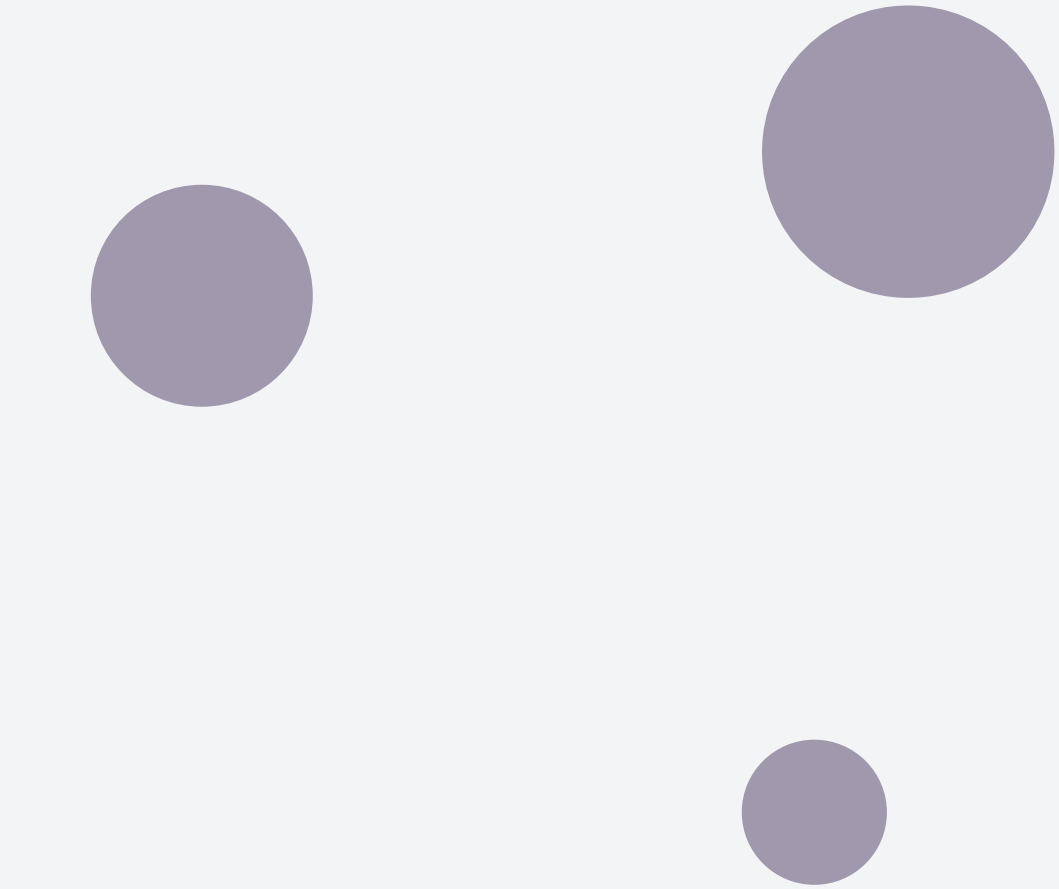
MAPPING OF ENVIRONMENTAL ISSUES ALONG THE ALBANIAN COAST

Study case: Vlora, Durrës and Lezha districts



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Experts
M.Sc. Olsi Nika
M.Sc. Alketa Skëndaj
@EcoAlbania, Tiranë 2021

Photo cover:
Alessio Corradini 2021

Graphic and layout:
Ermal Shenaj

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EXECUTIVE SUMMARY

The development of the coastal belt is of strategic and national importance for our country. The coastline stretches 316 km from Shkodra to Konispol and is Albania's most valuable asset. This includes economic, geopolitical, and touristic growth for not just the Adriatic basin but also for the Mediterranean basin as well.

The coastal area is shared administratively in 12 local units, after the Territorial Administrative Reform in 2014, where approximately 427,634 inhabitants live or 13.2% of the country's population.[1]

This study considered the selection of three districts of Lezha, Durrës, and Vlora. The identification of environmental issues of these counties focused on the coastal area and the analysis of environmental issues concluding in a report of the Portfolio of Coastal Environmental Issues.

The selection of the three districts was done based on locations where geographical factors prevail, frequency of tourism, the level of pollution, and the signaling of the problems related to these counties. Geographically, the 3 selected districts extensively represent northern, middle, and south Albania. While in terms of tourism and their potential, the Vlora region is one of the main destinations with a long reach that covers the entire Ionian coastal belt; the Durrës region has greater tourism capacities, especially for vacationers from Kosovo. The Lezha district is a destination with increasing potential where the beaches of Shengjin, Rana e Hedhun, and Tale stand out.

As a start, the study mapped the numerous environmental issues through research where 5 categories of main environmental issues were identified and 30 environmental issues were distributed according to the 3 main regions of Lezha, Durrës, and Vlora.

1 Instat, Census 2011. www.instat.gov.al

Table 1: Mapping of Environmental Issues Along the Coast – Office Research

NO.	CATEGORIES	MAIN PROBLEMS IDENTIFIED
1	Urban Waste and Wastewater Pollution	- Lack of sanitary landfills along the coastline; - Lack of urban wastewater treatment plants; - Existence of illegal and unsanitary landfills along river banks;
2	Marine and Terrestrial Erosion	- Marine erosion in the Kune-Vain delta; - Salting of coastal agricultural lands as a result of marine erosion in river deltas; - Southern bays erosion; - Creation of illegal pontoons[2] in the area of Durrës and Vlora;
3	Marine and Port Pollution	- Hydrocarbon waste discharge in river of Vjosë, Seman, and Erzen; - Discharge of ship ballast waters in 4 Albanian ports and 3 private ports;
4	Destruction of the Biodiversity of the Riviera	- An increase on invasive species (eg. blue crab in Kune-Vain Lagoon); - The increase of invasive species in Nartë lagoon; - Illegal fishing along the entire coastal part; - Use of explosive devices (dynamite, TNT) in Karaburun and Sazan Bay for dater; - Increased eutrophication in the Inner Bay of Karaburun Peninsula due to unplanned aquaculture and lack of control;
5	Conflicts on Coastal Development	- High coastal urbanization in the Municipality of Durrës, Shengjin, and Himara; - Transformation of natural and agricultural systems into urban systems in violation of general local urban plans; - Alteration and narrowing of environmental protected areas extending along the coastline;

Afterwards, these issues were evaluated in the regional workshops where the relevant actors of Vlora, Durrës, and Lezha Regions were asked to list the obvious environmental issues in the respective regions.

With the participation of 40 actors (17 women and 23 men) as representatives of local and central institutions, representatives of CSOs, academia, and the private sector. Each evaluated and ranked the main issues according to the priority and importance they present in their areas.

The identified problems will serve as an important discussion and consultation portfolio between the representatives of the legislature, executive, and community in the Vlora and Durrës districts. The meetings will be conducted through October 2021 and will play a key role in the presentation of the environmental issue.

2 A stone or wooden platform that stretches from the shore to the sea or lake and is used as a mooring place for boats or as a place of entertainment

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LIST OF ABBREVIATIONS

NAPA	National Agency of Protected Areas
RAPA	Regional Administration of Protected Areas
NEA	National Environment Agency
NCA	National Coast Agency
NATP	National Agency of Territorial Planning
LGP	Local Government Program
NITP	National Inspectorate for Territorial Protection
IMO	International Maritime Organization
KfW	Kreditanstalt für Wiederaufbau (Institute for Loans and Construction)
MTE	Ministry of Tourism and Environment
MARD	Ministry of Agriculture and Rural Development
IMOC	Inter-Institutional Maritime Operational Center
GDP	Gross Domestic Product
UNCLOS	United Nations Convention on Law of Sea
PA	Protected Area
WFD	Westminster Foundation for Democracy

1. INTRODUCTION

1.1 Report Structure

Chapter 1 which is the introductory chapter, presents the objectives of the study, the general characteristics of the Albanian coastline, and previous initiatives related to the study of the coast. The main objective of this report is to provide evidence and data on environmental issues to advocate in addressing environmental issues and influencing policymakers.

Chapter 2 presents the methodology used to identify pollution points and sources along the Albanian coastline. Specifically, in the districts of Vlora, Durrës, and Lezha, giving priority to pollution hotspots.

Chapter 3 presents the identification of the main pollution problems by referring to research work and linking to previous studies and approaches by state institutions, potential donors, environmental media reporting, and civil society organizations.

Chapter 4 presents the main sources of pollution in each county and priority hotspots according to prioritization by local actors.

Chapter 5 presents the general conclusion together with recommendations. More detailed information is presented in **Annex A.**

1.2 Research Purpose

The development of coastal regions in Albania has become a priority for the national development plan and is often driven by the interest and agenda of the private sector. Often, such development plans are not consulted with various local actors and do not take into account local or national environmental impact concerns. Therefore, it is imperative that a more proactive engagement of CSO and other actors will be consulted and influence decision makers. It is important for them to take into account the different environmental concerns of their communities.

This study is carried out by the Westminster Foundation for Democracy (WFD) in partnership with the EcoAlbania center. In the framework of this program, WFD Albania is implementing the initiative, "Participation of CSOs in decision making". Based on the analysis of WFD in Albania, the civil society is mainly involved in the policy implementation phase, but rarely participates in the agenda setting or policy-making phase. The situation is worse in the executive (line ministries and the Council of Ministers), as often, they present legislation and regulations without consulting stakeholders. Environmental CSOs have less access to decision makers compared to other CSOs, as the environment is not considered a key priority for the country's development.

And yet, there exists a solid group of CSO specialized in environmental cases which possess the needed capacity and experience. However, they encounter different barriers related to the impact on policy making at local and central levels.

As a result, this study aims to achieve the following objectives:

- To identify and map environmental issues along the maritime riviera in the 3 main regions in the country;
- To contribute to increasing cooperation and communication between decision makers and civil society;
- To contribute to increasing cooperation and communication between decision makers and civil society;

2. METHODOLOGY

Methodological Framework

The methodology followed for the identification of environmental issues in coastal areas is presented in Figure 1 below, which defines the main stages for the preparation of this document.

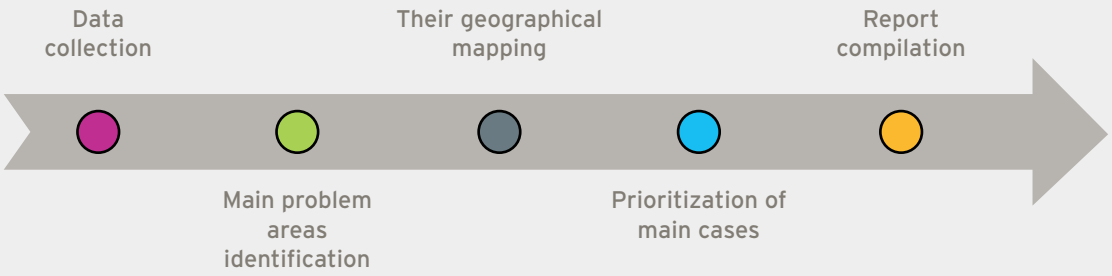

Fig. 1 Methodological framework of the report.

The initial step was a brief study of all available data sources for our study. For this purpose, articles, reports, management plans, and other resources have been collected from agencies and individuals who have information, interest or involvement in the area. Through the interpretation and evaluation of data by the team of experts, the main environmental issues in the three respective counties have been identified.

The second phase of the methodology involves the organization and synthesis of information created in an applicable inventory or framework. This is a classification process where data has been grouped and categorized into five major areas. *See Table 2 below*.

The third stage is the mapping of environmental problems, which does not only serve as a useful tool of analysis by professionals, but is also a tool for effective graphic illustration of facts and judgments. It is first and foremost a necessary tool to achieve informed public participation, especially when combined with the engaging and creative use of photographs and other visual support materials.

The fourth phase of the methodology consisted of an evaluation and prioritization system of all issues accumulated through scoring. The project team followed a multi-step approach in order to assess responses to each hotspot and criterion. First, the rating scale was converted to numbers to allow quantification of results, ranging from 0 (“very low”) to 5 (“very high”). Second, the project team calculated the average rating for each hotspot and the criteria for the respective stakeholder group to ensure equal representation for each group, regardless of the number of group consultants. Third, the values of the group of actors were calculated

based on an average criteria in order to achieve a final value for the three criteria for hotspots. Fourth, the project team listed the hotspots (according to the number of mentions) that indicated stakeholders would benefit most from the support of state actors, MPs, etc. through collaboration.

Research Instruments

The methodology is based on the combination of qualitative and quantitative methods as follows:

1. Literature review and identification of stakeholders.
2. Online consulting workshop (3 workshops and 40 participants)
3. The survey was conducted with the participation of 40 stakeholders who know the issues.
4. Analysis of the collected data and report compilation.

2.1 Review of Literature and Research Work

Experts have identified a number of environmental issues classified by topic (categories of environmental issues) in the three districts taken in the analysis: Lezha, Durrës, and Vlora. The identified issues were considered from the research of primary sources such as consulting and mapping workshops, as well as secondary sources (local strategic documents, national reports from state agencies, investigative writings realized by civil society organizations, national investigative media Birn Albania, Reporter.al, Albanian Investigative Network, Citizens Channel, and local media). As a start, the report identified five (5) categories of key environmental issues (Table 2) and 30 environmental issues within these topics, which in fact do not constitute an exhaustive list. Rather, these issues are a starting point for consulting with the actors in the region that led to their prioritization.

Table 2: Mapping of coastal environmental categories

NO.	ENVIRONMENT CLUSTER	EXPLANATION
1	Urban waste and wastewater pollution	- This category includes pollution from lack of sanitary landfills, lack of wastewater treatment plants and plastics.
2	Marine and terrestrial erosion	- Marine erosion is the advancement of the sea towards the land, the erosion caused by the lack of vegetation on the coast, the erosion of rivers in their deltas.
3	Marine and portual pollution	- Marine pollution will be analyzed from the context of hydrocarbon spills, port accidents and pollution at ports as a result of port operations.
4	Destruction of the biodiversity of the Riviera	- In this category problems related to illegal activity such as illegal hunting, illegal fishing, pollution from cultivation and, fishing farms or high eutrophication will be analyzed.
5	Coastal development conflicts	- In this category the reduction of coastal areas versus urban development is analyzed as well as the reduction of protected areas and the intensity of construction on the coast.

2.2 Selection of Actors

During the consultation process the stakeholders were identified in consultation with the EcoAlbania team and with the support of their field partners. Participants included representatives of government agencies such as NAPA, NAE, NCA, NIPT, civil society organizations, experts and academics and activists at the county level. During the pre-consultation phase the project has identified about 90 interested actors (50 men and 40 women) from Vlora, Durrës, and Lezha, who have been invited to participate in the consultation process conducted online through three workshops and 40 participants.

2.3 Workshop of Mapping and Prioritization

Many environmental issues in coastal areas were discussed, through three online interactive meetings, which took place for three days (21-22-23 July 2021), with 40 participants (17 women and 23 men) from the respective counties. As a result of the consultative and mapping meetings, but also the preliminary research work, 30 main issues were identified in three (3) regions (Lezha, Durrës, and Vlora).

2.4 Survey

After the completion of the online consultation meetings, the experts conducted a survey to gather the opinion and information of the consulted actors in order to prioritize the issues identified by themselves.

The survey was focused on prioritizing the most important and worrying issues for actors by evaluating and scoring each selected alternative. The responses collected in google format, went through a filtering and ranking process, where the results were then sorted by region. The relevant results and points are presented in Appendix A of the report.

2.5 Portfolio Report

Subsequently, the EcoAlbania expert team drafted the environmental portfolio report based on roundtable research, problem identification and review, and prioritization of environmental issues.

3. IDENTIFICATION OF ENVIRONMENTAL ISSUES

3.1 General Context on Coastal Zones

Albania is located in the south-eastern part of the European Continent and is part of the Balkan Peninsula. It is connected to the west with wide access to the Adriatic and the Ionian Seas and is part of the Mediterranean basin. Albania's wide access to the Adriatic and Ionian Seas makes it an important part of the geopolitical crossroads of historical developments in the region and in this context, the importance of the coastal area of our country has been, and will remain, strategic.

The Republic of Albania has a total population of 2.83 million inhabitants[3] - with a coastal area that extends to 12 local government units[4]. Based on an implementation result by the territorial administrative reform, the population living in these units is 427,634 inhabitants, according to INSTAT data. This constitutes 13.2% of the country's population out of 2.83 million inhabitants (according to the same source). The population in the main coastal cities such as Durrës (113,249 inhabitants), Vlora (79,513 inhabitants) and Saranda (17,233 inhabitants) make up about 49.1% (209,995 inhabitants) of the total resident population in these 12 units (427,634 inhabitants).

Due to its position, natural values, biodiversity, the cultural and historical heritage the coast represents one of the most important areas of the territory. Genuine studies in this area are missing and the area has been under dynamic and rapid developments, especially after the 1990s. Moreover, these studies would initiate a more strategic and functional development in this important geographical position, on a regional scale, as well as would promote a wiser use of numerous natural, cultural, and human resources.

