

Mare Nostrum Project

Final Report:

Legal-Institutional Instruments for Integrated Coastal Zone Management (ICZM) in the Mediterranean

2016



Project
funded by the
EUROPEAN UNION



**ENPI
CBCMED**
CROSS-BORDER COOPERATION
IN THE MEDITERRANEAN



Mare Nostrum



Project
funded by the
EUROPEAN UNION



**ENPI
CBCMED**
CROSS-BORDER COOPERATION
IN THE MEDITERRANEAN



MARE NOSTRUM PROJECT:

**Bridging the Legal-Institutional Gap in Mediterranean
Coastline Management**

Final Report:

Legal-Institutional Instruments for Integrated Coastal Zone Management (ICZM) in the Mediterranean

Project Head: Rachelle Alterman

Writing Team:
Cygal Pellach and Dafna Carmon

Additional Contributors:
Na'ama Teschner
Raanan Boral



MARE NOSTRUM PROJECT FINAL REPORT

Legal-Institutional Instruments for Integrated Coastal Zone Management (ICZM) in the Mediterranean

Technion Academic Team: Rachelle Alterman (head), Dafna Carmon, Cygal Pellach, Raanan Boral, Na'ama Teschner

Project management: Raanan Boral, Cygal Pellach

Additional research inputs: Ines Calor, Iris Frankel-Cohen, Elena Korotkova, Dorit Garfunkel, Jesse Fox, Rachel Adam, Ronnie Ginat, Anna Hazan, Safira De La Sala.

Administrative-financial Coordinator: Simon Van Dam

Cover Design: Cygal Pellach

Mare Nostrum Project ENPI CBC MSB Grant Agreement I-A/1.3/093 MARE NOSTRUM

marenostrumproject.eu info@marenostrumproject.eu +972-48294018 +972-54-4563384

© 2016 by the Mare Nostrum Partnership

Statement about the Programme: The 2007-2013 ENPI CBC Mediterranean Sea Basin (MSB) Programme is a multilateral Cross-Border Cooperation initiative funded by the European Neighbourhood and Partnership Instrument (ENPI). The Programme objective is to promote the sustainable and harmonious cooperation process at the Mediterranean Basin level by dealing with the common challenges and enhancing its endogenous potential. It finances cooperation projects as a contribution to the economic, social, environmental and cultural development of the Mediterranean region. The following 14 countries participate in the Programme: Cyprus, Egypt, France, Greece, Israel, Italy, Jordan, Lebanon, Malta, Palestinian Authority, Portugal, Spain, Syria, Tunisia. The Joint Managing Authority (JMA) is the Autonomous Region of Sardinia (Italy). Official Programme languages are Arabic, English and French.

Disclaimer: This publication has been produced with the financial assistance of the European Union under the ENPI CBC Mediterranean Sea Basin Programme. The contents of this document are the sole responsibility of MARE NOSTRUM Partnership and can under no circumstances be regarded as reflecting the position of the European Union or of the Programme's management structures.

Financing: The MARE NOSTRUM project is implemented under the ENPI CBC Mediterranean Sea Basin Programme (www.enpicbmed.eu). Its total budget is €4.3M and it is financed for the amount of €3.9M by the European Union through the European Neighbourhood and Partnership Instrument. The ENPI CBC Med Programme aims at reinforcing cooperation between the European Union and partner countries regions placed along the shores of the Mediterranean Sea."

General statement on the European Union: The European Union is made up of 27 Member States who have decided to gradually link together their know-how, resources and destinies. Together, during a period of enlargement of 50 years, they have built a zone of stability, democracy and sustainable development whilst maintaining cultural diversity, tolerance and individual freedoms. The European Union is committed to sharing its achievements and its values with countries and peoples beyond its borders.



MARE NOSTRUM PROJECT PARTNERS

Technion Institute for Research and Development (Israel)

Project Head: Professor Rachele Alterman, Principal Investigator.

Municipality of Haifa (Israel)

Municipality of Kavala (Greece)

Municipality of Alexandroupolis (Greece)

FEPORIS – Port Institute of Studies and Cooperation (Valencia, Spain)

IRMCo – Integrated Resources Management Co Ltd (Malta)

SPNI - Society for Protection of Nature in Israel

University of Thessaly, Department of Planning and Regional Development (Greece)

Professor Konstantinos Lalenis, Principal Investigator.

Democritus University of Thrace (Greece)

Professor Georgios Sylaios, Principal Investigator.

ACPD – Amman Centre for Peace and Development (Jordan)

INTERTEAM (Israel)

MARE NOSTRUM PROJECT ASSOCIATE PARTNERS

Partner countries:

Evangelia Balla (Greece); **Georgia Giannakourou** (Greece); **Kurt Xerri** (Malta); **Pablo Molina Alegre** (Spain, Catalonia); **Marc Darder** (Spain, Catalonia); **Marta Lora-Tamayo Vallvé** (Spain).

Other Mediterranean countries:

Loic Prieur (France); **Agnès Rachel Vince** (France); **Angela Barbanente** (Italy); **Enzo Falco** (Italy); **Francesco Lo Piccolo** (Italy); **Chiara Vicenti** (Italy); **Paulo V.D. Correia** (Portugal); **Naja Marot** (Slovenia); **Fatma Ünsal** (Turkey).

Other countries:

Nicole Gurran (Australia); **Helle Tegner Anker** (Denmark); **Gerold Janssen** (Germany); **Eva Maria Schachtner** (Germany); **Pieter Jong** (Netherlands); **Hendrik van Sandick** (Netherlands); **Dan Tarlock** (USA).

