: 07-2-21/2-1618/20 dated 30 October 2020

⁸⁰ In their comments to the Draft Report, the MoAWMF's FB&H officials have pointed out that the issue of the Adriatic Sea, as a part of the territory of B&H, and transboundary waters, should be regulated in a way that established regulatory and institutional prerequisites for these issues shall be at the level of B&H institutions, and that implementation of the state level intervention plans shall be in a line with international commitments and the environment. They believe that the institutions of FB&H, HNC and Municipality of Neum in these circumstances would be more efficient in the implementation of regulations and plans relating to water in general, because they would be managed (coordinated) from the state level, i.e. B&H.



Pursuant to the submitted comment, the Report was complemented with statements from the MoAWMF FB&H authorities on the importance of creating regulatory and institutional prerequisites at the level of B&H institutions in order to manage effectively interventions at the sea.

When it comes to the recommendations provided to the MoAWMF FB&H, the Audit Office is aware that there is a need to more adequately regulate the subject area in cooperation with B&H institutions, and that is why a recommendation was made to analyze the situation in the area and to initiate more adequate regulation of these issues in cooperation with B&H institutions. However, we appreciate that there is a need to take action to eliminate the identified regulatory and institutional shortcomings related to the protection of coastal seawaters, but also other waters under the jurisdiction of the FB&H, HNC and the Municipality of Neum. Recognizing the established competences of the Federal ministries,⁸¹ to monitor the situation in the area for which they were established, be responsible for the situation in that area, and make recommendations in the field of legislation, the Audit Office estimates that a more proactive approach should be taken in order to overcome the problems that have been present in this area for a long time.

Regarding the recommendation proposed by the MoAWMF FB&H in order to be added to the Draft Report, we believe it shall be a part of the Ministry proposal that should be sent to the relevant B&H institutions through the FB&H Government. Pursuant to the competencies defined by the Law on Audit⁸², the Audit Office cannot make recommendations to institutions outside its jurisdiction. As this performance audit is carried out as part of a parallel audit project, the other SAIs, participating in this project in their reports will cover the most important issues within their competence.

⁸¹ Article 10 of the Law on Organization of Administrative Bodies in FB&H ("Official Gazette of FB&H" No. 35/05)

⁸² Article 11 of the Law on Audit of Institutions in FB&H ("Official Gazette of FB&H" No. 22/06)



4. CONCLUSIONS

The general conclusion of the audit is that the basic prerequisites for efficient intervention management in case of accidental pollution of the Adriatic Sea have not been established in the FB&H yet. The shortcomings of the existing regulatory framework, inadequate institutional prerequisites for water protection, non-compliance with the adopted regulations, and delays in the adoption of clear action procedures have indicated the insufficient efficiency of the relevant institutions in this area. The proper implementation of international commitments and the achievement of water protection objectives remain to be a challenge, especially in the area of marine protection.

The focus of this performance audit was on accidental marine pollution. However, the findings presented in this Report are indicating problems in the water protection system in general. Therefore, the Audit Office appreciates that this Report can contribute to the improvement of water protection, which is one of the most valuable natural resources available to the FB&H.

Based on the conducted audit and the determined findings, the following conclusions were drawn:

4.1. Appropriate Regulatory and Institutional Framework for Managing Interventions in Case of Accidental Pollution of the Adriatic Sea Have Not Been Created.

The established regulatory framework in the field of water and environmental protection is not appropriate because the adopted regulations do not clearly and comprehensively regulate the protection of the sea and the intervention management in case of accidental marine pollution. None of the adopted regulations defines clear obligations and responsibilities in the field of marine protection. The Rulebook defining procedures and measures in case of accidental pollution of water and coastal water land defines only incidental pollution from land and does not clearly define the content of all the operational plans that need to be adopted. When it comes to the protection of water from pollution caused by vessels, it was determined that the Law on Inland and Maritime Navigation imprecisely defines the obligation to create plans in case of sudden pollution from the ship, which have resulted in non-compliance with this legal provision. The relevant institutions were explained the non-compliance with that Law by the need for more adequate legal regulation of maritime traffic at the level of B&H.

Despite the fact that the relevant institutions are aware of the problems of inadequate marine protection, they have not proposed improvement of the regulations in this area in cooperation with B&H institutions, nor have they envisaged specific measures in the strategic documents with an aim to solve the identified problems.

It was determined that, appropriate institutional prerequisites for adequate water protection have not been established in the FB&H, which was reflected with the inefficiency in establishing mechanisms for intervention in case of accidents on the waters, and also at the sea. No progress has been made in resolving human resource problems in water and environmental institutions, which has been present for many years.

4.2. Institutions in Federation of B&H have not adopted adequate operational plans that ensure efficient response in case of accidental pollution of the Adriatic Sea.

The audit found that the procedures for actions in case of accidental marine pollution have not been adopted in the FB&H. It is envisaged that operational plans related to accidental water pollution will also apply in case of coastal seawater pollution. However, insufficient efficiency has been found in making these plans.



The complete absence of activities was stated in the part of drafting the Cantonal Operational Plan for Accidental Water Pollution of First and Second Degree of Endangerment and the Plan of Defense Against Sudden Pollution from the Ship and the Coastal Zone of Inland Waters. On the other hand, it was concluded that the Federal Operational Plan, which was adopted after a long delay, does not contain all the necessary elements.

A control risk for the occurrence of accidental marine pollution has not been carried out in order to plan adequately measures and procedures. Whereas the Federal Operational Plan has never been tested, it is unknown whether the action procedures defined by this Plan are adequate.

Since the establishment of functional groups was delayed, it was stated that there is insufficient cooperation of the relevant institutions in this area. The participation of all relevant institutions in the functional groups has not been envisaged, primarily the Neum Port Authority and the Municipality of Neum, which could play a significant role in case of accidental marine pollution. The tasks of individual institutions participating in the implementation of the Federal Operational Plan have not been precisely determined nor has a list of available equipment been made. Therefore, it is unknown whether all planned participants are ready to act effectively in case of accidental sea pollution and other waters.