This concept specifically applies to residential buildings in the local and administrative units of the Coastal Belt which constitute 15% (106,577) of the buildings nationwide (598,267). The number of (non-collective) dwellings in the coastal area is 205,174 out of the 1,012,062 dwellings nationwide, which constitute 17% of all dwellings[5]. Common uninhabited dwellings in the coastal area make up 23% of dwellings nationwide, while buildings for seasonal or secondary purposes make up 34%.[6]

Coastal ecosystems constitute an attractive and ecologically important natural environment and in many cases are protected under international laws and agreements. Furthermore, they are considered a great economic asset for Albania, this being one of the main driving forces for the development of tourism. Along the entire coastline there are a high number of **protected areas** such as:

3 INSTAT. Albanian population 1 janar 2021; accesed on 4 july 2021; Population of Albania | Instat
4 Shkodër, Lezha, Kurbin, Durrës, Kavajë, Rrogozhinë, Divjakë, Fier, Himarë, Vlora, Sarandë, Konispol
5 INSTAT, Census 2011, ibid
6 INSTAT, Census 2011, *ibid*

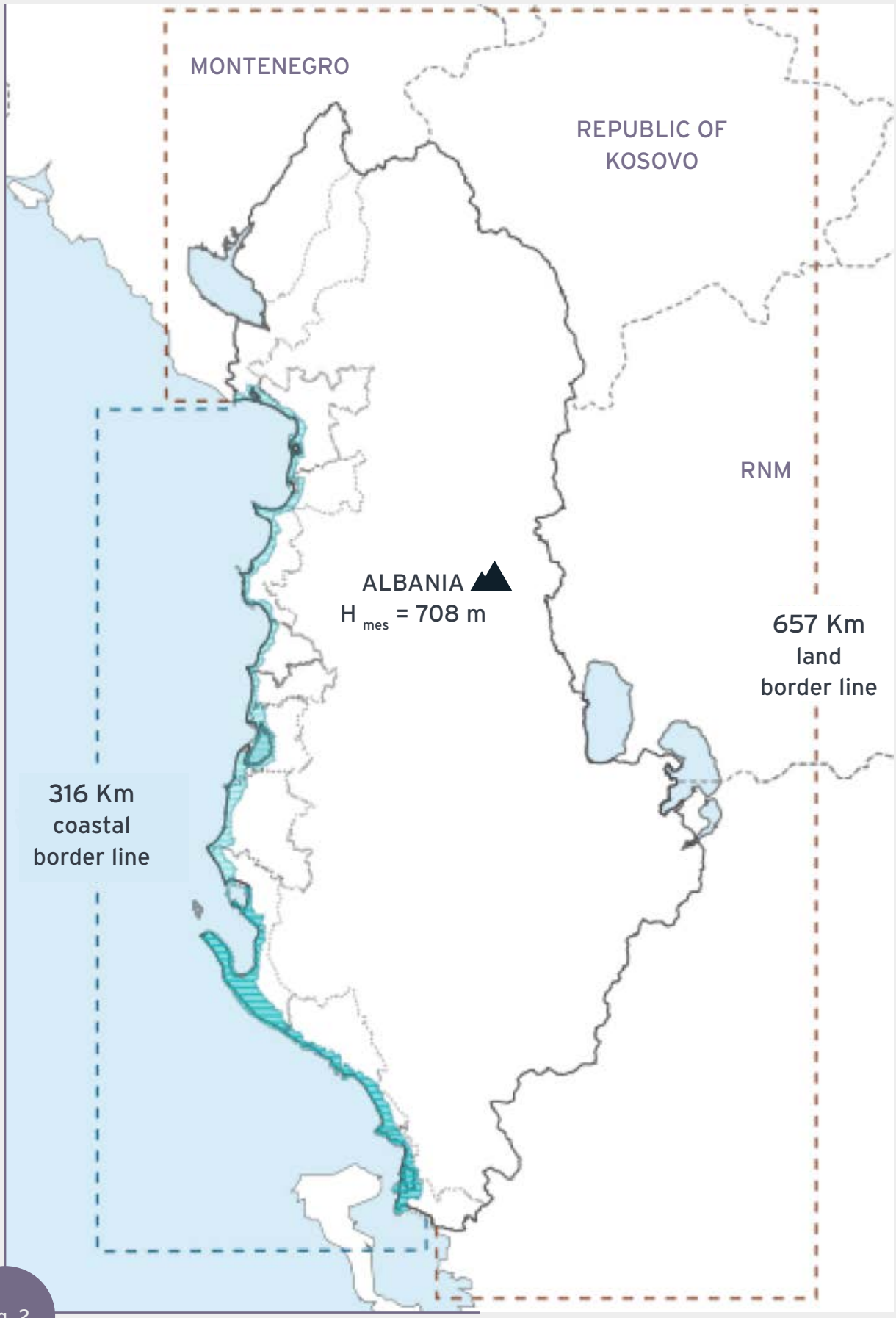

Fig. 2

Albanian land and sea border. Source: NATP, 2016

1. **Divjaka-Karavasta National Park;**
2. **Llogara National Park;**
3. **Managed nature reserves / Karaburun nature reserve;**
4. **Butrint National Park;**
5. **Managed nature reserves / Kune-Vain-Tale nature reserve;**
6. **Karaburun-Sazan National Marine Park;**
7. **Managed nature reserves / Rrushkull nature reserve;**
8. **Managed nature reserves / nature park Pishë Poro;**
9. **Managed nature reserves / nature park Patok, Fushëkuqe, Ishëm;**
10. **Vjosa-Narta protected landscape;**
11. **Protected landscape Buna-Velipoja.**

These areas are home to most of Albania's biodiversity, as well as many rare or endangered species. Fortunately, most of these areas are recognized and protected internationally by various conventions and agreements, such as the Ramsar Convention, the Emerald Network, the Landscape Convention, etc.

Tourism is one of the fastest growing sectors and the main contributor to the Albanian economy. The number of tourists who visited Albania in 2019 was 6,406,038 [7] and in 2020 it was 2,657,818 with a decline due to the pandemic[8]. The number entering Albania during the seven months of 2021 is 2,846,881, increasing by 2.4 times compared to the same period of 2020[9]. The coastal areas of Saranda, Himara, Vlora, Durrës, and Shengjin are among the most visited tourist destinations. Year after year, the tourism sector is growing its share of the country's Gross Domestic Product (GDP). Albanian GDP per capita is $5,287 (data for 2020)[10], while the total contribution of tourism to the economy is estimated at 27% for 2019 with approximately 4.8 billion USD[11].

3.2 Environmental Categories and Issues

Rapid urban developments have affected the cleanliness of the coast. The Adriatic and Ionian Seas have become hosts for urban, industrial, agricultural, and livestock discharges. Numerous spills occur from pesticides, raw chemicals of agricultural lands, organic waste containing phosphorus and nitrogen, viruses and pathogenic bacteria, heavy metals, etc. In addition to this, the increased number of inhabitants in some urban centers has made the process of self-cleaning of the sea impossible.

These factors should have been under the management and control of the local government. Endless waste left all along the coast is added to the list, this includes one of the main enemies of marine life, plastic waste. Another source of pollution is from rivers, especially

7 INSTAT. Entry of citizens in Albania 2014-2020, accessed 4 July 2021; Tourism | Instat
8 INSTAT, ibid
9 INSTAT, ibid. lëvizjet-e-shtetasve-në-shqipëri-korrik-2021.pdf (instat.gov.al)
10 World Data. Albania Gross Domestic per capita. Albania GDP per capita, 1980-2020 - knoema.com
11 Ibid Albania Contribution of travel and tourism to GDP, 1995-2019 - knoema.com

those in rural areas where valleys are often used as landfills. Lastly, groundwater pollution also contributes to this great vortex.

These factors should have been under the management and control of the local government. Endless waste left all along the coast is added to the list, this includes one of the main enemies of marine life, plastic waste[12]. Another source of pollution is from rivers, especially those in rural areas where valleys are often used as landfills. Lastly, groundwater pollution also contributes to this great vortex.

Despite media reports of high beach pollution as a result of human activity, the quality of bath waters, according to the KTA, has been more positive. According to the National Environment Agency and Report of "Bathing Water Quality 2020" data, which measures 119 tourist spots in the country, the situation is as follows:

- **91 points have excellent quality;**
- **21 points have good quality;**
- **5 points have poor quality;**
- **2 points have sufficient quality[13];**

The most polluted beaches are in Durrës (Zhiron Beach and the Beach behind the Plepa Canal). While the beaches with excellent quality are Borshi, Dhërmiu, Shëngjini, Velipoja and Himara[14].

Fig. 3

Pollution on delta of Ishëm river, Durrës district

12 Green27. The alternative view of environmental progress. Albania's negotiations with EU and Chapter 27. P.63
13 EEA. Bathing Water Quality 2020. State of bathing water – European Environment Agency (europa.eu)
14 Tirana Today. Ndotja/Shqipëria fundos Kroacinë, bregdeti i Adriatikut në mjerim; 18.03.2018: https://tiranatoday.al/ndotjashqiperia-fundos-kroacine-bregdeti-adriatikut-ne-mjerim-video/

In this context, the experts classified all the issues related to the coastal riviera in three regions (Vlora, Durrës, and Lezha) and in five main categories. Each of the environmental categories summarize a variety of specific issues for each county and will be addressed in detail in the following section.

3.3 Pollution from Urban Waste and Wastewater

The primary source of pollution in Albania is from urban solid waste. The Ministry of Tourism and Environment made an assessment with the support of the programme for the local government of the Swiss embassy[15] on behalf of the illegal, non-sanitary and landfills in need of rehabilitation, of which Albania has 199. The same assessment recommends that 44 landfills require rehabilitation with an approximate value of EUR 2.8 million; 62 landfills should be closed and require an investment worth EUR 2.85 million and 93 landfills should be relocated to other landfills that are legal or in sanitary condition and this requires an investment of EUR 1.35 million.

The study cases on coastal resulted in 43 landfills, 13 of which are sought to be closed and 27 of them need to be removed to the nearest sanitary landfill.

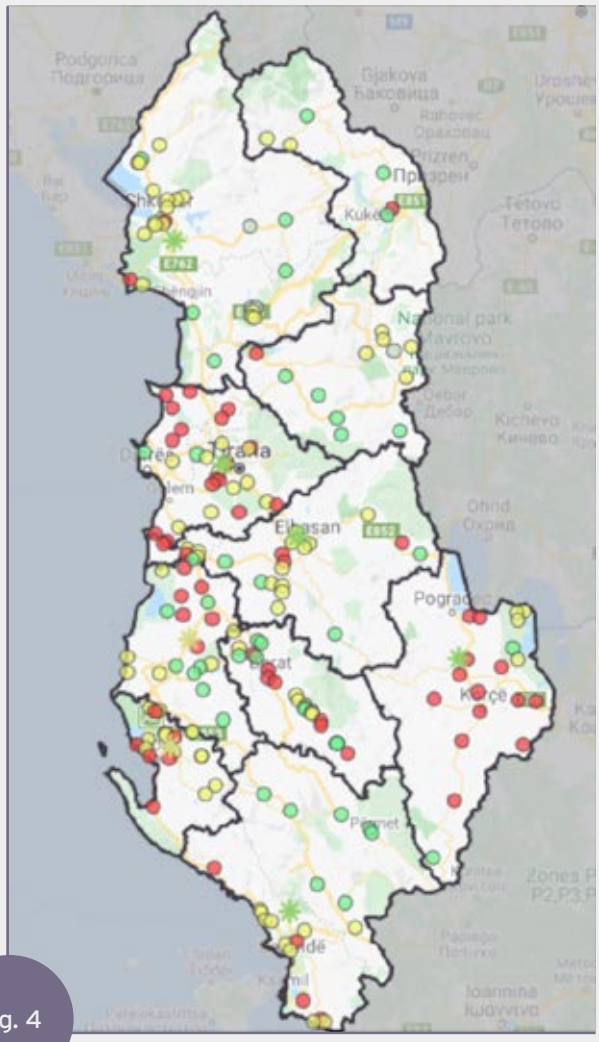

Fig. 4 Map of Albanian Landfills, 2018

Albania still lacks a sanitary landfill on its coast and garbage is dumped in landfills near rivers and streams, or near the sea. Eventually, most of this waste ends in the Adriatic and Ionian Sea, polluting both the beaches and the marine environment. The prevailing sea currents in the Adriatic carry waste to the coasts of Montenegro and Croatia[16]. This problem is of regional importance.

The municipal waste management is in the early stages as very little is recycled and landfill disposal is mainly used[17]. The separation of waste at the source is not practiced and currently

15 DLDP. Dumpsite mitigation study. Tiranë, 2018
16 Tirana Today. Pollution/Albania drowns Croatia, the Adriatic coast in misery; 18.03.2018: https://tiranatoday.al/ndotjashqiperia-fundos-kroacine-bregdeti-adriatikut-ne-mjerim-video/
17 Green27. The alternative view of environmental progress. Albania's negotiations with EU and Chapter 27.

their collection is done through a system of rubbish bins, 1.1 m3, placed on the sidewalks. Some of the rubbish bins, and the vehicles used to collect them, are severely depreciated and in poor condition. Waste is transported to landfills, most of which are out of standards and are found in inappropriate and unplanned places.

Fig. 5

Discharges of used water on the coast of Durrës © "e perditshmja", 2018

As a result, river deltas reflect the waste management situation in the country where most deltas face an environmental emergency due to the accumulated pollution and inflows along all urbanized areas. The Delta of Ishem in Durrës is one of the hotspots for pollution where whole layers of plastic and hospital waste are accumulated on the coast. On the other hand, the disposal of urban waste in coastal areas without sanitary and environmental conditions continues to be a practice. In Spille the waste problem continues to produce environmental crime due to incineration[18]. The same problem occurs along the entire coastline where the region of Durrës is most prominent due to the impossibility of a sanitary landfill[19]. As shown in Table 3, all municipalities that make up the coastal belt do not possess a sanitary landfill for urban waste disposal or incineration, which provided the chaotic display of urban waste during the tourist season of 2021, especially in the municipality of Durrës.

18 Spille environmental crime/ Police does not proceed the local officials, Municipaity denies the illegal landfill. Accesed on 5 Korrik 2021https://ww.balkanw4eb.com/krimi-mjedisor-ne-spille-policia-nuk-procedon-zyrtaret-vendore-bashkia-mohon-landfillin-e-paligjshem/

19 BIRN; EXIT

Table 3: Form of Urban Waste Management by Local Units[20]

DISTRICT	MUNICI-PALITY	LANDFILL	INCINERATOR	TRANSFER STATION	RECYCLING CENTER	DISPOSAL PLACE
Vlora	Konispol					X
	Ksamil			X		
	Sarandë				X	X
	Himarë			X	X	X
	Orikum					X
	Vlora					X
Durrës	Durrës					X
	Shijak					X
	Kruja					x
Lezha	Lezha			X	X	X
	Shëngjin					X
	Kurbin					X

On the other side, in the majority of cases, the untreated wastewater is directly discharged into the sea and water bodies connected to the sea. As a result, the bacteriological and chemical pollution on coastal waters is high and are a health risk for the population and tourists. This is based on (NEA,2020) the monitoring of urban wastewater impact on the quality of coastal waters is completed in cities of Durrës, Vlora, and Sarandë[21]. The selection of monitoring stations is designated on Albanian legislation CMD (council of ministers' decision) No.177 dated 31.03.2005, which is in line with the European Community Directive.

The situation is presented with values of environmental parameters measured exceeding the allowed norms that determine the legislation in some monitoring points such as in Porto Romano, Currila, Plepa Canal - Kavaja Rock (Durrës); Hidrovori-Soda Forest, at sea 20m after the pumping station - Soda Forest, New Beach - Vlora, Navy School (Vlora).

3.4 Coastal Erosion and Climate Change

Coastal development, on behalf of tourism and urbanization, has intensified in the last few years. The result has been an increase in population, which in turn causes the further degradation of ecosystems, increasing the erosion and wastewater going into the sea. This is due to the lack of an adequate network of canalization, loss and fragmentation of natural habitats, as well as endangered species.

20 NEA 2020
21 NEA , 2020

Fig. 6

Sea advancement towards beach as a result of marine erosions in Seman coast. © David Galjaard "Gazeta Iiria", 2017

Another highly important factor endangering the aquatic ecosystems in Albania is climate change. The consequences of climate change for the coastal area can be quite severe. For example, global sea level projections are projected to rise by 0.28-0.98 meters[22]. This effect of climate change will bring major consequences in the coastal area through the loss of land surface, destruction of ecosystems, and impact on the economic activity of coastal towns and villages.