Contents

CHAPTER 1	Introduction	1
PART I THE MARE NOSTRUM PROJECT IN CONTEXT.....		3
CHAPTER 2	Project Process.....	4
2.1	Project team.....	4
2.2	Stages of work	10
2.3	Challenges and solutions	14
CHAPTER 3	Cross-border Cooperation	16
3.1	Introduction	16
3.2	Greek / Turkish border	17
3.3	Israeli / Jordanian border	24
CHAPTER 4	Capitalization Initiatives	28
4.1	Scientific Model for Coastal Setbacks	28
4.2	Model ICZM Observatory – Kavala.....	29
4.3	Mare Nostrum Network of NGOs	30
4.4	Ports and Cities Initiative.....	31
4.5	Expert Forums	33
PART II CURRENT STATE OF LEGAL-INSTITUTIONAL INSTRUMENTS IN PARTNER COUNTRIES:		34
COMPARATIVE VIEW		34
CHAPTER 5	Introduction to our Analysis.....	35
5.1	About this part.....	35
5.2	Definitions	35
5.3	The comparative dimensions	37
CHAPTER 6	Greece.....	46
6.1	The context: Introduction to coastal issues in Greece	46
6.2	Definition of the coastline and coastal public domain	48
6.3	Setback from the coastline (in which no construction is allowed)	49
6.4	Accessibility in the Greek coastal zone	50
6.5	Compliance and enforcement in the coastal zone	51
6.6	Management and coordination	52
6.7	Public participation and access to information.....	53

CHAPTER 7	Spain	54
7.1	The context: Introduction to coastal issues in Spain.....	54
7.2	Definition of the coastline and coastal public domain	56
7.3	Setback from the coastline (in which construction is restricted).....	58
7.4	Access to and along the Spanish coastal zone	59
7.5	Compliance and enforcement in the coastal zone	60
7.6	Management and coordination.....	62
7.7	Public participation and access to information.....	63
CHAPTER 8	Malta	64
8.1	The context: Introduction to coastal issues in Malta	64
8.2	Definition of the coastline and coastal zone	65
8.3	Sandy beaches	65
8.4	Public ownership	66
8.5	Setback from the coastline (in which construction is restricted).....	66
8.6	Access to and along the Maltese coastal zone.....	66
8.7	Compliance and enforcement in the coastal zone	67
8.8	Management and coordination.....	68
8.9	Public participation and access to information.....	68
CHAPTER 9	Israel.....	69
9.1	Introduction to country and coastal issues.....	69
9.2	Coastal legislation, planning and land use regulation	69
9.3	Definition of the Coastline and Coastal Zone	71
9.4	Public domain	73
9.5	Setback from the coastline	74
9.6	Accessibility	76
9.7	Compliance and enforcement (public domain and setback zone).....	78
9.8	Management and coordination.....	80
9.9	Public participation	81
CHAPTER 10	Comparative Analysis	82
10.1	Planning and legislative tools.....	82
10.2	Delineation	86
10.3	Public ownership	89
10.4	Coastal setbacks	94
10.5	Accessibility	99
10.6	Compliance and enforcement.....	104

10.7	Management and coordination	108
10.8	Information and participation	109
PART III TOOLKIT OF ALTERNATIVE INSTRUMENTS.....		113
CHAPTER 11	Introduction to the Toolkit	114
CHAPTER 12	Toolkit: ICZM Terms and Legislation	115
12.1	ICZM Terms	115
12.2	Integration in Legislation.....	115
CHAPTER 13	Toolkit: Delineation of the Coastline.....	117
13.1	Summary of the issue	117
13.2	Recommendations and tools	118
CHAPTER 14	Toolkit: Coastal Public Land.....	120
14.1	Public land ownership	120
14.2	Land use in the coastal public land zone	122
14.3	Marinas and sports facilities	124
CHAPTER 15	Toolkit: Coastal Setback Zone	126
15.1	Width and delineation of the coastal setback zone	126
15.2	Permitted uses in the setback zones	128
15.3	Tourism and vacation homes: Major land use conflicts	131
CHAPTER 16	Toolkit: Accessibility	133
16.1	Summary of the issue	133
16.2	Horizontal accessibility	133
16.3	Vertical accessibility.....	136
16.4	Access to sea views	138
16.5	Events on the beach and social accessibility	138
CHAPTER 17	Toolkit: Compliance & Enforcement.....	141
17.1	Summary of the issue	141
17.2	Recommendations and tools	141
CHAPTER 18	Toolkit: Management & Coordination	143
18.1	Summary of the issue	143
18.2	Recommendations and tools	144
CHAPTER 19	Toolkit: Participation & Information	145
19.1	Summary of the issue	145
19.2	Recommendations and tools	145
CHAPTER 20	Toolkit: Cross-border Cooperation	149



20.1	Summary of the issue.....	149
20.2	Recommendations.....	149
CHAPTER 21	Toolkit: Managing Climate Change	150
21.1	Summary of the issue.....	150
21.2	Recommendations.....	150
REFERENCES.....		152
APPENDIX I	RELATED EU AND OTHER PROJECTS	157

CHAPTER 1 Introduction

The Mediterranean Sea, which the ancient Romans called Mare Nostrum, is a precious common resource for the 22 countries located along its shores. These countries share common challenges; anthropogenic forces, strong development pressures for infrastructure, tourism and housing, and vulnerability to hazards related to climate change, including sea-level rise and environmental degradation.

Starting with the adoption of the Barcelona Convention in the 1970s, the international community has pursued numerous attempts to address the growing threats to the health of the Mediterranean. The ICZM (Integrated Coastal Zone Management) Protocol was adopted by most Mediterranean countries in Barcelona in 2008. It is a unique international treaty especially formed to protect an international sea.

The ICZM Protocol was the first, and as of today the only international legal instrument specifically addressing coastal zones management (Rochette and Bille, 2012). It established a common legal framework for addressing the issues associated with ICZM. Article 2 of that Protocol sets out the following definition of ICZM:

“Integrated coastal zone management means a dynamic process for the sustainable management and use of coastal zones, taking into account at the same time the fragility of coastal ecosystems and landscapes, the diversity of activities and uses, their interactions, the maritime orientation of certain activities and uses and their impact on both the marine and land parts”

The ICZM Protocol sets out a list of principles and objectives to be met by signatories, but those principles represent ideals that are not (or not fully) reflected in the legal frameworks of individual countries and localities. A complex mosaic of legal and regulatory regimes, land rights, institutional structures and administrative cultures has thus far stood in the way, creating a legal-institutional gap in Mediterranean coastline management.