5. RECOMMENDATIONS

In accordance with the audit findings and conclusions, provided recommendations can contribute to the improvement of intervention in case of accidental sea pollution, and generally, to the better protection of the sea and other waters in the FB&H. Mutual cooperation and coordination of several institutions is necessary for the effective implementation of the recommendations. Taking into account competencies in the field of water protection, the Audit Office appreciates **that the institutions to which the recommendations were provided should be the initiators of changes and the leaders of activities aiming to solve the present problems in this area.**

5.1. Recommendations for improvement of the regulatory and institutional framework

Recommendation to the Federal Ministry of Agriculture, Water Management and Forestry

- ***Submit a proposal to the FB&H Government to initiate adequate regulatory and institutional regulation of Adriatic Sea protection***

In order to implement this recommendation, it is necessary that the Ministry, through the FB&H Government, initiates clear obligations and responsibilities of individual institutions in the management and protection of coastal waters and territorial sea. This needs to be done in cooperation with the relevant institutions of B&H, FB&H, HNC and the Municipality of Neum. Considering the divided competencies, it is necessary to establish proactive cooperation with the relevant institutions at the different levels of government in order to regulate adequately this area, and to initiate the transposition of the Marine Strategy Framework Directive into domestic legislation.

Recommendation to the Federal Ministry of Environment and Tourism

- ***Clearly prescribe the content of operational plans for accidental water pollutions in order to adopt comprehensive plans which enable efficient action in the case of accidental water pollution in the FB&H.***

In order to implement this recommendation, in the Rulebook on Procedures and Measures in Case of Accidents on Waters and Coastal Water Land, it is necessary to clearly define the content of operational plans for accidental water pollution which are prepared and adopted by institutions responsible for water and environment at the Federal and Cantonal levels. Also, it is necessary to prescribe the content of the plans that are required to be prepared by legal entities whose activities may cause accidental water pollution. The MoET FB&H shall consider the need for procedures and measures that can be defined, in case of accidental marine pollution, in way that is more precise.

Recommendations to the Federal Ministry of Transport and Communications

- ***Clearly define the obligation to adopt a Plan for Protection Against Accidental Pollution from Ships and for the Coastal Zone in accordance with the Low on Inland and Maritime Navigation, in order to adopt the Plan.***

Taking into account the provisions of the Law on Waters, regarding the protection of coastal sea waters from pollution caused by vessels (Article 57 of the Law on Waters), the provisions of the Law on Inland and Maritime Navigation and EU regulations in this area, it is necessary to more clearly define the Protection Plan of Waters from Pollution Caused by Vessels. In cooperation with the institutions responsible for water and the environment, the MoTC FB&H shall ensure the adoption of a plan that will regulate action in case of water pollution from vessels in timely and organized manners.



- ***Make an analysis of the situation in the area of maritime traffic and submit a proposal to the FB&H Government to regulate adequately sailing on inland and maritime waterways.***

In order to implement this Recommendation, it is necessary that the Ministry, through the FB&H Government, more adequately initiates regulation of maritime traffic in order to ensure the conduct and safety of navigation. Considering the divided competencies in this area, with an aim to regulate adequately maritime transport in a regulatory and institutional manner, it is necessary to ensure a proactive cooperation with the relevant B&H institutions. Regulations in the field of maritime transport should be harmonized with the provisions of EU regulations, as well as regulations in the field of water management and protection.

Recommendation to the Federal Ministry of Environment and Tourism, the Federal Ministry of Agriculture, Water Management and Forestry, the Ministry of Agriculture, Forestry and Water Management of the Herzegovina-Neretva Canton, the Ministry of Trade, Tourism and Environmental Protection of the Herzegovina-Neretva Canton

- ***Make an analysis of institutional preconditions for water protection in FB&H, and submit a proposal for the establishment of appropriate organizational and personnel capacities for the implementation of water protection regulations and policies.***

In order to implement this Recommendation, it is necessary that the institutions, within their competencies, submit a proposal to the Government of FB&H and the Government of HNC for the improvement of institutional and human resources for water protection. This problem should be addressed in a planned manner. Also, the need for reorganization of existing water sectors, internal reallocation of available personnel and ensuring adequate training of employees should be considered.

Recommendation to the Municipality of Neum

- ***Take the necessary measures to ensure adequate capacities for the protection and safeguarding of the sea and the marine environment.***

In order to implement this Recommendation, it is necessary to conduct a thorough analysis of available and necessary capacities for marine protection and the implementation of the CAMP project. Also, it is necessary to take concrete measures to establish the required capacities. The Municipality shall consider the need for internal redeployment of available personnel and for insurance of adequate employee education.

5.2. Recommendations for the establishment of the contingency plans in case of accidental water pollutions

Recommendations to the Federal Ministry of Environment and Tourism

- ***Ensure a risk assessment for accidental water pollution, including risk assessment for the Adriatic Sea in cooperation with the Federal Ministry of Agriculture, Water Management and Forestry.***

In order to implement this Recommendation, it is necessary to make an analysis and to determine possible ways of occurrence and intensity of pollution, as well as locations where there is an increased risk of possible accidental water pollution. Risk assessment should be an adequate basis for planning intervention in order to protect and rescue people, material resources and the environment.



- ***In cooperation with agencies for water ensure the improvement of the Federal Operational Plan for Accidental Water Pollution in order to contain all the necessary elements and clearly defined obligations and roles of individual institutions.***

In order to implement this Recommendation, it is necessary to:

- Clearly define the obligations of crucial institutions that should participate in the implementation of the Plan.
- More specifically plan measures and procedures in case of accidental sea pollution and to provide the involvement of all relevant institutions in the implementation of these measures, primarily the Municipality of Neum and the Neum Port Authority.
- Provide information on necessary and available equipment that can be used in the situations of accidental water pollution.
- Plan verification program of implementing the Plan, in order to test the envisaged procedures and measures.

