

**Outline Strategy for the
integrated management of the Romanian
Coastal Zone**
Towards Implementation

EVD

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HASKONING NEDERLAND BV
COASTAL & RIVERS

Barbarossastraat 35
P.O. Box 151
Nijmegen 6500 AD
The Netherlands
+31 (0)24 328 42 84 Telephone
+ 31 (24) 3231 603 Fax
info@nijmegen.royalhaskoning.com E-mail
www.royalhaskoning.com Internet
Arnhem 09122561 CoC

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Drafted by	I. Demmers, E. Keupink, B. Popa, R. Timmer	
Checked by	R. Timmer	
Date/initials check
Approved by	H. Laboyrie	
Date/initials approval

CONTENTS

	Page
1 INTRODUCTION	3
1.1 Why Integrated Coastal Zone Management in Romania?	3
1.2 Accountability and position of this strategy document	4
1.3 How to read this document	5
2 RECOMMENDATIONS AND PRINCIPLES FOR INTEGRATED COASTAL ZONE MANAGEMENT	6
2.1 General recommendations for ICZM	6
2.2 Principles for ICZM	7
2.3 Romanian approach to ICZM	8
2.4 ICZM strategy development process as applied in Romania	10
2.5 Stakeholders	11
3 THE CURRENT STATE OF THE COASTAL ZONE	13
3.1 Introduction	13
3.1.1 General features of the Dobrogea region	13
3.1.2 The Romanian coastline	14
3.2 Demarcation of the coastal zone	15
3.3 Coastal erosion	20
3.3.1 Northern and southern sector	20
3.3.2 Tides, winds and waves	20
3.3.3 Sediment transport	21
3.4 Ecosystems	23
3.4.1 Terrestrial	23
3.4.2 Marine	25
3.5 Human activities	25
3.5.1 Human settlements	25
3.5.2 Agriculture and fisheries	26
3.5.3 Tourism	31
3.5.4 Trade and infrastructure	34
3.5.5 Industry	38
3.6 Crossing borders	39
3.6.1 Main threats in the coastal zone: a summary	39
4 VISION: WHAT SHOULD THE COASTAL ZONE LOOK LIKE IN 2020?	42
4.1 Vision for the Romanian coastal zone on a medium to long-term perspective	42
4.2 Sector development visions	43
4.2.1 Agriculture and fisheries	43
4.2.2 Tourism	43
4.2.3 Trade and infrastructure	43
4.2.4 Industry	43
5 STRATEGIC ISSUES: DIRECTIONS FOR DEVELOPMENT	44
5.1 Strengths and opportunities in sector developments	44
5.1.1 Agriculture and fisheries	44
5.1.2 Tourism	46

5.1.3	Trade and infrastructure	48
5.1.4	Industry	48
5.2	Weaknesses and threats in sector developments	49
5.2.1	Water management and environmental protection	49
5.2.2	Coastal erosion	49
5.2.3	Potential land-use conflicts	49
6	TYPES OF MEASURES TO TAKE AND INSTRUMENTS TO USE	50
6.1	Strategic measures	50
6.1.1	A cross-sector approach to planning and management; horizontal and vertical integration	50
6.2	Instruments	50
6.2.1	Management instruments	50
6.2.2	Legislative instruments	51
6.2.3	Technical instruments	54
6.2.4	Financial instruments	56
6.2.5	Public participation instruments	57
7	INSTITUTIONAL SET-UP AND LEGAL IMPLICATIONS	57
7.1	The need to define “who does what” and “on the basis of what mandate”	57
7.2	Management and co-ordination model for the Romanian Coastal Zone	59
7.2.1	National Committee for the Coastal Zone	62
7.2.2	Technical Secretariat	62
7.2.3	Working Groups	63
7.2.4	Other agencies involved	63
7.2.5	Public participation	64
7.3	Legal framework	65
7.3.1	Present legal framework	65
7.3.2	Recommendations for improvement	66

MAPS

- Map 3.1: The Romanian Coastal Zone (proposed demarcation)
- Map 3.2: Agriculture and fisheries in Dobrogea and the coastal zone
- Map 3.3: Tourism in Dobrogea and the coastal zone
- Map 3.4: European Corridor IV
- Map 3.5: Black Sea Pan European Transport Corridors
- Map 3.6: Ports, infrastructure and industry in Dobrogea and the coastal zone
- Map 3.7: Threats in the coastal zone

ANNEXES

- Annex 1 European Parliament and Council Recommendation concerning the implementation of Integrated Coastal Zone Management in Europe
- Annex 2 Strategy and steps taken for the demarcation of the coastal zone
- Annex 3 List of protected and strictly protected areas
- Annex 4 List of historical monuments and sites
- Annex 5 List of laws and regulations relevant for the coastal zone

TABLES

- Table 3.1 Demarcation of the Romanian coastal zone

Table 3.2	Facts and figures on agriculture in the Dobrogea region
Table 3.3	Facts and figures for the tourism sector
Table 3.4	Facts and figures for trade and infrastructure
Table 3.5	Facts and figures for industry

FIGURES

Figure 2.1	Strategy preparation process
Figure 2.2	Members of the ICZM Working Group
Figure 2.3	Information feeding into the strategy process
Figure 3.1	Romania insularity and vulnerability index in comparison with other EU countries
Figure 3.2	Main threats in the coastal zone
Figure 8.1	Institutional framework for ICZM in Romania

LIST OF ABBREVIATIONS AND DEFINITIONS

ARCGIS	ARCGIS Geographical Information System (ESRI)
Baseline	The straight line between the most (seaward) advanced points of the shore; including those of the islands, hydro-technical works and other permanent (port) installations
BSC	Black Sea Commission
CBA	Cost Benefit Analysis
CC	Chamber of Commerce
CCC	County Council Constanta ("Consiliul Judetean Constanta")
CCT	County Council Tulcea ("Consiliul Judetean Tulcea")
CEA	Cost Effectiveness Analysis
CHC	City Hall of Constanta ("Primaria Municipiului Constanta")
DADL	Directia Apelor Dobrogea Litoral (Dobrogea Littoral Romanian Waters)
DDBR	Danube Delta Biosphere Reserve
DDBRA	Danube Delta Biosphere Reserve Administration
DDNRI	Danube Delta National Research Institute
DEM	Digital Elevation Model
DRPC	Danube River Protection Convention
E.O.	Emergency Ordinance
EEZ	Exclusive Economic Zone
EU	European Union
EU Recommendation	European Parliament an Council Recommendation concerning the implementation of Integrated Coastal Zone Management in Europe (30 May 2002)
EPA	Environmental Protection Agency
GEOECOMAR	
GD	Government Decision
GIS	Geographical Information System
ICM	Integrated Coastal Management
ICZM	Integrated Coastal Zone Management
ICZM WG	Integrated Coastal Zone Management Working Group
INCD	Danube Delta Research Institute
ICPDR	International Commission for the Protection of the Danube River
Km	Kilometre
M	Meter
MAFRD	Ministry of Agriculture, Forest and Rural Development
MAI	Ministry of Administration and Interior
MCD	Ministry of Culture and Denominations
MCIT	Ministry of Communications and Information Technology
MEC	Ministry of Economy and Commerce
MEI	Ministry of European Integration
MERY	Ministry of Education, Research and Youth
MEWM	Ministry of Environment and Water Management
MFA	Ministry of Foreign Affairs
MH	Ministry of Health
MJ	Ministry of Justice
MLSSF	Ministry of Labour, Social Solidarity and Family
MND	Ministry of National Defence
+ MSL	+ Mean Sea Level
MOF	Ministry of Finance
MPF	Ministry of Public Finance
MPWTH	Ministry of Public Works, Transport and Housing

MTCT	Ministry of Transport, Constructions and Tourism
NAAR	National Administration “Apele Romane” (National Administration Romanian Waters)
NAPRPBS	National Action Plan for the Rehabilitation and Protection of the Black Sea
NC	National Committee for the coastal zone
NIMRD	National Institute for Marine Research and Development
NM	Nautical Mile
PPP	Public Private Partnership
RH	Royal Haskoning
RIKZ	National Institute for Coastal and Marine Management
RNA	Romanian Naval Authority
SAPRPBS	Strategic Action Plan for the Rehabilitation and Protection of the Black Sea
TF	Task Force
TS	Technical Secretariat
WFD	Water Framework Directive (2000/60/EC)
WG	Working Group

1 INTRODUCTION

1.1 Why Integrated Coastal Zone Management in Romania?

The invitation to Romania to start negotiations for accession to the European Union (EU) created a new perspective for enhancing harmonisation in economic development and care for the environment. Since 1999, the process of incorporating environmental protection measures into sector development policies accelerated as did the need to strengthen national and local institutional capacity to implement and enforce the provisions of the newly transposed legislation.

In addition to Romania's policy to adopt and implement the EU Water Framework Directive (WFD - 2000/60/EC) in water resources management, Romania also intends to comply with the "European Parliament and of the Council Recommendation concerning the implementation of Integrated Coastal Zone Management in Europe", issued on 30 May 2002 (hereinafter called "EU Recommendation"). The most important reasons are:

- the coastal zone of Romania will experience increasing pressures on natural resources and its rich and diverse, but vulnerable, terrestrial and marine ecosystems due to increasing human pressures (population increase, urbanization, growth in agriculture, fisheries, industry, trade and tourism, et cetera);
- the coastal area of Romania is, and increasing will serve as, one of the backbones of the national economy but at the same time is and will be characterized by stronger competition for land and marine resources and available space for the various stakeholders, which could increasingly result in conflicts and destruction of the functional integrity of the resource system.

As a consequence, a coastal management system needs to be put in place. A system of co-ordinated relationship among (1) people who live in and use the area, (2) policy makers and managers whose decisions and actions affect the behaviour of coastal people and the way coastal resources are being used, and (3) the scientific community who study the coastal area and are able to provide valuable data in various fields, needed for proper planning and implementation.

This document represents the "Outline Strategy for the Integrated Management of the Romanian Coastal Zone. It is an "outline strategy" because it is yet to become official government policy. In preparing the outline strategy, important guidelines were the "EU Recommendation", the WFD as well as international guidelines, recommendations and experience. The outline strategy takes into account the "Strategic Action Plan for the Rehabilitation and Protection of the Black Sea" (SAPRPBS) and its transposition into a "National Action Plan for the Rehabilitation and Protection of the Black Sea" (NAPRPBS). The strategy is also based on existing Romanian national and regional sector policies in the fields of agriculture, tourism, industry, infrastructure development, nature protection and fisheries. As regards existing Romanian legislation, much attention is given to the Emergency Ordinance on ICZM (E.O. 202/2002) and other relevant legislation in the fields of environmental protection, spatial, urban and land-use planning.

This document is prepared by the Consultant in close collaboration with the members of the Integrated Coastal Zone Management Working Group (ICZM WG). Other relevant stakeholders of the coastal zone were also involved. It is a draft policy paper and comprises an integrated long-term view and perspective for the sustainable

development of the Romanian coastal zone, including Romania's transitional and coastal waters. For the purpose of better management of the coastal zone, recommendations for the demarcation of the coastal zone are also presented (refer Chapter 3.2). To facilitate better planning and management, the coastal zone is proposed to stretch from the imaginary line of 1 Nautical Mile from the coastal base-line seaward and landward to the watershed boundary in the west. The coastal zone is divided into sub-zones. A detailed elaboration for the demarcation of the Romanian coastal zone is provided in chapter 3.2.

This document is characterized by integration at a strategic (policy) level of desired economic developments. By taking into account the environment, water resources management, spatial and land use planning and coastal defence through protection against coastal erosion, it aims at the sustainable development of terrestrial and marine resources and ecosystems, including the protection and sustainable development of the Danube Delta Biosphere Reserve. The strategy is a multi-sector, long-term policy document. It should function as a "policy agenda", a "reference framework", providing directions for the desired developments in the most important economic sectors of the coastal zone (agriculture, tourism, industry, infrastructure, [international] trade and fisheries), taking into account the need to protect the environment.

This outline strategy and needed follow-up steps resort under the responsibility of the Ministry of Environment and Water Management (MEWM) because this ministry bears the responsibility to:

- define policies in the fields of water and environmental protection at national level;
- prepare strategies as well as specific regulations for the development and harmonisation of development processes on the one hand and environmental protection on the other into the general framework of government policies, and;
- co-ordinate the implementation of government policies and strategies at lower levels of administration.

Also Law no. 202/2002, the Emergency Ordinance on integrated coastal zone management, prescribes that the national strategy for ICZM should be prepared and promoted by the "Central Public Authority for Environmental Protection and Water Management" in co-operation with relevant other central agencies and the "local public administration". Although the law does not state who should approve the National Strategy, it is envisioned that a transfer of the present "outline strategy" will be conducted by (key members) of the ICZM WG to the NC for the coastal zone (NC) as one of the 1st steps into the practice of future integrated coastal management.

1.2 Accountability and position of this strategy document

As stated above, this "outline strategy" is a (draft) multi-sector long-term policy document for the sustainable use and development of the Romanian coastal zone. It is a 'reference framework' containing principles, guidelines and directions for desired developments. It aims to assist, steer and guide regional and local level government agencies to translate and transpose the long term-strategy into medium-term policies and short-term programmes of measures (action plans, investment plans), each in their own field of jurisdiction, as laid down in existing laws and regulation. In doing so, regional and local government agencies (e.g. agriculture, tourism, trade, industry, fisheries, etc) should endeavour to define the measures needed to facilitate

development and protect the environment (water resources, natural resources, landscape, cultural heritage). Where the use of natural resources in development processes create adverse impacts for the environment, it should be done by defining adjusted, adaptive, integrated policies in close co-ordination and collaboration with relevant other agencies, using the means and instruments already available to them (planning, implementation, monitoring, control, enforcement, financing). All in all, it means that relevant elements of this long-term strategy should be translated into medium-term policies and short-term action plans by the relevant sector agencies in a co-ordinated and integrated manner.

The strategy's legal basis is laid down in the E.O. 202/2002, which stipulates the development of an integrated strategy for ICZM.

As explained above, this "outline strategy" is prepared in close co-operation with key stakeholders of the Romanian coastal zone. To that effect an ICZM WG was established on March 18th 2004 during a Basin Committee meeting of Directia Apelor Dobrogea Litoral (DADL), chaired by the Prefect of Constanta County and endorsed by the MEWM and the National Administration "Apele Romane" (NAAR).¹ Subsequently, during an open plan process, at various strategy consultation workshops, stakeholders have agreed on (1) the main issues and threats in the coastal zone, (2) a vision for the future, desired state of the coastal zone and have agreed on (3) the main strategic measures and instruments that need to be applied. Because during the open plan process it was felt by key stakeholders that residents, interest groups and opinion leaders would have to be consulted too, a broader consultation process amongst these stakeholders was also carried out.

The results of these consultation sessions have been further elaborated by the consultants and incorporated in an integrated manner. A 1st version of the strategy document was prepared and consulted with key decision makers at national, regional and local level. Feed-back received from these key decision makers have been incorporated in a final "Outline Strategy for the Romanian Coastal Zone".

Being an "outline strategy", and developed by an "ad hoc" body, the ICZM WG -assisted by Consultants- it will be necessary to convert this document, if deemed necessary with adaptations, into a legitimate policy document, a policy agenda, for the Romanian coastal zone. Before becoming official policy it should have been approved by official Romanian government bodies (NC, MEWM as the lead agency, the Romanian Government). Also, the planning aspects of this policy documents should ideally be integrated into national development planning efforts. Because this document also contains various recommendations e.g. regarding the delineation of the coastal zone, regarding the institutional set-up for ICZM and regarding legislative amendments, these recommendations have to be scrutinized, and if deemed appropriate, formally approved and transposed.

1.3 How to read this document

This document consists of 9 chapters. As regards the "outline strategy", the core chapters are Chapters 3 to 6, because these 4 Chapters together constitute the real substance of the outline strategy.

¹ For a list of members of the ICZM WG refer to Figure 2.2.

Chapter 1 and 2 are introductory chapters. Chapter 1 outlines the reasons why Romania has made a start with ICZM and sketches (1) the overall approach, contents and role of the strategy document as well as (2) the responsibilities of the main government institutions regarding the preparation and promotion of the national strategy. Chapter 2 outlines the general recommendations and principles on which ICZM should be based and the approach adopted in Romania.

Chapter 3 portrays the current state of the coastal zone in Romania. Besides a general description of the coastal area, it presents what the main issues and what the main threats are in the coastal zone. It is the “starting point” from where to proceed when preparing a strategy.

Chapter 4 describes the future, desired state of the coastal zone. This “vision” provides an answer to the question “what should the coastal zone look like in say 20 years from now?” This vision was developed in close collaboration with the stakeholders of the coastal zone (ICZM WG and other stakeholders). Chapter 5 indicates the directions for future desired developments. It does so, by indicating the strengths and opportunities in sector developments (the most important ones for the Romanian coastal zone, in order of priority: agriculture, tourism, trade and industry and fisheries) as well as describing the weaknesses and threats that need to be taken into account. These desired future directions for economic development are dependent on the rational use of natural resources in and beyond the coastal zone and as such depend to a large extent on the possibility for real economic growth. Economic development efforts should also be subjected, however, to careful considerations for a sustainable use of the coastal zone’s natural resources, implying that appropriate measures need to be taken to protect the environment and safeguard the use of resources against over-exploitation.

Chapter 6 explains what kind of measures need to be taken and what instruments to use. Except from specific recommendation regarding coastal protection measures, all other measures are defined at a strategic level. To be able to manage the Romanian coastal zone, a system for management is required. Chapter 6 therefore, paints the recommended institutional set-up and associated mechanisms to create the bodies needed to manage the coastal zone and ultimately be able to implement the required measures. Chapter 7 also recommends the required amendments regarding the existing Emergency Ordinance on Coastal Zone Management, based on recommended institutional structuring and associated tasks and responsibilities. And finally, Chapters 8 and 9 provide an overview of the choices and dilemma’s that might arise during the process of implementation (Chapter 8) as well as the recommended exit strategy (Chapter 9).

2 RECOMMENDATIONS AND PRINCIPLES FOR INTEGRATED COASTAL ZONE MANAGEMENT

2.1 General recommendations for ICZM

The “European Parliament and of the Council Recommendation concerning the implementation of integrated coastal zone management in Europe” from 30 May 2002 (also refer to Annex 1) recommends in particular that:

- it is essential to implement an environmentally sustainable, economically equitable, socially responsible and culturally sensitive management of the coastal zone, which maintains the integrity of this important resource while

considering local traditional activities and customs that do not present a threat to sensitive natural areas and to the maintenance-status of the wild species of the coastal fauna and flora;

- integrated management of the coastal zone requires strategic, co-ordinated and concerted action at the local and regional level, guided and supported by an appropriate framework at the national level;
- integrated coastal zone management involves multiple factors among which town and country planning and land-use are only accessorially concerned.