Some of these changes are: rising air and sea surface temperatures; average changes and extreme rainfall; changes in the frequency of storm intensity; sea level rise; acidification in the ocean. Currently, some of the areas endangered by marine erosion factors on the coast are as follows:

Lezha municipality, where the threatened area is the estuary of the river Drin from Balldreni i Ri to the area of Tale, from marine erosion and coastal floods (from Shengjin island) to the estuary of the river Mat. Also, the presence of salt water in the Shengjin island area and marine erosion from the estuary of the Drin River to the estuary of the Mat River increases the risk of flooding.[23]

Durrës Municipality risks flooding from the Ishëm River. Whereas, the river basin located from Derven to the estuary, risks flooding from the Erzen River. Likewise, the zone from the Erzen River sanctuary to Rina (Cape of Rodon) and from Cape of Rodon in Porto Romano is at risk

22 https://www.climate.gov/news-features/understanding-climate/climate-change-global-sea-level
23 Report "Identification and Implementation of Adaptation Response Measures in the Drini – Mati River Deltas" (UNDP 2015)

of marine flooding. The same situation is evident from marine erosion in the southern part of Cape of Rodon and south of Bishti i Pallë. Here there are landslides along the Cape of Rodoni from Shkallnuri to Seferaj.[24]

Moreover, areas like Velipojë, Kune-Vain, Patok-Fushë Kuqe, Rrushkull-Gjiri i Lalëzit, Karavasta, Pishë-Poro Fier, Nartë and river estuariesare are in risk of coastal erosion too.[25]

Vlora Municipality is endangered by marine erosion and coastal floods from the Vjosa estuary to Triport. Part of the Vjosa River Basin from the Vlora Municipality is endangered by river floods, while in the southern part of the city of Vlora, karst wells are endangered by the introduction of salt water from the sea. The coastal area is endangered by massive landslides. From Cape of Stillo to Palas, the coastal area is endangered by marine erosion.[26]

In Himara Municipality, the coast is endangered by marine erosion where the coastal area is endangered by massive landslides. In the bay of Palermo and in Qeparo, the entry of salt water from the sea is endangered, while from Borshi to Lukova there are landslides.[27]

Saranda municipality, from Nivica to Saranda, is endangered by landslides while the coastline is endangered by marine erosion.

In the Municipality of Konispol, the coastline is endangered by marine erosion and the coastal area is endangered by landslides.[28]

3.5 Port and Sea Pollution

Port trade is an increasing sector in Albania and an important national and international economic source. The government of Albania has conducted strategic sectorial documents in the field of maritime trade and port activity such as the National Transport Plan, the National Strategy for Development, and Integration and the Medium-Term Budget Plan. Albania is a member of the 1982 United Nations Convention on the Law of the Sea, so it has an obligation to protect and safeguard the marine environment against pollution.
Pollution in itself is the introduction, by man, of substances or energy, directly or indirectly, into the marine environment, which damage the resources of the sea and the coast, reduce the quality of sea water, endanger human health, and impede marine activities and fishing.

Albania has drafted the National Plan in response to sea pollution which can be that of hydrocarbons or port pollution as a result of port operations[29].

24 NATP, 2015, p. 76
25 Report "Identification and Implementation of Adaptation Response Measures in the Drini – Mati River Deltas" (UNDP 2015)
26 NATP, 2015, p. 77
27 (NATP, 2015) p.76-77
28 Ibid. p. 77
29 CM decision no. 480, date 25.7.2012. Plan is distributed on (3) levels: i) national level 1 where the Inter-Institutional Maritime Operations Center (IACC) is responsible); ii) regional level 2 which includes the Regional Environmental Agency and the coast guard, iii) local level 3 which includes port authorities, municipalities, and regional environmental agencies.

3.5.1 Hydrocarbon Pollution

Pollution caused by hydrocarbons has been frequent in the Albanian coast[30]. Hydrocarbon pollution is caused by two main sources: pollution as a result of industrial accidents in hydrocarbon ports and pollution from oil spills in the Patos-Marinza oil field through the Vjosa or Seman Rivers. Table 4 presents some of the media cases collected during the last 5 years where it has been observed that industrial accidents dominate coastal pollution. But it is important to note that mismanagement of hydrocarbon discharges into the Seman, Erzeni, and Vjosa rivers is a permanent risk to water pollution.

Fig. 7

Advancement of the sea towards the beach as a result of marine erosion in the coast of Seman
© Megi Zonja "ANA", 2018

Moreover, it seems that government plans to advance the return of the port of Vlora as an energy port are coming to life. During 2021, the Albanian government has signed a cooperation agreement between Albania and the US through the Ministry of Infrastructure and Energy and Exxon Mobil & Accelerate Energy for the introduction of liquefied natural gas from America to Albania.[31]

30 Albania Searches for Seashore Oil Polluter | Balkan Insight
31 Klan TV. TEC agreement signed. What will happen in Vlora. March 12, 2021 https://tvklan.al/nenshkruhet-marreveshja-per-tec-in-cfare-do-te-ndodhe-ne-vlore/

Table 4: Cases of Hydrocarbon Pollution Reported by the Media.

#	REPORTED CASES OF POLLUTION	LOCATION	SOURCE	YEAR
1	Pollution of Durrës Beach	Durrës,	Balkan Insight	2015
2	Oil Spill on Zvernec Beach	Zvernec, Vlora	News 24 [32]	24.05.2016
3	Defect in Petrolifera, crude oil flows on the coast of Vlora	Zvernec, Vlora	Reporter.al [33]	24.05.2016
4	Pollution of the Vjosa River by hydrocarbon discharges	Grykëderdhja Vjosës	Balkan Insights [34]	2018
5	Environmental crime in Porto Romano	Porto Romano	Reporter.al [35]	20.04.2020

According to the Inter-Institutional Maritime Operational Center (IACS)[36] which deals with the coordination of numerous managements, inspection and control institutions at sea, statistics (year 2018-2020) in terms of illegal activities such as marine pollution and illegal fishing, have a negative impact on marine waters and ecosystems and are reported in Table 5 below:

Table 5: Cases of marine pollution and illegal fishing reported by IACS

	YEAR	NO. OF CASES
Marine pollution	2018	3 raste
	2019	12 raste
	2020	4 raste
Illegal fishing	2018	22 raste
	2019	23 raste
	2020	**10 raste**

As can be clearly seen from the institutional statistics, there is an imbalance between what is reported in the media and what institutional statistics are.

3.5.2 Operational Activity in Ports

Data from INSTAT shows that the volume of goods loaded / unloaded at ports in June 2021 is 412 thousand tons, an increase of 9.6%, compared to June 2020. Compared to the average of June for the period 2018-2020, the volume of loaded / unloaded goods at ports has increased

32 https://ww.news24.com/news24/green/neës/oil-spill-pollutes-albanian-coast-20160524
33 https://ww.reporter.al/defekt-te-petrolifera-nafta-bruto-derdhet-ne-bregdetin-e-vlores/
34 Oil Pollution Threatens Europe's Last Wild River | Balkan Insight
35 https://ëw.reporter.al/krimi-mjedisor-ne-porto-romano-autoritetet-bejne-nje-sy-qorr-ndaj-derdhjes-se-naftes-ne-det/
36 CMD No.954, date 30.9.2009 for the organization, structure, functioning of the inter-institutional maritime operational center (IACS) and the interaction with state institutions that have interests at sea.

15.7%.[37] In the first half of 2021, the volume of goods loaded / unloaded at ports is 2,345.3 thousand tons, increasing by 15.4%, compared to the first half of 2020.[38] High commercial activity in ports and relatively old fleets (Figure 8) for our country pose an increased risk in terms of port management of wastewater, urban waste from ships and ballast waters, where the port of Durrës holds the most weight large as shown in Figure 8.

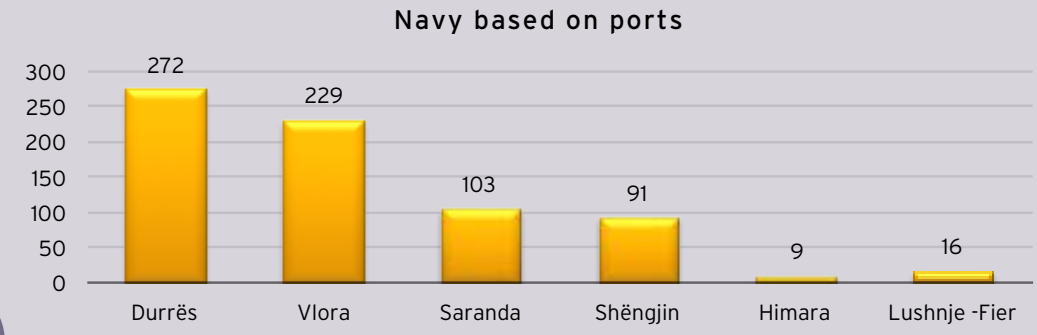

Fig. 8

Albanian navy based on ports[39]

This is proved based on Paris memorandum[40] which has ranked Albanian ships on black lists[41] due to the high risk that they possess.

Albania has 4 state ports (Shengjin, Durrës, Saranda and Vlora), three private ports (Port Vlora 1 - Petrolifera oil terminal managed; Porto Romano hydrocarbon port[42], and ARMO's Oil Port in the Bay of Vlora), the triple for Vlora fishing vessels, two fuel rings operating in the Bay of Vlora and the Vlora Power Plant (KESH a.s).

3.6 Destruction of biodiversity

In identifying biodiversity issues, experts used three main indicators, in order to determine a final representative list of the following issues: risk of eutrophication of waters and sea biodiversity[43] presence of invasive species and illegality.

3.6.1 Eutrophication[44] from aquaculture

Marine fishing is the most important sector of the fishing industry, but lagoon and inland fishing are also important. Aquatic fishing categories are: sea, coast, lagoon, inland waters, aquaculture and molluscs. According to the latest data from the Ministry of Agriculture, the production

37 INSTAT Transportation statistics,june 2021 https://ëw.instat.gov.al/media/8747/statistikat-e-transportit-qershor-2021-1.pdf
38 Instat, ibid.
39 MBZHR, 2020
40 The Paris Memorandum is a mechanism that conducts inspections on shipping standards in Europe https://www.parismou.org/detentions-banning/detentionlists-2021
41 Monitor. Albanian ships, how they were blacklisted and the exit plan.8.7.2021; https://www.monitor.al/anijet-shqiptare-si-u-futen-ne-listen-e-zeze-dhe-plani-per-daljen/
42 https://portimbm.al/safety-and-environment-hse/
43 Eutrophication is the high concentration of nutrients in a body of water. These nutrients - usually nitrogen and phosphorus – serve as food for aquatic organisms such as algae, plankton or other microorganisms. Eutrophication can also occur outside the water; for example, soils can be eutrophic when they have high levels of nitrogen, phosphorus or other nutrients.
44 Ibid.

captured in 2020 was 16,892 tons.[45] The main categories that occupy the highest percentage of fishing are, "Aquaculture" with 52.09% and fishing "Marine" with 26.76%, followed by "Inland waters" with 16.83%, of total production.

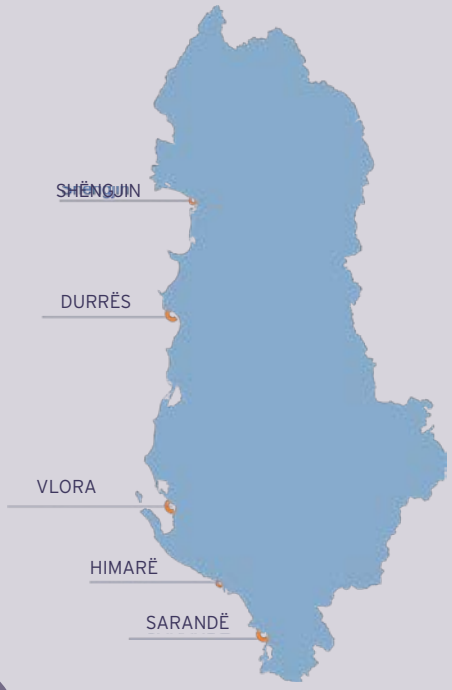

Fig. 9 Map appearance of seaports

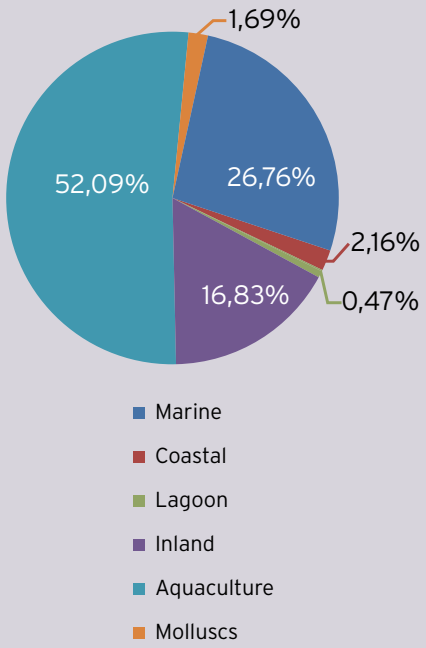

Fig. 10 Structure of fishing catches by%

The Albanian fishing fleet (Figure 5) is currently located in four ports: Durrës, Vlora, Shengjini and Saranda where about 1,870 people are employed. Moreover, 1,000 fishermen are directly engaged in inland fishing in 2018. In 2018 aquaculture produced 6,258 tons, consisting of sea fish (77%), trout (13%) and mussels (10%). There are currently 24 marine fish farms for sea bass and shrimp, 22 trout farms, several mussel farms in Lake Butrint and 4 carp farms growing in inland natural and artificial reservoirs. Aquaculture provided direct employment for 620 people in 2018.[46]

In 2017, imports of fish and fishery products were estimated at $ 75.7 million.[47] Exports were worth $ 94 million, win form of prepared and canned anchovies representing the bulk of exports. Fish consumption in Albania has gradually increased and per capita consumption is estimated to be around 5.3 kg / year in 2016.[48]

45 Instat Fishing Statistics 2020. Accessed on 5 september 2021, www.instat.gov.al
46 FAO. Fisheries and aquaculture in Albania; FAO Fisheries & Aquaculture - Fishery and Aquaculture Country Profiles - The Republic of Albania
47 Ibid.
48 These data are based on statistics prepared by the FAO Fisheries Information, Data and Statistics Unit and disseminated in 2020. The graphs are based on the same source, but these are automatically updated annually with the latest statistics. For our country these are the latest data.

Reproduction and concentrated fish populations on aquaculture farms is one of the main elements of marine water pollution.

Specifically, the impact of intensive aquaculture along the Riviera is high due to the antibiotic used and the high level of concentration of contaminants as a result of food concentrations or even excrements of high-density fish populations in the area which are released in the surrounding area. Another negative effect on concentrated aquaculture farms is the phenomenon of genetic pollution. This phenomenon consists of the accidental crossing of wild fish species with fish populations used in aquaculture. Especially common this phenomenon is present in species that have high hybridization ability such as trout, shells, etc.

3.6.2 Evasive Species

One of the main problems identified for the marine ecosystem is related to the problem of ballast waters (from ships) of maritime transport which are known as one of the main vectors for the spread of invasive species in the coastal belt. The blue crab (Callinectes sapidus) is a species of crab known as the Lesepsian or alien that came from the Red Sea through the Suez Canal.

Initially, this species was encountered on the northern coast of Albania in Lezha in the Kune-Vain lagoon about 10-12 years ago. Here the crab has found suitable conditions and in the absence of natural predators and not being initially preferred for consumption, it has increased exponentially not only in the Kune-Vain lagoon but has also spread to almost the entire Albanian coast.

In this way the crab has invaded habitats previously occupied by indigenous species such as the common Mediterranean crab (Carcinus mediterranea).
In this way the crab has caused quite a few disturbances in the ecological balances of the trophic networks of the coastal lagoons in Albania. Like the blue crab, a number of other alien-invasive species are already present in marine waters in Albania.

Changes in water quality and climatic elements have made it possible to increase the competitiveness of other marine phanerogams[49] against indigenous seaweed (Posidonia oceanica). The latter is the habitat-forming species found at the bottom of the sea throughout the Mediterranean basin that hosts more than 40% of the entire marine world[50]. Moreover, Posidonia meadows are fundamental in oxygen production enabling support of non-photosynthetic underwater life. For the above-mentioned reasons, Posidonia meadows are constantly being reduced and giving way to non-indigenous species such as Zostera noltii, Cymodocea nodosa, etc., which in no way can replace the contribution and role of Posidonia in the ecosystem.

3.6.3 Illegality

In Velipoja, Kune-Vain, Patok-Fushë Kuqe, Rrushkull, Karavasta, Pishë-Poro, Fier, Narta, Butrint, Rrushkull, Vjosa-Narta, etc., illegal hunting is practiced by local and foreign hunters.

49 High ensore plants living at sea bottom
50 Marine species living underwater

Overfishing, illegal fishing and the use of prohibited vessels are common phenomena along the coast. Likewise, illegal fishing practices such as dynamite, electricity or recent offshore drilling by the fishing fleet just 500 m from the coastline are destroying marine biodiversity.[51] Statistics of illegal fishing are relatively low with only 10 cases in 2020 (Table 5), but from the consultations conducted during the workshops the situation was more serious.