Recommendation to the Ministry of Agriculture, Forestry and Water Management of the Herzegovina-Neretva Canton, the Agency for Watershed of the Adriatic Sea and the Ministry of Trade, Tourism and Environmental Protection of the Herzegovina-Neretva Canton

- ***Prepare and adopt Cantonal Operational Plan for Accidental Pollution in accordance with the obligations defined by the Rulebook on Procedures and Measures in Case of Accidents on Waters and Coastal Water Land.***

In accordance with the obligations defined by the Rulebook, the Ministry of Agriculture, Forestry and Water Management of the HNC, in cooperation with the Agency for Watershed of the Adriatic Sea, needs to develop a Cantonal Operational Plan for Accidental Pollution of First and Second Degrees of Endangerment and send it to the Ministry of Trade, Tourism and Environmental Protection of the HNC in order to be adopted.

Audit team:

Aida Đozić, Team Leader

Mirsada Čengić, Team Member

Amela Balić, Team Member



ANNEXES



ANNEX 1. Basic Information on the Legal Framework Relevant to the Subject of Audit

The Law on Waters⁸³ is the basic regulation in FB&H that regulates water management. According to this Law, water management includes water protection, water use, protection against harmful effects of water and regulation of watercourses and other waters.⁸⁴ Regarding the audit subject, the purpose of this Law is, inter alia, water management aiming to reduce water pollution, preventing water degradation and fulfilling obligations under the international agreements that are binding for Bosnia and Herzegovina.⁸⁵

In case of accidental water pollution, a legal or natural person in connection with whose action or omission such a danger has arisen, must immediately take all the necessary measures in order to prevent or mitigate the effects caused by the accident, and without delay inform the nearest police department, the water inspection, the Federal Environmental Inspectorate, the Agency for Watershed or the Civil Protection Operations Centre.⁸⁶ The Federal minister responsible for the environment, in agreement with the Federal minister responsible for water, shall define the procedure and measures which should be taken in case of an accident.⁸⁷

The Law on Environmental Protection⁸⁸ defines the principles of environmental protection and it was adopted, among other things, in order to reduce the use and damage of the environment, to improve and restore the damaged environment, and to protect human health and improve environmental conditions for quality of life. **The Environmental Protection Act regulates, among other things, water protection.**⁸⁹

The Law on Inland and Maritime Navigation⁹⁰ regulates the conduct and safety of navigation, basic material legal relations regarding vessels, procedures for registration of vessels, transport and navigation operations, navigation accidents, **captaincies and control of inland and Adriatic waterways**, which territorially belong to the FB&H.

The Law on Protection and Rescue of People and Material Goods from Natural and Other Disasters,⁹¹ among other issues, regulates the human protection and rescue system, flora and fauna, material, cultural, historical and other assets and the environment from natural disasters, technical-technological, ecological and other accidents.

The Law on Waters of the Herzegovina-Neretva Canton⁹² regulates the issues of water management, water use and protection, regulation and maintenance of watercourses, establishment of a water information system, adoption of water acts within its competence.

The Law on Environmental Protection of the Herzegovina-Neretva Canton,⁹³ among other issues, regulates water protection, which includes the preservation of surface and groundwater, water supplies, quality regulation, protection of riverbeds, coastal areas of inland waters and aquifers.

⁸³ "Official Gazette of FB&H", No. 70/06

⁸⁴ The Law on Waters determines the structure for water management, so that the basic unit for water management area is agencies which they have been governing the watershed (Agency for the Adriatic Sea Water Area and the Agency for the Sava River Basin).

⁸⁵ Article 2 of the Law on Waters ("Official Gazette of FB&H", No. 70/06)

⁸⁶ Article 61, paragraph (1) of the Law on Waters

⁸⁷ Article 61, paragraph (9) of the Law on Waters

⁸⁸ Official Gazette of FB&H", No. 33/03 and 38/09

⁸⁹ Article 14 of the Law on Environmental Protection ("Official Gazette of FB&H", No. 33/03 and 38/09)

⁹⁰ "Official Gazette of FB&H", No. 73/05

⁹¹ "Official Gazette of FB&H", No. 39/03, 22/06 and 43/10

⁹² "Official Gazette of HNC", No. 6/13

⁹³ "Official Gazette of HNC", No. 6/12



ANNEX 2. EU Directives and International Conventions Relevant to Water Protection

The Water Framework Directive 2000/60/EC sets out as to how the countries develop their water policy, including the designation of river basins, the designation of water bodies, the setting of environmental quality objectives (EQO) for water, the preparation of river basin management plans and the involvement of stakeholders and the public in the decision-making process in water management. This Directive forms the basis of the Law on Waters.

The Marine Strategy Framework Directive 2008/56/EC aims to protect the marine environment in Europe more effectively. Within the framework of this Directive, a number of criteria and methodological standards should assist Member States in implementing its provisions. Annex III was amended in 2017 in order to ensure connection between ecosystem components, anthropogenic pressures and impacts on the marine environment, with the 11 protocols to this Directive and the new Decision about the good state of the environment.

SEVESO III Directive 2012/18/EU on the control of major-accident hazards involving dangerous substances seeks to control the risk of major accidents involving dangerous substances, in particular chemicals. It provides the better **access to information** to the public about the risks that may arise from nearby industrial facilities, and how to act in case of an accident. The directive also envisions more strict inspection standards, as well as improving the process of advising the public on projects, plans and programs involving large facilities.

International Conventions Relevant to Protection from the Sea Pollution

The international legal framework for the protection of the Mediterranean Sea (including the Adriatic Sea) comprises a number of international conventions. Countries with access to the Mediterranean Sea, including the European Economic Community (now the EU), have launched the first regional marine protection program in 1975 under the auspices of the UN Environment Program UNEP. In relation to this, the first Mediterranean Action Plan (MAP) was adopted, which was replaced in 1995 by the Second Mediterranean Action Plan (MAP II).