2.2 Principles for ICZM

Principles to be followed by member states for ICZM should be based on:

- a broad and overall perspective (thematic and geographic) taking into account the interdependence and disparity of natural systems and human activities with an impact on coastal areas;
- a long-term perspective which takes into account the precautionary principle and the needs of present and future generations;
- an adaptive management during a gradual process which facilitates adjustment as problems and knowledge develop. This implies the need for a sound scientific basis concerning the evolution of the coastal zone;
- local specificity and the great diversity of European coastal zones making it possible to respond to their practical needs with specific solutions and flexible measures;
- working with natural processes and respecting the carrying capacity of ecosystems making human activities more environmentally friendly, socially responsible and economically sound in the long run;
- involving all parties concerned (economic and social partners, organisations representing coastal zone residents, business sector) in the management process, for example by means of agreements and based on shared responsibility;
- support and involvement of relevant administrative bodies at national, regional and local level between which appropriate links should be established or maintained with the aim of improved co-ordination of the various existing policies. Partnerships with and between regional and local authorities should apply when appropriate;
- the use of a combination of instruments designed to facilitate coherence between sector policy objectives and coherence between planning and management.

Europe's coastal zones are potentially vulnerable areas. With about 20 percent of Europe's population living in or near the coast line, coastal zones provide space for (large) urban settlements, harbours and industrial areas, agriculture, physical infrastructure, natural and fisheries areas and last but not least intensive tourism areas. In combination with climatic changes and corresponding sea level rise, Europe's coastal zones are increasingly threatened.

The concept of Integrated Coastal (Zone) Management was developed from the mid 1980s in an effort to cope with less sustainable developments of large parts of Europe's coastal zones. From the experience gathered in coastal zone management in Europe as

well as worldwide², a variety of definitions for ICZM can be given, based on the same line of thought, as described below.

ICZM is a dynamic, continuous and interactive process designed to promote the sustainable management of coastal zones

ICZM is a continuous, interactive, adaptive, participatory and consensus-building process comprised of a set of related tasks, all of which must be carried out to achieve a desired set of goals and objectives, however these goals and objectives are specified

“Integrated coastal management can be defined as a continuous and dynamic process by which decisions are taken for the sustainable use, development and protection of coastal and marine areas and resources. ICM acknowledges the interrelationships that exist among coastal and ocean uses and the environments they potentially affect, and is designed to overcome the fragmentation inherent in the sectoral management approach. ICM is multi-purpose oriented, it analyses and addresses implications of development, conflicting uses, and interrelationships between physical processes and human activities, and it promotes linkages and harmonization among sectoral coastal and ocean activities”
(Cicin-Sain and Knecht, 1998)

2.3 Romanian approach to ICZM

In line with European recommendations, ICZM in Romania seeks, over the long-term, to balance the benefits from economic development and human uses of the coastal zone, the benefits from protecting, preserving, and restoring coastal zones, the benefits from minimizing loss of human life and property, and the benefits from public access to and enjoyment of the coastal zone, all within the limits set by natural dynamics and the carrying capacity.

ICZM should therefore:

1. Take a wide range perspective;
2. Build on an understanding of specific Romanian conditions;
3. Work with natural processes;
4. Ensure that decisions taken today do not foreclose options for the future;
5. Use participatory planning to develop consensus;
6. Ensure the support and involvement of all relevant administrative bodies;
7. Use a combination of (policy) instruments.

ICZM is also founded on the principle of taking decisions on the lowest appropriate level (subsidiarity principle). Where needed, these decisions should be guided and supported by national policies, plans and overall political considerations which are decided upon at higher levels.

In order to fully comply with the EU Recommendation on ICZM not only a strategy should be prepared on the basis of stakeholder participation, but also users, interest

² UD CSMP, IOC, UNEP/GPA, NOAA, World Bank (Global Forum on Oceans, Coasts and Islands).

groups and the private sector having a stake in the coastal zone are to be involved in decision making processes regarding future development and the protection of the coastal zone. It is envisaged that such an approach will strengthen a sustainable and integrated management of the coastal zone, amongst others through increased awareness and a feeling of joint ownership.

Implementing a participatory approach in ICZM entails quite a bit, also in Romania. First, Romania started to prepare and formulate an “outline strategy” in close co-operation with all relevant stakeholders, and supported and guided where necessary by higher levels of government. Second, higher administrative levels should integrate this strategy into their nation-wide policies and support, facilitate, guide and steer follow-up action. Third, real implementation should be undertaken at the lowest appropriate level implying that the strategy for the coastal zone should be translated and transposed by existing regional and local administrations into tangible, integrated action plans. It is in line with this approach, that the “outline strategy” presented in this document needs to become official policy first, that a certain degree of institutional and legislative reform should be realised and that further implementation is mainly executed by lower levels of administration.

The basis for the participatory approach is in accordance with the Romania principles founded in legislation regarding access to information and participation in decision making. The right of access to information is a constitutional right in Romania³. The Laws on Coastal Zone Management and Environmental Protection⁴, which establish the general framework for policy, provide a specific right of access to information on the quality of the environment. The Law on Environmental Protection also stipulates (art. 5, paragraph C) the right of the public and Non Governmental Organisations (NGOs) to be consulted in decision-making concerning the development of environmental policies, environmental legislation and regulations and the issuing of environmental licenses and permits (territorial and urban planning included). The definition of environmental information is very broad and aims at offering every individual the means to know whether that person’s right to a healthy environment is being respected. Romania also ratified⁵ the Convention on “Access to Information, Public Participation in Decision Making” and “Access to Justice in Environment Matters”⁶. The Convention establishes concrete modalities for public participation and conditions for public debate in environmental decision making processes. This includes planning and programming, policy and strategy formulation and execution of special projects⁷. In this light, a participatory approach to ICZM in Romania is well founded in laws and international agreements. Moreover, it should be considered obligatory.

As mentioned in Chapter 1, the European WFD is used as a guiding principle in formulating this strategy. Integrated water resources management is considered an important component of ICZM. In the light of this strategy, the WFD is integrated in sector development objectives e.g. in agricultural and industrial development as well as in nature conservation. Regarding the demarcation of the coastal zone an optimal integration is facilitated between water management and coastal zone management by

³ Art. 31.1 of the Romanian Constitution (1991)

⁴ Emergency Ordinance 202/2002 and Law No.137/1995

⁵ Law No. 86/2000.

⁶ Signed at Aarhus, Denmark, 1998

⁷ Country Profile regarding Agenda 21, United Nations, 2002

using as the landward boundary the watershed and identifying a management zone that includes the land-water interface. To facilitate water quality management of ground, surface and coastal waters, a high importance is placed on the instruments of spatial and land use planning.

2.4 ICZM strategy development process as applied in Romania

In Romania, strategy preparation was given shape in 2004. First of all, an “ad hoc” Integrated Coastal Zone Management Working Group (ICZM WG) was established during a Basin Committee Meeting of DADL on March 18th 2004. This ICZM WG consisted of 18 representatives of governmental and non-governmental key stakeholders from various levels of administration in Romania.

Assisted by Consultants, a process of ICZM strategy development was followed consisting of four main steps. Three of these steps consisted of strategy consultation workshops, in which the ICZM WG participated. In the last step, extensive consultations were carried out in order to collect opinions and test whether the strategy should be altered or adjusted. The process is portrayed in figure 2.1 below.

Figure 2.1 ICZM strategy preparation process in Romania



Step 1

The first step in the process of strategy development for ICZM was the description of the current state of the coastal zone and the identification of the main issues. Information was gathered through studies, analysis, expert judgement and consultations. The ICZM WG was consulted in a workshop and decided upon the main issues and threats in the coastal zone. The summarised results of this first step are described in chapter 3 of this strategy document.

Step 2

Based on the results of step 1 and fed by different national, regional and sector policy documents and integrated policy goals; statements on the following issues were developed:

- The desired future state of the coastal zone in 20 years from now,
- The 'looks' of the future coastal zone
- Development goals for the coastal zone

These statements added up to elements for the "Vision for the Romanian Coastal Zone". The ICZM WG actively participated and decided on these "elements" and "overall vision". The "Vision for the Romanian Coastal Zone" is described in chapter 4.

Step 3

Step 3 consisted of the identification of the main strategic issues to be taken to be able to achieve the long-term, multi-sector goals of ICZM and the identification of the needed measures and institutional arrangements to successfully implement the ICZM strategy.

Step 4 implied bilateral consultations of a first version of the strategy document with members of the ICZM WG and key decision makers. The results from the consultations provoked alterations and/or adjustments which after incorporation resulted in a "draft" or "outline strategy document".

Follow-up steps

This strategy document also describes measures that need to be taken and instruments to be used for actual implementation. These are explained Chapter 6. Implementation of the outline strategy only follows after approval of the "outline strategy" and conversion into formal policy, institutionalisation of a management structure and to some extent adjustments in existing ICZM legislation (Chapter 7). A number of issues remain to be resolved, for which follow-up steps need to be taken, before actual implementation can really take place. The latter are described in Chapter 9.

2.5 Stakeholders

During a bottom-up participatory session, stakeholders were selected who would participate closely with the Consultants in the development of this outline strategy for integrated management of the Romanian coastal zone. Selection took place at the Basin Committee meeting of DADL on March 18th 2004, chaired by the Prefect of Constanta County.

Formally, decision makers in integrated coastal zone management are defined by the Emergency Ordinance on Integrated Coastal Zone Management (E.O. no. 202/2002). They are the members of the National Committee (NC) for coastal zone management. In March 2004, the NC was however not yet formally established by a Government Decision and not yet operational. Therefore, a temporary ICZM WG was established to be able to proceed.

Based on the recommendations and principles in coastal zone management, several of which indicate the important role of local and regional stakeholders in implementation as well as preparation, an important representation of regional and local stakeholders was realised.

Figure 2.2 Members of the ICZM Working Group (Basin Committee Meeting DADL, March 18th 2004)

ICZM Working Group members

- Prefect of County of Constanta (Chairman)
- Prefect of County of Tulcea / Chairman County Council Tulcea (Vice-Chairman)
- Director of DADL (Secretary)

And representatives from:

- Ministry of Environment and Water Management
- National Administration "Apele Romane"
- Directia Apelor Dobrogea Litoral
- County Council of Constanta
- County Council of Tulcea
- GEOECOMAR
- NIMRD
- Danube Delta Institute
- Danube Delta Reserve Administration
- Environmental Agency Constanta
- Environmental Agency Tulcea
- Port Administration (Ministry of Transport)
- Chamber of Commerce Constanta
- Chamber of Commerce Tulcea
- Mare Nostrum (NGO)

Its composition, role and tasks was discussed and decided upon during the Basin Committee of DADL, and after a slight modification, approved by the MEWM and NAAR. In a certain sense the ICZM WG acted as the predecessor of the NC.

During the process of strategy preparation, a number of other governmental stakeholders have been involved in several workshop sessions. Also, in close co-operation with the Chamber of Commerce Constanta and Mare Nostrum a wider group of stakeholders was informed by distributing information leaflets and consulted through interviews and focus group meetings. Finally, the general public was informed of the strategy preparation process through press releases and television interviews.

Other stakeholders informed and consulted were:

- Local Councils of coastal zone cities and villages
- County Departments of Agriculture, Tourism, Transport, Construction and Tourism
- Constanta and Tulcea Territorial Planning Departments
- Inhabitants of coastal cities and villages
- (Representatives of) fishers and farmers
- (Representatives of) the business community
- (Representatives of) the tourism sector
- (Representatives of) industry and SME
- Other NGOs.

The strategy development process is a matter for all stakeholders to be involved in at strategic level. Stakeholders have to jointly prepare a strategy for the coast and –also at later phases when updates are needed- be consulted. They must agree on main problems and issues, on the main objectives to be achieved and on the directions in which solution need to be sought to realise desired goals and objectives. This process as pursued in Romania is portrayed in Figure 2.3 below.

Figure 2.3 Information feeding into the strategy preparation process



In addition to public participation in strategy development, routine involvement of stakeholders is required in implementation phases too.

In subsequent phases, programmes of measures have to be formulated derived from the overall strategy. Key stakeholders, mainly existing regional and local government agencies, thus have to translate or transpose the strategy, being a long term, multi-sector policy for the coastal zone into medium-term policies and short-term programmes of measures – in line with their area of jurisdiction. In this way, the strategy functions as an overall reference framework, a policy agenda.

3 THE CURRENT STATE OF THE COASTAL ZONE

3.1 Introduction

Romania is located in south-eastern Europe at the lower reaches of the Danube river. The Romanian coast, 244 km long and situated in the south-eastern part of the country, stretches from Ukraine in the north to Bulgaria in the south. The Romanian coastal zone, bordering the Black Sea, is entirely sited in the Dobrogea region, the latter covering an area of 15,485 sq km, some 6.5 % of the entire Romanian territory.

3.1.1 General features of the Dobrogea region

The Dobrogea region is located in the south-eastern part of Romania. Historically speaking, it is one of the oldest 'provinces' of Romania since, as far back as the 7th century BC, Greeks and Romans founded the 1st colonies along the coast like Histria, Tomis (now Constanta) and Callatis. The Dobrogea region is mainly a land of hills.

Physiographical the region can be subdivided into 3 sub-units. North Dobrogea showing the highest altitudes (up to 180 - 467 m) in the north with prevailing Paleozoic and

Mesozoic soil formations and including a large delta area and lagoon system in the east. Central Dobrogea, with decreasing altitudes from the north to the south ($\pm 300 - 0$ m) with prevailing green schist soil formations. And finally, South Dobrogea mainly consisting of a plateau (100 – 200 m) where Sarmatian limestone is covered by loess.

Four relief steps are characteristic for the whole of Dobrogea (400-300m; 300-200m; 200-100m and 100-0m). All these relief steps are found in North Dobrogea and partially in Central Dobrogea. In South Dobrogea relief steps of 200-100m and 100-0m are typical. For the whole Dobrogea region the relief step 100-0m is predominant (about 60 percent).

Climate of the Dobrogea region is primarily temperate continental while at the coastal zone a strong Mediterranean influence can be discerned. Winds are for the most part westerly, but in the Dobrogea Littoral zone winds show a high inconsistency both in direction and speed, and are generally weak. Storms are rare. Annual mean temperature varies around 11 degrees Celsius while precipitation in the coastal area is generally low (from ± 400 mm to 600 mm annually) also because descending air is dispersing clouds from surrounding areas and because air masses are moving seawards, causing loss of moisture and humidity.

As regards its natural resources and economic importance, Dobrogea avails of significant mineral, vegetable, animal and tourist resources. Especially after the 1950s, the land has supported extensive areas for agricultural production and experienced increasing mineral and industrial productivity (since 1965). Lately quite some mines have been closed due to the fact that they are outmoded and often a threat to the environment. Dobrogea possesses a large harbour, improved transport and communication infrastructure and remains to be one of the main tourist destinations for Romanians.

From an administration point of view, Dobrogea is subdivided into 2 regional administrative units, Tulcea County in the north (8,430 sq km) and Constanta County in the south (7,055 sq km). County administrations are subdivided into local administrative units (municipalities, towns and rural settlements).

3.1.2 The Romanian coastline

The Romanian coastline has usually been subdivided into 2 main geo-morphological zones. The northern zone (almost 164 km in length) extending from the Bay of Musara to Cape Midia, including the Danube Delta Biosphere Reserve and lagoon complex Razim-Sinoe, is characterised by sandy beaches, low altitudes and gentle submarine slopes. The southern zone (80 km) between Cape Midia and Vama Veche is predominantly covered by limestone cliffs of differing heights, varying from 3 m to 35 m, short stretches of sandy beaches at river mouths and harbours (Midia, Constanta, Mangalia) and steeper submarine slopes than in the northern zone.

The northern part of Dobrogea (Tulcea County) is strongly dominated by its location alongside the lower reaches and delta area of the Danube river and its proximity to the Black Sea, resulting in a huge environmentally protected delta area with transitional and coastal waters. In the southern part (Constanta County) economic activities are concentrated and largely related to the vicinity to the sea. Constanta, the country's 2nd biggest city, not only harbours the country's biggest port it also is the focal point of

Romania's seaside tourist area, stretching from Vama Veche in the south to Navodari north of Constanta town.

This chapter describes the current situation of the coastal zone. Firstly recommendations for the delineation or demarcation of the coastal zone are presented, where after an overview of the prevailing ecosystems and human activities will be presented.

3.2 Demarcation of the coastal zone

One of the first questions in ICZM is how far inland and how far offshore the coastal zone should extend. Although not defined as such officially, for research and planning purposes, European coastal zones are comprised of a 12 NM territorial sea and a 10 km wide land belt to include most of the large coastal cities.

The 'coast' is where land and sea meet. If this line of meeting did not move it would simply be a line on the map or on a satellite image. But, natural processes that shape the coast are highly dynamic, varying in space and time. Thus the line that joins the land and sea is constantly moving. These movements can be caused by the rise and fall of tides, storm surge, erosion (e.g. at Eforie Nord and Eforie Sud) and accretion processes (e.g. in the Danube Delta). It creates a region of interaction between land and sea, a band rather than a line. So, if the coastal zone may be thought of as the area that shows the interface between land and sea, a coastal area can be defined as

the band of dry land, adjacent ocean space (water and submerged land), in which terrestrial processes and land uses directly affect oceanic processes and uses and visa versa (Ketchum, 1972)

or as:

the coastal zone is viewed in its entirety as a special geographic area wherein its productive and natural defense functions are intimately linked with the physical and socioeconomic conditions far beyond its physical boundary" (Chua, 1993)

As documented for a range of countries in reference books⁸ there is a great diversity among nations in the kind of boundaries they have established for their coastal management objectives.

These include:

Landward boundaries	Seaward boundaries
Up to 100 m	Mean low tide or mean high tide
100 – 500 m	Arbitrary offshore distance from tidal mark
500 m to 1 km	3 NM territorial sea boundary
1 – 10 km	12 NM territorial sea boundary
Extent of local government jurisdiction	Limit of national jurisdiction / 200 NM EEZ or fisheries zone

⁸ Refer to Annex 1.

Landward boundaries	Seaward boundaries
Watershed	Edge of continental shelf
Variable according to use	Variable according to use

The region that is being referred to in national and international policy documents as “coast”, “coastal area” or “coastal zone”, can be characterised and demarcated using a range of definitions and criteria, e.g.

Possible approaches to demarcate “coastal zones”	
Physiographical	Social
Geological	Environmental
Hydrological	Cultural
Ecological	Administrative
Economical	Legal

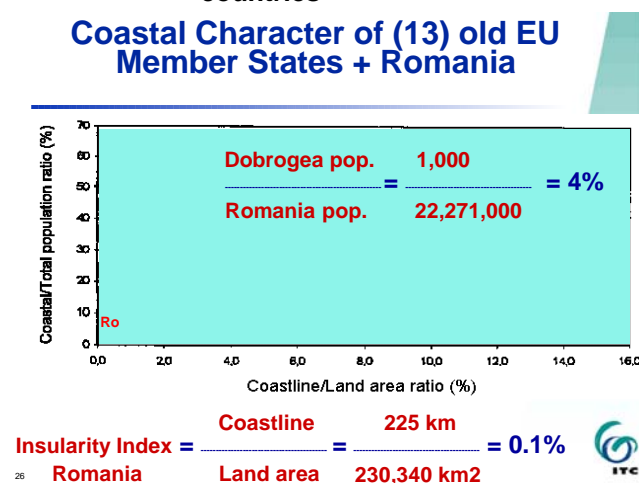
‘Coastal zones’ can therefore be defined in many ways. In practice the size of the ‘coastal zone’ may vary from a narrowly defined ‘coastal strip’ (limited to the land-sea interface) to a zone stretching land inwards (for a few hundreds meters to several kilometres) and extending seawards using any demarcation line within the limits of a nation’s jurisdiction in the off-shore. At policy level the limits of coastal zones have been defined in 4 possible ways, e.g.