3.7 CHALLENGES OF COASTAL DEVELOPMENT

The pressure of coastal developments is one of the main national challenges along the coastline. The large number of illegal constructions or their demolition according to various campaigns, before or after the tourist season have accompanied the daily politics in Albania in the last 30 years. Often this increased pressure has generated numerous conflicts not only in the property but also developmental type such as: tourism or urbanization, environment or construction, sustainable development or vertical economy, family tourism or elite tourism. In order to identify the problems related to development conflicts, it is important to analyse the two main indicators: a) the intensity of constructions on the coast in time in the period 1990-2020 and b) the increase or decrease of the areas of 9 protected areas that stretch along the entire coastline.

3.7.1 Urbanization and construction intensity

Along the coastline there is a clear formation of a linear urban system and services, almost uninterrupted, which starts in Shkodra and follows the line of the main road system, it crosses beyond Albania to Velipoja, Shengjin, Durrës, Vlora, Himara, Saranda to reach to its south, in the areas of Ksamil and Konispol Municipality. Based on the needs for housing and employment and the increase of economic income, a second phenomenon in the coastal region is related to the demand for second homes or holiday homes, for the strata of society with above-average incomes. This phenomenon is also associated with the requirements for increased tourist infrastructure and with modern standards.

Coastal urbanization has always been under pressure from unregulated, illegal construction or beyond regulatory plans. All municipalities (Lezha, Vlora, Himara, Saranda, Konispoli) that lie on the coastline have approved their local plans defining the development areas and relevant spaces in 2017.[52] The Municipality of Durrës is still in the phase of agreeing and reviewing the document.[53]

According to the Integrated Sectoral Plan of the Coast, the Municipality of Durrës is classified as a Municipality with high urbanization intensity with an increase of 36.91% of its urbanization compared to 2000.[54] The Municipality of Lezha, mainly Shengjin, is classified as a municipality with high and medium intensity of construction with an increase of 16.03% of the construction demand. Municipality of Vlora are classified as municipalities with high

51 FAO. Fisheries and aquaculture in Albania; FAO Fisheries & Aquaculture - Fishery and Aquaculture Country Profiles - The Republic of Albania
52 National Agency for Territorial Planning. Detailed local plans. Accessed on 1 August 12021; General local plans (planifikimi.gov.al)
53 NATP, ibid.
54 PINS Bregdeti, p.51

and medium density urbanization with an increase of 10.96% of urbanization.[55] While the Municipality of Himara, Saranda and Konispol with low urbanization density.

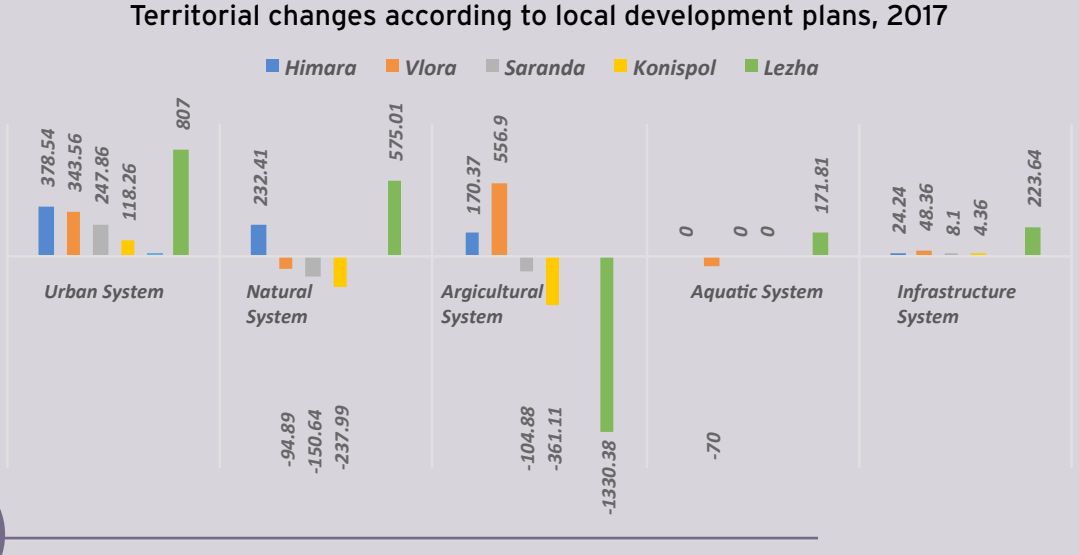

Fig. 11

Territorial changes according to local development plans, 2017 [56]

Analysing the local development plans for 5 of the 6 coastal municipalities, in figure 5 we notice that all municipalities have proposed an increase in urbanism where Lezha leads with 807 ha. In total, the proposed space for urbanism in the municipalities of Himara, Vlora, Saranda, Konispol and Lezha amounts to 1,895 ha. This area has been reduced by the natural and water system as seen from figure 5, in the municipality of Lezha and mainly to the detriment of the Kune-Vain-Tales Lagoons.

The pressure for urbanization on the coastline is high and this is obvious in the review of development plans for the Municipality of Himara, Vlora and Lezha which in 2020 have requested an increase in urban areas. However, it is difficult to have an accurate statistical and comparative picture of urbanism on the coast as the housing census has started in 2020 and the first results will come out in 2022.[57] What we can say is that there is a pressure high for construction, tourist resorts in the municipalities of Himara, Vlora and Lezha (Shëngjin) using agricultural land and natural system or protected areas.

3.7.2 The change on protected areas

In the coastal zone a high number of protected areas is found, with a total area of about 120 thousand hectares, which include National Parks (4 with an area of 46,020 ha); managed reserves or nature parks (4 with an area of 51,282 ha) and protected landscapes (1 with an area of 23,027 ha); according to table 6 below. In total there are 9 such areas that according to the decisions of their declaration constitute a territory of 119,401.5 ha or 23.6% of the entire network area of protected areas in Albania.

55 PINS Coast, p. 51
56 NATP, Local Development Plans of 2017 for the municipalities under study. www.akpt.gov.al/pzhv
57 Instat, 2020 Building census. www.instat.gov.al

Table 6: Environmental Protected Areas along the Albanian coast

NO.	PROTECTED AREA	CATEGORY	SURFACE ACCORDING TO THE ANNOUNCEMENT DECISION (ON HA)
1	Bunë-Velipojë	Protected landscape (V)	2,302.7
2	Lagoon complex Kune-Vain-Patok	Managed Nature Reserves (IV)	9,393.90
3	Rrushkulli	Managed Nature Reserves (IV)	650.00
4	Divjakë-Karavasta	National Park (II)	22,389.08
5	Wetland complex Vjosë-Nartë	Managed Nature Reserves (IV)	21,238.00
6	Sazan-Karaburun	National Park (II)	12,437.70
7	Karaburun	Managed Nature Reserves (IV)	20,000.00
8	Llogara	National Park (II)	1,769.20
9	Butrint	National Park (II)	9,424.40
TOTAL			120,329.28

In 2019, the National Agency of Protected Areas (NAPA) launched a process of reviewing and re-evaluating protected areas in the country, which has encountered a debate between civil society, academia and the proposing institution.[58]

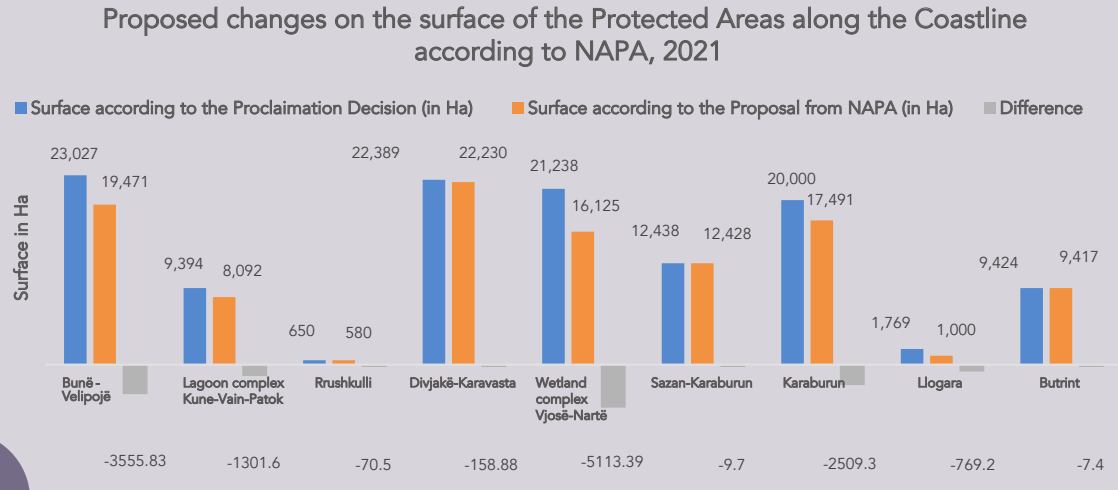

Fig. 12

Proposed changes for PA from NAPA, 2021 [59]

As a result of the re-evaluation and proposals shared by NAPA through draft DCMs which were presented for consultation on 28 July 2021 (www.konsultimipublik.gov.al), the protected areas

58 Vladimir Karaj. Environmentalists protest against wrinkling of protected areas. BIRN, 20 may 2021; https://www.reporter.al/mjedisoret-ne-proteste-kunder-rrudhjes-se-zonave-te-mbrojtura/
59 Calculations elaborated by experts

along the coastline would shrink by 13,495.8 ha, which compared to the total area of protected areas accounts to 2.5%. From these areas, according to the draft decision presented by MTE and NAPA, (see Figure 13) the areas most affected by the reduction are PA Llogara which is reduced by 43.5%, PA Vjosa-Narta by 24%, PA Buna-Velipoja with 15, 44% and PA Kune-Vain-Patok and PA Karaburun with 13.86% and 12.55% respectively.

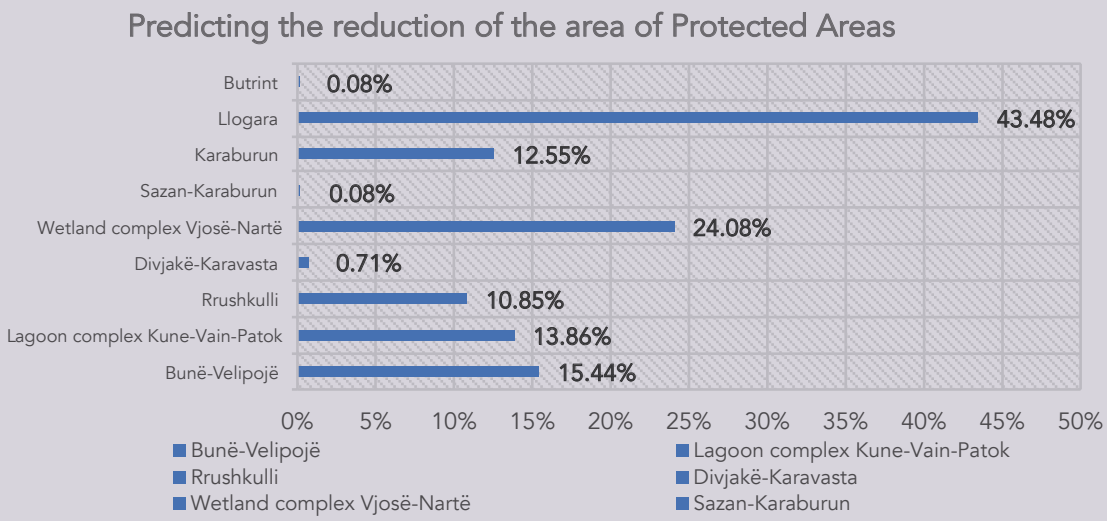

Fig. 13

Proposed changes of Protected Areas Network from NAPA, 2021 [60]

Based on the fact that the Council of Ministers draft decisions have not been approved and are in the process of public consultation, in the interest of this study it is best to emphasize that the pressure of urbanization of the coastal zone will continue to be high and unfortunately is oriented in areas protected as the only territories with high potential and still untouched, which on the one hand carry a natural capital enviable for infrastructure investments and on the other hand being generally public property, the costs of transfer of ownership are minimal. A concrete case was the Mabetex project, which involved the construction of over 2,300 apartments, several hotels, about 370 villas and ancillary facilities such as a golf course and a helipad, but which was strongly opposed by a coalition of organizations and associations. environmental, but not only.[61]

60 Calculations elaborated by experts
61 EcoAlbania. Mabetex Resort threatens the National Park "Divjaka - Karavasta. 25.8.2017; www.ecoalbania.org

4. ANALYSIS AND PRIORITIZATION OF COASTAL ENVIRONMENTAL ISSUES

4.1 Vlora District

The coastal riviera of the Vlora region, which consists of the municipalities of Vlora, Himara, Saranda and Konispol, is characterized by an urban trend with high potential for economic, agricultural, tourist and industrial development. The county produces 160,000 tons of urban waste per year which are currently collected in the Bajkaj sanitary landfill for the part of the Saranda Riviera, Konispol and Himara. While the Municipality of Vlora, including Orikum, still use an old landfill and are under construction of a new sanitary landfill supported by kfW (Construction Credit Institute).[62] Of the total urban waste in Vlora region, Vlora municipality produces 76.9% of waste (122,463 tons), Himara 5% (7,950 tons per year), Saranda 17.6% (28,000 tons per year) and Konispol municipality with 0.5% or (800 tons per year).[63]

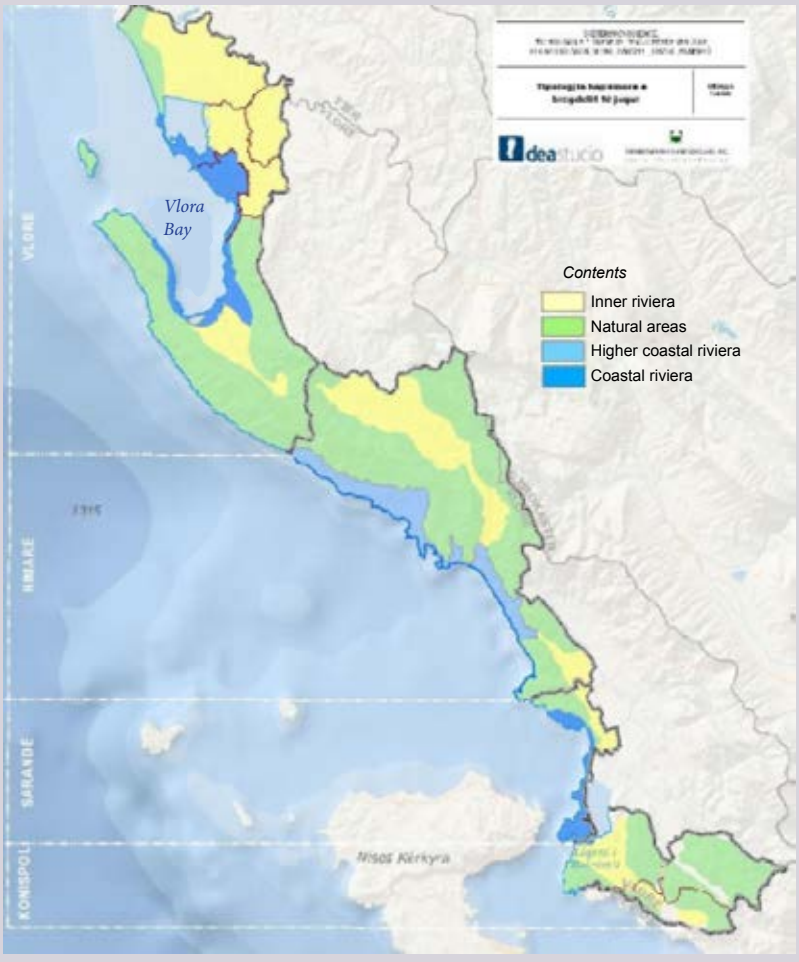

Fig. 14

Map of the Riviera in the Vlora District. Source: Municipality of Vlora & Dea Studio, 2016.

62 Ministry of Urban Development. Territorial Vision and Strategy. Common narrative for the four Municipalities. Consulting service for drafting general local plans.Dea Studio & Thymio Papayannis and Associates Inc.
63 Ministry of Urban Development. Territorial Vision and Strategy. Common narrative for the four Municipalities. Ibid. p. 6.