The Mediterranean Countries have adopted the **Barcelona Convention**⁹⁴ for the Protection of the Marine Environment and the Coastal Region of the Mediterranean (Barcelona, 1976, 1995), with associated protocols, which obliges signatory countries to respond appropriately to "prevent, reduce and combat pollution and protect the marine environment". The objectives of the Convention are the assessment and control of marine pollution, ensuring the sustainable management of marine and coastal natural resources, integrating environmental concerns into the social and economic development planning, protecting the marine environment and coastal areas by preventing or reducing pollution and, as far as possible, eliminating pollution, whether it is at the sea or on land.

The Barcelona Convention⁹⁵ is the legal framework for the work of the Mediterranean Action Plan (MAP), and up to now, it has been complemented by seven specific protocols. It was amended in 1995 into the **Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean**, which has been ratified by 22 countries, including B&H.

⁹⁴ Decision on Ratification of Amendments to the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean - Barcelona Convention ("Official Gazette of B&H", No. 12/20)

⁹⁵ <https://fmpvs.gov.ba/map-mediteranski-akcion-plan-barselonska-konvencija/>



In 2016, the contracting parties to the Barcelona Convention adopted a Decision⁹⁶ (Decision IG. 22/20) which includes the preparation of a Feasibility Study for the implementation of the CAMP Project in Bosnia and Herzegovina (B&H).⁹⁷ Each member state of the CAMP Project has the obligation to develop a **National Intervention Plan**, which serves to act in case of accident pollution of the sea with oil and/or oil mixtures of more than 2000 m³, hazardous and harmful substances, and in case of extraordinary natural events at the sea.

The Barcelona Convention has seven accompanying protocols:

- Dumping Protocol
- Prevention and Emergency Protocol-Emergency protocol
- Land-based Sources and Activities-Protocol LBS
- Specially Protected Areas and Biological Diversity Protocol-Biodiversity Protocol
- Offshore Protocol (pollution from exploration and exploitation)
- Hazardous Wastes Protocol
- Protocol on Integrated Coastal Zone Management (ICZM)

*In addition to the above-mentioned international conventions, the **International Convention for the Prevention of Oil Pollution from the Sea**⁹⁸ and the **International Convention for the Protection of the Sea against Pollution from Ships**⁹⁹ are also important.*

⁹⁶ Decision on Approval to Ratify the Convention on the International Regulations for Preventing Collisions at Sea 1972. ("Official Gazette of Bosnia and Herzegovina - International Agreements", No. 01, 02-05-2-2086 / 18); <http://slist.ba/mu2020/ugovori01.pdf>

⁹⁷ The Mediterranean Action Plan (MAP), operating under the auspices of the United Nations Environment Program (UNEP), implements the Coastal Area Management Program (CAMP). CAMP Projects are implemented in Mediterranean countries with the basic goal to provide assistance, knowledge and experience in solving urgent environmental problems. These problems are related to integrate coastal zone management (ICZM) as a basic tool for achieving sustainable coastal zone development. After the Council of Ministers of B&H / MoFTER B&H has adopted the Feasibility Study, the organization of the CAMP B&H Program will be carried out in accordance with the operational manual. Based on the findings of the Feasibility Study and subsequent developments, as well as consultations with relevant experts and institutions, an Agreement for the CAMP Project was prepared, which presents the objectives, structure and content of the Program, as well as implementation arrangements for activities to be implemented. The Municipality of Neum is on behalf of the Council of Ministers of B&H a signatory to the Agreement for the CAMP Project of B&H. The Agreement was signed on June 29, 2020. by the Municipality of Neum and the Center for Regional Activities of the UNEP / MAP Priority Action Program.

⁹⁸ This Convention, which was signed in London in 1954 and entered into force in 1958, was accepted by the former Yugoslavia in 1973. The State of Bosnia and Herzegovina ratified it in 1994 ("Official Gazette of RB&H", No. 13/94).

⁹⁹ It was signed in London in 1973 and entered into force in 1983. The former Yugoslavia accepted it in 1985, and the State of Bosnia and Herzegovina in 1994. ("Official Gazette of RB&H", No. 13/94).



ANNEX 3. Competences of Institutions Relevant to the Subject of the Audit¹⁰⁰

MoAW MF FB&H	MoET FB&H	MoTC FB&H	AWAS	FCPA	FAIA
<p>Prepares strategy proposals and proposes regulations for the implementation of laws in the field of water management in the FB&H. Provides consent to the MoET FB&H on regulations on procedures and measures to be taken in case of accidents. It prescribes the conditions that must be met by a specialized authorized legal entity for the elimination or prevention of water pollution. Implements obligations related to international treaties, agreements, conventions and protocols in the field of water management.</p>	<p>Performs administrative, professional and other tasks within the competence of the Federation related to environmental water protection, development of environmental strategy and policy, water quality standards, environmental monitoring and water control.</p> <p>Implements environmental and nature protection measures related to water.</p> <p>Provides approvals to the MoAWMF FB&H for the adoption of water management strategies. It prescribes the procedures and measures to be taken in case of accidents, with the consent of the MoAWMF FB&H.</p> <p>Establishes functional groups for the implementation of FOP.</p> <p>Implements obligations related to international treaties, agreements, conventions and protocols in the field of environment.</p>	<p>Performs administrative, professional and other tasks related to the exercise of the Federation competencies in the field of maritime transport. Monitors the state of safety of water transport. It cooperates with state, entity and cantonal ministries, as well as inspectors in this field. Adopts a Plan of Defence against Accidental Pollution from Ships and the Coastal Belt. Initiates the achievement of international treaties, conventions, agreements and other acts.</p>	<p>Prepares a Water Management Plan for the Associated River Basin District.</p> <p>Takes urgent measures to prevent or reduce the harmful effects caused by accidental pollution and prepares plans for such measures.</p> <p>Cooperates with the Cantonal Ministry of Water in the development of the Cantonal Operational Plan for Incidental Pollution of the I and II degree of endangerment.</p>	<p>Develops the Program of Protection and Rescue from Natural and Other Disasters.</p> <p>Assesses the FB&H vulnerability to natural and other disasters.</p> <p>Proposes a Plan for Protection and Rescue from Natural and Other Disasters.</p> <p>Organizes, prepares and implements the protection and rescue of people, material and cultural resources.</p> <p>Organizes, prepares and trains staff, units and commissioners of civil protection and protection and rescue services.</p>	<p>Performs inspections in the field of the Federal Water and Environmental Inspectorate, and coordinates the work of Federal and Cantonal inspections.</p> <p>Adopts programs and plans for performing inspection supervision for the Federal inspection, and submits requests for changes or revocation of water acts.</p> <p>Undertakes inspections to establish the factual situation in order to enforce laws and other regulations with the subjects of supervision.</p> <p>Takes preventive measures.</p> <p>Determines the degree of pollution risk in case of accidental water pollution and the measures to be taken.</p>