The overarching goal of the Mare Nostrum Project is to help to bridge the policy-implementation gap in the legal aspects of ICZM along the Mediterranean. The project encompasses the local, national and cross-border levels. The focus is on land-related issues: the legal-regulatory aspects of land ownership and control, urban planning, public infrastructure, and governance structure. Project activities have been centred in countries in which the project partners are located – Israel, Greece, Spain and Malta – but our findings and recommendations are relevant to all Mediterranean countries.

Key to the project is the comparison of different jurisdictions and their approach to integrated coastal zone management. Comparative analysis of legal-regulatory aspects of planning is regarded as a powerful instrument to enhance cross-national learning and calibration, as explained in greater depth by the Project Head in previous research projects (Alterman 2001; 2010, 2011) In the first interim project report (September 2014), we surveyed the national frameworks for coastal zone management in each of the partner countries. In the second interim report (March 2015), we explored several local case studies in each of the partner countries, to gain a deeper understanding of how ICZM manifests at the local level.

In this third and final report, we synthesize the project activities and findings into the following three parts:

PART I: An account of the project process; details of cross-border cooperation activities and findings; and a description of the capitalization initiatives which have been implemented or proposed through the course of the Mare Nostrum project, for improved management and implementation of ICZM principles.

PART II: A cross-national comparative analysis of the frameworks in the partner countries, with additional insights from other Mediterranean countries gleaned throughout the course of the project. Through evaluation of the ICZM Protocol, the national frameworks and local case studies, we have identified a set of criteria for comparison, to guide our comparative analysis. Through assessing those criteria, we can identify regulatory tools which are successful, as well as any implementation gaps between laws and regulations and the situation on the ground.

PART III: A toolkit of alternative instruments: A set of recommendations which might assist in minimizing or reducing the legal-institutional gaps in Mediterranean coastline management. Our recommendations span the supranational, national and local levels and are relevant to all countries – not just the countries in our study.

The Mare Nostrum project has enabled our project team to uncover a wealth of information about ICZM practices and has provided a platform for the analysis of those practices. Our analysis has delved deeply to uncover key implementation gaps. Our recommendations, together with the capitalization initiatives which our project team has implemented to date, have the potential to significantly improve ICZM practice.

PART I

THE MARE NOSTRUM PROJECT IN CONTEXT

CHAPTER 2 Project Process

In this chapter we provide details about the Mare Nostrum project process. We describe the project team and how it was built; the stages of work; challenges and solutions; and next steps.

2.1 Project team

The Mare Nostrum project was initiated and led by Professor Rachelle Alterman of the Technion – Israel Institute of Technology. The Technion is the leading partner and coordinator of the project.

In assembling the project team, we were bound by the ENPI CBC Med Programme guidelines on “eligible actors”, which are based on Article 14 of the ENPI Regulation (EC) No. 1638/2006.

The following countries and regions are eligible to participate (see Figure 1):

- Cyprus: the whole country
- France: Corse, Languedoc-Roussillon, Provence-AlpesCôte d’Azur
- Greece: Anatoliki Makedonia -Thraki, Kentriki Makedonia, Thessalia, Ipeiros, Ionia Nisia, Dytiki Ellada, Sterea Ellada, Peloponnisos, Attiki, Voreio Aigaio, Notio Aigaio, Kriti
- Italy: Basilicata, Calabria, Campania, Lazio, Liguria, Puglia, Sardegna, Sicilia, Toscana
- Malta: the whole country
- Portugal: Algarve
- Spain: Andalucía, Cataluña, Comunidad Valenciana, Islas Baleares, Murcia, Ceuta, Melilla.
- Egypt: Marsa Matruh, Al Iskandanyah, Al Buhayrah, Kafr ash Shaykh, Ad Daqahliyah, Dumyat, Ash, Sharquiyah, Al Isma’iliyah, Bur Sa’id, Shamal Sina’2
- Israel: the whole country
- Jordan: Irbid, Al-Balga, Madaba, Al-Karak, Al-Trafila, Al-Aqaba
- Lebanon: the whole country
- Palestinian Authority: the whole country
- Syria: Latakia, Tartous
- Tunisia: Médenine, bès, Sfax, Mahdia, Monastir, Sousse, Nabeul, Ben Arous, Tunis, Ariana, Bizerte, Béja, Jendouba

We selected our project partners from within the above regions, with the following added parameters:

We sought to have our partners represent a spectrum of coastline management issues, with varying degrees of effectiveness (as at the project start date) of the legal-administrative system in regulating and enforcing effectively. On a national level, Malta and Greece appeared less effective, whilst Spain and Israel appeared to have more effective mechanisms in place.

We also sought to involve regions with both conflict-ridden and non-conflictual cross-border relations. Spain, Malta and most parts of Greece are non-conflictual with their national neighbours; Israel and Jordan and the towns along the Greek-Turkish border (such as Alexandroupolis) are more conflictual.



Figure 1 – Eligible regions according to ENPI CBC Med Programme

(Source: http://www.programmemed.eu/fileadmin/PROG_MED/IEVP/Brochure_ENPI_MED-ENG.pdf)

2.1.1 Project Partners

The project partnership was structured to fit the rational of the project, which takes a bottom-up approach: From implementation to improved policy making. Given this bottom-up focus of the project, we sought to avoid including national government agencies. Our team includes eleven members: Three municipalities (Haifa, Kavala, Alexandroupolis), three universities (Technion, Democritus University of Thrace, University of Thessaly), two non-government organizations (SPNI – Society for the Protection of Nature in Israel, and ACPD – Amman Centre for Peace and Development), two small private firms (IRMCo – Integrated Resource Management Company Ltd., InterTeam) and one research organization not associated with academic institution (FEPORTS – Port Institute of Studies and Cooperation in Valencia).