4.1.1 The main environmental problems in the Vlora District

Based on the research work of expert's group engaged in drafting this study report, but also based on the data collected in the regional thematic workshop developed by EcoAlbania along with actors targeted on July 23, 2021, in the Region of Vlora and specifically along the coast, the following environmental issues have been identified:

Table 7: Presentation of the most acute environmental problems identified in the coastal area of Vlora Region

NO.	ENVIRONMENTAL ISSUES
1	High pressure on the coastal ecosystem due to high urbanization and development of tourism accommodation structures
2	Shrinkage of protected areas in the protected Vjosa-Narta nature reserve for the construction of the airport and its supporting infrastructure
3	Waste mismanagement on coastal beaches
4	Potential marine pollution from port activity and hydrocarbons in Vlora. Presence of La Petrolifera Italo Albanese Sh. A. (ANP), which manages a coastal warehouse for LPG (Liquefied Petroleum Gas), Petroleum, its derivatives (Petroleum, Petrol, etc.) and other goods, liquid and solid, in the Bay of Vlora as well as recently the commissioning of TEC Vlora after the passage of gas and LNG plant with the company Exxon Mobile.
5	Potential pollution from port activity - Saranda Port
6	Marine pollution from fish farms in Karaburun, Porto Plaermo, Saranda and Ksamil
7	Illegal fishing and destruction of underwater biodiversity in Sazan-Karaburun Park
8	Alienation, destruction and fragmentation of coastal habitats (sand dunes in the Adriatic and the rocky coast Saranda-Ksamil)
9	Deforestation of Soda Forest
10	Pollution from wastewater management and urban sanitation
11	Illegal exploitation of riverbeds and high coastal erosion

4.1.2 Prioritization of environmental issues in the Vlora district

Under the framework of this study report, the working team aimed to prioritize the environmental problems identified in the coastal area of Vlora Region. The prioritization process is mainly based on the confrontation between the findings of the working group from the research in the office by determining the 5 main categories (clusters) of environmental problems and the data generated by the consultation with the target groups of different local and regional actors. Information of local actors was generated through the completion of the questionnaire (See Appendix A) directly during the workshops as well as through the subsequent completion through online platforms. In Vlora Region are invited to participate in the workshop about 20 local actors, representatives of local and central institutions, representatives of CSOs and the academic world of the region, etc. The questionnaire was completed directly during the workshops or online by 8 of them; 5 women and 3 men.

The graph below (Figure 15) shows which of the categories of environmental issues are more priority according to the assessment of local actors, which require a more urgent intervention. In this way, pollution from urban waters and wastewater is estimated to be the main priority assessed by 23% of stakeholders, followed by the problem of coastal development conflicts with 22% and port pollution with 20%. Less priority is estimated to be the problem of biodiversity destruction along the Riviera with 19% followed by marine erosion and climate change with only 16%.

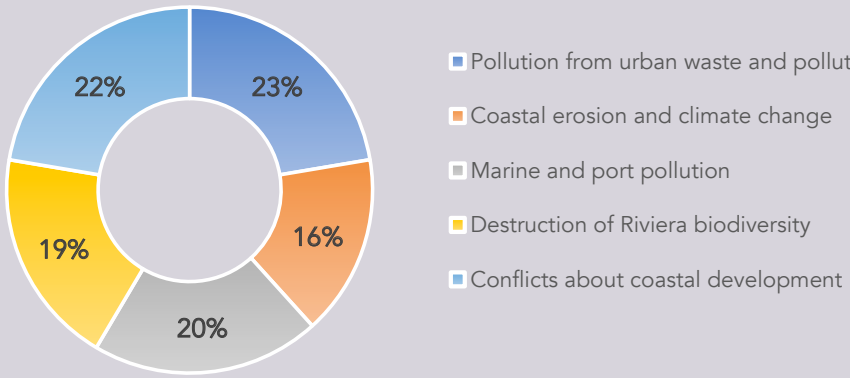

Fig. 15

Prioritization of environmental issues in the Vlora District

However, if each of the categories were evaluated within them, it is noticed that the differences of the priority evaluation between the problems of each category are very small, where all the problems are evaluated with priority above average. Figure 16 presents the assessment of the actors of Vlora Region for environmental problems along the coast related to pollution from urban waste and wastewater[64].

4.1.2.1 Pollution from urban waste and polluted waters in Vlora Region

For the category "Pollution from urban waste and polluted water" as the biggest problems are assessed "inefficient management of urban waste" and "lack of a sanitary landfill on the coast" with 3.63 points out of 4 in total. The situation in the river deltas of Vlora Region is also assessed as problematic, which reflect the final destination of the urban waste collection site of the region or even of the neighbouring regions. The situation in the river deltas is estimated on average with 3.38 points out of 4. In coastal areas of Vlora region, the situation is less problematic regarding direct waste disposal, with 3.25 points out of 4. While other problems related to solid waste management are rated as less urgent to intervene in finding a solution. However, the fact that all identified problems are rated on average with more than 3 points out of maximum 4, proves that all remain challenges to be addressed.

64 The term "wastewater" includes water that has been used by humans to perform their urban functions and includes the sewage of toilets, sinks, etc..

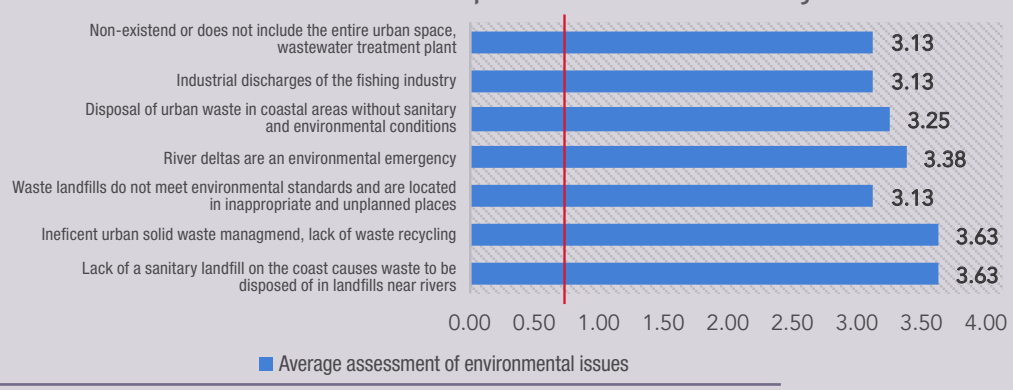

Fig. 16

Assessment of environmental problems related to pollution from urban waste in the coastal areas of Vlora Region

4.1.2.2 Coastal Erosion and Climate Change in the Region of Vlora

Referring to Figure 17 below, for the category "Coastal erosion and the climate change in the Region of Vlora" as the biggest problem that affects increased coastal erosion, it is estimated "the use of streambed for construction materials illegally" which is evaluated with 3.5 points out of 4. Causes for increased coastal erosion are also evaluated as "destruction of vegetation" and "lack of a proper sewerage system" which can be considered as adaptive measures to control of coastal erosion. These factors are rated on average 3.25 points out of 4.

No less important, in the group of the problems affecting coastal erosion, are considered the "engineering interventions in streambeds" like dams, embankments, etc. This intervention hinders the transport of alluvium[65] to the coast, they are rated with 3 points out of 4. "Climate change" is evaluated as insignificant by the actors of the Vlora Region; they have rated it with an average of 1.75 points out of a maximum of 4.

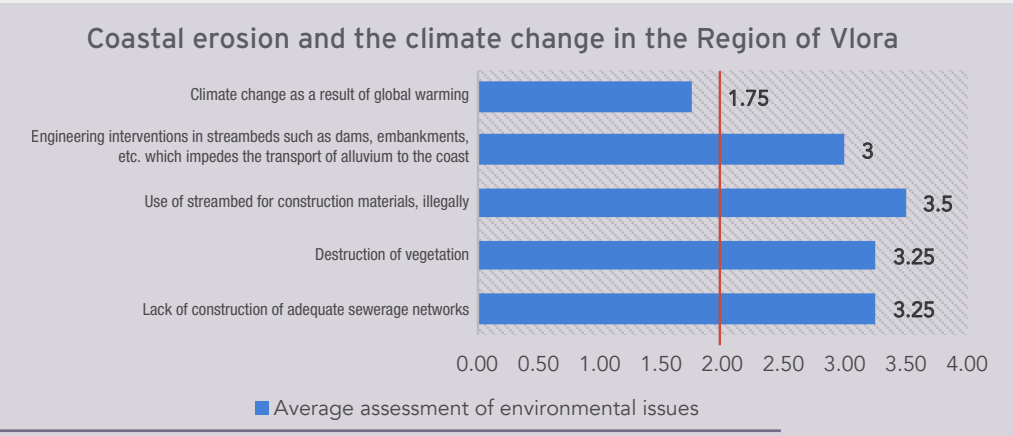

Fig. 17

Assessment of environmental issues related to coastal erosion and climate change in Vlora Region

65 Fluvial inert materials (sediments) that are transported byriver streams and deposied in their 4 lower streams

4.1.2.3 Marine and Port Pollution in the Region of Vlora

Figure 18 below presents the assessment of environmental issues related to marine and port pollution in the Region of Vlora. According to the assessment of local actors in the Vlora Region, the most problematic in this context is considered to be the transfer of pollution from the continent to marine waters, which is estimated at 3.63 points out of 4. This is related to the discharge of untreated water into the sea through canals and streams. Also, marine water pollution source is port activity as well as from hydrocarbons, rated with 3 out of 4 maximum points.

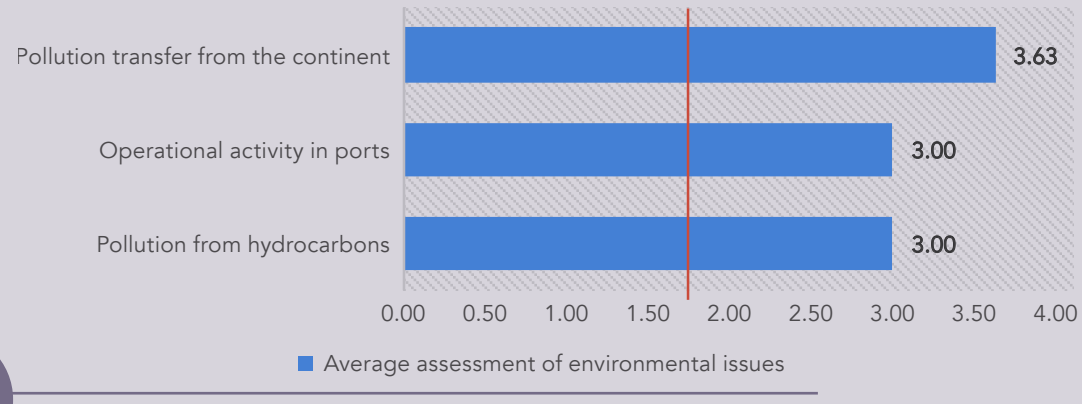

Fig. 18

Assessment of environmental issues related to marine and port pollution in Vlora Region

4.1.2.4 Biodiversity Destruction in the Coastal Area of the Vlora Region

Another category of the environmental problems in the coastline of the Vlora Region, analyzed in account of this study report, is the destruction of biodiversity. Figure 19 presents an evaluation of the problems connected with this category.

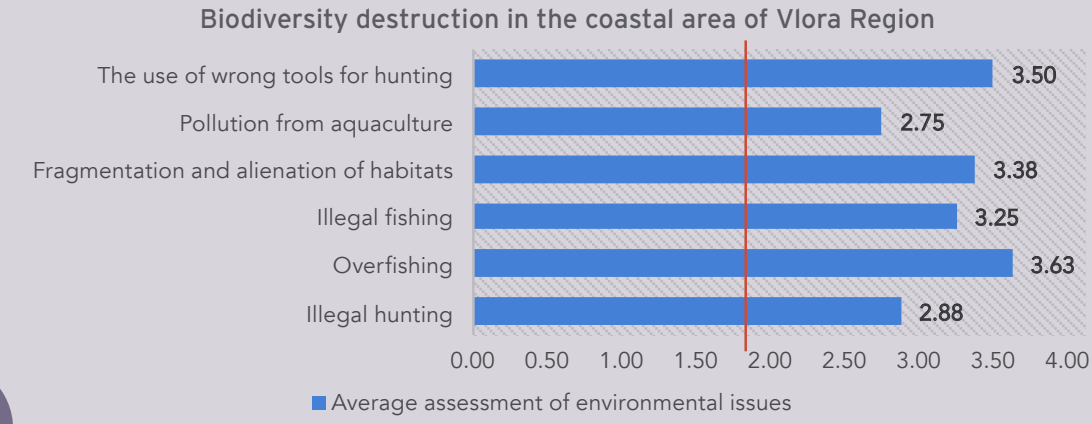

Fig. 19

Assessment of environmental issues related to the destruction of biodiversity in the Region of Vlora

Among the factors that affect the loss of biodiversity in the coastal area in the Region of Vlora, according to the assessment of local actors, are overfishing rated on average with 3.63 points out of 4; use of wrong tools for hunting, rated with 3.5 points out of 4 and fragmentation and alienation of habitats rated with 3.38 points out of 4. Other factors such as illegal hunting and fishing and pollution from aquaculture are also considered problematic factors and phenomena that affect the loss and destruction of biodiversity in the coastal area of the Vlora District.

4.1.2.5 Challenges of Coastal Development in the Vlora Region

Another category of environmental issues analyzed in this report is the conflict of development in coastal areas. The analysis of these conflicts is related to the use of spaces along the coast in function of economic development. Often this development puts pressure on natural or semi-natural areas, protected areas, as well as the social component where the most at risk are the marginalized groups of society.

In this context in the Region of Vlora, urban development and the extension of urban areas appear to be a great problem, which is rated by the local actors with 4 out of 4.

No less important are evaluating the developmental problems connected with the building of new accommodation structures for massive tourism like hotels, restaurants, resorts, etc. as well as infrastructure projects like airport, highway, that are under construction or planned, this generates a great environmental conflict that consists in lowering the environmental quality.

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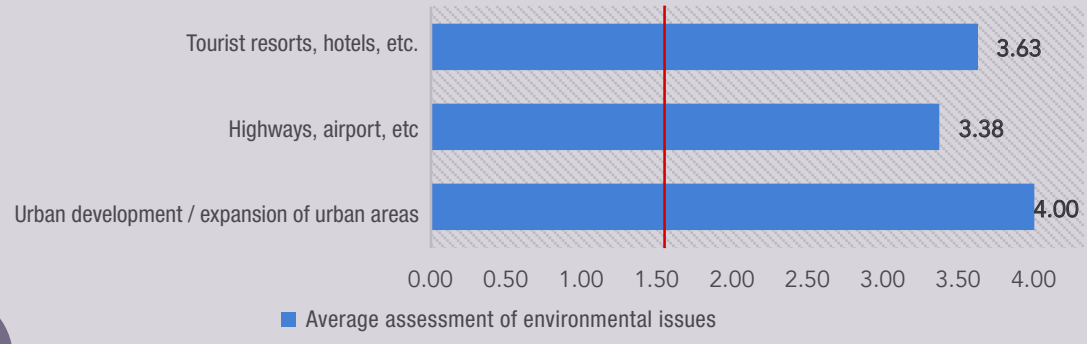

Fig. 20

Assessment of environmental issues related to coastal development conflicts in Vlora Region

4.2 Durrës Region

The Durrës Region is a diverse territory consisting of the municipalities of Durrës, Kruja, and Shijak. Although currently one of the potential municipalities in terms of economic development thanks to the development of the tourism sector, Durrës during the last 10-15 years has shown

great losses in terms of public spaces and leaving room for the concreting process, increasing the possibility of more frequent floods also affected by the effects of climate change. Another concern is related to the pollution of coastal areas coming as a result of the lack of underground sewage and urban waste management, taking into account mainly the period of the summer season. In fact, the lack of wastewater treatment plants has indirectly led (through rivers) to discharge into the sea. The Erzen and Ishëm rivers flow into the territory of the municipality of Durrës, which according to the State of the Environment Report 2020 (RGJM) [66] are among the most polluted rivers in the country. Therefore, the crossing of the Erzen River along the territory of Shijak municipality, and its poor condition from urban waste and uncontrolled extraction of aggregates, has significantly degraded agricultural lands and affected their productivity.