¹⁰⁰ The provision of Article III, items c) and i) of the Constitution of the Federation of B&H stipulates that the Federal Government and Cantons are responsible for the policy of protection of the human environment and the use of natural resources, while the provisions of Article III para. (1) and (3) of the Constitution of the Federation of B&H stipulate that the Federal Government is entitled to determine policy and enact laws concerning these areas.

Law on Federal Ministries and Other Bodies of Federal Administration - consolidated text ("Official Gazette of FB&H", No. 58/02, 19/03, 38/05, 2/06, 8/06, 61/06); Law on Organization of Administrative Bodies in FB&H ("Official Gazette of FB&H", No. 35/05); Law on Waters ("Official Gazette of FB&H", No. 70/06); Rulebook on Procedures and Measures in Case of Accidents on Waters and Coastal Water Land ("Official Gazette of FB&H", No. 71/09 and 102/18); Law on Environmental Protection ("Official Gazette of FB&H", No. 33/03, 38/09); Law on Inland and Maritime Navigation ("Official Gazette of FB&H", No. 73/05); Law on Protection and Rescue of People and Material Resources from Natural and Other Disasters ("Official Gazette of FB&H", No. 39/03, 22/06 and 43/10)



MoAFW
M HNC*

MoTTEP
HNC**

NEUM
MUNIC.**
*

Implements water management policies.

Provides suggestions and remarks to the proposal of the FB&H Water Management Strategy.

Preparation of the Cantonal Operational Plan for Accidental Pollution of I and II Degree of Endangerment occurred in the area of the Canton, in cooperation with the relevant water agency.

Performs administrative supervision over the implementation of the Law on Waters of HNC and regulations adopted on the basis of that Law.

Performs environmental protection activities and implements environmental protection measures.

Provides comments and suggestions to the proposed Water Management Strategy.

Adopts the Cantonal Operational Plan for Accidental Pollution of the I and II Degree of Endangerment in the area of the Canton, at the proposal of the Cantonal Minister of Water.

Organizes monitoring of the state and preservation of the environment (land, water, air).

Establishes and implements policies for spatial planning and protection of the human environment of the Municipality of Neum.

It regulates, organizes, finances and improves environmental protection activities that are important for the local community.

Makes decisions on the use of the coast and the coastal zone on waterways.

Participates in the implementation of the CAMP Project.

Provides information to the public regarding environmental protection.

* Source: Law on Waters ("Official Gazette of the FB&H", No. 70/06), Law on Waters of the HNC ("Official Gazette of the HNC", No. 6/13); Rulebook on Procedures and Measures in Case of Accidents on Waters and Coastal Water Land ("Official Gazette of FB&H", No. 71/09 and 102/18)

** Source: Law on Waters ("Official Gazette of FB&H", No. 70/06); Law on Environmental Protection of the Herzegovina-Neretva Canton (Official Gazette of HNC, No. 6/12); Rulebook on Procedures and Measures in Case of Accidents on Waters and Coastal Water Land ("Official Gazette of FB&H", No. 71/09 and 102/18)

*** Source: Law on Principles of Local Self-Government in FB&H ("Official Gazette of FB&H", No. 49/06 and 51/09), Law on Inland and Maritime Navigation ("Official Gazette of FB&H", No. 73/05); Law on Environmental Protection of the Herzegovina-Neretva Canton (Official Gazette of HNC, No. 6/12); Agreement regarding the Coastal Zone Management Program (CAMP) Project for Bosnia and Herzegovina



ANNEX 4. The Levels of Endangered Waters according to the Rulebook on Procedures and Measures in Cases of Accidents on Waters and Coastal Water Land

Accidental pollution of the first degree of endangerment - if smaller quantities of dangerous or other substances that are causing pollution have entered the water; if it is possible to prevent the spread of pollution by rapid application of the necessary measures; if no major consequences are expected for the ecological condition of the water, nor the danger for its use (envisaged application of the Cantonal Operational Plan for Accidental Pollution)

Accidental pollution of the second degree of endangerment - if larger quantities of dangerous substances or other substances that are causing pollution have entered the water; if the rapid application of the necessary measures can prevent the spread of pollution, but sources of drinking water or sources of water for the other purposes are endangered; when the consequences of the possible use of water are significant, and it is necessary to declare measures in order to restrict their use (envisaged application of the Cantonal Operational Plan for Accidental Pollution)

Accidental pollution of the third degree of endangerment - if larger quantities of dangerous or other substances that are causing pollution have entered the water, with possible transboundary consequences; if the rapid application of the necessary measures can prevent the spread of pollution, but sources of drinking water or sources of water for other purposes are endangered; when the consequences for water quality and its use are large, and it is necessary to declare measures prohibiting the use (envisaged application of the Federal Operational Plan for Accidental Pollution)

ANNEX 5. Intervention Treatment in case of Accidental Pollution of the Neretva River

Based on the available documentation, an analysis of the actions taken during the last registered accidental pollution that occurred on the Neretva River was accomplished. Namely, a traffic accident has occurred on the main road M-17 Mostar – Jablanica in 2013, during which a fuel tank was overturned and caused an oil spill into the Grabovica accumulation lake on the Neretva River.

It was stated that no detailed action procedures have been defined in the period when the mentioned accident occurred. The manner of communication, coordination and action of the institution representatives was not regulated in detail. One of the causes of this situation is the fact that the functional groups provided for in the Rulebook have not been established.