Below we outline the key personnel and responsibilities taken on by each partner:

Technion Institute for Research and Development (Israel)

Professor Rachelle Alterman, Principal Investigator.

Responsibilities:

- Created the necessary governance structure for an effective project direction and management.
- Implemented the governance structure, organization and decision rules to ensure timely achievement of project activities.
- Established the communication flow and method.
- Undertook monitoring and assessment of activities' quantified outputs.
- Was the lead partner undertaking research into existing practices in ICZM and international comparative analysis (First Interim Report and this Final Report).
- Was the lead partner in developing a “Toolkit of Alternative Instruments”.

Municipality of Haifa (Israel)

Responsibilities:

- Managed the Haifa local case study – [Hayam Shelanu](#) – “Our Sea” – one of six local case studies investigated through the project.
- Provided a report on current practice in ICZM at the local level
- Contributed to the development of the toolkit.

Municipality of Kavala (Greece)

Responsibilities:

- Managed the Kavala local case study – one of six local case studies investigated through the project.
- Provided a report on current practice in ICZM at the local level
- Contributed to the development of the toolkit.
- Established and continues to operate a local ICZM Observatory, together with the Democritus University of Thrace.

Municipality of Alexandroupolis (Greece)

Responsibilities:

- Managed the Evros Delta local case study – one of six local case studies investigated through the project.
- Provided a report on current practice in ICZM at the local level.
- Contributed to the development of the toolkit.
- Was the site of a cross-border Greece/Turkey cooperation workshop.

FEPORIS – Port Institute of Studies and Cooperation (Valencia, Spain)

Responsibilities:

- Represented the Valencia Region, taking advantage on its participation in MAREMED project.
- Managed the *La Albufera* and *Bay of Alicante* case studies – two of six local case studies investigated through the project.
- Provided a report on current practice in ICZM at the local level.
- Contributed to the development of the toolkit.
- Was the leader of the “Capitalization” aspects of the project.
- Organized the final conference event.

IRMCo – Integrated Resources Management Co Ltd (Malta)

Responsibilities:

- Managed the Valletta Grand Harbour local case study – one of six local case studies investigated through the project.
- Provided two reports on current practice in ICZM – at the national and local levels respectively.
- Contributed to the development of the toolkit.

- Was the leading partner in designing and implementing the Public participatory GIS web-based platform and process (PPGIS) for the project.
- Conducted PPGIS training for all partners.

SPNI - Society for Protection of Nature in Israel

Responsibilities:

- Provided information on current practice in ICZM at the national level (Israel).
- Contributed to the development of the toolkit.
- Established a network of NGOs interested in coastal zone management in the Mediterranean.

University of Thessaly, Department of Planning and Regional Development (Greece)

Professor Konstantinos Lalenis, Principal Investigator.

Responsibilities:

- Provided a research report on current practice in ICZM at the national level in Greece.
- Was the lead partner in the case study research and field work and undertook a comparative analysis of the case studies (Second Report).
- Supervised implementation in pilot projects and in-country trainings that disseminate and make use of the tools in a cross-border, cooperative and coordinated manner.
- Contributed to the development of the toolkit.

Democritus University of Thrace (Greece)

Professor Georgios Sylaios, Principal Investigator.

Responsibilities:

- Contributed the scientific and technical data used in the Kavala case study.
- Developed the local ICZM Observatory, established for the City of Kavala.
- Contributed to the development of the toolkit.

ACPD – Amman Centre for Peace and Development (Jordan)

Responsibilities:

- Provided a venue for the participation of Jordan and encourage the legal entities in Jordan to participate and assist in the implementation of the project.
- Worked with the Aqaba Special Economic Zone Authority (ASEZA) in order to facilitate better institutional links with its close neighbour on the Israeli side of the border – the city of Eilat. Coordinated a cross-border meeting between the two partners.
- Acted as a bridge between the northern Mediterranean (European) countries and the Southern Mediterranean (north African) countries. Organized a training workshop for north African countries and brought north African participants to the final conference in Valencia.
- Contributed to the development of the toolkit.

INTERTEAM (Israel)

Responsibilities:

- Ensured the project outputs were communicated and visible to the public
- Designed and managed the project's web page and social media channels.

2.1.2 Associate partners

In addition to the above eleven project partners, we also invited a range of associate partners – experts who could enhance and broaden our learning on ICZM around the world. Associate partners were added throughout the project, as the project team expanded its networks in the fields relating to ICZM.

Our strategy in inviting associate partners was to extend the project's academic knowledge base beyond the limitations on the formal number of partners. The associates represent three circles of knowledge (refer Figure 2):

- Our partner countries: Additional experts from our partner countries (Greece and Spain).
- Other Mediterranean countries: France, Italy, Slovenia, Portugal's south-east.
- Non-Mediterranean European countries and beyond: Portugal's Atlantic coast, Netherlands, Denmark, Germany AND other parts of the world: USA, Australia.

Overall, the recruitment of associate partners enabled us to learn from about coastal zone management in an additional 10 other countries; **USA, Australia, Germany, Netherlands, France, Italy, Turkey, Denmark, Portugal and Slovenia.**

The Mare Nostrum associate partners were:

Partner countries

- Evangelia Balla – Scientific Council of the Hellenic Cadastre S.A., Greece
- Georgia Giannakourou – University of Athens - Faculty of Political Science and Public Administration, Greece
- Kurt Xerri – Universidad Rovira i Virgil (representing Malta in this project)
- Pablo Molina Alegre – J&A Garrigues, S.L.P. Law Firm, Spain (Catalonia)
- Marc Darder – Catalanian Government, Spain
- Marta Lora-Tamayo Vallvé – Universidad Nacional de Educación a Distancia, Spain