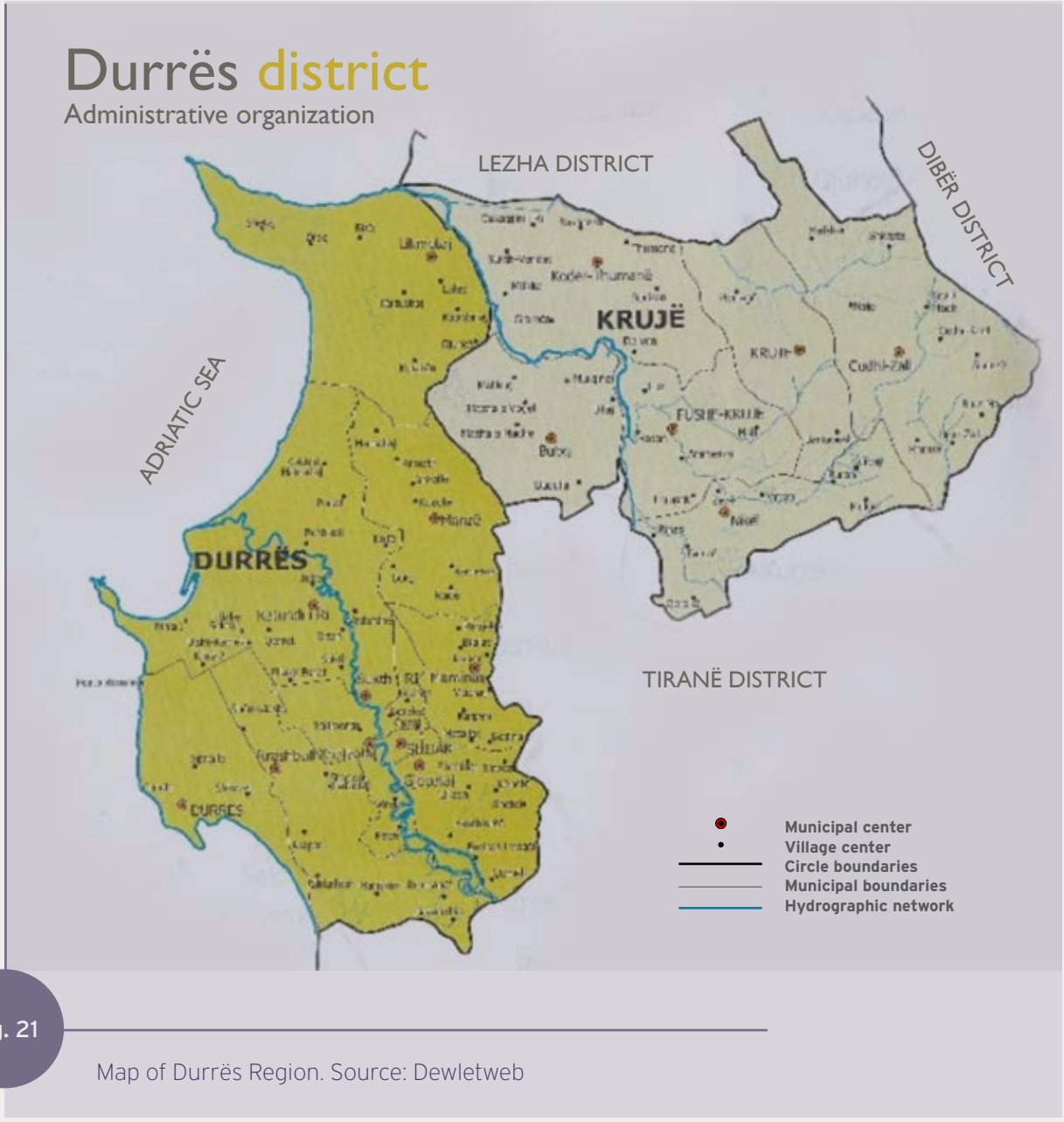

Fig. 21

Map of Durrës Region. Source: Dewletweb

66 NEA Report on environment assessment 2020,Tiranë. Accessed 12 july 2021; www.akm.gov.al

4.2.1 The Main Environmental Problems in the Region of Durrës

From the research work of the group of experts engaged in drafting this study report and also based on the data collected by EcoAlbania from the targeted actors on July 22, 2021, in the Region of Durrës, specifically along the coastline have been identified the following problems:

Table 8: Presentation of the most acute environmental problems identified in the coastal area of Durrës District

NO.	ENVIRONMENTAL PROBLEMS
1	Potential pollution from port activity - Port of Durrës
2	Erosion in Spille
3	Porto Romano landfill pollution
4	Chemical pollution Porto Romano
5	Potential pollution from hydrocarbon activity in Porto - Romano
6	Lack of sewage network in the former Administrative Units, Rrushkull
7	Area endangered by the floods of the Erzen River and the collection of urban waste from Sukthi, New village, Rrushkull towards the sea
8	Marine pollution from Erzen River
9	Waste landfill in Manez
10	Lack of sewage plants in Lalëz
11	Marine pollution from the Ishëm River inflows
12	Destruction of sand dune habitats and fragmentation of hilly habitats

4.2.2 Prioritization of Environmental Issues in the Region of Durrës

As in the Vlora Region, the study has prioritized the environmental problems recorded in the coastal zone in the Durrës Region. The prioritization process has been supported mainly on the findings of the working group, office research, and data generated by consultation with target groups of various local and regional actors.

The Durrës Region has been invited to be part of the workshop with 40 local actors, representatives of local and central institutions, representatives of OSHC, academic representatives from the region, etc. Questionnaires have been completed during the workshop, electronically by 16 people, 12 of which were women and 4 men.

In the graphic below (figure 22) shows which of the problems are more priority according to the local actor evaluation.

Pollution from the urban and contaminated water has been rated as the main priority, evaluated from 24% of the actors, followed by the port and marine pollution with 21%. Evident is the biodiversity destruction issue along the riviera rated with 20%. As for the Durrës district, less priority is evaluated on problems related with coastline development rated at 18%, followed by the marine erosion issue and climate change rated only 17%.

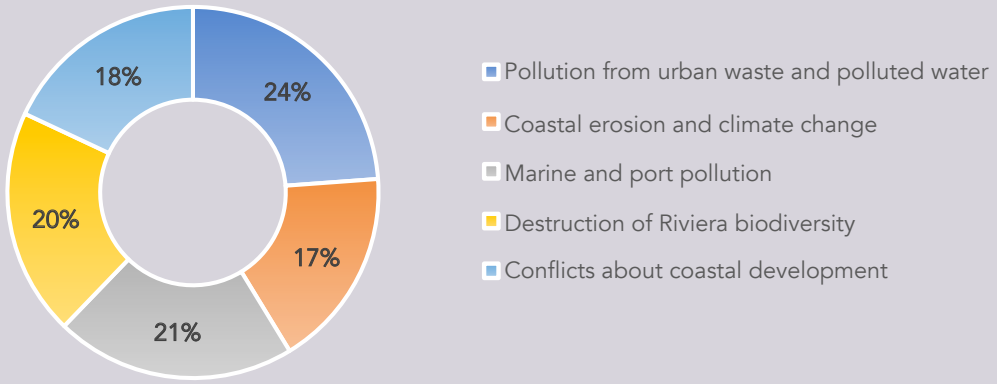

Fig. 22

Prioritization of environmental issues in the Region of Durrës

Meanwhile, in the specific analysis of each category, in the Vlora Region it is noticed that the differences of the priority evaluation between the problems of each category are very small and all the problems are evaluated with priority above average. Figure 23 presents the assessment of the actors in the Durrës Region for environmental problems along the coast related to pollution from urban waste and wastewater.

4.2.2.1 Pollution from Urban Waste and Polluted Waters in the Durrës Region

For the category "Pollution from urban waste and polluted waters" as the biggest problems are assessed "inefficient management of urban waste" and "industrial discharges of the fishing industry" with 3.75 points each out of 4 in total. Problems have been evaluated even in the situation of the direct deposit on the waste, with no sanitary or environmental standards, in the coastline areas of the Durrës Region, rated 3.63 out of 4.

Disposal of urban waste in areas that do not meet environmental standards and are located in unsuitable and unplanned coastal locations, as well as the lack of a sanitary landfill on the

coast, causes that waste to be deposited in landfills near rivers. These problems have been evaluated with an average of 3.56 points out of 4 by the local actors of Durrës Region.

The lack of treatment plants for wastewater or the non-extension of its function in the entire area of the coastal areas of the Durrës Region has also been assessed as an environmental problem rated 3.44 out of 4 points in total. The fact that all identified problems are rated on average with more than 3 points out of 4 max, proves that all remaining challenges must be addressed.

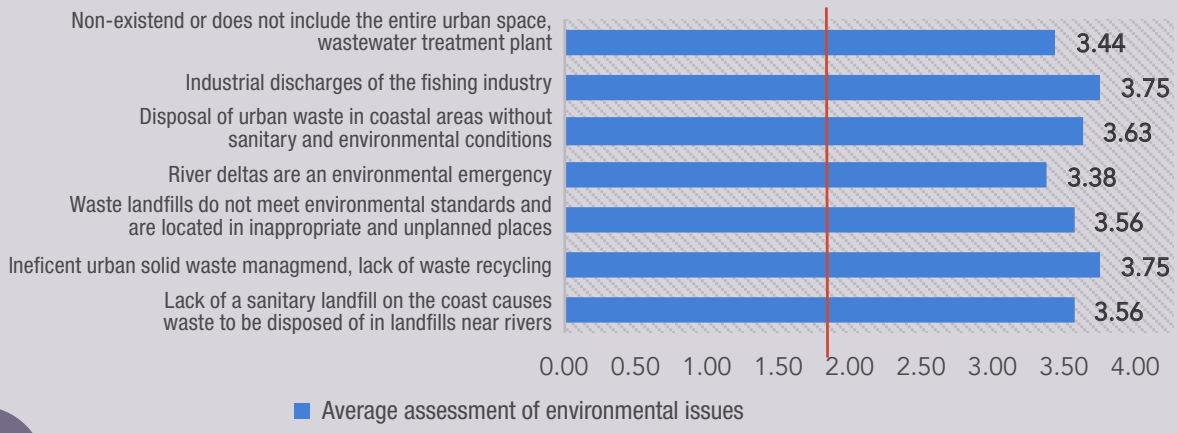

Fig. 23

Assessment of environmental problems related to pollution from urban waste in the coastal areas of the Durrës Region

4.2.2.2 Coastal Erosion and Climate Change in the Region of Durrës

In figure 24 below, the category "coastal erosion and climate change in Durrës Region" has determined that the biggest problem resulting in the increase of coastal erosion is the "destruction of vegetation cover" rated 3.69 points out of 4. Another factor with significant impact on increasing the level of coastal erosion according to the assessment is the effect of "climate change", rated 3.56 points out of 4. Other causes of increased coastal erosion are estimated to be the "use of streambed for construction materials, illegally" and "lack of a suitable sewerage system" which were evaluated with 3.5 points out of 4.

Considered less important from the challenges that affect coastal erosion are "engineering interventions in streambed" such as dams, embankments, etc. which impedes the transport of alluvium to the coast, rated 3.25 points out of 4.

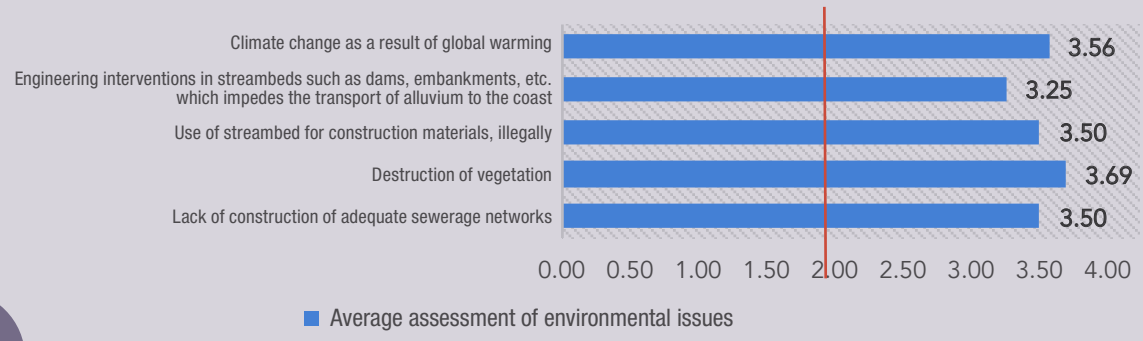

Fig. 24

Assessment of environmental issues related to coastal erosion and climate change in the Durrës Region

4.2.2.3 Marine and Port Pollution in the Durrës Region

Figure 25 below presents the assessment of environmental issues related to marine and port pollution in the Durrës Region. According to the evaluation by local actors in this Region, the most problematic in this context is considered to be the transfer of pollution from the continent to marine waters and pollution from hydrocarbons, estimated at 3.63 out of 4 maximum points. Somewhat less problematic is the pollution caused by the port activity, which is estimated at 3.5 points out of 4.

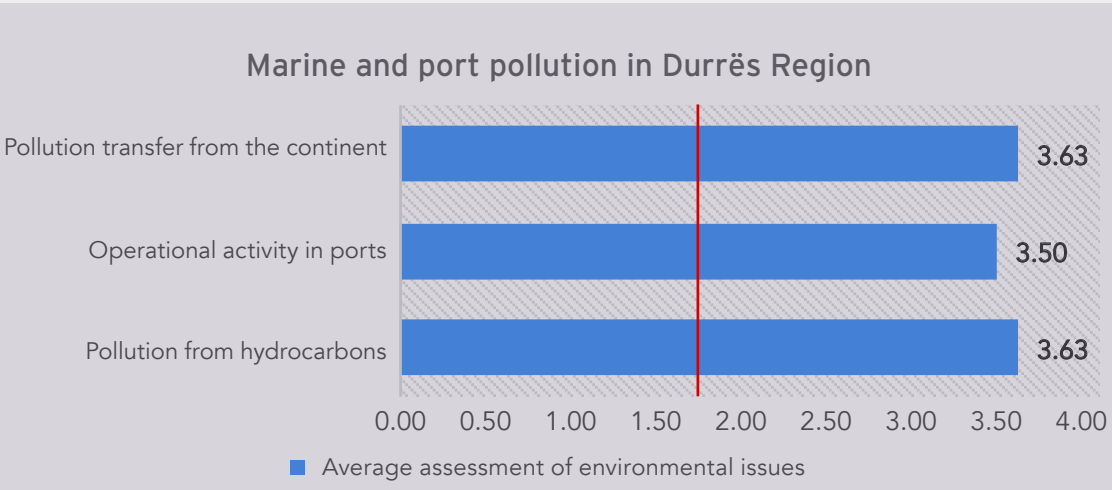

Fig. 25

Assessment of environmental issues related to marine and port pollution in Durrës Region

4.2.2.4 Biodiversity Destruction in the Coastal area of the Durrës District

Another category of environmental problems in the coastal areas of the Durrës District is the destruction of biodiversity. Figure 26 presents the assessment of issues related to this category.

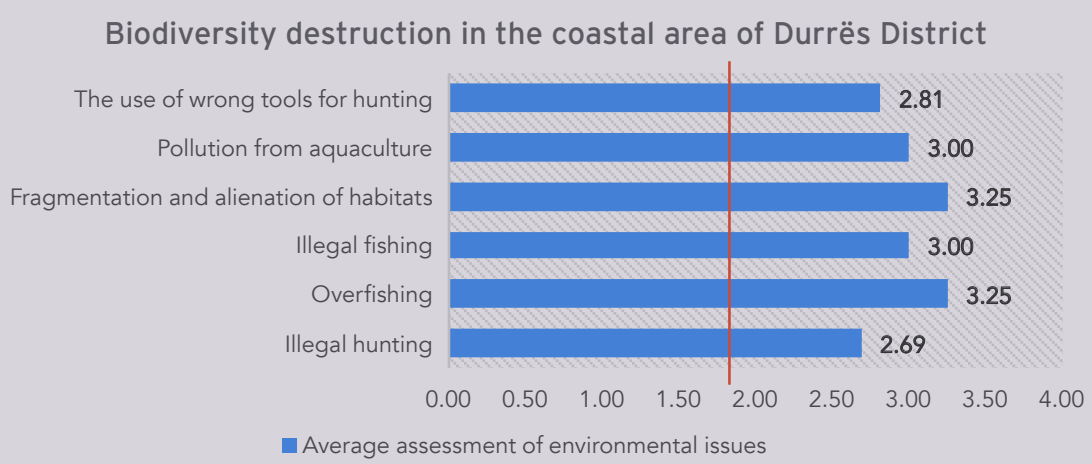

Fig. 26

Assessment of environmental issues related to the destruction of biodiversity in the Region of Durrës

According to local actors, the factors that affect the loss of biodiversity in the coastal area in the Durrës Region are overfishing and fragmentation, as well as alienation of habitats rated with 3.25 points out of 4. Other factors such as pollution from aquaculture and illegal fishing are considered also problematic factors that significantly affect the loss and destruction of biodiversity in the coastal area of the Durrës District which are evaluated with 3 points out of 4. Illegal hunting and use of wrong tools for hunting are evaluated respectively with 2.69 and 2.81 points out of 4.

4.2.2.5 Challenges of Coastal Development in the Durrës Region

The last category (cluster) of environmental issues analyzed in this report is the conflict about the development in coastal areas. In this context, regarding this category in the Durrës Region, urban development and the expansion of urban areas, as well as in the Vlora Region, is presented as a very acute problem, which is assessed by local actors with 3.88 points out of 4.

The development problems related to the construction of accommodation facilities for mass tourism, such as hotels, resorts, etc., are considered to be no less essential. Durrës can already be considered as an area that has passed the phase of intensive construction. Less rated as problematic are infrastructure projects such as airports, highways, etc. which are evaluated with 3.31 points out of 4.