It was found that the procedures and measures which have been taken, were not fully aligned with the provisions of the Law on Water or with the Rulebook on Procedures and Measures in Cases of Accidents on Waters and Coastal Water Land, because the Federal Administration for Inspection Affairs did not determine the level of water pollution, and on that basis issued a Decision determining measures and procedures for repairing the damage. The Inspector-General of Water provided verbal instructions to those in charge of road maintenance about how to remove hazardous waste. Also, Inspector has explained to them that an authorized company should be hired to rehabilitate and alleviate the pollution of the reservoir on the Neretva River at the expense of the perpetrators.

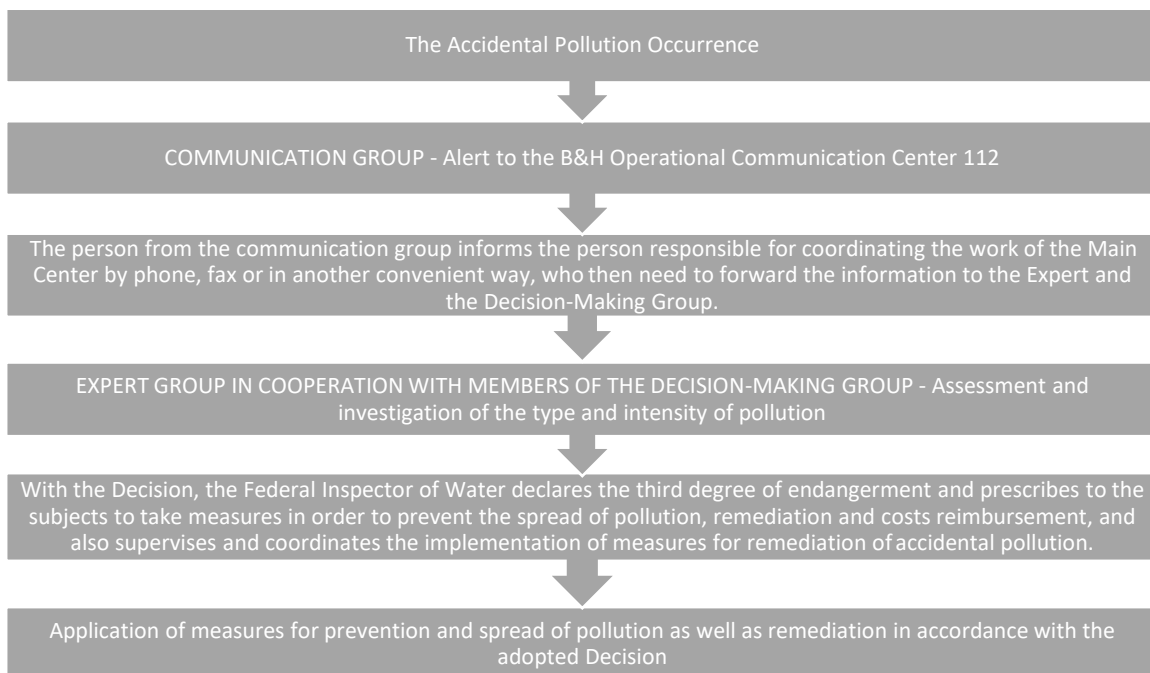
There is no evidence that the relevant institutions have determined the assessment of the level of the water condition endangerment and the assessment of the damage caused to the environment. From the submitted documentation, it could not be confirmed that it was verified whether the polluter who caused the accident possesses all prescribed acts that are important in the interventions management, such as the Operational Plan of Measures and the Safety Report, the Information on Security Measures and the Internal Intervention Plan. Also, the Inspection have not supervised the damage repair and waste disposal and, as they stated from the inspection, the authorized company has no obligation to submit a Damage Remediation Report to the Inspection.



From the documentation submitted by the AWAS, it is evident that the determined volume of pollution was 64 m³, i.e. 38400 kilos of the total amount of compacted waste and about 72000 liters of oily water. Also, a subsequent field trip was documented in order to determine whether, after the rains and possible leaching of oily substances from the road, there is a need to re-engage the remediation capacity. Surface water samples were taken at three localities (at the accident site, next to the HE Grabovica and at the first downstream pond Herc-Fish).