Other Mediterranean countries

- Loic Prieur – Université de Paris-Sorbonne - UFR de géographie et d'aménagement, France
- Agnès Rachel Vince – Government of France
- Angela Barbanente – Politecnico di Bari, Italy
- Enzo Falco – Gran Sasso Science Institute (GSSI), Italy
- Francesco Lo Piccolo – University of Palermo, Department of Architecture, Planning Unit, Italy
- Chiara Vicenti – Institute for Environmental Protection and Research (ISPRA), Italy
- Paulo V.D. Correia – University of Lisbon, Higher Institute of Technology (IST), Portugal
- Naja Marot – University of Ljubljana, Slovenia

- Fatma Ünsal – Mimar Sinan Fine Arts University, Department of City and Regional Planning, Turkey

Other countries

- Nicole Gurrán – University of Sydney - Urban and Regional Planning, Australia
- Helle Tegner Anker – University of Copenhagen - Department of Food and Resource Economics, Denmark
- Gerold Janssen – Leibniz Institute of Ecological Urban and Regional Development, Germany
- Eva Maria Schachtner – Leibniz Institute of Ecological Urban and Regional Development (Marine Spatial Planning), Germany
- Pieter Jong – Delft University of Technology - Faculty of Technology, Policy and Management (TPM), Netherlands
- Hendrik van Sandick – Ministry of Infrastructure and the Environment of the Netherlands
- Dan Tarlock – IIT Chicago-Kent College of Law, USA

These associated partners provided valuable information to the project team regarding coastal management law and practice in their respective countries and regions.

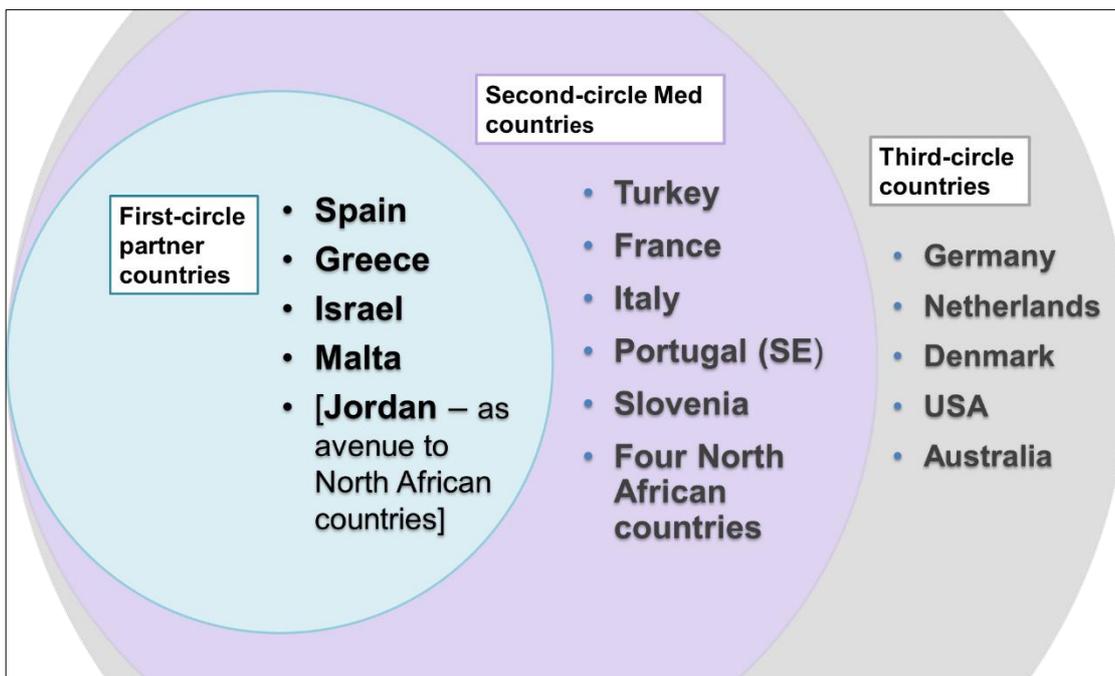


Figure 2 – Circles of knowledge

2.2 Stages of work

At Figure 3 we outline the stages of work which took place over the course of the Mare Nostrum project. Below we provide a detailed explanation of each stage.

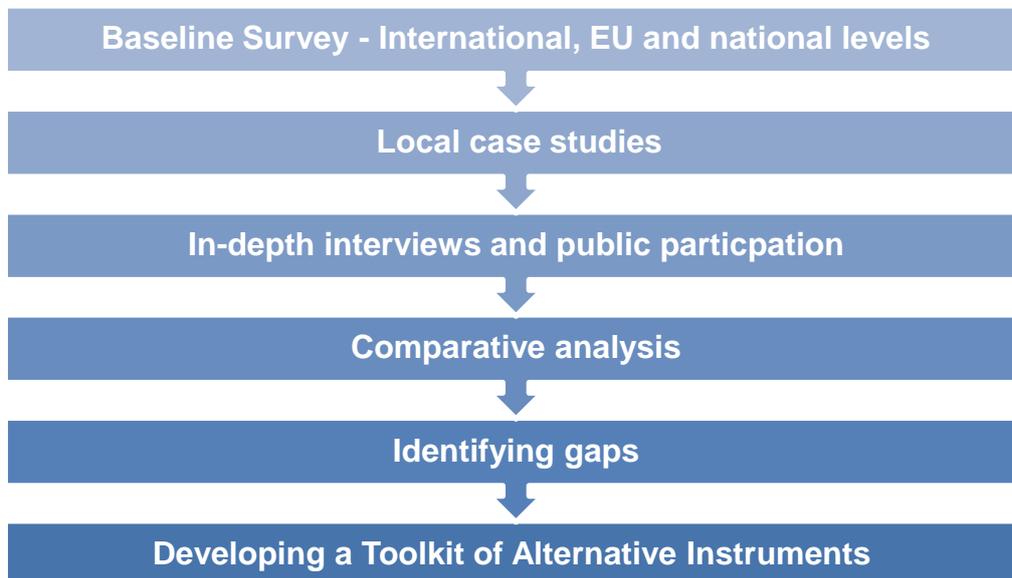


Figure 3 – Stages of Work

2.2.1 Baseline Survey

In the first stage of the project, team members undertook a thorough investigation into existing knowledge, law and practice in the realm of coastal management. The survey incorporated the international, EU and national levels: While the Technion team undertook to highlight relevant international and EU laws and programs, other partners evaluated the existing legal-institutional instruments available for the implementation of ICZM within their respective countries.