1. fixed distance definitions;
2. variable distance definitions;
3. definition according to use;
4. hybrid definitions.

The Romanian coastal zone

In comparison to the country’s total surface area (insularity index= 0.1%) as well as measured by the proportion of the population living in coastal municipalities as a percentage of the national population (vulnerability index=4%), the character of the Romanian coast in comparison to other EU member states is portrayed in Figure 3.1 below.

Figure 3.1 Romania (insularity and vulnerability index) in comparison to other EU countries



In comparison to many other EU countries Romania has a short coastline (254 km). Nevertheless, given its economic importance (mainly agriculture, horticulture, industry, trade and tourism), given its vast protected natural habitats (DDBR, lakes and lagoons) and given its geographical position as a main transport corridor (roads, rail and inland water ways) on the eastern border of Europe, the coastal zone is an important area for Romania.

The way to delineate the Romanian coastal zone could best be determined on the basis of (a) planning and management criteria on the one hand, on (b) existing legislation and on the basis of (c) the natural conditions of the Romanian coastal area. Especially given the importance the Romanian government and the EU attach on water management objectives (derived from the WFD) as well as on objectives for ICZM (derived from EU Recommendation), a demarcation approach should be applied to facilitate and accommodate for all objectives above and resulting in the choice for a hybrid definition.

Although required by law, Romania's coastal zone has not yet been formally established. The law (E.O. 202/2002) stipulates:

- “to establish the coastal zone and the required measures to ensure its integrity” (Art 2, a),

and mentions a number of considerations regarding its demarcation, such as:

- “in order to delineate the coastal zone and define the measures for environment protection in the area. The central public authority for environment protection and water management together with the central public authority for agriculture, food and forests, in consultation with local public administration authorities and the General Staff of Naval Forces, will classify the coastal zone in functional zones, based on homogenous criteria for land planning and management.” (Art 9, 6) and:
- “The delineation of the coastal zone will be done according to land planning and spatial development, being the responsibility of local public authorities.” (Art 9, 7).

The strategy process to come to acceptable landward and seaward boundaries of the Romanian coastal zone, including a sub-zoning of that coastal zone, consisted of the following analytical steps:

1. *List* and compare existing definitions in Romanian legislation, and international agreements;
2. *Plot* in 4 W-E cross-sections perpendicular to coastline:
 - geographic extent of relevant laws and regulations
 - quantitative hydro-morphological zoning;
3. *Analyze* GIS-dbase and RS image data at DADL;
4. *Define* coastal zone model with 4 sub-zones;
5. *Construct* zoning map, using existing and reproducible boundaries from GIS-dbase;
6. *Evaluate* validity of zoning map;
7. *Finalize and distribute* coastal zoning map.

This strategy is in accordance with (a) the ‘Emergency Ordinance concerning ICZM’ and (b) international agreements. It also supports the main objectives of integrated water resources management as laid down in (c) ‘the Water Framework Directive’ (for a full description of the strategy and applied steps refer to Annex 2).

Summarizing, the applied strategy and applied steps results in a demarcation of the Romanian coastal zone (including sub-zoning) as explained in Table 3.1 and portrayed in Map 3.1.

For the delimitation of the Romanian Coastal Zone; a hybrid definition of the coastal zone is applied, realizing optimal water management and ICZM and facilitating the utilization of spatial and land use planning instruments. At the same time, existing legal provisions in the “definition” of the coastal zone can be adhered to.

Table 3.1 Demarcation of the Romanian coastal zone

Demarcation of the coastal zone in Romania				
Zone:	Inland boundary	Seaward boundary:	Includes:	Pressures//impacts
Upland Impact zone	Watershed	50 m +MSL	Dobrogea hills (recharge area)	Human settlements, deforestation // groundwater pollution, soil erosion
Planning Zone	50 m +MSL	50 – 150 m (coastal strip)	Coastal plain, lakes, lagoons, DDBR	Agriculture, irrigation, industry, waste water, transport, tourism // soil-water-atmosphere pollution, dehydration-ecosystem damage
Management Zone	50 - 150 m ⁹ (coastal strip)	1 NM seaward from baseline	Near shore zone (land and waters), beaches, infrastructure	Population density, waterfront development, ports and marinas construction, groundwater over-harvesting // erosion-accretion, dehydration, environmental degradation
Black Sea Impact Zone	1 NM line	12 NM line	Territorial waters	Water pollution, over-harvesting, ferries-shipping lanes // over-harvesting, ecosystem damage, biodiversity loss

The zones as identified in Table 3.1 regarding the demarcation of the coastal zone are subject to different policies and regulations.

Within the Management Zone, at the land-water interface, a coastal strip having a width of 100 – 300m measured from the most advanced sea line and depending on (a) local natural and (b) physical and infrastructure conditions, should be applied with a rather strict regime as regards the various forms of human uses and the needed protection against the adverse effects of these human uses.

⁹ Variable distance definition 50 – 150 m depending on natural conditions, urbanization and waterfront development in tourist areas (encroachment of built-up areas too close to shoreline).

- ☒ Small settlements

- ☒ Major cities

- ☒ Shoreline (N)

- ☒ Shoreline (S)

- ☒ Danube Delta Reserve boundary

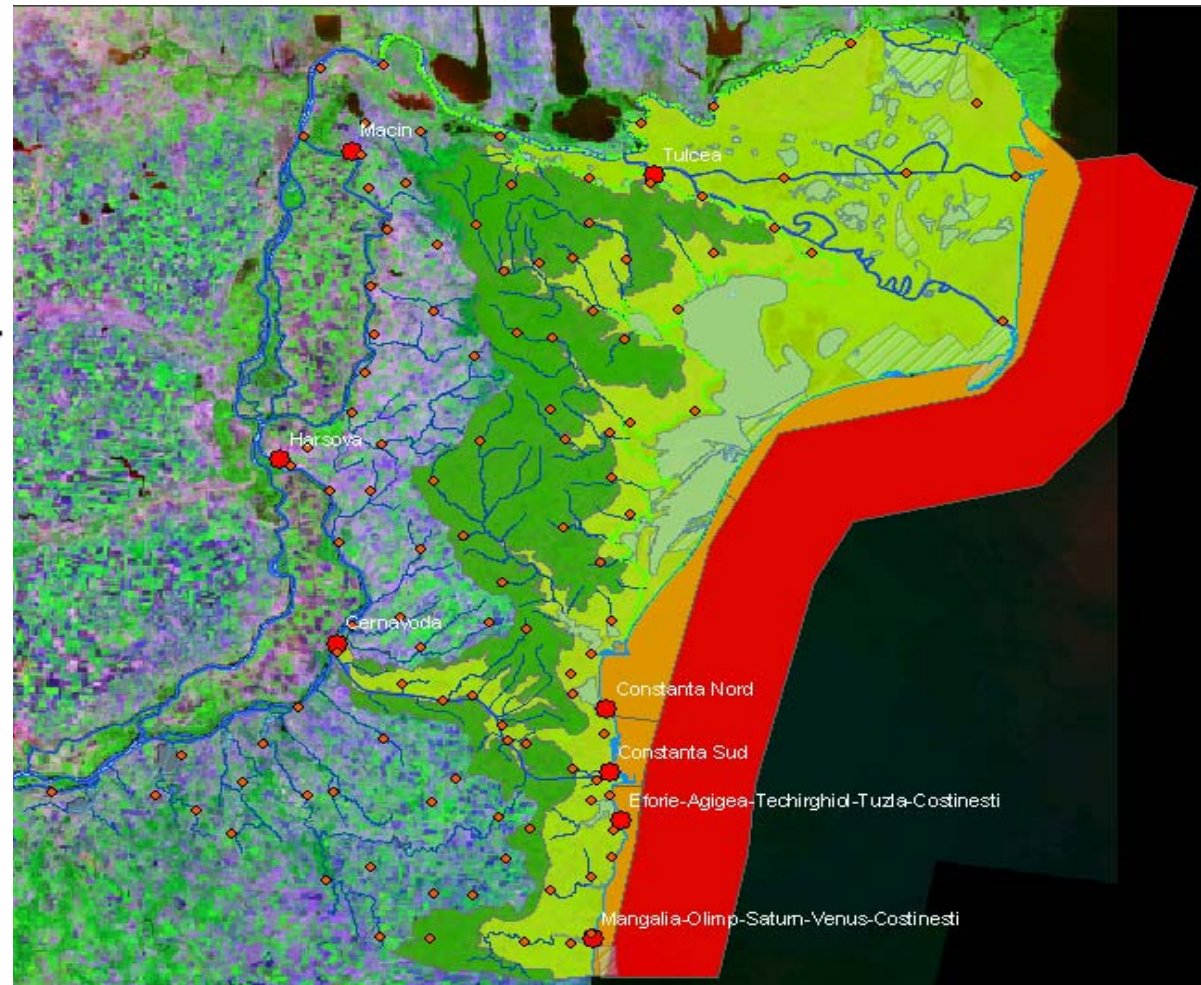
- ☒ Lakes

- ☒ Rivers

- ☒ Danube river

- ☒ Strictly protected areas

- ☒ Coastal_zone_management
Name
 -  Impact zone
 -  Planning zone
 -  Management zone
 -  Buffer zone
- ☒ landsat247TM1990.sid



3.3 Coastal erosion

3.3.1 Northern and southern sector

The length of the Romanian coastline is 244 km, representing 7.65 % of the Romanian border length. Generally, the Romanian coastline can be split into 2 main sectors: a northern and a southern one. Singol Cape, located between Mamaia and Constanta, represents the point that divides both areas. Some papers refer to Cape Midia as being a split; however, they are located quite close to each other.

North of Singol Cape, comprising the entire Danube Delta, the beaches are exclusively sandy and the foreshores are generally gently sloped. Some sub sea sandbars, originating from the Sacalin sand spit south of Sfintul Gheorghe and running more or less parallel to the coastline in southern direction, have been observed during survey campaigns. Terrigenous sand, brought in by the Danube, is predominantly found in this northern section: up to 87% on the beaches and up to 95% in the near shore zone. The sand is of mineral origin, fine and grey coloured.

South of Singol Cape the beaches are generally rocky with limited surficial sand layers. Cliffs are alternating with sandbars at those locations where inland lakes do exist: at the location of these spits generally a reasonable sandy beach is present. The foreshore shows significantly steeper slopes, emphasising the rocky submarine platforms. In the southern zone mainly organogenous (from shells) and calcareous sands are found: up to 98% on the beaches and up to 80% in the near shore zone. The sand is coarser than in the northern area and is yellowish coloured. The calcareous sands originate from the cliff erosion, whilst the *Mytilus* shells are the sources for the organogenous sands. Limestone fragments and pebbles, originating from deteriorated and damaged coastal structures, can also be found on the beaches.

3.3.2 Tides, winds and waves

Tides

Along the Black Sea coastline there is hardly tide. During spring-tides, water level differences do not exceed about 0.11m. However, apart of these low amplitudes of Black Sea tides, large alterations of sea levels are produced (more than 1 m amplitude) as result of storms. At the same time, it is mentioned that, besides the alterations of level caused by local winds, Romanian coastline faces with seiches that exceed 1.8 m near the mouth of the Danube.

Winds

The wind climate is quite inconsistent, both in direction and speed, and no regular winds are being prevalent. The speeds are generally weak and moderate; storms are rare. Analyses of data from 1971 to 1994 showed the predominance of the westerly winds, representing 18.7% of the total. Easterly winds have the lowest frequency, viz. 7.1%

The westerly winds are predominant during six months (November to January and July to September), and are on the second place for another four months. The

second period, when the westerly winds are prevailing, is due to the warm season breezes from inland. In spring (April to June), the southerly winds have the highest frequency. The northerly winds predominate in February and October, and the north-east ones in March. Nevertheless, the northerly winds (from north-west to north-east) represent 40.3% of the annual total, as compared with 33.8% for the southerly winds. Highest wind speeds originate from the north and north-east. These storms (wind speed exceeds 10 m/s) occur monthly and last between one and seven days, their speed exceeding 30 m/s. Overlooking a year, both the mean speeds of the winds as well as the calm periods present a remarkably cyclical pattern. Long-term medium wind speeds have a maximum in February and a minimum in July. During August, the wind climate is calmest and in February and December the wind climate is most adverse.

Waves

As a consequence of the considerable fluctuation of the wind patterns, the characteristics of the wave fields in the Romanian littoral area are significantly irregular and have many inter-yearly differences.

Monthly averages of the calm period (i.e. a wave height less than 0.2 m) as well as the ratio between cases with wind-driven waves (having a wave period of less than 5 seconds) and swell waves (having a wave period of more than 5 seconds) are cyclical. Maximum calm periods have been recorded during May (66.5% of the time) and minimum calm waves in February (52.5% of the time). The shore wind-generated waves vary among 20.3% in May and 39.4% in October, and the swell waves vary among 13.1% in June and 20.6% in November. The ratio between those two types of waves varies between 1.2 in November and 2.2 in October, indicating the fact that in November the storms generally take place offshore whilst in October they also affect the coastline significantly. The predominance of the northern winds has resulted in most of the wind-driven waves being propagated from the north-east. In reality, more than 90% of all the wind-driven and swell waves propagate from north-eastern directions towards south-eastern directions and shoal towards the coastline (towards westerly directions) in the near shore area in front of the beaches.

During the sea storms from the northern or southern sectors the waves' height often exceeds 5 m, up to 10 m, having average periods of 10 s. The waves having the probability of repetition once in 100 years (secular wave) reaches 14 m height.

Currents

The main current in the western part of the Black Sea is running from north to south, induced by the main winds from northern direction and the discharge from the debauching rivers of Danube, Dnyster and the Dnjeper. The speed of the currents is 0.03 – 0.30 m/ sec in general, but during the storms the average can be up to 0.6 to 1.0 m/sec.

3.3.3 Sediment transport

Following the predominant northern winds and consequential waves, and the very limited water currents, the sand transport is also dominantly running from North to

South. The annual quantity of row sediments transported along the coastline range to values of hundreds of thousands of cubic metres within the coastal strip between the coastline and the bathymetric contour that limits the area where the waves disturb the bottom sediments. In the northern area, where the shore and foreshore are exclusively sandy, the sediment transport is carried out parallel to the seashore in southern directions. Sandbanks parallel to the coastline are formed between the coastline and the bathymetric contour that limits the area where the waves disturb the bottom sediments, as result of broken waves. The coastal morphology regime depends on the row sediment balance on the shore influenced by longitudinal and transversal circulation.

Obviously, the sediment transport takes place very irregularly with the complex fluctuations of the duration, intensity and direction of the waves, as well as the seasonal supply of sand from the three branches of the Danube, viz. the Chilia Branch, the Sulina Channel and the St. Gheorghe River. Since early 1970's, the sand supplied by the Danube in the area of its sea-mouths was reduced by more than 30% due to damming of the Danube in 1971 at Iron Gate 1 (km 942), and the supply of sand by the Danube has been reduced from approximately 2,000 kg/sec down to 500 kg/sec. It is obvious that this had a negative impact on the sediment transport along the coastline and made the coastline more vulnerable for erosion.

The coastal jetties or breakwaters, especially those at Sulina, Navodari, Agigea and Mangalia, which are generally protruding quite far into the Black Sea, significantly disturb the alongshore sand transport process. Further, the development of the Sacalin sand spit just south of Sfintu Gheorghe also clogs the sand transport from the main Danube branches down to the remainder of the Romanian coastline. In the southern parts, where the cliffs, a large number of coastal structures and the rocky seabed foreshores are dominantly present, the sand transport is minimal due to the up drift presence of the Agigea breakwater. The local pocket beaches and the beaches along the sandbars are limited scale and some cross-shore seasonal transport takes place. The width of the beaches depends on the shore geology structure (rocks, high cliffs or lower formations). The southern sector is featured by rocky bottoms and has the narrowest beaches.

Running along the coastline from north to south, the coastal stretch has been subdivided into the following distinct coastal cells having more or less same features, viz.:

- Bay of Musura;
- Sulina to Sfintu Gheorghe;
- Sfintu Gheorghe to Gura Portitei;
- Gura Portitei to Midia Port;
- Midia Port to Constanta;
- Agigea to Eforie Sud;
- Eforie Sud to Costinesti;
- Costinesti to Venus;
- Venus to Saturn.

In general, the main part of the Romanian Black Sea coastline, especially at places where infrastructure is present, is suffering from moderate to severe coastal erosion. The coastline generally consists of sandy beaches north of Constanta. South of

Constanta Port (Agigea) there are cliffs with a limited amount of pocket- and spit-beaches.

The supply of sand to the Romanian coastline from the Danube Delta has diminished drastically during the last 3 decades, mainly due to:

- human interventions: (a) upstream dam-works in the Danube; (b) construction of jetties at Sulina, Midia and (c) the Agigea breakwater south of Constanta Port);
- natural sandpit creation (Sacalin) south of Sfintu Gheorghe.

This deficit of sand supply is the main cause of coastal erosion. A significant part of the deteriorating coastline, especially at Mamaia and the tourist resorts south of Constanta Port, is being used by the tourism industry in summer, for which the actual quality of the beaches is not fit for any further sustainable development.

3.4 Ecosystems

The coastal zone is “the band of dry land, adjacent to water and submerged land in which terrestrial processes and land uses directly affect oceanic processes and uses and visa versa”. It is also the border area where two different ecosystems meet and interact. It is a dynamic area, shaped in the first place by natural forces. But, human presence and human activities also affect the coastal environment. This combination of natural processes and human presence and activities makes the coast as how we see it.

3.4.1 Terrestrial

The Dobrogea region, administratively shaped by the 2 counties Tulcea and Constanta County, consists of a variety of terrestrial ecosystems.

Going from west to east, and after crossing the Danube river and its vast flood plain, the area gradually changes from a hilly landscape of agricultural plains covered with patches of natural vegetation, trees and grasslands, into a system of wetlands, marshes, lakes, lagoons and sandy beaches in the north-east, known as the Danube Delta. This delta covers an area of 4,178 km² and is shared by Romania (82%) and Ukraine (18%). The Danube Delta Biosphere Reserve (DDBR), a protected area, covers a territory of 5,800 km², 69% of which is sited Tulcea County. It consists of arable land, forests, wetlands, lakes, channels and marshes. The largest cities near to the DDBR are the capital city of Tulcea in the west, Babadag in the south and Sulina in the east.

Going from the north to south, one first finds the old Hercinic mountains and the Tulcea Hills. Inland, in the central and southern parts in Constanta County, agricultural lands extend to the Bulgarian border in the south and virtually to the shoreline in the south-east.