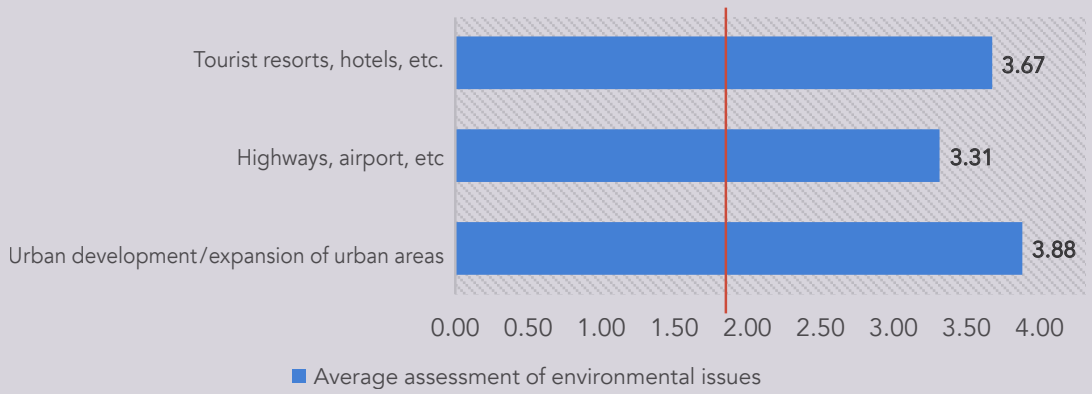

Fig. 27

Assessment of environmental issues related to coastal development conflicts in Durrës Region

4.3 Lezha Region

The Lezha Region includes the municipalities of Lezha, Mirdita, and Kurbin. Lezha is one of the most important centers of the northwestern territory of Albania in some aspects, where mountain, field, forest, archaeological and historical monuments, lagoons, and the sea form a prominent community. The territory is intertwined and in this area all the conditions for the development of fauna and flora are quite diverse.

In this territory, a variety of ecosystems coexist, such as rivers, sea line, coastline, evergreen and deciduous and mixed coniferous forests, meadows and pastures.

The main area where effects of climate change have begun lies in the Drin and Mat River Delta (DLDM) and has been identified as a vulnerable region critical to climate change and its expected effects. Increased human pressure has led to significant changes in the environment of the DMRD area.[67]

Across the DMRD area, rapid population growth is modifying the natural environment through overuse of coastal, marine, and estuarine resources with irreversible consequences such as:
loss of coastal, marine, and estuarine habitats;[68] disappearance of important geomorphological features (sand dunes); significant loss of coastal vegetation, flora and fauna; disappearance of the buffer zone; change in the distribution of alien (invasive) species; reducing the regenerative capacity of ecosystems by increasing sea levels and climate change; infiltration of salt water.

67 Silvija Nora Kalnins . Identification and Implementation of the Adaptation Response Measures in the Drini-Mati River Deltas (PIMS 3629). UNDP, Tirana 2013

68 Peripheral area around the central area which has the function of mitigating the impact and pressure caused by human activity in a protected area

The resulting degradation has a number of consequences that limit both existing and future opportunities for human use of the area, such as: erosion and sinking of low-lying areas by rising sea levels and rising storm frequencies, leading to loss of space; change of hydrological regime, leading to loss of freshwater for agriculture, other industries and for domestic use; loss of wetland area, leading to reduced opportunity for protection from rising sea levels, loss of attractive values of ecosystems and their services; habitat and biodiversity change leading to resource loss and environmental renewal.

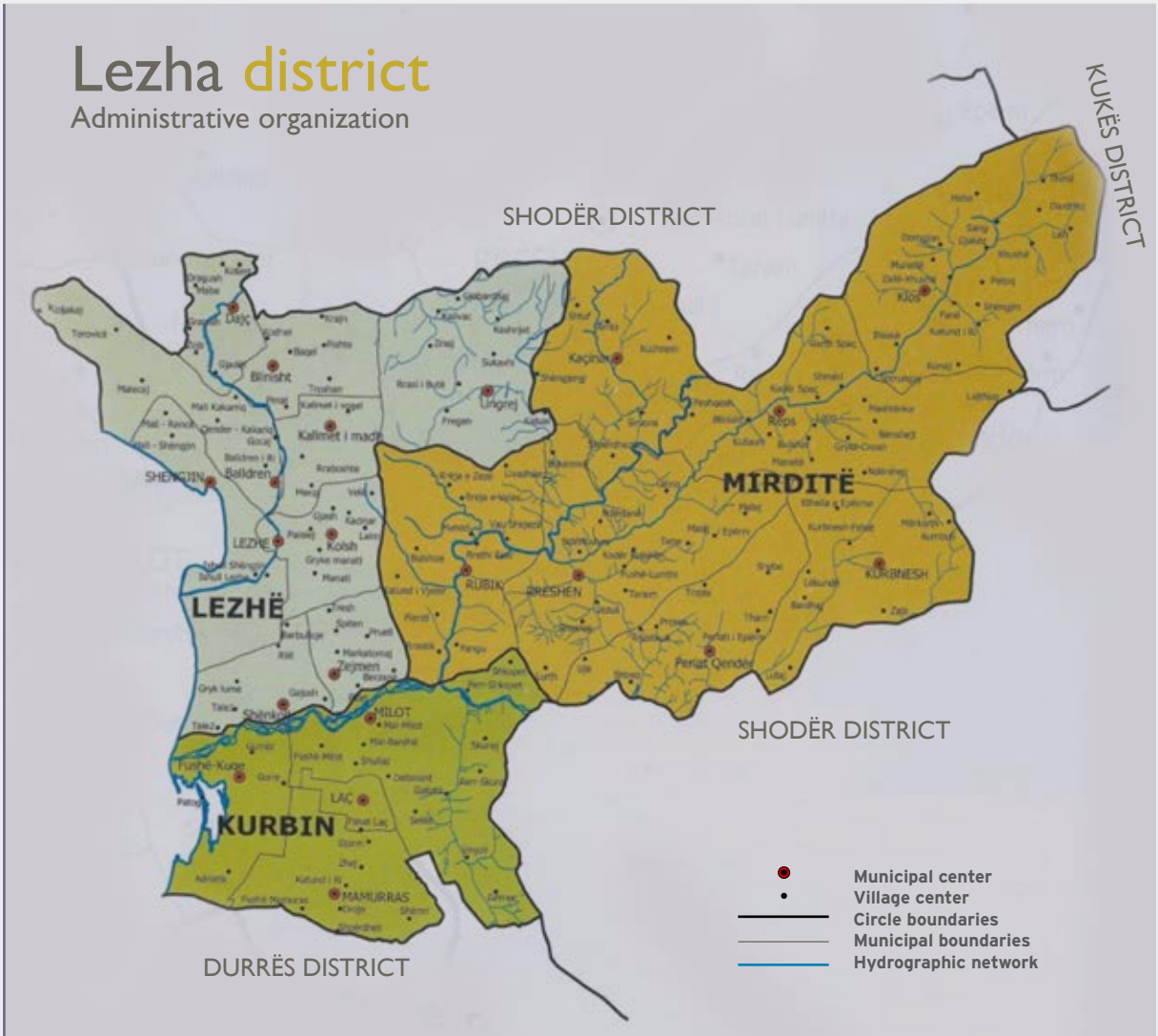

Fig. 28

Map of Lezha region. Source: StateWeb.

4.3.1 The Main Environmental Problems in the Region of Lezha

From the research work of the group of experts engaged in drafting this study report but also based on the data collected in the regional workshop developed by EcoAlbania with

actors targeted on July 21, 2021, in the Region of Lezha and specifically along the coast. The following environmental problems have been identified:

Table 9: Presentation of the most acute environmental problems identified in the coastal area of Lezha Region

NO.	ENVIRONMENTAL ISSUES
1	Illegal hunting and fishing in Kune-Vain, Tale and Patok
2	Coastal erosion in the Kune-Vain Lagoon
3	Port pollution in Shengjin
4	Urban waste accumulated at the estuary of the Drin River up to the Mat River.
5	Industrial discharges of the fishing industry
6	Disposal of urban waste in Drin River in Lezha
7	The growth of invasive species such as the Blue Crab in the lagoon and the destruction of the Lagoon ecosystem
8	Loss of coastal, marine and estuarine habitats
9	Disappearance of important geomorphological features (sand dunes)
10	Change in the distribution of alien (invasive) species
11	Changing the hydrological regime, leading to the loss of fresh water for agriculture, other industries and for domestic use

4.3.2 Prioritization of Environmental Issues in the Region of Lezha

As in the other two regions, the study has prioritized the environmental problems identified in the coastal area of the Lezha Region. The prioritization process has followed the same line of confrontation between the findings of the working group from the office research and the data generated from the consultation with the target groups of different local and regional actors.

In the Region of Lezha 30 local actors were invited to participate in the workshop, among the participants were representatives of local and central institutions, and representatives of CSOs. The questionnaire was completed directly during the workshops by 6 of them; 2 women and 4 men.

The graph below (Figure 29) shows which of the categories of environmental issues are more priority according to the assessment of local actors. In this way, pollution from urban waters and wastewater is estimated to be the top priority assessed by 24% of stakeholders, followed by the problem of coastal development conflicts with 23%.

Evidence shows coastal erosion and climate change estimated at 20% and the biodiversity destruction along the Riviera estimated at 19%. The problem of port and marine pollution is

assessed as less priority with only 14%.

Meanwhile, from the specific analysis of each of the categories, as well as in the Region of Vlora, the differences in the priority evaluation between problems in each category are very small, where all the problems are evaluated with priority above average. Figure 30 presents the assessment of the actors of the Lezha Region for environmental problems along the coast related to pollution from urban waste and wastewater.

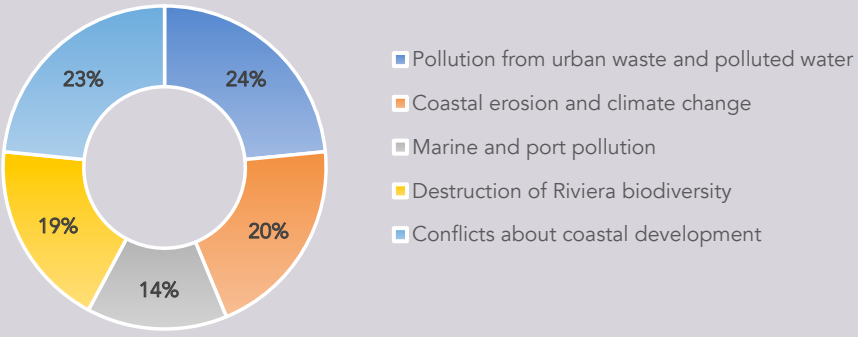

Fig. 29

Prioritization of environmental issues in the Region of Lezha

4.3.2.1 Pollution from Urban Waste and Polluted Waters in the Lezha Region

For the category "Pollution from urban waste and polluted water" the biggest problems rated with 3.83 points out of 4 are: disposal of urban waste in areas that do not meet environmental standards and are located in inappropriate places and unplanned coastal; the deposition of solid waste near river deltas are seen as environmental emergencies; inefficient management of urban waste as well as the problem of waste disposal directly in the coastal areas of the Lezha Region.

The lack of a sanitary landfill on the coast, as well as the lack of a treatment plants for used water, or the non-extension of its function in the entire area of coastal areas of the Lezha Region, are also identified as environmental problems with 3.67 out of 4 points in total.

Less problematic is the situation related to industrial discharges of the fishing industry which is evaluated with 3.5 points each of 4 in total.
However, as in other regions, the urban pollution of the coast is estimated on average with more than 3 points out of 4 maximum, which proves that all the problems analyzed under this category must be addressed.

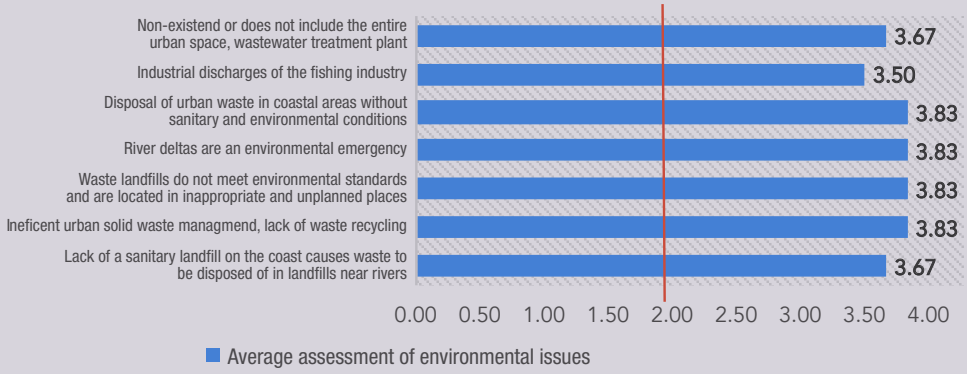

Fig. 30

Assessment of environmental problems related to pollution from urban waste in coastal areas of Lezha Region

4.3.2.2 Coastal Erosion and Climate Change in the Lezha Region

In figure 31 below, for the category "coastal erosion and climate change in the Region of Lezha" the biggest problems affecting the increase of coastal erosion have been evaluated as the "use of streamed as construction materials illegally" which is evaluated with 4 points out of 4. Followed by "destruction of vegetation" with 3.83 points out of 4 in total.

Another factor according to the assessment with a significant impact on increasing the level of coastal erosion in the Region of Lezha are the "engineering interventions in river beds" such as dams, embankments, etc., which hinder the transport of alluvium to the coast, rated with 3.65 points out of 4.
The issues affecting coastal erosion also assessed the effect of "climate change" and "lack of a proper sewerage system" which are rated 3.5 points out of 4.

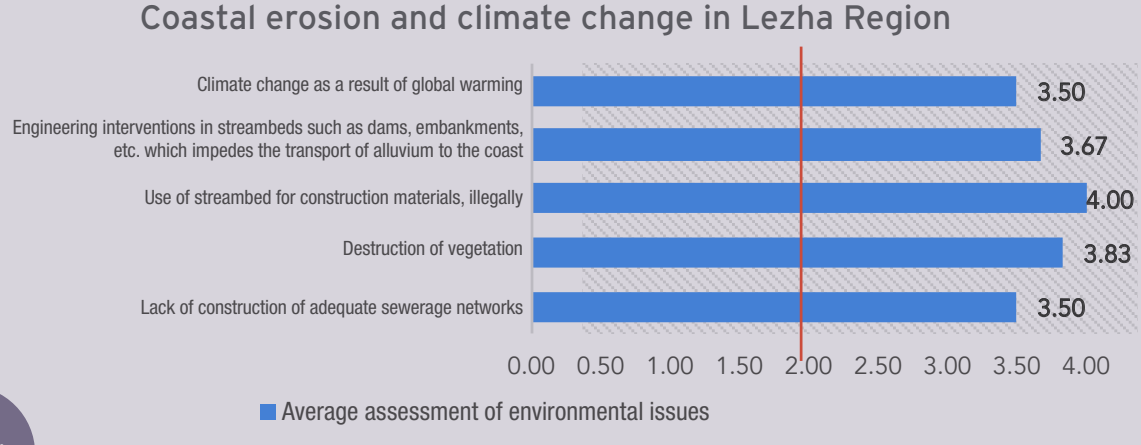

Fig. 31

Assessment of environmental issues related to marine erosion and climate change in the Region of Lezha

4.3.2.3 Marine and port pollution in the Region of Lezha

Figure 32 below presents the assessment of environmental issues related to marine and port pollution in the Region of Lezha. According to the evaluation of local actors in this region, the most problematic in this context is estimated to be the transfer of pollution from the continent to marine waters, rated 3.5 out of 4 points. After this is the port activity in Shengjin, rated 3.17 points out of 4. And less problematic is the pollution caused by hydrocarbons, rated with 3 out of 4 points.

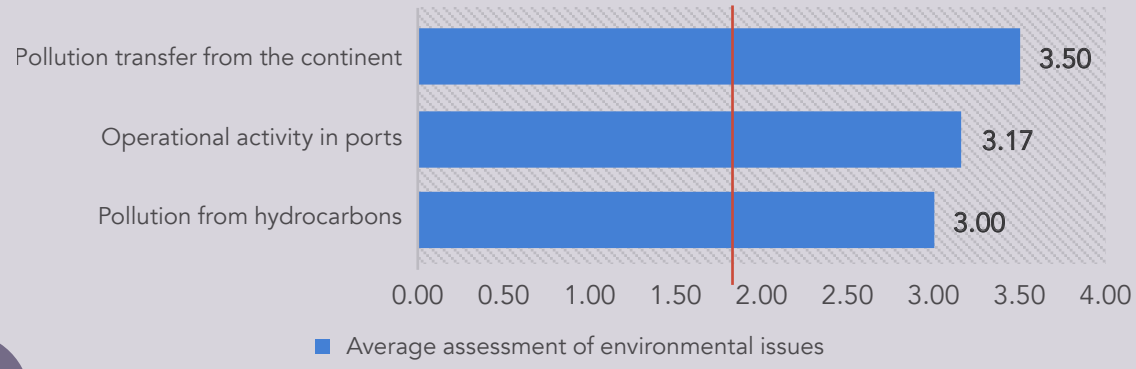

Fig. 32

Assessment of environmental issues related to marine and port pollution in the Region of Lezha

4.3.2.4 Biodiversity Destruction in the Coastal area of the Lezha Region

Biodiversity destruction in the coastal areas of the Lezha Region is another category of environmental issues analyzed. Figure 33 presents the assessment of issues related to this category.