The baseline research began in preparation for the Mare Nostrum Project Kick-off Meeting, which took place at the Technion in Haifa in March 2013. At this meeting, partners discussed the initial results of their research and received feedback from each other to guide future work.

The results of this baseline research produced a platform of knowledge on which to base the next stages of the project. In addition, this stage of the project was intended to capture aspects of ICZM already thoroughly researched by others. These included:

- Existing information about the environmental attributes and hazards specific to the Mediterranean coastline, with particular attention to conditions within the Mare Nostrum partner countries.
- Existing information about the legal-institutional conditions that may affect implementation of ICZM and spatial planning instruments within partner countries.
- Existing coastal management programs in the Mediterranean Basin and those originating outside of the Mediterranean Basin but which might influence it. We also looked into coastal programs from other parts of the world, by context: e.g.: a) enclosed seas; b) in areas of conflict; c) involving developed and developing countries; d) EU and non-EU countries.

- Identification of which ICZM and spatial-planning instruments are deemed successful (“best practice) in various countries and contexts outside the Med and identification of those that can potentially contribute to the particular context of the Mediterranean Sea countries.
- Learning about "best practices" in central and western Europe as well as other parts of the World (via Associated Partner).

The above topics were the subject of the Mare Nostrum Project First Interim Report. This report, titled "[Existing Knowledge on Legal – Institutional Frameworks for Coastline Management, The International, EU and National Levels](#)" was first published in September 2013, but has since been updated and revised several times, as changes occurred in real time and as more information became available.

2.2.2 Local Case Studies

Following investigation into the supra-national and national context for ICZM, the next stage was for our partners to undertake research into the state of ICZM in six local areas, and to hone in on specific issues affecting those areas. Those issues constituted the Mare Nostrum local case studies, as follows:

- Haifa Municipality – [Hayam Shelanu](#): Accessibility to the coast from residential neighbourhoods.
- Kavala Municipality: Definition of the setback zone and ICZM Observatory.
- Alexandroupolis Municipality – *Evros Delta*: The case of illegal boathouses in the Delta region.
- Valletta Grand Harbour: The provision of open spaces in the Grand Harbour area.
- Valencia – La Albufera: Where the local council halted planned urban development in the coastal zone and instead established a nature reserve.
- Valencia – Bay of Alicante: Opportunities for improving ICZM in an area with a complex concentration of land uses and stakeholders with competing interests.

Our partners presented and discussed the context of their local case studies at the first project workshop (Workshop #1), which took place in Volos, Greece in July 2013. Following that meeting, the partners returned to their respective countries to continue the background research and to set in motion the practical aspects of the case studies.

This stage provided invaluable local knowledge input to the project. The background research prepared the ground for the application of PPGIS (Public Participation through Geographic Information Systems), which contributed to the ultimate development of our Toolkit of Alternative Instruments (this report). Specifically, our partners identified:

- Available environmental and institutional data bases (where relevant, to be incorporated into the PPGIS tool).
- Existing ICZM-related instruments operating within the municipal partners or in their regions - those derived from the supra-national level (the EU) and those generated national or locally.
- Key legal, institutional and administrative impediments (including property rights regimes) to the implementation of ICZM EU and MED policies, viewed from the local level upwards within each of the countries.

- The relevant actors (stakeholders) involved in ICZM implementation and decision-making in each partner locality or country as potential "resources" of which some were later drawn in when designing the PPGIS tool and the Toolkit of Alternative Instruments.
- Databases of environmental, socio-economic/demographic data, and legal-institutional attributes for the six municipal case study sites.

Following investigations into the above issues, the partners gave detailed accounts of their case studies at the Alexandroupolis conference held in February 2014. The information they then presented, together with additional details drawn out through in-depth interviews, are the subject of the second Mare Nostrum report, titled "[Existing Practices and Impediments to Implementation – the Local and Cross-National Level](#)", published in February 2015.

2.2.3 In-depth interviews and public participation

The participation of stakeholders in decision-making processes regarding the management of public assets is vital – particularly in the case of finite and diminishing resources such as the coastal zone. Stakeholders in coastal zone management may include representatives of formal organizations at national, regional and local levels; scientists and other experts; users of the resource (e.g. fishermen); and the general public.

As previously noted, the Mare Nostrum project aims to define the implementation gaps, between policy, law and regulations and the reality on the ground. Thus in order to gain an appreciation for the extent and impact of these gaps, it was important to understand how familiar stakeholders are with the concept of ICZM, the ICZM protocol, and the EU directive on ICZM. Furthermore, as our project included a public participation component (PPGIS), we sought to gain insight into whether and to what extent the Mare Nostrum participation process influenced stakeholder awareness and attitudes to ICZM.

Following initial baseline surveys (outlined in Report 2), the partners managing the case studies implemented PPGIS processes based on their chosen case studies. Prior to undertaking PPGIS activities, the partners attended a PPGIS training workshop held by IRMCO in Malta in November 2014.

The PPGIS processes addressed the following issues (full details in [Mare Nostrum PPGIS report](#)):

- Haifa, Israel: "[Hayam Shelanu](#) (Our Sea)" – addressing a range of issues, with a focus on the physical and conceptual connections between residents of the city and the sea (Figure 4). Through this process, the Municipality instituted a coastal forum, including representatives from local and national institutions.
- Kavala, Greece: [ICZM Observatory](#). The municipality introduced institutional stakeholders and the local community to this tool and gained their feedback.
- Valletta, Malta: "[Safeguarding and protecting the remaining Open Spaces in and around the Grand Harbour](#)". Stakeholders mapped and classified open spaces in the Grand Harbour area. This process led to the development of a [Local Communities' Charter](#) signed by stakeholders and six local Municipalities.
- Valencia, Spain: Classification of stretches of the coastal zone within 500 metres of the coastline. As we will see in Chapter 7 below, the classification of the coastal zone as either urban or non-urban is crucial in order to allow for application of Spanish coastal law.