Along the shore, south of the Danube Delta one finds lakes and lagoons; know as the Razim-Sinoie system. North of the main city in the region, Constanta, the sandy beaches contribute to the strong image of mass-tourism along the coastal strip. Starting from Mamaia and continuing almost to the Bulgarian border, an almost continuous strip of resorts, hotels, restaurants and other tourist facilities dominated the coastal landscape. Here the coast line changes from sandy beaches to a cliff coast.

Beaches in the south consist of limestone cliffs covered with loess and pockets of sandy beaches.

Offshore, the sub marine zone in the section north of Singol Cape possesses reduced sandy slopes (in Tulcea County), while south of Singol Cape (in Constanta County) steeper rocky slopes are present. Beaches in the south consist of limestone cliffs covered with loess and pockets of sandy beaches.

Nature conservation

In 2001, the Romanian Network of Protected Areas included 827 sites, declared by Law 5/2000, in concordance with the rules of the International Union for Conservation of Nature (IUCN) and on the bases of studies approved by the Romanian Academy. The total surface of protected areas amounts to 1,234,710 ha, representing 5.18% of the national territory. From the Romanian Network of Protected Areas, the Danube Delta, characterized by a unique and high biological diversity, is one of the most important protected areas on earth. It has the following statutes:

- Biosphere Reserve by UNESCO;
- Wetland Area of International Importance, under the *Ramsar* Convention;
- Site of World Natural and Cultural Heritage.

The Danube Delta Biosphere Reserve (DDBR)

In August 1990, the entire Danube Delta (DD) and its adjacent geographical units were declared a biosphere reserve by a degree of the Romanian Government (983/1990). At the same time the Danube Delta Biosphere Reserve Administration (DDBRA) was established to manage the area and implement the measures required to ensure the conservation of the natural heritage and the sustainable development of the reserve. In September 1990, the DDBR was designated as a wetland of international importance under the Ramsar Convention and in December 1990 it was recognized by UNESCO and more than 60% of the area was included in the World Heritage List. The DDBRA prepares and implements its own management plans. The 1st one was drawn up in 1995 and revised in 2001 for the period 2002-2006. In 1996, the UNESCO MAB Program recognized the Cross Border Biosphere Reserve between Romania and Ukraine.

Constanta County comprises of 27 natural reserves, including 5,225 ha of water, 900 ha of forests and over 6,000 sand banks and dunes.

Romania signed the "Declaration on the Co-operation and Creation of the Lower Danube Green Corridor", together with Bulgaria, Moldova and Ukraine. Romania is also party in the agreement on the establishment and joint management of transboundary protected areas in the Danube Delta and the Lower Prut River, together with Moldova and Ukraine.

Protected areas in Romania	Surface in ha	%
Total surface of protected areas in Romania	1,234,608.12	100%
Scientific reserves, natural reserves, nature monuments	102,433.32	8%
Natural parks, Natural Parks, Biosphere Reserves	1,132,174.80	92%
Out of which		
Danube Delta Biosphere Reserve	580,000.00	47%
Other national and natural parks	552,174.80	45%

3.4.2 Marine

Romanian transitional and coastal waters characterised on the basis of salinity, temperature and depth and are subdivided into various sub-types of water. These are:

- Fluvial transitional waters;
- Marine transitional waters;
- Lacustrine transitional waters
- Sandy shallow waters, and
- Mixed shallow coastal waters.

Over the last decades, the Black Sea ecosystems underwent changes. From a qualitative point of view, the Romanian transitional and coastal waters are influenced by 2 major categories of pollution sources: (1) the Danube river, (2) human activities in the southern area of the littoral (industrial and municipal waste water, port activities, fishery). There are 5 main sources of point source pollution, 4 of which are municipal waste water treatment plants (Constanta Nord and Sud, Eforie Sud and Mangalia) and one industrial waste water treatment of Petromidia (Navodari). Over the last 25 years a substantial increase in nutrient load to the Black Sea has occurred, causing the north-western area of the Black Sea to become the most heavily eutrophic marine zone in the whole Mediterranean basin. During the last decade nutrient concentrations were reduced.

Parameter (μM)	1960 - 1970	1981 - 1990	2001
P- PO_4	0.34	5.91	0.66
N- NO_3	1.60	7.11	5.03
N- NO_2	-	0.74	0.85
Si- SiO_4	36.75	12.10	16.13
Organic matter ($\text{mg O}_2/\text{l}$)	1.96	2.46	2.66

The structure and the primary, secondary and tertiary biomass ratio changed, the migration of certain prey fishes from Marmara Sea waters diminished, while the populations of sturgeons and dolphins are no longer as numerous as they used to be.

Thus, the Black Sea in the area of the Romanian seaside is subject to a polluting process of which the primary sources of land-based pollution are of an urban and industrial nature, transported into the sea mainly through the Danube. Pollution sources are either direct discharge of used waters or of waters that were insufficiently treated or not treated at all, or by indirect disposition in ground and surface waters. The primary causes of sea-based pollution of the marine environment are shipping and harbour activities and off-shore oil exploitation. Other problems arise from beach erosion and over-fishing by some Black Sea riparian countries.

3.5 Human activities

3.5.1 Human settlements

Corresponding to their local administrative functions, human settlements in Dobrogea are either municipalities, towns or rural settlements. In Tulcea County there is only 1 municipality (the capital city of Tulcea), 4 towns (Babadag, Isaccea, Macin and Sulina) and 176 rural settlements. Constanta County, much more densely populated, hosts 3 municipalities (Constanta, Mangalia, Medgidia), 7 towns ((Cernavoda, Eforie, Basarabi, Hîrsova, Navodari, Negru Voda Ovidiu, Techirghiol) and 239 rural settlements.

Small and very small rural settlements are evenly spread over the region. They are often not connected to the main transport and communication networks. Populations vary from less than 100 to about 500. Medium sized settlements (500 – 1,000 inhabitants) are mostly located in the flat inland zones. The large to very large rural settlements, of which populations range from 1,000 to 4,000 people, are situated along the Danube, along the Tulcea – Medgidia railway and along the southern Black Sea coast.

Most rural settlements perform agricultural functions or -along the coast- exist on fisheries in combination with (eco-)tourism. While some middle-sized towns specialize in agriculture (Isaccea, Hîrsova) others developed a mixture of industry and agriculture (Macin, Babadag) or a mixture of industry and services (Medgidia, Mangalia, Cernovoda). Constanta -being the 2nd largest city of Romania- outweighs Tulcea by far as a full-fledged centre of administration, trade (port), services, manufacturing and tourism. The town of Navodari, along the coast and about 20 km north of Constanta, specialises in petrochemical industrial activities.

In terms of human occupation Tulcea county is characterised by a relatively low population density ($\pm \dots$) with larger urban settlements mainly located alongside the Danube river. In Constanta County population density is higher, with larger urban settlements located along the Cernavoda – Constanta infrastructure axis. Here trade, industry and urban development is consequently more pronounced and arriving at the edge of land and sea one finds vast areas used for tourism, recreation, trade and manufacturing.

The most important urban centres in the Dobrogea region are Constanta, Tulcea, Cernavoda, Medgidia, Eforie and Mangalia, with over 1.000.000 inhabitants in total. The major economic activities in these towns are industry (manufacturing, service industries, food processing), tourism (over 1 million persons/ year), trade, transport and processing, shipyards, fishing (about 3.000 tones/year) and off-shore oil exploitation.

The main economic sectors in the whole of the Dobrogea region as well as in the coastal zone are agriculture, tourism, trade and industry. These sectors are dealt with in the Chapters below.

3.5.2 Agriculture and fisheries

Agriculture

Approximately 80% of the surface area of Constanta County consists of agricultural land. In Tulcea County this is somewhat over 40%. About half of it is in fact arable land and less than half of these areas are irrigated (about 34%). Although over the last 2 decades or so agricultural production declined drastically, production is slowly increasing again. Expanded irrigation coverage, to boost agricultural production, is a key factor and a main development objective in the region. Agricultural reform and growth is a country-wide objective. Major crops grown in Dobrogea are maize, rye, wheat and sunflowers. To a lesser extent sugar beet and soy bean are cultivated. Animal husbandry is of a small scale, almost subsistence-level, nature. Natural pastures and hay fields represent some 8% of the region. Vineyards and fruit trees cover about 4% of the Dobrogea region, the former mainly in the littoral areas to produce wine and table grapes. The most important wine production centres are located in Ostrov and Murfatlar in Constanta County and in Niculitel in Tulcea County.

Agriculture is the only sector of the Romanian economy involving predominantly elderly people. In 1999, nearly 55% of the employed population in agriculture was aged over 50 years and close to 25% over 65 years. Only approximately 27% of the population employed in agriculture was younger than 35 years. The labour force under 40 years in agriculture would however be sufficient for a more optimal exploitation using modern equipment¹⁰. In terms of returns, research has shown that current yields are 2 to 3 times lower compared to developed countries, but are close to those obtained in the neighbouring countries.

Threats in the agricultural sector

Threats in agricultural development are (1) the risk of increasing unemployment due to mechanisation and automation, (2) the risk of increasing pollution as a result of the increasing use of chemicals in agricultural production methods (fertilizers, insecticides, pesticides) as well as (3) increasing demand for irrigation water leading to more severe water shortages.

Table 3.2 Facts and figures on agriculture in the Dobrogea region

Agriculture	Constanta	Tulcea	Total
Agricultural land	568.000 ha (80%)	361.000 ha (42.5%)	929.000 ha (60%)
	<ul style="list-style-type: none"> • Arable: 86% • Pastures: 11% • Vineyards: 3% • Fruits: 1% 	<ul style="list-style-type: none"> • Arable land: 80% • Pastures: 17% • Vineyards: 2,5% • Orchards: 0,5% 	<ul style="list-style-type: none"> • Arable land: 63% • Pasture: 33% • Vineyards + Orchards: 4%
Products	Grain, sunflowers, vegetables, vineyards, fruit	Livestock, grain, sunflowers, vineyards	
Irrigated land	20%	45%	
Rural population	25%		
Employment		37%	Romania: 41% (In rural areas: 70%)
Contribution to GDP			Romania: 12%
Policies and plans	National level: Increase of agricultural products by: <ul style="list-style-type: none"> ○ Mechanisation ○ Rehabilitation of irrigation systems ○ Establishment of water user associations 		

Fisheries

Nowadays the seasonal character of activities (March- October, November) as well as the existence of two kinds of marine fishing in the Romanian Black Sea sector is characteristic for the Romanian marine fishery sector.

- Active fishery, using coastal trawlers and operating in the offshore at depths exceeding 20 m;
- Stationary fishing, using passive gears in 30 fishery locations along the littoral, between Sulina and Vama Veche, in the shallow coastal waters.

Active fishery

Since 1980, a new commercial fishing fleet was operated in Romania. It included small-size coastal trawlers (type B410;132GRT/570HP / type Baltica; 98GRT/300HP and type

¹⁰ Pre-Accession Economic Programme Romania, Ministry of Development and Forecast, 2001

TCMN; 95GRT/365HP). During the 1980s, the fleet had 20 trawlers. After 1999, there were 7-14 trawlers and presently only 9. The number of fisherman decreased from 180-200 to 70-90 of the commercial fleet.

Stationary fishery

From the 1960s to the late 1990s, stationary fishing was carried out by three state companies in 18 fishing locations along the Romanian littoral between Sulina and Mangalia. Use was made of 70-150 pound nets and catches varied between 3,120 – 7,900 ton. Catches consisted mainly of pelagic species, while bottom species were found only as by-catches. Since the 1990s, similarly to the situation in coastal fishing, stationary fishing in the Romanian littoral has declined.

During the past 10 years, fishing efforts decreased continuously to 32 - 41 pounds on the whole littoral. A number of 150-200 fishermen were active in the last years, compared to 400 - 500 in the 1980-decade. The total catch has been gradually reduced from 2,490 ton in 1993 to 423 ton in 2001 and 641 ton in 2002. The catches resulted from pound nets fishery and fish is preserved and processed through salting in 15 fishery locations, situated between Sulina and Mangalia. The fish is marketed as fresh fish or salted fish or is used as fresh food for animals.

Illegal fishery has developed along the entire littoral.

Under the circumstances presented above, active fishing in Romania is mainly affected by the following factors:

1. Reduction of the fishing efforts as a consequence of the economic changes induced by the transformation of the state ownership into private ownership;
2. Limited market demand for some periods of the year, mainly augmented by the fact that more than 90% of the production is delivered as salted fish;
3. The jellyfish and ctenophore agglomerations, making trawl fishery difficult on all hauling levels in some years and periods.

Passive fishery uses pound nets and has suffered the strongest impacts due to the change of ecological conditions near the coastal zone.

Moreover, there are observations attesting that fish migration routes have changed during the last 6-7 years. Fish tend to remain in the offing, at a certain distance from the coast zone with the isobath of 5-13 m where the pound nets are located.

Threats the fishery sector

So, the main problems that face the Romanian fishery sector are:

1. Strong reduction of catches in the passive fishery because of the decrease of anchovy and horse mackerel stocks and due to the intensity of fish migration from shallow waters, where the environmental conditions have continuously been deteriorating. Income of the fishery companies as well as their staff have drastically gone down.
2. The change of catch structure where less valuable species are predominant and limit production and diversification.
3. So far there is no suitable legal and institutional framework and this fact has favoured the proliferation of illegal and uncontrolled fishery in the Romanian exclusive economic zone of the Black Sea. Over-fishing is mainly directed at valuable species (e.g. Black Sea turbot).

4. The free market and imported products have caused the limitation of the traditionally prepared products and the reduction of their price to the limit of the profitability.
5. Transboundary migrations and distribution of the commercial fish species and the lack of an integrated management for the whole Black Sea basin cause difficulties in fishery activities of each riparian country in the short term and can cause collapse for the medium and long term.

Reduction of the catches by almost 5 - 6 times compared to the 1980s have caused losses of about 2.4 million USD and about 4 million USD compared to the 1985-1986 years (years with the greatest productions).

Economic losses due to illegal and artisanal fisheries, practiced by local fishermen and also through industrial practices by foreign trawlers, especially on the turbot, is assessed at about 1000 tons/year (3 million USD).

3.5.3 Tourism

Romania has a variety of tourist attractions and recreational assets that have developed over time and have been promoted to boost domestic and international tourism. Three main tourist areas may be identified in the Dobrogea region.

First there is the shoreline of the Black Sea, known as *Pontus Euxinus* in antiquity, which stretches from the most northern arm of the Danube, known as Chilia, to the southern border of to Bulgaria.

In the southern part, tourism focuses on the beach and recreational tourism. Mass tourism developed over here and is concentrated in band of resorts along the southern section of the shore between Mamaia and Vama Veche. Other tourist attractions are places with therapeutic mud, natural spa resources, freshwater and saline lakes and historic and religious value. Here, also performing arts, festivals and exhibitions take place. Other potentials to attract tourists are found in places where the produce of vineyards and regional and local delicatessens are produced and business conferences could be offered.

Ecotourism is being encouraged and developed in the northern section, the Danube Delta Biosphere Reserve region, where a wide variety of flora and fauna can be found, routes of scenic beauty can be explored and fishing and hunting for leisure is permitted, be it in a controlled manner. Also, places of traditional and artisanal handicrafts and fisheries can be visited here too.

The 3rd tourist area, between Ostrov and Isaccea, parallel to the Danube, offers numerous historical sites, specific geographical features and landscapes, amongst others because of the presence of a number of small lakes.

Tourism along the coast of the Black Sea is of great importance for the region as well as for the country. Many make a living out of it. The coastal zone avails of 14 resort areas with 746 accommodations, treatment and leisure units in hotels, villas, camping grounds and holiday villages (2000).

Although a medium and long-term Tourism Development Strategy was released by the Ministry of Transport, Constructions and Tourism (MTCT), approved by the Romanian government, it is focussed on privatisation of assets in the tourist industry with much less focus on sustainability on the basis of product development, human resources development; marketing and promotion, safety and protection of tourist travels and on nature and environment protection.

Table 3.3 Facts and figures for the tourism sector

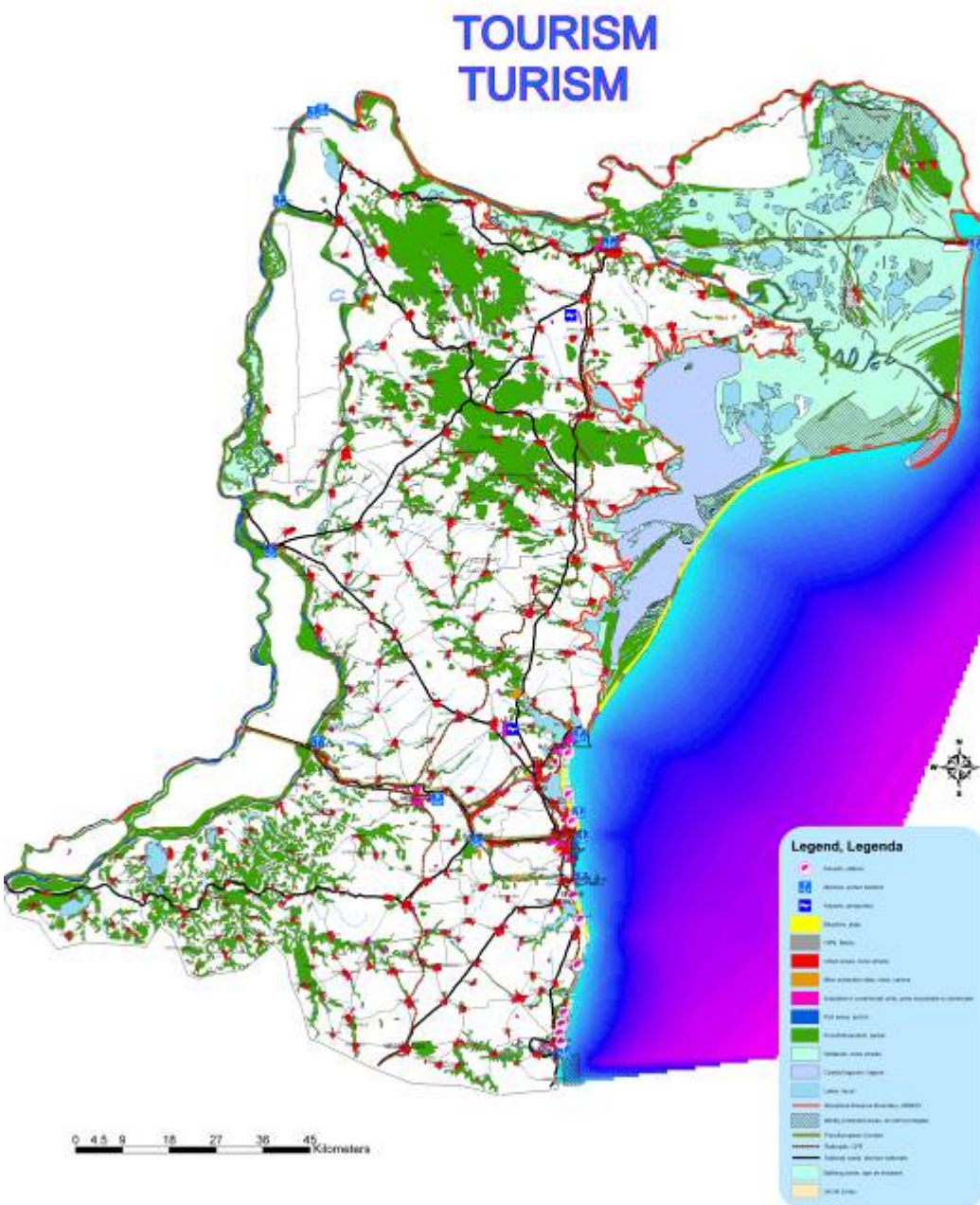
Tourism	Constanta	Tulcea	Total
Tourism	Mass tourism in coastal zone (Navodari-Vama Veche) <ul style="list-style-type: none"> • beach tourism • balneal/fitness • business 	Small scale eco-tourism in Danube Delta	
Accommodation capacity (beds)	116,419	2,258	National: 272,596
Accommodation (% of	42.7	0.008	

national capacity)			
Accommodation usage in 2002 (%)	41.3	18.6	National 34.0
Number of tourists (2001)	750,000 1,754,000 nights	30,000-50,000 (?) 138,460 nights	
Employment			National: 68,000 in 2002
Contribution to GDP			National: 2.6% (of 41.8 BEUR) Poland: 13.1% Hungary: 10%
Other facts & figures	Relatively high percentage of 1 and 2 star hotels (80%)		3338 accommodation units in Romania, highest in CEE

Threats in the tourism sector

Although having potential to develop, the tourism sector is currently not very strong. Peak seasons are limited to 4, maximally 5 months of the year (June – September / October) and numerous facilities are outdated and far below prevailing European standards. These factors, in combination with decreasing standards of living during the transition process, have caused the number of tourists to decline over the last decade.