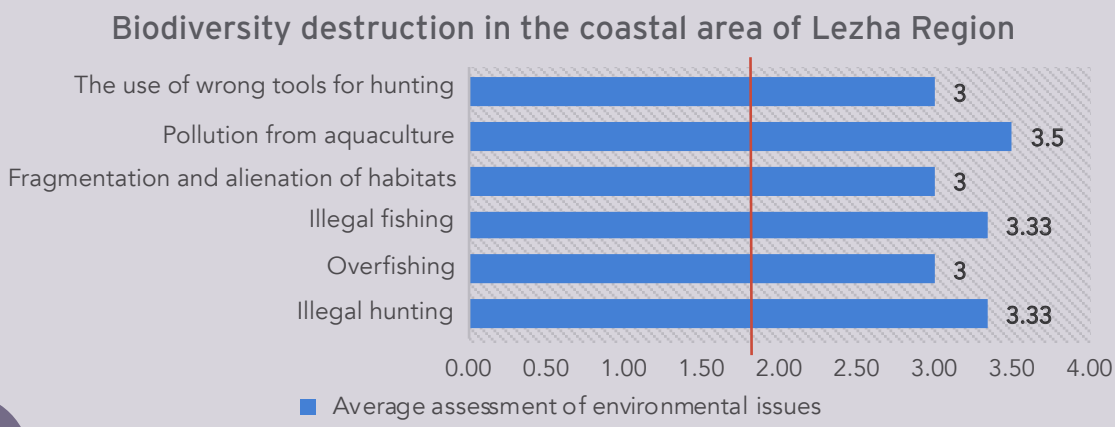

Fig. 33

Assessment of environmental issues related to the destruction of biodiversity in the Region of Lezha

According to local actors, factors affecting the loss of biodiversity in the coastal area of the Lezha Region are pollution from aquaculture, rated with 3.5 points out of 4, followed by illegal fishing and illegal hunting, rated with 3.33 points from 4. Other factors significantly affecting the loss and destruction of biodiversity in the coastal area of the Lezha Region are the fragmentation and alienation of habitats and use of wrong hunting equipment and overfishing, evaluated with 3 points out of 4.

4.3.2.5 Challenges of Coastal Development in the Region of Lezha

The last category (cluster) of environmental issues analyzed in this report is the conflict regarding the development in coastal areas.

Regarding this category in the Region of Lezha, the development of infrastructure projects such as airports and highways have been assessed as the most problematic, receiving an average rating of 3.67 points out of 4. No less significant are the development problems related to the construction of mass tourism accommodation structures such as hotels, resorts, etc., which are evaluated with 3.5 out of 4.

Urban development as well as the expansion of urban areas, in contrast to other regions, was presented as a less important problem, however the area of Shengjin has already expanded, becoming an urban space that supports massive coastal tourism. This issue was evaluated with 2.33 points out of 4.

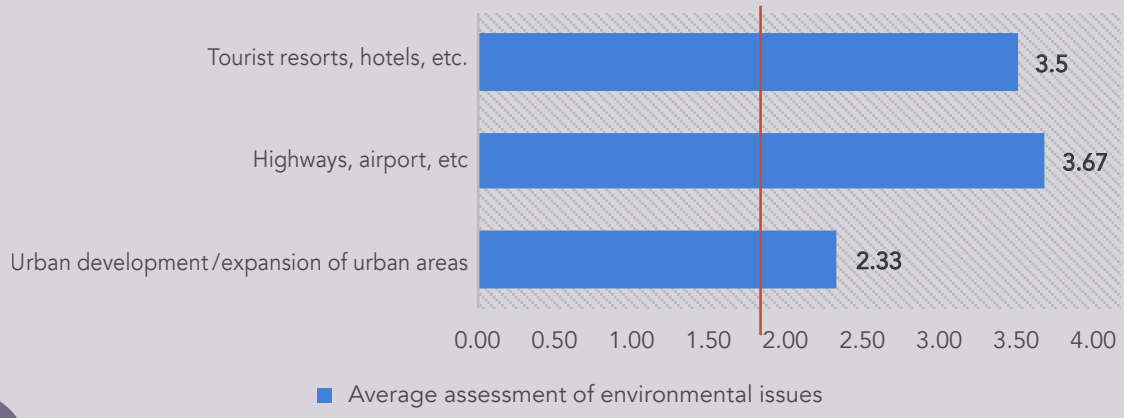

Fig. 34

Assessment of environmental issues related to coastal development conflicts in the Lezha Region

5. CONCLUSIONS

5.1 Vlora Region

In this study, the main environmental problems were highlighted in three main areas of the Albanian coastline, such as the regions of Lezha, Durrës, and Vlora, including 6 coastal municipalities of Konispol, Saranda, Himara, Vlora, Durrës, and Lezha.

The study has considered the presentation of not only environmental issues but also to address areas endangered by environmental pollution that have their source deeper in the territory such as rivers or pollution industry in the territory.

The Environmental Portfolio report in coastal areas was focused on five (5) main categories; ***i) Pollution from urban waste and polluted waters; ii) Coastal development challenges; iii) Coastal erosion and climate change; iv) Marine and port pollution and v) Destruction of biodiversity of the riviera.*** Within these categories the study has identified about 30 environmental problems that require special attention and monitoring by public authorities. The report also emphasizes the need for an institutional dialogue between the legislative, executive, and local governments in Albania. In the study all identified problems were prioritized based on their importance, according to the division at the regional level, and according to the scoring realized by the consulted actors.

A. Pollution from Urban Waste and Wastewater

1. ***Vlora Region***, pollution from urban waste and polluted water is the main priority where 23% of respondents ranked it with the highest points. Meanwhile, the challenges of coastal development were assessed at 22% by the respondents, making it a secondary priority for them. In particular, the lack of landfills on the coast and the lack of recycling has been assessed as the main problem, with 3.63 points out of 4 possible.

2. ***Durrës Region***, the problem of pollution from urban waters and wastewater is estimated to be the main priority, assessed by 24% of local actors, followed by the problem of port and marine pollution with 21%. The problem of biodiversity destruction along the Riviera, estimated at 20%, is also evident. Meanwhile, less priority has been assigned to categories of problems related to coastal development challenges, estimated at 18%, followed by marine erosion and climate change by only 17%.

3. ***Lezha Region***, pollution from urban waters and wastewater is estimated to be the main priority assessed at 24% by local actors, followed by the problem of coastal development challenges with 23%. Evidence also shows the problem of coastal erosion and climate change, estimated at 20%, and that of biodiversity destruction along the Riviera, estimated at 19%. The problem of port and marine pollution is assessed as less priority with only 14%.

B. Challenges of coastal development

1. In this category the experts analyzed two main indicators: i) the intensity of construction and ii) the reduction of protected areas on the coast. An important finding is revealing the problem of high construction on protected areas stretching along the coastline. Expert analysis revealed that only 3 regions are part of the study, with an intention of reducing the protected area by 2.5% or (13,495.8 ha).

2. Analyzing the local development plans for the municipalities of Himara, Vlora, Saranda, Konispol, and Lezha ***(Durrës has not yet approved the development plan)*** the experts noticed that all municipalities have proposed an increase in urbanism where Lezha leads with 807 ha. According to the general local plans, the proposed space for urbanization in the municipalities of Himara, Vlora, Saranda, Konispol, and Lezha goes to 1,895 ha.

3. The Municipality of Vlora has a 10.9% increase in the intensity of urbanization according to the local development plan and is reviewing the PVZH (Local Development Plan) again - to fulfill the growing demands for urbanization.

4. In the Region of Durrës, urban development and the expansion of urban areas, as well as in the Region of Vlora, is presented as a very acute problem, which has been assessed by local actors with 3.88 points out of 4.

5. In the Region of Lezha, the development of infrastructure projects, such as airports and highways, are assessed as the most problematic, receiving an average rating of 3.67 points out of 4. No less significant are the developmental problems related to the construction influenced by massive tourism. These include accommodation structures such as hotels, resorts, etc., which are evaluated with 3.5 points in this study.

C. Coastal Erosion and Climate Change

1. In the Vlora Region, the main cause in the increase of coastal erosion is the "***illegal use of streambeds as construction materials"*** rated 3.5 out of 4. Other causes identified are ***"vegetation destruction"*** and ***"lack of an adequate sewerage system"*** which can be considered as adaptive measures to control coastal erosion. These factors have been rated on average 3.25 points out of 4.

2. In the Durrës Region, the biggest problem causing an increase of coastal erosion has been identified as ***"vegetation destruction"*** rated 3.69 out of 4. Other factors that have a considerable impact on the increase of coastal erosion in Durrës Region in the ***"climate changes"*** rated 3.56 out of 4.

3. In the Lezha Region, the biggest problems causing an increase of coastal erosion has been identified as the ***"illegal use of streambeds as construction materials"*** rated 4 out of 4. Followed by "vegetation destruction" rated 3.83 out of 4.

D. Marine and Port Pollution

1. In the Vlora Region, according to the assessment of local actors, the most problematic issue is the ***transfer of pollution from the continent*** to marine waters, rated 3.63 out of 4. This is connected with the discharge of untreated water into the sea through canals and streams. Followed by the effects of polluted water entering the sea from ***port activity*** as well as from ***hydrocarbons***, rated 3 out of 4.

2. In the Durrës Region, the most problematic issue is considered to be the transfer of pollution from the continent to marine waters and pollution from hydrocarbons, rated 3.63 out of 4. Somewhat less problematic is the pollution caused by the port activity in the port of Durrës, rated at 3.5 points out of 4.

3. In the Region of Lezha, according to the actors, the most problematic issue is the transfer of pollution from the continent to marine waters, rated at 3.5 out of 4. Followed by the port activity in the port of Shengjin, rated with 3.17 points out of 4. Less problematic is the pollution caused by hydrocarbons, rated with 3 points out of 4.

E. Destruction of the Biodiversity of the Riviera

1. Among the factors that affect the loss of biodiversity in the coastal area in the Region of Vlora, according to the assessment of local actors, are overfishing rated on average with 3.63 points out of 4; ***use of wrong hunting tools***, rated with 3.5 points out of 4, and ***habitat fragmentation and alienation*** rated with 3.38 points out of 4.

2. In the Durrës Region, the factors that affect the loss of biodiversity in the coastal area, according to local actors, are ***overfishing***, ***fragmentation***, and ***alienation of habitats*** rated with 3.25 points out of 4. Other factors, such as pollution from aquaculture and illegal fishing, are also considered problematic factors that significantly affect the loss and destruction of biodiversity in the coastal area of the Durrës Region rated with 3 points out of 4.

3. In the Region of Lezha, according to the evaluation of local actors, the main problems are ***pollution from aquaculture*** evaluated with 3.5 points out of 4, followed by ***illegal fishing and illegal hunting*** evaluated with 3.33 points out of 4.

RECOMMENDATION

- A significant part of the identified problems require a better functioning of existing systems by monitoring and controlling the institutions at the local and central level, such as pollution by hydrocarbon, ports, and ballast waters in ports.

- While a good part of them requires concrete investments, especially from the municipalities. These would include building plants for the management and treatment of urban wastewater and urban waste such as landfills and incinerators. This is an important step to ensure sustainable infrastructure investments, such as the Vlora Landfill, or wastewater treatment plants, and a detailed national program for increasing local capacity to control, manage and inspect waste in the coastal belt.

- The environmental problems identified in this study should serve as an incentive for authorities as well as civil society organizations and foreign assistance programs to foster a wider technical debate in order to develop solution based projects and prioritization in draft annual and medium-term local budgets.

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ANNEX A

Questionnaire for Validation of Environmental Issues

QUESTIONNAIRE ON ASSESSMENT OF ENVIRONMENTAL ISSUES ON THE COAST

General Information

WFD Albania is implementing the initiative package, "Participation of CSOs in decision making". Based on the WFD analysis in Albania, civil society has mainly been involved in the policy implementation phase, but rarely participates in setting the agenda or policy-making phase. The situation is worse in the executive (line ministries and the Council of Ministers), as they often adopt legislation and regulations without first consulting with interested actors. Environmental CSOs have less access to decision makers than others as the environment is not considered a key priority for the country's development. However, there is a solid group of CSOs specializing in environmental issues that has the capacity and experience, but faces various obstacles in terms of influencing policy-making at the local and central levels.

The development of coastal regions in Albania has become a priority for national development plans that are often driven by the interest and agenda of the private sector. Often such development plans do not consult with various local actors and do not take into account environmental concerns of the local or national impact. Therefore, there is a growing need for a more proactive engagement of CSOs and other actors to consult and influence decision makers taking into account the different environmental concerns of their communities.

In this context, EcoAlbania has been mandated to prepare a study report to identify environmental problems in coastal regions by providing evidence and data on environmental issues.

Section 1: Pollution from urban waste and polluted water

Note: Please complete the questionnaire by selecting the alternatives according to the explanation.

1 - Not relevant, no problem
2 - Small problem but it is towards the solution
3 - It is a problem but not great one4 - Problem shumë i madh dhe evident

1. In your opinion, how problematic is the pollution from urban waste and polluted waters in your county?

	Under Category	Evaluations			
		1	2	3	4
1.1	Lack of a sanitary landfill on the coast causes waste to be disposed of in landfills near rivers	☐	☐	☐	☐
2.1	Inefficient urban solid waste management, lack of waste recycling	☐	☐	☐	☐
3.1	Waste landfills do not meet environmental standards and are located in inappropriate and unplanned places	☐	☐	☐	☐
4.1	Non-existent or does not include the entire urban space, the wastewater treatment plant	☐	☐	☐	☐
5.1	River deltas are in an environmental emergency	☐	☐	☐	☐
6.1	Disposal of urban waste in coastal areas without sanitary and environmental conditions	☐	☐	☐	☐
7.1	Industrial discharges of the fishing industry	☐	☐	☐	☐

Section 2: Coastal Erosion and Climate Change

2. In your opinion, how problematic is coastal erosion and climate change in your region?

	Under Category	Evaluations
		1 2 3 4
2.1	Lack of adequate sewerage system in agriculture	☐ ☐ ☐ ☐
2.2	Destruction of vegetation	☐ ☐ ☐ ☐
2.3	Use of river bed as a source of illegal exploitation for construction materials	☐ ☐ ☐ ☐
2.4	Engineering interventions in river beds such as dams, embankments, etc. which impedes the transport of alluvium to the coast	☐ ☐ ☐ ☐
2.5	Climate change as a result of global warming	☐ ☐ ☐ ☐

Section 3: Marine and Port Pollution

3. In your opinion, how problematic is the marine and port pollution in your region?

	Under Category	Evaluations
		1 2 3 4
3.1	Pollution from hydrocarbons	☐ ☐ ☐ ☐
3.2	Operational activity in ports	☐ ☐ ☐ ☐
3.3	Pollution transfer from the mainland (discharge of untreated wastewater)	☐ ☐ ☐ ☐

Section 4: Biodiversity Destruction

4. In your opinion, how problematic is the destruction of biodiversity in the coastal area of your region?

	Under Category	Evaluations			
		1	2	3	4
4.1	Illegal Hunting	☐	☐	☐	☐
2.1	Overfishing	☐	☐	☐	☐
4.3	Illegal Fishing	☐	☐	☐	☐
4.4	Fragmentation and alienation of habitats	☐	☐	☐	☐
4.5	Pollution from aquaculture	☐	☐	☐	☐
4.6	Use of the wrong hunting tools (explosives, electricity, poisons)	☐	☐	☐	☐

Section 5: Coastal Development Conflicts

5. In your opinion, how problematic are the coastal development conflicts in the region from the environmental point of view?

	Under Category	Evaluations			
		1	2	3	4
5.1	Urban development / expansion of poorly planned urban areas	☐	☐	☐	☐
5.2	Development of infrastructure projects (highways, airports, etc.)	☐	☐	☐	☐
5.3	Development of projects with significant impact on the environment (tourist resorts, hotels, etc.)	☐	☐	☐	☐

Section 6: Priorities by Category (Clusters)

Note: Please complete the questionnaire by selecting the alternatives according to the explanation.

Priority 1: The situation is critical and immediate intervention is required
Priority 2: Intervention should be planned
Priority 3: The situation is stable but intervention needs to be planned for improvement

In your opinion, determine the most priority issues that consist of environmental issues in the coastal area of your region.

	Category	Priority of intervention
		1 2 3 4
1	Pollution from urban waste and polluted water	☐ ☐ ☐ ☐
2	Coastal erosion and climate change	☐ ☐ ☐ ☐
3	Marine and port pollution	☐ ☐ ☐ ☐
4	Destruction of the biodiversity of the Riviera	☐ ☐ ☐ ☐
5	Coastal development conflicts	☐ ☐ ☐ ☐

Mapping of environmental issues along the Albanian coast

Study case: Vlora, Durrës and Lezha districts

WFD

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