In addition to the above PPGIS activities, two cross-border PPGIS events were planned: Between Greece and Turkey (organized by Alexandroupolis Municipality) and between Israel and Jordan (organized by ACPD and the Technion team). Due to the economic crisis in Greece (refer Section 2.3 below), the Greece-Turkey cross-border workshop did not eventuate.

The Israel-Jordan cross-border workshop did take place, after a delay due to the Gaza war in the summer of 2014. The workshop, which took place in Aqaba in March 2015, brought together environmental experts and local officials from Eilat and Aqaba to discuss ICZM issues. This meeting was unique in that it was the first in 10 years to bring together coastal management professionals from the two sides. The participants found much common ground and sought to continue to find ways to cooperate on issues relating to coastal management. Details in Chapter 3 below.



Figure 4 – The Haifa PPGIS project in action: Walking with residents to the sea
(Source: Municipality of Haifa)

2.2.4 Comparative Analysis

Having gathered a wealth of information throughout the previous stages of work, the Technion undertook a detailed comparative analysis of the legal-intuitional context of ICZM in the partner countries and beyond. Apart from the various country and local case study reports produced by our partners, our analysis was informed by several in-depth interviews with our Associate Partners – experts in the fields of coastal law and planning from around the world.

Our analysis, which can be found in detail at Part I below, assisted in identifying similarities and differences in ICZM policy, regulation and practice. Furthermore, it allowed us to identify which tools are used in service of ICZM goals and the effectiveness of such tools.

2.2.5 Identifying Gaps

Through the comparative analysis process, as a culmination of all previous stages of work, we were able to clearly identify and categorize the legal-institutional implementation gaps which are the main focus of this project. We then focussed on these gaps in developing the Toolkit.

2.2.6 Developing a Toolkit of Alternative Instruments

The development of the Toolkit of Alternative Instruments, presented in this report, represented the final stage of the Mare Nostrum Project. The project team developed the toolkit through two key workshops:

- (1) Following the completion of the bulk of the comparative analysis, and having identified key implementation gaps, the Technion team presented these findings to the entire project team. Following the presentation, project partners, key decision makers and some associated partners participated in a three-day brainstorming “think-tank” exercise. In brainstorming, the goal is the generation of ideas. Creativity is encouraged and judgment is deferred. The three-day workshop (held in Kavala in March 2015) produced the foundation for the toolkit.
- (2) Following additional refinement of our research and comparative analysis, the Technion team invited several of our Associate Partners to a workshop at the Technion in Haifa (November 2015). In this workshop, we discussed ICZM law and practice on an international comparative scale and evaluated the legal-regulatory tools already in use around the world. Our Associated Partners, all experts in the legal-regulatory aspects of ICZM, contributed their views on existing and proposed initiatives which might reduce the gap between the aspirations of the ICZM Protocol and the reality on the ground.

2.3 Challenges and solutions

Throughout the project, the Mare Nostrum consortium faced some unforeseen challenges. The progress of the project was adversely impacted by two unrelated but parallel processes: The financial crisis in Greece and the political instability in most of the Middle East and North Africa as a result of the so-called “Arab Spring”. In addition, the war between Israel and the Palestinians in Gaza during the summer of 2014 raised tensions and postponed some of the cross-border activities planned between Jordan and Israel.

The Greek financial crisis affected the project’s progress. The project methodology was heavily based upon the access to information at the local level which would be used to leverage insights gathered from local cases into improved policy-making across the region. A major – if not the most important – source of information was to be the collective local authorities. Yet, in addition to the usual bureaucratic difficulties, the Greek financial crisis created many additional impediments to gathering information through the Greek local authorities. For example, the Greek National Legislative framework, implemented in the summer of 2012, created a particularly cumbersome procedure for hiring specialized personnel, but its impacts became apparent only after the project was launched. As the Mare Nostrum project was designed to progress through building up knowledge about national and local approaches to ICZM, the problems faced by the local authorities led to further delays in the project. As the economic crisis worsened and its effects became more apparent, the project team found it increasingly difficult to meet our objectives by the official end of the project.

The most significant outcome of the Greek financial crisis for the Mare Nostrum project was that the cross-border PPGIS activities planned for Greek and Turkish participants from either side of the Evros Delta did not take place. It was fortunate that we were able to bring Turkish experts and stakeholders to our meeting in Alexandroupolis in February 2014. At that meeting, we had the opportunity to hear about coastal management in Turkey, allowing for some limited cross-border exchange (see Chapter 3 below).

The ICZM Observatory in Kavala was also affected, as legal-institutional information was not easy to obtain through the municipality. Yet by the end of the project, some relevant databases had been incorporated into the Observatory and more will be included as they become available.

The instability in the Middle East and North Africa also caused delay. Because Mare Nostrum had no partners in the North African countries, we relied on the networks of our Jordanian partner, who had formed personal contacts in several countries over several years. As a result of political instability in the region, however, contacts nurtured with particular officials of a relevant local authority became obsolete. For instance, Egypt, perhaps the most important Arab country, experienced government overhaul twice during the course of the project. Our Jordanian partners initially had contacts in Libya, but these contacts became unreachable over the last several years.

Despite the difficulties, the Jordanian partner managed to find relevant experts in each of the North African countries except Libya. Those experts participated in a training workshop which took place in Aqaba in October 2014, produced reports about the state of ICZM laws and practice in their respective countries, and participated in the final Mare Nostrum conference held in Valencia in November 2015. This level of participation was an achievement in the light of the tension in the Middle East.