Progress and improvements can be observed however over recent years. Private initiatives and investments are made contributing to the modernisation of accommodations, the quality of products and services and expansion of recreational and leisure facilities. Despite relatively favourable international prices much needs to be done to improve existing quality of accommodations, service standards, attractiveness and variety of tourist destinations. Especially in the absence of tangible medium and short-term investment plans based on realistic regional and local development plans it will be difficult to attract western tourists in much larger numbers.



3.5.4 Trade and infrastructure

Current transport infrastructure in Romania and the Dobrogea region is poorly developed and generally of low quality. Density of public roads continues to be low in comparison to EU countries (± 33 km/100kmp for Romania to ± 116 km/kmp for European member countries). In the Dobrogea region, transport networks consist of roads (± 3500 km), railway (± 460 km), air and inland water transport over the Danube river (Ostrov, Macin, Isaccea, Sulina) and the Danube-Black Sea Canal. The 64 km long Danube – Black Sea Canal shortens sailing to Constanta harbour by 300 km. Tulcea and Coundstanta County each avail of a small airport. Although Constanta airport is known as an international airport, international flights are limited and confined to the summer season.. Given Romania's geographical position on the crossroads of 3 Pan-European Corridors (Corridor IV, VII and IX) and given the future importance and potential of the Port of Constanta road and rail transport is being modernised especially along the development axis Bucharest – Cernovoda - Constanta. These developments are considered necessary to especially facilitate future growth in industry, trade and tourism. Existing infrastructure in the energy sector consists of relatively small thermal power plants(Constanta, Tulcea, Navodari), small hydro-power plants (Cernovoda, Ovidiu) and a large nuclear power plant in Cernovoda. Water supply and wastewater treatment facilities are not sufficiently developed over the region.

The modernisation and development of transportation infrastructure aims at improving passenger safety and comfort and will boost trade by aligning the national system of transportation to the European ones¹¹¹². The program for the rehabilitation of national roads is a priority for the Romanian government, will support economic development and started in 1993. It represents 8141.8 km of road modernization and is due to be completed in 2016. Until the end of 2004, 1242.4 km were to be finalised. In 2001 the rehabilitation/modernisation of railways, part of the Pan European transport corridor IV, will start¹³.

Rehabilitation and modernisation of the naval transportation on the Danube and the canals Danube - Black Sea and Poarta Alba-Midia are planned. In the short-run, improvements at the harbour offices in Galati, Tulcea and Drobeta-Turnu Severin are foreseen¹⁴.

International developments that will positively affect Romanian infrastructure improvements and its related trade volumes will definitely be the developments of the Trans-European networks as decided upon during the 3rd Pan-European Transport Conference in Helsinki in 1997. These developments and improvements of thoroughfares include 10 multimodal corridors connecting to the infrastructure of the central and east European countries in line for accession to the European Union¹⁵. Consequently, Romanian policies are aimed at developing capacities in certain sectors situated on the routes of the Pan European corridors IV, VII, and IX¹⁶. These will be important for economic development in the Dobrogea region and the coastal zone.

¹¹ Pre-Accession Economic Programme Romania, Ministry of Development and Forecast, 2001

¹² Country Profile regarding Agenda 21, United Nations, 2002

¹³ Pre-Accession Economic Programme Romania, Ministry of Development and Forecast, 2001

¹⁴ Pre-Accession Economic Programme Romania, Ministry of Development and Forecast, 2001

¹⁵ www.oecd.org

¹⁶ Country Profile regarding Agenda 21, United Nations, 2002

Three of these Pan European Corridors are important for the coastal zone in Romania.

- A. Pan European Corridor IV;
- B. Pan European Corridor VII;
- C. Pan European Corridor IX.

Ad.

- A. Corridor IV provides the link running from Dresden/Nuremberg (Germany), via Prague (Czech Republic) Vienna (Austria) / Bratislava (Slovakia), Budapest (Hungary) and to Romania. It consists of rail, road and port modalities. In Romania the Corridor splits into two branches:
 - The Northern branch, running from Arad via Bucharest to Constanta
 - The Southern branch running from Arad via Craiova to Sofia in Bulgaria
 Another two branches run from Sofia, to Thessalonica in Greece and to Istanbul in Turkey.
- B. Corridor VII is the Danube river. The Danube is the second largest river in Europe with a length of 2,415 km. Corridor VII runs from Western to Eastern Europe through the Rivers Rhine, Main and the Rhine-Main-Danube canal. Hence, the Danube provides part of the link between the North Sea and the Black Sea. Corridor VII also refers to the relevant port infrastructures and to the Black Sea-Danube Canal. It provides Links with other corridors and major inland ports:
 - Corridor IV: Budapest (Hungary); Medgidia (Romania)
 - Corridor V: Bratislava (Slovak Republic); Budapest; Dunaujvaros, Mohacs (Hungary);
 - Corridor IX: Oltenita, Giurgiu (Romania); Russe (Bulgaria);
 - Corridor X: Budapest; Belgrade, Novi Sad (FR Yugoslavia);
- C. Corridor IX connects Helsinki in Finland, through Russia (St. Petersburg, Pskov, Moscow and Kalingrad) and the Ukraine (Kiev, Ljubasevka, Odessa) through Moldavia (Chisinau) with Bucharest in Romania and onwards to Bulgaria (Dimitrovgrad, Ormenio) and Greece (Alexandropoulos). It consists of road, rail and port modalities and has a length of 6500 km.

Table 3.4 Facts and figures for trade & infrastructure

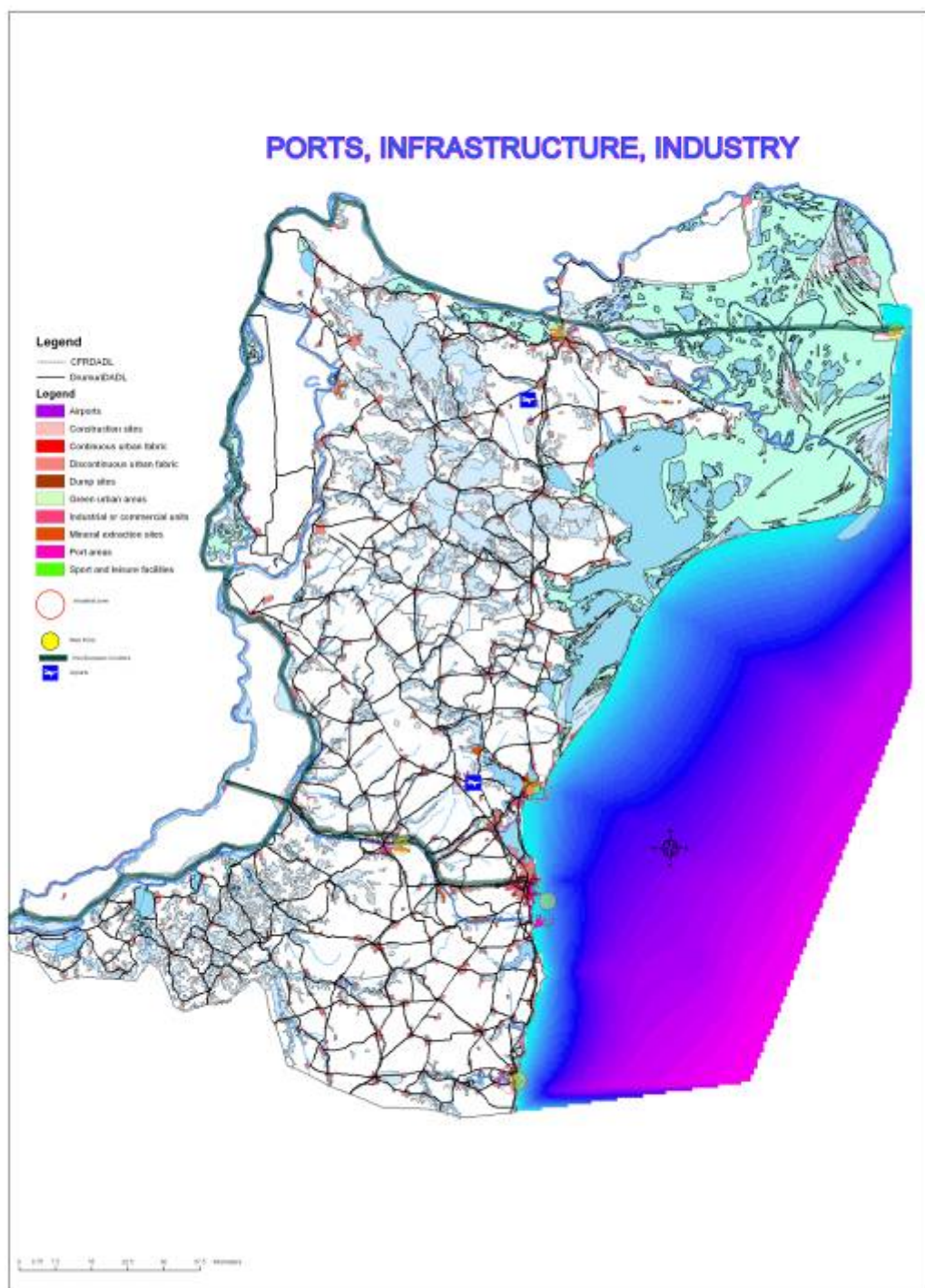
Trade & Infrastructure	Constanta	Tulcea	Total
Ports	<ul style="list-style-type: none"> • Constanta (Mangalia, Midia) 	<ul style="list-style-type: none"> • Sulina 	
Infrastructure	<ul style="list-style-type: none"> • Pan European Corridor IV (road, railway) • Pan European Corridor VII (Rhine-Main-Danube) • Oil pipelines 	<ul style="list-style-type: none"> • Tulcea linked through Sulina with Black Sea 	

Map 3.4 European Corridor IV



Map 3.5 Black Sea Pan European Transport Corridors





Map 3.6 Ports, infrastructure and industry in Dobrogea and the coastal zone

3.5.5 Industry

Until 1950, Dobrogea was the least industrialised region of the country. During the 1950s and 1960s, but especially since 1965, large investments have been made in heavy industries: petrochemical and chemical fertilizer (Midia, Navodari), shipyards (Constanta, Midia, Mangalia, Tulcea), pulp and paper (Constanta), cement (Medgidia), metal works (Tulcea), as well as in the construction & building, agro-processing, textile leather goods and fishing industry. A shift occurred from light industries (75%; 1950) to heavy industries (55%, late 1980s). From the 1960s onwards, industrial production grew by some 14% annually.

However the transition from a command to a free market economy at the end of the 1980s brought political changes, the need for change from state ownership to private ownership and (amongst other sectors) a distinct fall in industrial output leading to economic decline.

Nowadays, industry in the region is primarily concentrated in the cities of Constanta, Navodari as well as also along the axis Cernavoda – Constanta. In the coastal zone, heavy and light industries are most notably present in the capital city of Constanta (food, textile, metal works, naval construction, energy, wood processing and furniture) and Mangalia (food, textile, metallurgy, shipyards). Petrochemical and fertilizer industry is concentrated in Navodari – Midia. The cities of Tulcea, Medgidia and Mangalia possess industries in the metallurgy, clothing, building materials and ship building sectors. Light processing industries, mainly food processing and furniture, exist in smaller cities and towns too. A large nuclear power plant operating at about 40 % of its capacity is located in Cernavoda.

The region further includes extractive and wood industry, transport, logistics and telecom. Also due to gradually increasing foreign investments (joint ventures or by-outs) agriculture, tourism, industry and trade are the future economic engines for the region. Special importance is given by the government to the development of Small and Medium Enterprises in the coastal zone, covering sectors in the light industry such as textile, food processing, building materials, wholesale and retail, hotels and restaurants, transport and logistics and telecom. This initiative will also have to become an important economic driving force (creation of employment). Industry as a total is responsible for over 1/3 of regional gross domestic product (GDP).

Table 3.5 Facts and figures for industry

Industry	Constanta	Tulcea	Total
Industrial Activity	<ul style="list-style-type: none"> • Petrochemistry • Shipyards • Cement factory • Oil extraction • Food & beverages • Nuclear power plant • Power plants 	<ul style="list-style-type: none"> • Metallurgy • Food & beverages • Shipyard 	

Regarding the improvement in Romania's competitive position in the international market, the Romanian government mainly focussed on the strengthening of the adaptability of the Romanian economic operators and the initiation of privatization. This

is the main key to face competition on the international market under the conditions of market forces, free trade and globalisation¹⁷.

3.6 Crossing borders

International cooperative action to rehabilitate and protect the Black Sea takes place through the Istanbul Commission and its subsidiaries. Together with Bulgaria, Georgia, the Russian Federation, Turkey and Ukraine, Romania has reaffirmed its commitment to the rehabilitation and protection of the Black Sea ecosystem and its resources, as expressed in the Bucharest Convention (1992) and Odessa Declaration (1993). To that effect a “Strategic Action Plan for the Rehabilitation and Protection of the Black Sea” (SAPRPBS) was drawn up in 1996. Followed by a “synthesis of the National actions and projects aiming to solve the priority environmental issues as identified in the SAPRPBS”. Although according to the “Commission on the Protection of the Black Sea Against Pollution” the timeframe set in the SAPRPBS was too ambitious, regional co-operation between the Black Sea states, slowly but steadily, becomes stronger and more target oriented every year. A report on the state of the Black Sea in conjunction with an inventory what has been done on the national and regional level and required actions was issued in 2002. It is the intention of the Black Sea Commission to revise the Bucharest Convention and the “Black Sea Action Plan” by next the ministerial meeting planned for 2007.

As regards the basin of the Danube river, 13 states are contracting parties in the Danube River Protection Convention signed in June, 1994 and entering into force in October 1998. A 1st “Joint Action Programme for the Danube Basin” for the period 2001 – 2005 can be seen as the beginning of a joint move towards arriving at an efficient and effective status of the water environment in the Danube River Basin and the Black Sea.

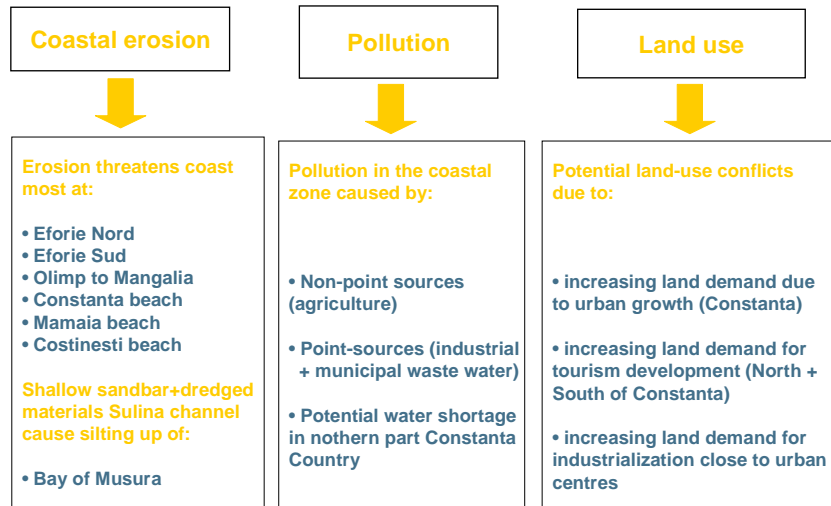
3.6.1 Main threats in the coastal zone: a summary

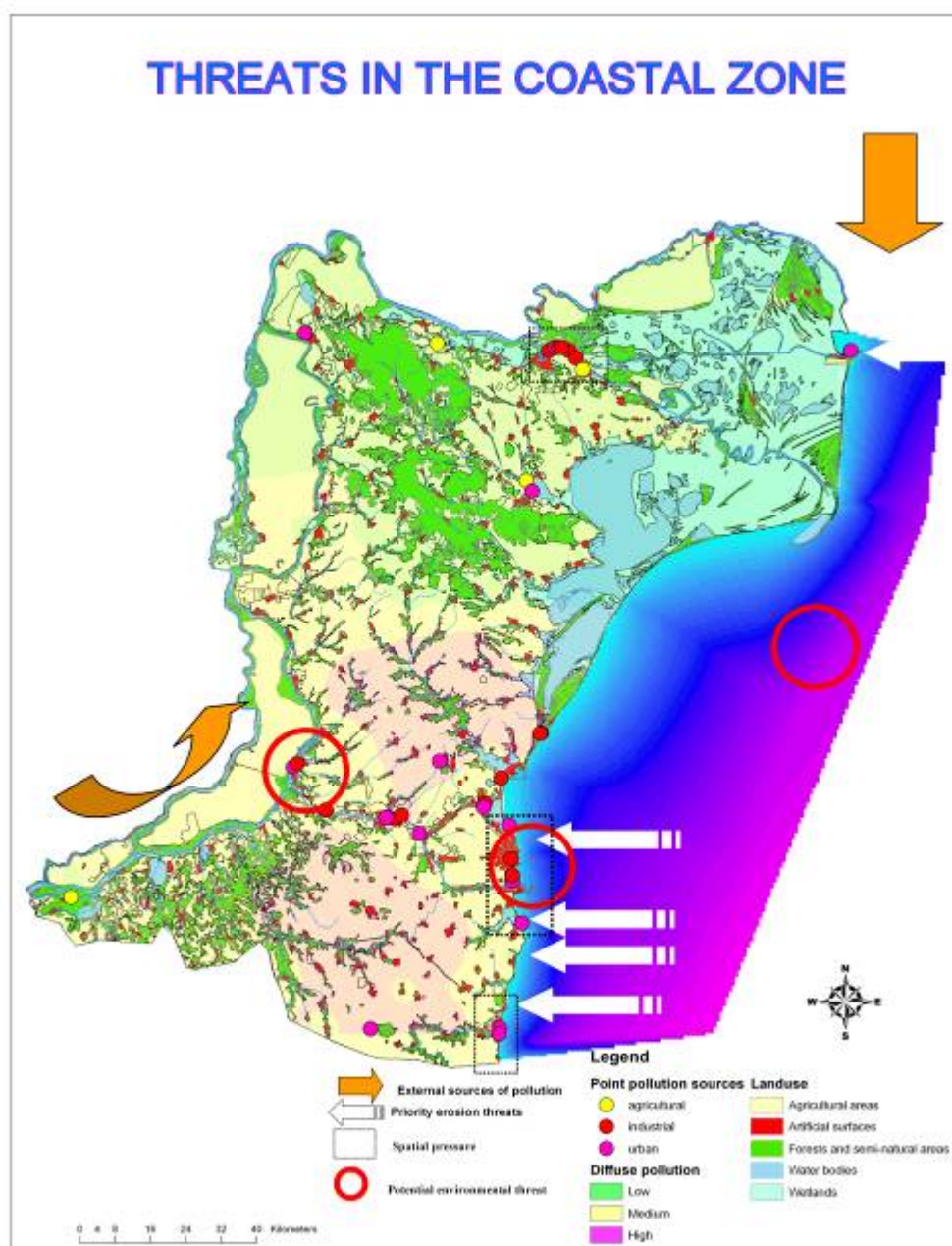
All in all, the main threats in the coastal zone are summarized Figure 3.2 and portrayed in Map 3.1

Figure 3.2 Main threats in the coastal zone

¹⁷ Country Profile regarding Agenda 21, United Nations, 2002

Main threats in the coastal zone





Map 3.7 Threats in the coastal zone

4 VISION: WHAT SHOULD THE COASTAL ZONE LOOK LIKE IN 2020?

4.1 Vision for the Romanian coastal zone on a medium to long-term perspective

Finding an answer to the question “what should the coastal zone look like in 2020?” can certainly be approximated in different ways, depending on insights, opinions, interests and resources available to government agencies and other stakeholders. However, to be able to anticipate, steer and guide future developments a more solid basis is needed. This basis was developed during a process of analysis and brainstorming and weighing pros and cons (opportunities and threats) of anticipated sector developments in 2004 to lay down the foundations and the create building blocks for an “outline strategy for the integrated management of the coastal zone”.