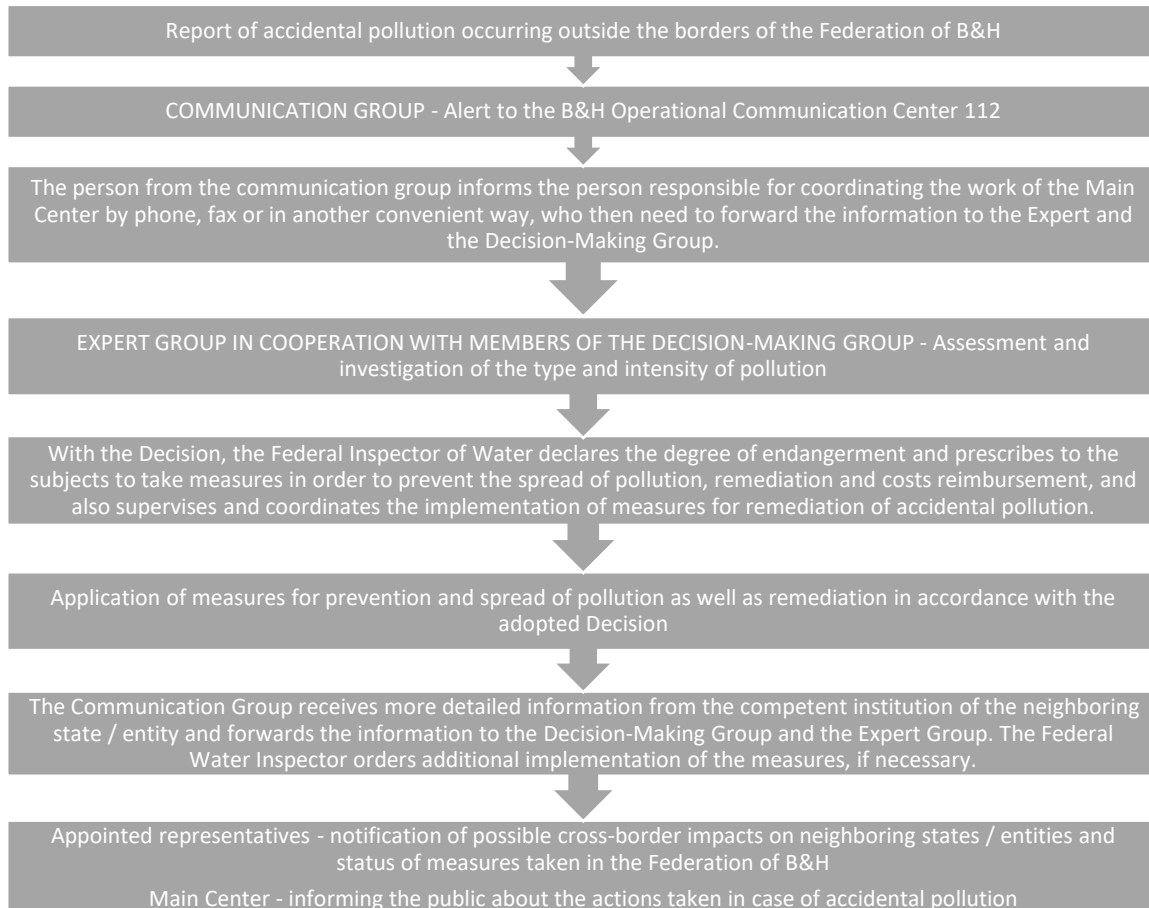
ANNEX 6. Organization of Procedures and Manner of Implementation of Measures According to the Federal Operational Plan for Accidental Pollution of the Third Degree of Endangerment

ORGANIZATION OF PROCEDURES AND MANNER OF IMPLEMENTATION OF MEASURES IN CASE OF ACCIDENT POLLUTION OF THIRD DEGREE, FORMED WITHIN THE BORDERS OF THE FEDERATION OF B&H





ORGANIZATION OF PROCEDURES AND MANNER OF IMPLEMENTATION OF MEASURES IN CASE OF ACCIDENT POLLUTION OF THIRD DEGREE, FORMED BEYOND THE BORDERS OF THE FEDERATION OF B&H



ANNEX 7. Intervention Action Plans in Case of Accidental Water and Sea Pollution in Republic of Croatia¹⁰¹

When it comes to accidental water pollution, Republic of Croatia has adopted several plans:

- Operational Plan of Measures in case of Extraordinary and Accidental Water Pollution of Croatian Waters,¹⁰²
- National Plan of Measures for Sudden and Accidental Water Pollution,¹⁰³
- Intervention Plan for Accidental Marine Pollution,¹⁰⁴ and other lower-level action plans.¹⁰⁵

The Operational Plan of Measures of Croatian Waters (applied in case of accidental pollution of the first and second degree of endangerment and in sudden situations that do not require the declaration

¹⁰¹ The plans were analyzed as a comparative measure with regard to their greater compliance with EU standards.

¹⁰² https://www.voda.hr/sites/default/files/dokumenti/operativni_plan.pdf

¹⁰³ https://narodne-novine.nn.hr/clanci/sluzbeni/full/2011_01_5_82.html

¹⁰⁴ https://narodne-novine.nn.hr/clanci/sluzbeni/full/2008_08_92_2926.html

¹⁰⁵ The lower action plans are: 1. Operational Action Plan in Case of Extraordinary and Accidental Water Pollution of Croatian Waters; 2. Operational Plan of Measures in Case of Extraordinary and Accidental Water Pollution of Legal or Natural Persons Who are Obligated to Obtain a Water Permit for Water Discharge or a Decision on Integrated Environmental Protection Conditions for Water Pollution Originating from the area covered by these administrative acts; 3. Operational Plan of Measures in Case of Extraordinary and Accidental Water Pollution of Water Service Providers for Water Pollution that originated from municipal water structures or originally occurred in municipal water structures.



of the degree of endangerment) precisely states the responsible persons and their tasks in the implementation of measures. In addition to precisely defined measures, the Plan envisages the implementation of a performance analysis and costs incurred during and after the implementation of measures. The performance analysis also includes a cost-benefit analysis of individual remediation methods (cost benefit analysis). Also, the Plan contains a detailed list of equipment and resources in the implementation of measures, and states that the Water Protection Sector shall organize a check of equipment and training of workers for the implementation of this Operational Plan. The Plan, also, defines the manner of public informing in detail.

The National Plan of Measures for Sudden and Accidental Water Pollution contains:

- assessment of the possibility and degree of threat from accidental and extraordinary pollution,
- measures and procedures which should be taken in events of extraordinary and accidental water pollution,
- measures and procedures which should be taken in event of transboundary water pollution,
- implementing entities of the National Action Plan,
- obligations to adopt the lower action plans in event of extraordinary and sudden water pollution by legal and natural persons and their detailed obligations and powers as well as the contents of those documents, obligations and powers of Croatian Waters and suppliers of water services during pollution caused by municipal water structures, as well as the time frame for the lower- level action plans preparation,
- measures that should be taken in order to inform the public in a timely and complete manner.

The National Plan of Measures refers to the pollution of inland waters that can endanger human life and health, as well as nature and the environment as a whole.

The contingency plan for sudden marine pollution sets out measures and procedures for anticipating, preventing, limiting, preparedness for and responding to sudden marine pollution and for extraordinary natural events at sea in order to protect the marine environment.

The contingency plan for sudden marine pollution covers several types of risks:

- accidents at sea involving a shipwreck, stranding, fire, explosion, structural failure, an accident while operating a ship or any other event on or off the ship, and accidents at offshore maritime facilities,
- accidents on submarine pipelines,
- sunken ships and aircraft,
- extraordinary natural event in the sea,
- crash of aircraft and helicopters into the sea,
- accidents at coastal installations and terminals.