A wide array of national, regional and local stakeholders (policy makers and interest groups) with a stake in the coastal zone participated in and contributed to this process. Step by step a strategy has been developed, providing a more solid basis for a strategy. One of the main outcomes was a shared and widely supported “Vision” for the Romanian coastal zone.

Prioritized Elements of a Vision for the Romanian Coastal Zone

1. The Danube Delta is an ecologically balanced area, where the ecotourism is one of the main economic activities and the traditional activities are preserved. The protection measures in the Danube Delta are ecologically correct.
2. The beaches in the coastal zone are rehabilitated from the point of view of sedimentary balance and meet the European standards.
3. The law regarding the Integrated Management of the Coastal Zone is applied.
4. The authorities are efficient, effective, transparent, and respond to the population needs.
5. The difference between the living, health, and education standards of Romania and the EU is reduced.
6. The cultural heritage of Dobrogea is preserved and put into value.
7. The use conflicts in the coastal zone are solved.
8. The local population is informed, educated, and involved in the decision-making process.
9. All inhabitants in the coastal zone benefit from the water supply, sewage and wastewater treatment systems on European standards.
10. Facilities for health tourism are on international standards.
11. The urban zones are provided with green areas covering more than 10 sq.m per inhabitant.
12. Constanta, Sulina, and Mangalia are important ports for the cruising ships.
13. The Dobrogea area of the Pan European Corridor is an economically developed zone.
14. Biodiversity in the protected areas in the coastal zone is at its optimum level of its potential.
15. Water, land, and air transport is ecologically safe and sound.
16. Large-scale use of the non-conventional and renewable energy sources.
17. The physical infrastructure is on international standards.
18. Tulcea is a centre of ecotourism.
19. Constanta is the main transport hub in the south-eastern European Union.
20. Agriculture in the coastal zone is sustainable.

These vision elements for the (desired) development of the Romanian coastal zone take into account the huge challenges for the coming years. Its envisaged implementation is

confined to a limited period of time, say for the next 15 to 20 years. This limited period of time enables a structural planning and provides sufficient time for implementation and results. But, given the tremendous changes that are expected to take place when Romania will become a member of the European Union, might require reconsideration and/or updating of desired goals and objectives.

4.2 Sector development visions

Sector development visions were developed during the 3rd Strategy Workshop in October 2004¹⁸ and are based on the acknowledgement that the main strengths in economic growth for Dobrogea and the coastal zone are based in the following sectors: agriculture, tourism, trade and industry. The opportunities these sectors will bring about are further elaborated in sector visions for the future development of the region and the coastal zone.

4.2.1 Agriculture and fisheries

“The agricultural sector in Dobrogea will be an important growth sector in the coastal zone and will be undertaken in a sustainable manner. This implies that, in the future, agricultural production will grow and is economically and environmental sustainable.”

This perspective for agriculture fits in the national policy (National Medium-term Development Strategy of the year 2000) where is stated that agriculture is considered a strategic national priority, amongst others to ensure food security and rural development¹⁹.

4.2.2 Tourism

“Tourism is an important growth sector in the coastal zone. Mass tourism will be developed and concentrated in the Black Sea resorts; ecotourism will be developed in the Danube Delta region with Tulcea as its centre of eco-tourism.”

4.2.3 Trade and infrastructure

“Trade is an important sector in the coastal zone. The Port of Constanta, situated on the Pan European Corridors IV and VII, is the main transport hub in the south-eastern European region.”

4.2.4 Industry

“Industry is an important sector of the coastal zone, but needs to be concentrated along the development axis Constanta – Cernavoda. “

¹⁸ Refer: Towards Strategic Issues and Broad Measures for the Coastal Zone, Report of the 3rd Strategy Workshop, 29 October 2004

¹⁹ Country Profile regarding Agenda 21, United Nations, 2002

5 STRATEGIC ISSUES: DIRECTIONS FOR DEVELOPMENT

5.1 Strengths and opportunities in sector developments

A vision is needed to be able to guide development processes and steer implementation. Given the analysis on the current state of the coastal zone in Romania, the national Romanian developments objectives as well as given the international context in which development are taking place, the main strengths and opportunities for the Romanian coastal zone are identified as being:

- The main economic growth sectors are: agriculture, tourism, trade and industry.
- Agricultural development will be (environmentally) sustainable.
- Mass tourism will be developed in the Black Sea resorts, ecotourism will be developed in the Danube Delta. Tulcea will be a centre of ecotourism.
- Industry and trade will be developed along the development corridor Cernavoda – Constanta.
- Port of Constanta is the main transport hub in the south-eastern European region.
- Living standards, health and education will substantially improve.

These strengths and opportunities can be translated into strategic measures to be taken which in turn become the building blocks for further action planning and implementation. However, strengths and opportunities can only be put into value by using an integrated approach. Development strengths and opportunities have to be carefully weighed against each other and a balanced against the threats, the adverse impacts they might have on the environment, the so called benefits and costs for society.

5.1.1 Agriculture and fisheries

The principal objective for the development of agriculture on a short and medium-term is the quantitative and qualitative increase of the agricultural production in order to guarantee food safety for the population and in accordance with the protection needs of the environment. This development includes compliance to environmental standards (enforcement of existing regulations on the use of chemicals in agriculture, banning the use of prohibited chemical substances; decreasing the use of fertilisers, pesticides, insecticides and increasing the use of natural fertilisers. Land reclamation, the use of appropriate technologies promotion of biological agriculture, privatisation and reduction of diffuse pollution are key objectives in the agricultural sector.

The envisaged developments will **determine** the reduction of areas cultivated with cereals on a yearly average basis of 2-3% for the benefit of areas cultivated with technical and oil-bearing cultures, so that the areas cultivated with vegetables, technical plants and high yielding varieties will increase. The goal was that in 2004 sugar beet cultures would cover an area of approximate 130 thousands ha and soybean an area of over 200 thousands ha. At the same time, activities in the zoo-technical sector will be improved mainly by increasing the quality and the number of livestock; continuing the process of genetic amelioration of animal breeds; stimulating and supporting breeders in order to create effective live-stock farms.²⁰

²⁰ Pre-Accession Economic Programme Romania, Ministry of Development and Forecast, 2001

All these measures will also support the the food processing industry, together with the quantitative increase of agricultural products (milk, meat, fish, vegetables and fruits, sugar beet) as a result of creating commercial enterprises for harvesting, processing and marketing these products.

One of the most important constraints for growth of the agriculture sector is the issue of property rights. Previously state-owned land has been returned to the rightful owners. Restitution of property rights of is a prolonged process. Up to 2000, 82.1% of those who claimed land ownership have seen their property rights reinstated. The process continues and full restitution was envisaged by 2004²¹. A clear determination of which land belongs to whom is needed for production growth in agriculture. Clear ownership provides the possibility to sell and buy land, increase production and make use of the advantages of economies of scale. Needed investments will not be made if the situation of land ownership is not resolved.

Clear opportunities for the Dobrogea region are an increase of agricultural production and associated transport, storage and transshipment (export) of agricultural (sub) products. Besides the above mentioned improvement in ownership situation, these developments require rehabilitation of irrigation systems, (sustainable) use of agricultural chemicals (fertilizers, pesticides) and the development of storage, transport and transshipment facilities.

Strategic vision elements for agriculture:

- Raising the efficiency of exploitation, reduction of agricultural land areas and decreasing water loss through adequate land measures;
- Integration of agricultural activities and practices into natural ecosystems; restoration of a number of ecosystems in areas affected by water draining;
- Micro-climate improvement through a number of protection measures and forestation of land, improper for agriculture;
- Raising land-use efficiency through modern less pollutant technologies
- Promotion of small zoo-technical farms based on the utilisation of sustainable practices;
- Applying economic instruments in order to stimulate the market to use equipment for environment protection and efficient water use in agriculture.

Adverse impacts

- Salinization
- Eutrophication
- Pesticides (reduced impact)

Strategic vision elements for fisheries:

- Sustainable development of fisheries through elaboration and implementation of regulatory documents;
- Implementation of fishing procedures based on criteria regarding ecosystem protection and FAO Conduct Code;
- Development of a fishing fleet and fishing facilities restructuring plan;
- Stimulation of traditional small scale fishing activities to support communities of local fishermen;

²¹ Country Profile regarding Agenda 21, United Nations, 2002

- Promotion of selective and non-destructive fishing practices that will have a reducing impact on threatened species and habitats;
- Stimulation of aquacultures in order to reduce the pressure caused by over-fishing of the natural populations;
- Diversification of the use of aquatic living resources;
- Control of accidental or deliberate exotic species introduction.

Above strategic vision elements for fisheries, can be combined into **strategic directions for marine fishing:**

1. Strengthening the regional legal framework for sustainable management of the Black Sea fisheries through developing fisheries legal documents.
2. Harmonization of the fishing sector development strategies with those for environmental protection through the implementation of a concept on fishery management based on ecosystem protection criteria and the FAO Code of Conduct for responsible fishing.
3. Elaboration of mechanisms for solving conflicts of interest among the marine resources users.
4. Elaboration of a restructuring program for the fishing fleet and fishing facilities.
5. Stimulation of traditional and reduced fish-catching activities to support the local fishing communities, in the context of sustainable coastal fisheries.
6. Promotion of selective and non-destructive fishing practices with reduced impacts on habitats and threatened species, especially dolphins, and stimulation of incentives.
7. Supporting scientific research and fishing resources monitoring in order to improve the scientific support for fishing management measures.
8. Stimulation of marine aquaculture, diversifying species assortments in order to reduce pressures on natural populations.
9. Ensuring the proper quality of marine mollusks through the implementation of UE Mollusks Directive.
10. Implementing the mechanisms for controlling accidental or intended introduction of exotic species.
11. Identification of critical habitats for fisheries and developing measures for their conservation and rehabilitation.

Impacts

- Negative impact on habitats caused by non-selective fishing and bottom trawling
- Negative impact on biodiversity caused by incidental fishing
- Over-fishing

5.1.2 Tourism

Mass tourism in the Black Sea resorts:

Taking into account that:

- Beach tourism alone is not enough for an optimal development of the sector, the putting into value of the many options for diversification and development available (such as the promotion of balneal- and cultural activities, business conferences, et cetera), and acknowledging that each option requires its own conditions for development;
 - The right and ownership of developing mass tourism lies first and foremost at the lowest administrative level and with local stakeholders, and without denying the sector's national importance;
 - Greater emphasis needs to be placed on long-term and sustainable development opportunities as compared to short term interests which could hamper development opportunities in tourism;
 - There is a consensus on the need to Increase the number of foreign tourists and not solely focus on 'cheap tourism', the **strategic measures for mass tourism** in the Black Sea resorts should be:
1. The preparation of local tourism development strategies and plans in order to know desired directions and create more optimal conditions.
 2. The Town Halls will take a leading role by developing strategies in consultation with all stakeholders.
 3. Inclusion of strategies and plans for tourism development in territorial and urban plans and related sector development plans.

Eco-tourism in the Danube Delta:

Taking into account that:

- The right and ownership of developing eco-tourism lies first and foremost with the villagers in the Delta and should support and sustain the local people;
- The area is highly sensitive for over-exploitation and that, so far, there is no clear view on what optimal development of eco-tourism in the area would entail;

The **strategic measures for eco-tourism** in the Danube Delta are:

- Tulcea County Council should take the lead in developing a plan and associated instruments in co-operation with the villagers, assisted by the National Tourism Agency.

Tangible strategic measures that have to be taken are:

- Upgrading and development of necessary public and infrastructure works, including sewage collection and treatment facilities
- Protecting and conserving beaches and coastal landscape;
- Raising environmental awareness amongst employees in the tourism sector (and tourists);
- Control of pollution²²
- Concluding the privatisation process

Threats for the tourism sector can be derived from its increasing spatial demands, increasing water use, risks of environmental pollution and the presence of tourism facilities in the vicinity or in the area which is needed for coastal protection. Addressing these issues requires adequate land use planning to ensure that tourism interests are

²² Country Profile regarding Agenda 21, United Nations, 2002

integrated in other interests. Meanwhile cooperation with the Ministry of Waters and Environment Protection is necessary to address environmental impacts and water management.

The tourism sector should complete the privatisation in order to attract strong investors, such as international hotel chains or investors with an established reputation in this sector. This enables availability of significant financial resources and management expertise. The objective of privatisation is regarded as fundamental and is also backed by government policy.

5.1.3 Trade and infrastructure

Trade and infrastructure, strategic measures:

- Modernisation and diversification of transportation services;
- Road transport improved (highways, national county and communal roads);
- Romanian railway (CFR) modernised;
- Development of commercial, maritime ports (Mangalia, Midia, Sulina) and fluvial ports (Tulcea, Isaccea, Cernavoda, Smardan, Harsova , Ostrov);
- Development of ports along the Danube - Black Sea canal (Medgidia, Basarabi, Agigea);
- Development of marinas and marina services (Tomis, Eforie, Mangalia, Crisan, Gura Portiei, I.C. Bratianu, Maliuc, Sulina, Murighiol, Sf. Gheorghe, Mahmudia)
- Port development should be encouraged by granting free zone status where feasible.
- Modernisation of port infrastructure e.g. Port of Constanta: diversification of births, facilities for container traffic; Ports of Constanta, Mangalia, Tulcea and Sulina: shipyard
- Development of special transportation (natural gas, oil);
- Water supply, sewage and sewage treatment plants installed and/or rehabilitated;
- Development of telecommunications (phone, satellites, internet).

5.1.4 Industry

Industries to be developed:

- Food industry, light industry (e.g. ready-made cloths, processing industry);
- Shipyards in Constanta, Mangalia, Tulcea and Sulina;
- Electric power industry – FNCE and promotion and development of the use of non-conventional energy sources;
- Development of Small and Medium Enterprises (IMM), e.g. by:
 - Encouraging traditional production activities specific for Dobrogea;
 - Fishing industry and related businesses and trade.

Industries to be discouraged:

- Heavy, extractive, metallurgy and chemical industries.
- Controlled development in the petrochemical industry.

- Development and diversification of service industries
- Necessity of continuous professional training

Preferred (future) developments:

- Construction of Industrial parks along the Danube-Black Sea Channel and in Tulcea;
- Establishing industrial parks along the Corridors IV and VII;
- Economic valuation of western Dobrogea (Danube river).

5.2 Weaknesses and threats in sector developments

Weaknesses and threats in sector developments

The analysis of the current state of the coastal zone in Romania highlighted some major threats for the coastal zone (refer Chapter ...). By taking into account possible adverse impacts of future sector developments on the environment, the following threats need to be taken into account:

- Erosion
- Pollution
- Potential land-use conflicts (urbanization, waterfront developments)
- Good governance and the absence of law enforcement.

5.2.1 Water management and environmental protection

Economic growth in Dobrogea and the coastal zone is likely to cause increasing human pressure on its environment, land-based and marine resources. The intensified use of these resources can easily bring about much higher levels of pollution (environmental degradation), if corrective measures are not taken. Especially the environmental and water managers will therefore be greatly challenged to timely anticipate on these increasing pressures (>demand, >pollution), by having to take the proper corrective actions, where technically and financially feasible, and –last but not least- make sure that environmental water legislation is complied with.

5.2.2 Coastal erosion

Deficit of sand supply is the main cause of erosion along the Romanian coast. A significant part of the deteriorating coastline, especially at Mamaia and the tourist resorts south of the Port of Constanta, are being used by the tourism industry. Future growth and physical developments in the tourist sector, especially the construction of hard structures (hotels, bars and other recreational facilities) too close to the shoreline, coupled with increasing population pressures and associated urban encroachment, is going to add to the problems caused by erosion. Corrective actions (response measures), enforcement of existing legislation, in conjunction with strict spatial and land-use planning are the main instruments available to government agencies to prevent or counter these problems.

5.2.3 Potential land-use conflicts

Restored economic growth will not only be accompanied by increasing human pressures on coastal and marine resources, it will also substantially increase demands for land and

space. With projected growth rates in Romania's GDP of 5% or more during the coming years and with projected urbanization levels in the country to increase from $\pm 60\%$ (2005) to $\pm 70\%$ (2025), claims for land and space will become much more pronounced. Studies of multiple uses of space, conflict resolution that can be realised by integrating coastal zone planning, with the aim of harmonising and balancing existing uses with potential uses, will become an instrument of growing importance, combined with well thought-out planning of land-use.

6 TYPES OF MEASURES TO TAKE AND INSTRUMENTS TO USE

6.1 Strategic measures

6.1.1 A cross-sector approach to planning and management; horizontal and vertical integration

If sustainable development of the coastal zone is to be more than just an "unachievable ideal" considerable efforts have to be undertaken and investments²³ made in a cross-sectoral approach to planning and management.

Of course, the 1st step to developing ICZM must be the setting of development goals and objectives. After that, coastal development objectives and response measures should be fully integrated into the broader national planning process.

Because setting sector goals, formulated in isolation from related sectors, will inevitably lead to problems of sustainable development, the 3rd step should be the adoption of a cross-sector approach. This cross-sector approach should replace the normal practice of a single-sector approach to planning and implementation.

Subsequently, coordination has to be pursued to guide and steer developments into the right direction and prevent the environment from degradation. Such should be done by closely monitoring actual developments on the ground to keep track of actual developments.

Based on monitoring results, adaptations have to be initiated in sector policies and plans.

6.2 Instruments

6.2.1 Management instruments

Integrated coastal zone management is a continuous, interactive, adaptive and participatory process, comprised of a set of related tasks, meant to achieve a desired set of goals. As explained in Chapter 7.2 (Figure 8.1), the management of the Romanian coastal zone basically takes place at 2 distinct but interrelated levels. A distinction is made between the strategic level for which "national bodies" are responsible and the implementation level for which mainly regional and local level bodies will be responsible. Key strategic management tasks, assumed by higher level government bodies (MEWM, NC supported by TS, can be broken down into:

1. Approval of a "Strategy for the Integrated Management of the Romanian Coastal Zone" and any subsequent update or revision thereof;
2. Incorporating the strategy for the coastal zone into the broader national planning process;

²³ Also in the field of training and education.

3. Initiation of actions to facilitate and promote cross-sectoral planning and the preparation and execution of integrated policies and action plans (programmes of measures) by sector agencies
4. Guidance and steering, promotion and co-ordination, and strategic monitoring and control to keep track of developments on the ground.
 - a. Guidance and steering through expert advice, consultation and pursuation;
 - b. Promotion through advice on co-financing arrangements between “central public authorities” and regional/local sector agencies and between private sector and regional/local sector agencies (PPPs).

Operational guidelines and specific management instruments will have to be further elaborated in the near future.

6.2.2 Legislative instruments

Romanian legislation, regulations and international treaties/conventions:

The institutional framework for coastal zone management is firstly defined by the Constitution. The Constitution of Romania provides for a number of basic provisions, but especially relevant in this context are those that define the administrative organisation of the country. The main administrative provisions are as explained below.

Romania is a unitary republic. Its administrative system can be compared to the French political and administrative system. The country is governed on the basis of the Trias Politica, dividing powers between:

- Executive (at the national level headed by the President and the Government);
- Legislative (the Parliament, which is organised in two chambers, the Senate and the Chamber of Deputies), and;
- Judiciary (courts of law and the Constitutional Court). The legislative as well as the Presidency is elected for a term of four years.

Parliament is thus the main institution that provides the rules by which administrative bodies have to operate. Responsibilities, tasks, procedures, etc. of administrative bodies are established by law. But also environmental standards, for example, are laid down in laws. Also the implementation of EU regulations requires enactment by law by Parliament before they come into force in Romania.

The Government of Romania, as a collegiate body, consists of the Prime Minister, government ministers (including ministers of state, ministers and ministers delegated, attached to the Prime Minister), and the secretaries of state (i.e. deputy ministers) which are designated as members of the Government. Other secretaries of state may attend meetings of the Government in place of the minister, but they do not possess the right to vote. The Government adopts:

- Ordinary Laws
- Ordinances (defined in special enabling law on issues outside the scope of organic laws)
- Emergency Ordinances (in exceptional cases, coming into force only upon approval by Parliament)
- Government Decisions (to organise the execution of laws);

Special laws, regulations, directives and international agreements/conventions

A. Regarding integrated coastal zone management

The Emergency Ordinance concerning the integrated coastal zone management (E.O. no. 202/2003), gazetted on 17 January 2003.

B. Related to water resources management

In 1996, the Water Law (Law No. 107/1996), which replaced Law No. 8/1974, was adopted. The need for such a law originated from the high importance given to water demand from the population and the economy as a whole as well as the importance of flood defence and the protection and the rational use of this water resources. Its importance is mirrored in the fact that for the first time water management was based on the river basin principle and all activities are organized and managed through river basin organisations.

According to article 6 it is set out that:

- The unified, rational and complex water management activities shall be organized and carried out on the basis of the river basin approach, as indivisible geographical entities of water resources management. Water management must consider the surface, ground and (where applicable) transitional and coastal waters as one entity, both from the quality and the quantity point of view, for the purpose of ensuring sustainable development.
- The water management shall be based on the principle of human solidarity and common interest through the close, all-level collaboration and cooperation of the public administration, water users, representatives of the local communities and population, in order to obtain maximum social benefits”.

The law also prescribes that integrated water management, the operation of water management structures as well as the implementation of the national water strategy and policy, will be carried out by the National Administration “Apele Romane” (NAAR) and its river basin branch organisations.

C. Regarding water quality:

- The 91/271/EC Directive regarding the cleaning of urban used water, for which a 15-year transition period until 2022 was asked.
- The 98/83/EEC Directive regarding the quality of water destined for human consumption, for which a 15-year transition period until 2022 was asked.
- The 76/464/EEC Directive regarding dangerous substance clearance (along with the 7 daughter directives), for which an 8-year transition period until 2015 was required.
- The 91/67/EEC Directive regarding water protection against nitrates pollution from agricultural sources, for which a 7-year transition period until 2014 was requested.

D. Regarding transitional and coastal water management

In 1992, Law 98, the Convention regarding protection of the Black Sea against pollution (Bucharest Convention) was ratified, also known as the “Black Sea Strategic Action Plan”. There are three protocols that are part of the Convention:

- The PROTOCOL regarding the protection of the marine environment against pollution from land-based sources. This protocol defines the groups of dangerous and harmful substances and materials.
- The PROTOCOL regarding the cooperation in combating the pollution of the marine environment with oil and other harmful substances.
- The PROTOCOL regarding the protection of the marine environment against pollution from discharge. This protocol defines the groups of dangerous and harmful substances and materials.

In 1996, the Strategic Action Plan for the Rehabilitation and Protection of the Black Sea has been signed by the national representatives and was amended in 2002. Detailed documents are available on www.blacksea-environment.org.

A National Action Plan for Romania was prepared on the basis of the BSSAP but still needs to be updated in line with the changes agreed at regional level (Sofia, 2002).

E. Regarding spatial and territorial planning, land-ownership and land administration

Other relevant Laws and Ministerial Orders related to spatial planning and land-use. Are:

- Law No. 7/1996 by which a modern general cadastre has to be set up. So far it has been insufficiently efficient however because of (i) lack of adequate staff and (ii) financial resources and insufficient (iii) technical resources (e.g. adequate land registration and geodetic surveying).
- Law No. 71/1966 on Infrastructure of National Relevance.
- Law No. 50/1991 on the Authorisation of the Construction of Buildings and Some Measures for Housing Construction.
- Ministerial Order No. 91/1991 stipulating the procedures for authorising and the contents of spatial planning documents.
- Law on Regional Development (Law No. 151/1998) establishing the institutional framework, objectives, competences and instruments specific to regional development in Romania.
- Law No. 350/2001 establishing the rules for territorial and urban planning.

Laws and regulations of importance for land restitution and land administration was established by a number of laws:

- The Law on Agricultural Land Resources (Law No. 18/1991) (*Legea Fondului Funciar*) or so called Land Restitution Law which establishes the constitution and reconstitution of property rights on the land of the former agricultural cooperatives.
- Law No. 7/1966 on Cadastre and Real-estate Publicity that provides the legal framework to organise and manage a modern cadastre including facilitating land restitution.
- The Leasing Law (No. 36/1997) that arranges the leasing of land.
- Law No. 54/1998 governing the legal transfer of land.
- Law No. 213/1998 that establishes the legal status of public property.
- The Land Law (Law No. 1/2000) that offers legal rights to former farmers to claim larger areas of farm land and forest land than provided in the Law on Agricultural Land Resources.

F. Regarding environmental management

In 1995, the Environmental Protection Law, Law 137/1995, has been published. Basic principles and strategic elements have been established such as the precautionary principle, the ecological risk prevention principle, the biodiversity and ecosystems conservation principle, the polluter pays principle, the principle of sustainable development and sustainable use, the principle of development of international collaboration to ensure the environment quality, etc.

Section 1 of the law is specific for the protection of water and aquatic ecosystems having as main objective the maintenance and improvement of their quality and natural productivity with a view to avoid some natural effects over the environment, human health and material estates.

In 2002 the DECLARATION of the Ministers of Environment of the Contracting Parties to the Convention for the Protection of the Black Sea against Pollution was signed in Odessa (www.blacksea-environment.org).

The Ministry of Environment and Water Management established an integrated Strategy for Legislative Harmonization and a Strategy for Sector Management (www.mapppm.ro).

G. Regarding solid waste management:

- The 94/62/EC Directive regarding wrapping and waste wrapping, for which a 3-year transition period has been requested until 2010.
- The 99/31/EC Directive regarding waste depositing, for which a 10-year transition period was required until 2017.
- The 2000/76/EC Council Directive regarding waste incineration, for which a 3-year transition period was required until 2010.

H. Regarding industrial pollution control and risk management:

- The 96/61/EC Council Directive regarding pollution forestalling and integrated control, for which was asked an 8-year transition period, until 2015.
- The 99/13/EC Directive regarding volatile organic compound transmission limitation as a result of solvent utilization in some activities and installations, for which an 8-year transition period until 2015 was required.
- The 88/609/EEC Directive regarding specific pollutants transmission limitation into the atmosphere through large incineration installations, for which a 5-year transition period until 2012 was required.

6.2.3 Technical instruments

Environmental management

Integrated water resources management

Spatial and land-use planning

Coastal protection measures

On the basis of gathered information, comprehensive workshop discussions with the ICZM WG and site inspections, an outline strategy for coastal protection along the Black Sea coastline of Romania is formulated, consisting of the following main ingredients:

- One centralised institute for the co-ordination of all activities along the entire coastline of Romania is considered to be essential. In such a setting, no split-up should be made between the Danube Delta and the southern part of the coastline since the morphological processes of the southern part is dominated by the Danube Delta coastal features.
- A harmonization to “state-of-the-art” standards of the adopted methodologies, instruments, data and so on is required. Furthermore, it is preferred that all available information will be stored centrally. At present multiple institutes have relevant data and analyses available, however, exchange and transfer of data appears to be difficult due to various reasons.
- As much as possible (and within available budgets), the present coastline position shall be maintained and rehabilitated. This is especially valid at those areas where infrastructure such as industry, hotels and infrastructure is present. Controlled retreat is only acceptable at those areas where the erosion tendency can hardly be stopped due to long-term and persistent natural processes, for example along the coastal stretch south-west of the Sacalin spit.
- Where technically possible, coastal protection interventions should be as “soft” as possible and the number of visible coastal structures, such as jetties, groynes, emerged (visible) reefs, should be reduced to the minimum. Beach replenishments with offshore or land-borrowed sand and submerged (invisible) reef-type of rock structures and combinations of the former are to be preferred. These “soft” type solutions guarantee a minimum of neighbouring negative effects and are generally optically the most attractive solutions for the tourism industry.
- An initial priority ranking with regard to the sites where coastal protection works might need to be done is as follows:
 - Highest priority: Eforie Nord and Eforie Sud (down to Cape Turcului), Mamaia beaches and Sulina Channel mouth down to Sfintul Gheorghe.
 - Secondary priority: Spit area north of Chituc (from Zoatoane), Costinesti and neighbouring southern cliffs, Olimp to Mangalia, 2 Mai to Vama Veche, headland of Tuzla (lighthouse area on cliff) and the coastal frontage Constanta.

Specific results from the strategy discussions related to the formulation of a coastal protection approach are:

- A clear preference of a sand bypassing scheme of the accumulated sediments from the north to the south side of the Sulina jetties, thus mitigating the beach erosion between Sulina and Sfintu Gheorghe.
- The prevention of the dredging of new sea-channels through the Danube delta
- The organisation of maintenance of those hard structures that perform reasonably well in the southern regions (Olimp to Mangalia).

- It might be interesting to re-evaluate the present function of the Midia jetties: the economic activities of the Midia port are minimal and the jetties hamper significantly the sand supply to the Mamaia and Constanta beaches.

A premature but illustrative and indicative assessment has been made of technical interventions needed for a number of coastal protection schemes: erosion mitigation and beach rehabilitation. It must be understood that the designs presented in Technical Report 1²⁴ are of a very preliminary nature and one and another has to be integrally designed in one of the follow-up stages of this project.

In order to enable a precise and properly supported assessment of measures required to protect the Romanian coastline from further erosion, the following activities need to be carried out: (a) engineering investigations, (b) preliminary designs, (c) feasibility assessments (economical evaluations, environmental and social impact assessments), (d) priority ranking, (e) detailed designs and tender documentation, (f) implementation of works, and finally (g) a monitoring and maintenance strategy has to be adopted.

6.2.4 Financial instruments

Financing principles and implications

Integrated coastal zone management in the European Community is to be based on two legal documents, the EU recommendation and the Water Framework Directive (WFD). In Romania the Emergency Ordinance concerning integrated coastal zone management forms the basis for ICZM.

The latter document, although very comprehensive and wide in scope, does not explicitly refer to economic instruments like Cost Benefit Analysis (CBA) and/or Cost Effectiveness Analysis (CEA) to support decision-making. It restricts itself to addressing in Chapter V, Article 61 (1) "Economic and financial mechanisms for coastal zone management", the issue of financing of ICZM related public investments through the state budget, internal and/or external credit funds, the environmental fund and other sources like non-reimbursable funds, donations and sponsorship.

The EU Recommendation is also not explicitly advising the use of economic instruments for decision-making. It restricts itself to the recommendation that member states should commit to a common vision for the future of their coastal zones, based on an "(...) environmentally sustainable and economically equitable management of the coastal zone (...)", as well as the identification of "(...) sources of long-term financing for ICZM"

Long-term financing sources

Because the real value of coastal zone management lies in "what happens on the ground" and because this will be mainly the responsibility of existing regional and local sector agencies, sources of long-term financing have to be secured by (a) the routine budget allocations to these sector agencies and (b) through local taxes, duties and specific charges (e.g. water charge, fees for environmental licenses, tourism tax, etc). In special cases, for instance where special preventive, corrective or protection measures need to be taken by any of these sector agencies, e.g. in the interest of protection of the environment and/or to prevent conflicting interest to occur, proposals

²⁴ Refer Technical Report 1. Final Report on Coastal Protection prepared under separate cover.

can be submitted to the respective “central public authority” for co-financing (cost sharing). Of course, on the basis of prove of technical feasibility, EIAs/SIAs and in cases of large investments CBAs/CEAs. To that effect the NC could appoint a Working or Expert Group to look into the matter and advice the NC/MEWM and responsible “central public authority” that will step in as co-financing agency.

A “coastal zone management tax” has been discussed during the process of strategy preparation, but -currently- seems to be undesirable and unattainable, both because of political reasons as well as seen from the point of view of the current living standards as associated people’s ability-to-pay. In the future however such a tax could be reconsidered.

Other financing sources

Private sector involvement

The private sector has an important role to play. Entrepreneurship and private investments are the driving forces for economic development. Given the transition to a market economy in Romania the private sector will be an increasingly important stakeholder. Its potential role in Romania will be evinced in

1. In all important economic sectors in the coastal zone, from productive investments in agriculture and industry to development initiatives in the trade and tourism sector (innovation, rehabilitation, modernization, marketing, investments).
2. In housing and area development, where trade-offs can be achieved between the public and private sector, for example
 - 2.1 Joint planning and implementation (Public Private Partnerships) to reduce costs.
 - 2.2 When real estate developers are permitted to build houses on the condition that actions are taken to preserve the environment and/or real estate developers are obliged to construct parts of municipal infrastructure again leading to cost reductions for the public sector (e.g. the combined construction of a coastal promenade and coastal protection or defence works).

In addition, informing the private sector about the importance and gains of proper coastal management and involving it in decision taking processes will create a feeling of joint ownership and strengthen the wish to deal with the environment in a proper way and prevent potentially conflicting interest.

6.2.5 Public participation instruments

1. By involving representatives of the general public in decision taking processes (e.g. with regard to strategy preparation, formulation of policies and plans);
2. Information needs to be disseminated to the public to make sure that informed decisions can be taken by members in decision making bodies by that (e.g. in NC) that represent of the general public.

7 INSTITUTIONAL SET-UP AND LEGAL IMPLICATIONS

7.1 The need to define “who does what” and “on the basis of what mandate”

Integrated coastal zone management has been defined in Chapter 2.2 as “a continuous, interactive, adaptive, participatory and consensus-building process comprised of a set of

related tasks, all of which must be carried out to achieve a desired set of goals and objectives, however these goals and objectives are specified”.

Management of coastal zones involves multiple problems and sources of problems, multiple objectives to produce desired -and often conflicting- outputs from the use of coastal resources. It involves different productive capacities over space and time, greater or lesser linkages to upstream areas and beyond, multiple stakeholders and institutions with varying responsibilities for different elements of management.

The coastal system that needs to be managed is a complex, dynamic web of interrelationships among human activities, demands in society, available natural resources and external natural and human influences. So, if sustainable development of the coastal zone is to be more than an unachievable ideal, considerable efforts have to be made to create the right links in this “complex, dynamic web of interrelationships” and fashion a way to plan and manage its components.

The various tasks of planning and management and the dimensions of integration are listed under the following elements:

Main elements of planning and implementation			Dimensions of integration
1	'planning'	Analysis (for a sound understanding of terrestrial + marine ecosystems and processes), problem identification, specification of goals and objectives	Intersectoral integration Intergovernmental integration Spatial integration Science–management integration International integration
2		Scientific research and long-term data collection	
3	'implementation'	Installation of management practices and technologies	
4		Operation and maintenance of management strategies	
5		Enforcement	
6		Monitoring	
7		Evaluation and adaptation	
8		Financing	

N.B. planning is looked upon as an integral part of management

If ICZM is to be achieved, an institutional framework must exist across planning and sector agencies. In other words, an answer is needed to the questions who does what and on the basis of what mandate? Achieving such a framework is difficult, since rarely does a single agency or institution exist -at any level of government- with overall responsibility for integrated planning and execution of policies and action plans across the various sectors of coastal areas.

Government institutions are, of course, the main actors in the coastal management process. However, the various government institutions –at various levels of administration- perform services and operate programs on the basis of different mandates and laws often containing different goals, objectives and policies.

At least 3 factors tend to complicate institutional co-operation:

1. Government institutions in different sectors will probably have different orientations and goals and thus different interests;

2. Different levels of government will probably have different priorities;
3. Different government institutions at different administrative levels are guided by different mandates (tasks, responsibilities and powers);

One of the main challenges in ICZM is to fashion ways to ensure that actions of the involved government institutions, involving other stakeholders (e.g. residents, NGOs, private sector) are harmonized with one another and are consistent with agreed goals and objectives (derived from the coastal strategy).

Hence, the challenge is to devise an institutional mechanism that can co-ordinate the myriad organizations involved in coastal issues to be able to guide processes and steer developments into the stated directions to achieve desired goals and objectives.