Attached to the Plan are schematic representations of the action in all these situations. The plan also contains a list of oils (pollutants), a list of protected areas of the sea, as well as a list of active mariculture farms. The preparation of documentation is clearly prescribed, as well as education and exercises for all participants in the Intervention Plan. The plan is in line with international agreements in the field of marine environment protection. This Intervention Plan is applied in case of sudden pollution of the sea with oil and / or oil mixture with a scale of more than 2000 m³, dangerous and harmful substances, and in case of extraordinary natural events in the sea. For oil and / or oil mixtures with a scale of less than 2000 m³, for a smaller scope and intensity of an extraordinary natural event in the sea, the county intervention plan for sudden sea pollution is applied.



ANNEX 8. Functional Groups Foreseen by the Federal Operational Plan

Main Center	Group Headquarters	Institutions Involved
Communication Group	Ministry of Security of B&H Operational-Communication Center of B&H - 112	Ministry of Interior; MoFTER B&H; agencies for watersheds; Federal Civil Protection Administration; Federal Administration for Inspection Affairs
Expert Group	Agency for Watershed of Sava River Agency for Watershed of Adriatic Sea	Authorized laboratories; Federal Administration for Inspection Affairs; Hydrometeorological Institute of the Federation of B&H; Federal Institute of Geology; Federal Institute of Agropedology, Institute of Public Health of the Federation of B&H; Federal Civil Protection Administration
Decision-Making Group	Federal Administration for Inspection Affairs	MoFTER B&H; Ministry of Security of B&H; Federal Ministry of Agriculture, Water Management and Forestry; Federal Ministry of Environment and Tourism; Federal Ministry of Health; agencies for watersheds; Federal Civil Protection Administration
Responsible person for coordinating the work of the Main Center: Minister (MoET FB&H)		

Inspecting the decisions on the appointment of representatives of functional groups¹⁰⁶, it was established that a representative of the Ministry of Security of B&H was also appointed to the Communication Group, which is not foreseen in FOP, while the appointment of the Expert Group left out representatives of authorized laboratories. The decision on the appointment of the Decision-Making Group was harmonized with the members of the group envisaged by FOP. The decisions also, within the appointment, determined the presidents of individual functional groups, whose task is to convene all members of the group to organize the activities defined by the Federal Operational Plan.

¹⁰⁶ Decisions on the Appointment of Functional Groups No. 04-23-476-I / 19, 04-23-476-II / 19 and 04-23-476-III / 19, dated 21 September 2020, were published in the Official Gazette of FB&H " No. 72/20, October 9, 2020.



REFERENCES

- Barcelona Convention („Official Gazette B&H”, No. 26/98)
- Constitution of the Federation of Bosnia and Herzegovina ("Official Gazette of FB&H", No. 1/94, 13/97, 16/02, 22/02, 52/02, 63/03, 9/04, 20/04, 33/04, 71/05, 72/05 and 88/08)
- Čavrak B, Simončić V., „Proposed Mode of Action in Ecological Accident Situations”, Proceedings, Conference: Ship Rescue and Prevention of Pollution of the Adriatic Sea, Split, 1990.
- Decision on Approval to Ratify the Convention on the International Regulations for Preventing Collisions at Sea 1972 ("Official Gazette of Bosnia and Herzegovina - International Agreements", No. 01, 02-05-2-2086 / 18)
- Decision on Ratification of Amendments to the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean - Barcelona Convention ("Official Gazette of Bosnia and Herzegovina - International Agreements", No. 12/20)
- Decree on the Content and Manner of Making Protection and Rescue Plans against Natural and Other Disasters and Fire Protection Plans („Official Gazette of the FB&H”, No. 8/11)
- Directive Seveso III 2012/18/EU
- Federal Operational Plan for Accident Pollution of the 3rd Degree of Endangerment („Official Gazette of the FB&H”, No. 19/20)
- Feasibility Study of the CAMP Project for B&H
- Law on Inspections of FB&H (“Official Gazette of FB&H”, No. 73/14 and 19/17)
- Law on Principles of Local Self-Government in FBiH (“Official Gazette of FB&H”, No. 49/06 and 51/09)
- Law on Inland and Maritime Navigation ("Official Gazette of FB&H", No. 73/05)
- Law on Waters (“Official Gazette of FB&H”, No. 70/06)
- Law on Waters of the Herzegovina-Neretva Canton (Official Gazette of HNC, No. 6/13)
- Law on Protection and Rescue of People and Material Resources from Natural and Other Disasters ("Official Gazette of FB&H", No. 39/03, 22/06 and 43/10)
- Law on Environmental Protection ("Official Gazette of FB&H", No. 33/03, 38/09)
- Law on Environmental Protection of the Herzegovina-Neretva Canton (Official Gazette of HNC, No. 6/12)
- Marine Strategy Framework Directive 2008/56/EC
- Plan for Protection and Rescue of People and Material Resources from Natural and other Disasters in FB&H in 2008.
- Plan for Protection and Rescue from Natural and Other Disasters at HNC, 2018
- REMPEC (2000) Guide for Combating Accidental Marine Pollution in the Mediterranean
- Rulebook on Procedures and Measures in Case of Accidents on Water and Coastal Water Land („Official Gazette of FB&H”, No. 71/09 and 102/18)
- Rulebook on the Content of the Report on the Security Situation, the Content of Information on Security Measures and Content of Internal and External Intervention Plans („Official Gazette of the FB&H”, No. 68/05)
- Rulebook on the Conditions and Criteria that Must be Met by a Specialized and Authorized Legal Entity for the Implementation of Measures to Eliminate or Prevent Water Pollution in Case of Accident Pollution or Danger of Accident Water Pollution and the Manner of Authorization („Official Gazette of the FB&H”, No. 6/11 i 93/13)
- Water Framework Directive 2000/60 /EC
- Water Management Strategy FB&H 2010–2022.
- Water Management Plan for the Adriatic Sea Basin in the Federation of B&H (2016-2021)