Moreover, in the knowledge that collaboration cannot be enforced, genuine cross-sector co-ordination and collaboration in ICZM can only be achieved on the basis of:

- Willingness of stakeholders to collaborate;
- Capacity of the coordinating bodies to guide and steer and of the sector agencies to integrate planning and actions; and:
- The technical feasibility of alternative options and financial capacity to take corrective actions.

7.2 Management and co-ordination model for the Romanian Coastal Zone

During a process of strategy preparation conducted in 2004 an institutional set-up for integrated management of the Romanian coastal zone was analysed and designed.²⁵

The analysis started from the bodies identified in the E.O. (202/2002) and the task assigned to these bodies. By subsequently building on better understanding of what ICZM is about as well as using this incremental insight to determine what the main tasks and activities are that need to be carried out and by whom, an institutional model or institutional set-up was designed for ICZM in Romania.

This model aims to fashion intergovernmental collaboration and coordination and to facilitate harmonization in development policies and plans for the coastal zone to achieve agreed goals and objectives which should be derived from the coastal zone management strategy.

Proposed institutional set-up is thus based on the identification of the coordinating bodies (or entities) needed, the tasks/activities that need to be carried out by these bodies as already identified in the existing coastal zone management legislation (E.O. 202/2002). In terms of final responsibility and coordinating tasks, the most important bodies are the “central public authority for environment and water”²⁶, the NC, the latter supported by the TS. The proper functioning of this institutional set-up is based on the following main features:

1. Preparation and implementation of policies and plans in the various sectors of the economy (in the coastal zone) is the responsibility of the existing

²⁵ Refer to “Strategic Issues and Broad Measures for the Coastal Zone. Report of the 3rd Strategy Workshop, p. 24.

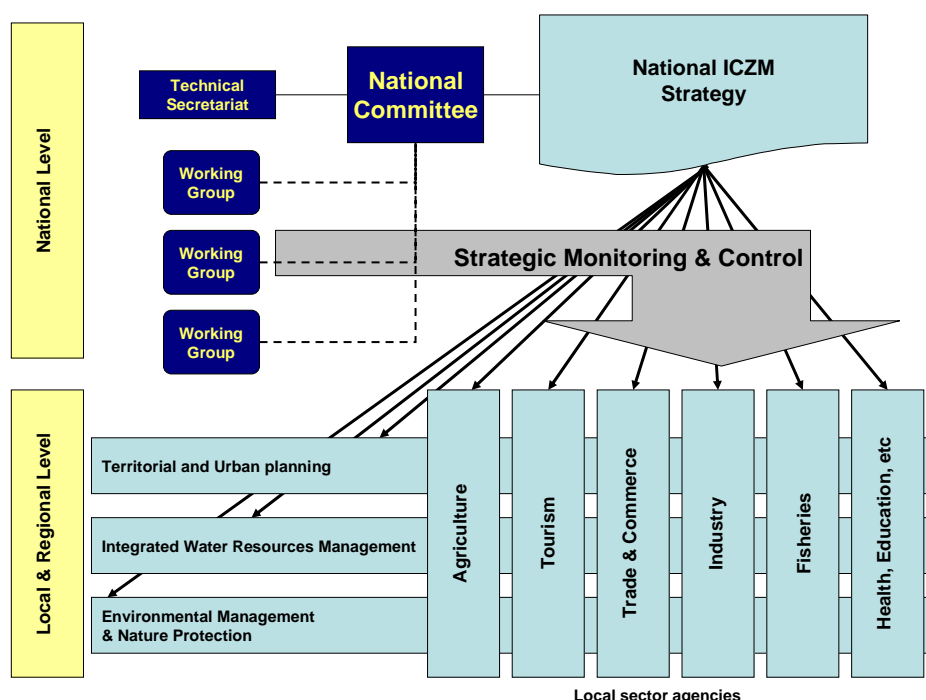
²⁶ MEWM bears final responsibility for environmental management and water management (ground-surface, transitional and coastal waters). Other “central public authorities” also have a role to play, MTCT for instance bears final responsibility for territorial, urban and land-use planning an important instrument for ICZM.

government sector agencies, mainly at regional and local level, as laid down in existing laws and regulations.

2. Incorporation of preventive or corrective measures that are needed and that are derived from cross-sectoral planning considerations also have to be implemented and managed by the sector agencies.
3. Integrated management of the coastal zone needs to be realised by creating a platform for guidance, steering and coordination to achieve cross-sectoral planning and management and the preparation and execution of preventive and/or corrective measures (to counter adverse impacts of development processes on the environment and prevent/resolve potential conflicts of interests). This needs to be carried out by the coordinating bodies (MEWM, NC)²⁷ in collaboration with the executing bodies (the sector agencies).

Above mentioned insight and considerations have led to a model for the integrated management of the Romanian coastal zone as portrayed in Figure 8 below.

Figure 8.1 Institutional framework for ICZM in Romania



From Figure 8.1 it becomes clear that the main bodies involved are the ones operating at “national level” and the ones functioning at “regional and local level”. Bodies operating at the “national level” will assume responsibilities in guidance, steering, coordination, strategic monitoring & control and evaluation. These are the bodies portrayed in Figure 8.1 as the National Committee (NC), the Technical Secretariat (TS). Working Groups or “Expert Groups” (WG/EG) can be assigned to advise MEWM and NC, coordinated by TS. Although most of these bodies are already identified in E.O. 202/2002, the functioning of these bodies is new for Romania and experience regarding their effective operation is not yet at hand.

²⁷ In the NC all relevant other “central public authorities” and key regional and local stakeholders are represented.

The bodies functioning at “regional and local level” already exist. These are the “sector agencies²⁸” established on the basis of existing law and regulations having jurisdiction over the various policy areas. These sector agencies will be the bodies or entities responsible for real implementation of policies and plans. They have to translate/ transpose the (long-term, multi-sector) strategy objectives into (medium-term policies and short-term action plans (“programmes of measures”). Where needed and technically and financially feasible, sector agencies have to realise the required degree of integration and adjustment by defining preventive and/or corrective measures in close collaboration and consultation with their relevant sister sector agencies.

Summarising:

First of all, to create authority and enhance the effectiveness of cross-sector planning and management, a lead agency should exist. In Romania this lead agency could best be the Ministry of Environment and Water management (MEWM)²⁹. It should be designated to act as lead ministry. Once this is agreed and approved, the challenge is to vest sufficient authority in this lead ministry so that it has effective control over activities of sister ministries involved in decision making regarding the coastal zone.

Second, a special inter-ministerial coastal co-ordinating council or commission should be created. Given the E.O. 202/2002 (already enacted by parliament), and the fact that a National Commission for the Coastal Zone has been established in June 2004, this body already exists. The NC as the primary coastal management entity should preferably function at a higher level than that of the sector agencies so it has the necessary powers to harmonize sector policies, plan and actions. The NC should be adequately financed and staffed.

The proper functioning of MEWM and NC, with guiding, steering and co-ordination responsibilities, is based on having the following characteristics:

1. The MEWM must be authoritative; that is, it must have appropriate legal/legislative authority.
2. The MEWM must be able to influence the activities of all agencies and levels of government that have decision making authority relative to the coastal zone.
3. The MEWM must be seen as a legitimate and appropriate part of the process.
4. The MEWM must be capable of making informed decisions; that is, it must have access to appropriate scientific and technical expertise and data.
5. The MEWM and NC carry out their tasks and responsibilities on the basis of legitimation derived from the Romanian Government.

The MEWM should delegate certain powers to the NC but will remain final responsibility. The NC is accountable to the MEWM. The TS and the Working or Expert Groups support the NC and are accountable to the NC.

²⁸ These include the existing regional (and local) agencies with mandates and responsibilities in the fields of environment (EPAs), water management (DADL) and territorial, urban and land use planning at county and municipal level (Departments for Territorial and Urban Planning).

²⁹ A justification for this lead role of MEWM is its final responsibility and central role regarding policies and plan for sustaining and protecting the environment in combination the management of the county's (finite) water resources.

7.2.1 National Committee for the Coastal Zone

The National Committee for the Coastal Zone (NC), established on the basis of the E.O. no. 202/2002 and Government Decision (no. 1015/25 June 2004), will be a high level approval body. The NC is not an executive body. The responsibility for executive tasks, e.g. the preparation and implementation of sector policies and plans and applying the proper implementation instruments, remain with the existing sector agencies, as already defined by existing laws and regulations.

The NC convenes 2 times (to maximally 4 times) a year and will focus on achieving consensus between line ministries and agencies regarding relevant coastal zone issues. The NC is subordinated and accountable to MEWM, but on the basis of delegated powers from MEWM:

1. Approves the “Strategy for the Integrated Management of the Romanian Coastal Zone” and any subsequent updates or revisions on behalf of the lead agency;
2. Endeavours to have the strategy for the coastal zone fully incorporated into the broader national planning process;
3. Bears responsibility for the proper guidance, steering, coordination and strategic monitoring and control for the execution of the strategy;
4. Initiates actions as deemed necessary to facilitate ICZM on the basis of a cross-sectoral approach to (sector) planning and (sector) action planning , including the initiation of actions to improve guidance ad steering, realise cross-sector coordination and adjustment, and monitor and control its results
5. Initiates and proposes actions for amending relevant legislation, when deemed necessary;
6. Appoints members of the Technical Secretariat and is responsible for proper functioning of the TS;
7. At the instigation of the TS, proposes to MEMW or –as the case may be- to any other “central public authority” the “ad hoc” establishment of Working or Expert Groups that will perform certain expert tasks to advice and support decision taking processes of the NC/MEWM, as deemed necessary.
8. Establishes a National Data Base at the TS.
9. Establishes an information dissemination counter and a complaints counter within the office of the TS.

7.2.2 Technical Secretariat

The Technical Secretariat will consist of:

- A (small) permanent secretariat that performs secretarial and logistical functions for the proper functioning/convening of the NC and performs public information dissemination functions. This small secretariat will be paid by MEWM;
- A limited number of (part-time) experts/professionals originating from key stakeholders in the coastal zone (e.g. NIMRD, DADL, Environmental Protection Agency, DDBRA, territorial and land-use planning agencies at county/municipal level), paid by their own representing agencies.

Expert-staff of the TS will be responsible for:

1. Monitoring the “state of the coastal zone”
2. Preparation of advice to the NC

3. Initiating, proposing and co-ordinating the work contracted out to Working/Expert Groups (e.g. Consultants/Experts), as deemed necessary and as approved by NC/MEWM.
4. Guide, steer and oversee the work of the small permanent secretariat.

Technical Secretariat will avail of the needed logistical means as well as a permanent office.

7.2.3 Working Groups

Working Groups or Expert Groups can be installed, proposed by the NC to MEWM (approved by MEWM, and depending on the nature of work by other ministries represented in NC). This kind of work will be initiated and co-ordinated by TS. Objective of work done by Working/Expert Groups is to prepare and provide expert advice on topics relevant for the proper implementation of the strategy for the coastal zone, e.g.:

- a. monitoring and reporting on the state of the coastal zone;
- b. updating or revising the strategy for the coastal zone;
- c. advising on the technical and economic/financial feasibility/desirability of proposals from regional/local sector agencies for co-financing arrangements, for certain preventive/corrective measures, with "central public authorities";
- d. advising on for need for legislative reform;
- e. advising on execution of training and education programs.

Members of Working/Expert Groups will have to recognised experts in relevant fields and will be assigned on a temporary "ad hoc" basis.

7.2.4 Other agencies involved

The responsibility for genuine implementation of the strategy lays with the already existing sector agencies. These will mainly be the regional and local sector agencies with jurisdiction in the coastal zone. They are ultimately responsible for the proper translation/transposition of the strategy development goals and objectives and the needed integration across sectors (e.g. any preventive/corrective actions that need to be taken to counter adverse impacts or create potential conflicts of interest caused by certain development process).

Sector agencies should report on a regular basis (say once a year) to the NC what they have achieved in their efforts to jointly manage the coastal zone in an integrated manner, e.g in what way their individual policies and plans have taken into account policies and plans of sister agencies, what preventive/corrective measures have been taken to prevent environmental degradation, what proposals have been submitted for co-sharing arrangements with "central public authorities and/or between sister agencies.

Integration in coastal zone management means:

implementing and monitoring policies, programmes of measures, administrative arrangements and harmonized standards as part of a unified program, and making adjustment if necessary, to ensure stated objectives are being met
(drawn from Chua, 1996)

Several dimensions of integration need to be addressed as part of the ICZM process:

1. Intergovernmental integration, or vertical integration, which means integration between the various levels of government;
2. Intersectoral integration, or horizontal integration, meaning that land-based and marine sectors need to take their policies into account and take corrective measures where needed.
3. Spatial integration
4. Science – management integration, and
5. International integration, implying that nations have to address transboundary issues.

One of the key lessons learnt is that horizontal and vertical integration is both the keystone in the practice of ICZM as well as its largest challenge. Governments need to learn that integration and collaboration (a) need to be done on a voluntary basis and (b) will create the benefits for society for which they also bear responsibility. Forced integration has its political costs, because agencies coerced into “a new ICZM regime” can be expected to find ways out, actively undermine or even oppose integrated and co-ordinated implementation.

7.2.5 Public participation

Public participation can be an important instrument to promote ICZM. Stakeholders have to be informed about the state of the coastal zone, the desired goals and objectives of future developments and the corrective action that need to be taken to prevent environmental degradation. By involving stakeholders in decision taking processes (e.g. with regard to strategy preparation, formulation of policies and plans) a feeling of understanding will be created for the complexity of ICZM as well as a feeling of joint ownership of the strengths and opportunities as well as the weaknesses and threats in the coastal zone. The latter is likely to increase awareness regarding the complex tasks ahead and the importance of a clean environment. Public participation also increases stakeholders’ readiness to –individually or group-wise- make their (individual) contributions, be it in terms of caring for the environment, adhering to environmental regulations and standards and paying of taxes and fees.

Public participation in ICZM in Romania is foreseen for in the following manners:

1. Membership in the NC and participation in decision taking processes by representatives of the (organisations of the) private sector, interest groups (from agriculture, fisheries), advocacy groups (Environmental NGOs) and representatives of public organisations of residents (Prefects, County Councils, Mayors) (E.O. Article 67, Section 4, Chapter VI);
2. The right to information and free access to information (E.O. Art 69 (1), Article 72, Chapter VII);
3. The right to contest decisions and appeal for reconsideration of decision (E.O. Article 72, Chapter VII).

In addition, information needs to be disseminated to the public to make sure that informed decisions can be taken by members in decision making bodies by (e.g. in NC) by representatives of the general public. To this effect, in addition to public access to policy documents and status reports on the coastal zone, an ICZM web-site should be created, maintained at the office of the TS, with broad information on strategies, policies, plans, major decisions taken, major events organised, et cetera, that is accessible to the general public.

7.3 Legal framework

7.3.1 Present legal framework

The present legal framework for ICZM, the “Emergency Ordinance concerning the integrated coastal zone management” (E.O. 202/2002, modified by Law 280/2003) is:

1. very comprehensive and wide in scope;
2. very ambitious
3. not in all aspects internally consistent.

In addition, the E.O. does not precisely indicate the geographical boundaries of the coastal zone. For instance:

Ad 1: the E.O. is a legislative piece of work that endeavours too regulate too much. Because ICZM is about management of the coastal zone and involved multiple problems, multiple desired outputs and multiple institutions with varying mandates, it should rather be a piece of legislation that “facilitates” other existing legislation and regulation “to do its work” and to be adhered to, instead of trying to regulate itself. The E.O. should therefore become a “Framework Law”. There is however one exception. The E.O. should contain a section with very specific and rather strict regulation for the “coastal strip”. Despite the existence of legislation and regulation regarding specific land-use and building permits and procedures, the coastal strip needs a special “legislative regime” from the perspective of ICZM. This is nowhere already existent in current Romanian laws and regulation.

Ad 2: the E.O. is very ambitious because it proclaims to be based on a number of principles (e.g. sustainable development principle, precautionary principle, polluter-pays principle, etc). The very principle of the polluter that will have to pay for the “environmental deterioration in the coastal zone” makes this law too ambitious. There is no way that given the current living standards, forecasts for the foreseeable future in improvement of living standards, and the very wide scope and cost implications of the wording “environmental deterioration in the coastal zone” polluters will really be able to pay for all the investments that will have to be made in the future. In addition, by way of other existing legislation and regulation, it is already compulsory by law that polluters have to pay for damage (e.g. environmental) caused by them.

Ad 3: in a number of aspects the E.O. is not consistent. For example, (A): although the polluter pays principle is adhered to in the E.O, (ref. Article 61 [1], Chapter 5: “Economic and financial mechanisms for coastal zone management”) the law does not identify the financial mechanism(s) to do so (e.g. through penalties, charges, taxes or fees) nor does it refer to any other piece of existing legislation that does so to ensure that the polluter will pay; (B): the E.O. assigns specific tasks, responsibilities and powers to specific bodies that are incompatible with other existing legislation/regulation, for instance: the E.O. stipulates in Article 68, (4) Chapter VI, Section 4, that the NC approves amongst other (a) regional and local urban development plans and (b) EIAs and environmental audits. This is in conflict with other existing legislation/regulation because these powers are the jurisdiction of other government agencies.

7.3.2 Recommendations for improvement

Recommendations;

1. The E.O. should become a “framework law”, a piece of legislation that (a) reflects the nature, spirit and routine practices of bodies that assume coordination functions in cross-sectoral, integrated coastal zone management; (b) facilitates other existing laws and regulations to do their work and be complied with, (c) clearly identifies the geographical boundaries of the coastal zone, its sub-zones and the purposed of sub-zoning, (d) formulates a rather strict regime for the “coastal strip” within the coastal management sub-zone.
2. The E.O. should avoid to tread on jurisdictions and mandates of other government bodies that are already vested in existing legislation/regulations in the various fields of policy making and implementation.
3. The NC should be defined as a decision making body –not an executive body- that operates under the overall responsibility of a lead agency – the MEWM-, with a reference to clearly defined tasks, responsibilities and powers (possibly defined in a “bylaw” or in a “statute”).
4. The E.O. should take account of the fact that collaboration between government agencies can be promoted but not enforced upon agencies not even by law.
5. Members of the NC should be limited to the key “central public authorities” and key regional and local stakeholders to make it an effective decision making body.
6. The NC should be given powers that are in line with its real tasks (guidance, steering, promotion, coordination, monitoring and control, evaluation and adaptation). Its responsibilities, tasks and powers should not be in contradiction with existing legislation and regulation where jurisdiction and mandates have already been assigned to other existing government bodies –as the E.O. currently does in a number of cases-.
7. In terms of financing sources for ICZM the E.O. should keep all (future) options open.
8. Operational guidelines, work rules and procedures (“regulations”) are needed for the various bodies (NC, TS, Working or Expert Groups) involved in guidance, steering, promotion, coordination, monitoring, evaluation and adaptation).
9. An expert team consisting of technical experts and specialised lawyers should prepare a new draft law on ICZM avoiding overlaps and contradictions with existing other legislation/regulation. If needed and unavoidable, recommendations for amendments in legislation of adjacent fields should be proposed.

Annex 1 References

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