The war between Israel and the Hamas in Gaza in the summer of 2014 caused a delay in the cross-border process between stakeholders from the Jordanian and Israeli sides of the Gulf of Aqaba/ Eilat. Yet, despite the tension, the Technion team and ACPD managed to conduct a large meeting of local stakeholders, experts and officials from both sides (refer Chapter 3). A planned second meeting was unfortunately postponed due to the new tension which arose in the second half of 2015.

Finally, it should be mentioned that initially, the Mare Nostrum project plan included drafting of Supra-National Legislation on ICZM for Mediterranean Countries. But during the course of the project, the EU was drafting a Marine Spatial Planning Directive. That Directive initially included a proposal for regulation of the terrestrial part of the coastal zone, which was ultimately excluded as the majority of EU countries decided that the supra-national legislation should not pertain to the land. In this context, it was futile for us to attempt to draft such legislation. Instead, we chose to work towards a PORTS AND CITIES FORUM for model legislation for ports and cities relations in land-based issues (refer Section 4.4).

CHAPTER 3 Cross-border Cooperation

3.1 Introduction

Being a part of the ENPI CBC-Med programs, Cross-border cooperation was a key aspect of the Mare Nostrum project.

Beyond the cooperation between several countries which was at the foundation of this project, we specifically sought to involve regions with both conflict-ridden and non-conflictual cross-border relations. When considering our project partners, we noted that Spain, Malta and most parts of Greece are non-conflictual with their national neighbours; Israel and Jordan and the towns along the Greek-Turkish border are more conflictual. As such, we chose to carry out cross-border workshops at each of these two borders.

Given that the Israeli/Jordanian border is not on the Mediterranean, the Greek/Turkish border was planned as our key site for cross-border activities. According to ENPI CBC-Med program rules, Turkey could not be a project partner, therefore we selected the Municipality of Alexandroupolis (Greece) to lead the cross-border work in this location.

The primary role of Alexandroupolis in the project was in fact to analyse and attempt to bridge conflicts between Greece and Turkey in matters relevant to the establishment of ICZM principles along the Mediterranean coastline. We sought to understand how the different countries interact with each other; differences in policy and legislation which may need to be bridged in order to meet the further the objectives of the ICZM Protocol; the sources of any environmental conflicts at the border; what, if any, cooperation exists between the two sides and what may be done to bridge these conflicts.

We hoped that the Municipality of Alexandroupolis would bring stakeholders from the two sides together to discuss the issues and potential ways in which they could cooperate towards ICZM goals.

Unfortunately, partly due to the Greek financial crisis and partly due to the significant disparity between the Greek and Turkish sides, our partners in Alexandroupolis were unable to coordinate the planned cross-border activities. They undertook a case study on the Greek side of the border only – the case of illegal boathouses in the Evros Delta. In addition, the report concerning that case study did not address cross-border issues; it did not describe what are the key conflicts with Turkey surrounding the Evros Delta or provide any indication on whether the issues affecting the Greek side of the border are also issues on the Turkish side.

In order to fulfil this important mission of the project, at least in part, the Technion team:

- In February 2014, asked our Turkish associate to bring relevant Turkish stakeholders and experts to the Mare Nostrum conference in Alexandroupolis. The Turkish participants contributed information about environmental challenges on their side of the border, providing for some limited cross-border exchange.
- Undertook a study of the relevant cross-border issues at the Evros Delta.
- Consulted with Turkish experts to gain basic information about the rules and regulations on the Turkish side.

- Compared the Greek and Turkish contexts in an attempt to understand which issues must be bridged if the two sides are to cooperate on ICZM matters in the future.

We offer the following information for possible future actions involving collaboration by the two countries or future initiatives by the EU.

3.2 Greek / Turkish border

In this section we outline the environmental and cross-border issues which will be critical in any cross-border cooperation in ICZM issues between Greece and Turkey. Given that through the Mare Nostrum project we have covered the Greek legal-regulatory context for ICZM, we also provide some details of the Turkish regulatory context, to allow for comparison and to lay the foundation for the two countries to work together on these issues in the future.

3.2.1 Cross-border environmental issues at the Evros Delta

Traversing Greece, Bulgaria and Turkey, the Evros/Meric/Martisa River is one of the major watersheds in the Eastern Balkan. The river catchment area has a population of approximately 3.6 million and is primarily rural (with some larger cities). In the area where the river enters the Aegean Sea (Mediterranean) near the Gulf of Saroz, it forms a delta with an area of approximately 190 km². Most of the delta (150 km²) is classified as a wetland with unique ecological qualities and this wetland lies in Greek territory. The natural ecosystem of the Delta has been modified by human activity since 1950, but the site is one of the most important wintering areas in the Mediterranean. Species which pass through the Delta include three hundred species of birds, including the last 15 surviving pairs of Royal Eagle and more than 200 species of fish, including endangered species protected by Greek and European legislation.

The Evros Delta is protected by the EU Water Framework Directive (2000/60/EC), which applies to EU member states. In addition, 100 km² of the Greek part of the Evros Delta is protected by four major agreements:

- ‘Wetland of International Importance’ under the Ramsar Convention, which was signed by both Greece (1975) and Turkey (1994).
- A status of a Special Protection Area (Directive 79/409/EEC for the conservation of birds and their habitats)
- A Site of Community Importance (Directive 92/43/EEC for the conservation of natural habitats)
- Part of the wild fauna and flora NATURA 2000 Network.

The Delta is the source of water for several conflicting needs - irrigation, hydropower, fishing and conservation. The use of the water by the three bordering countries is embedded in historical political distrust. Each country blames the others for polluting the water, diversion of the stream and over-fishing. Both Turkey and Greece blame Bulgaria for recurring flooding due to the construction of major dams. Competition over fishing catch is another source of dispute, especially since 2008, because a steady decline in the total value of catch by Greek fishermen has been observed.

The first official bi-lateral agreement between Greece and Turkey was signed already in 1934. That agreement pertained to flood protection and a joint initiative for flood control was

implemented in 1955. Yet a political dispute between the two countries in 1956 resulted in interruption and cancellation of the majority of planned works. Flooding has therefore remained a major threat in the basin. Additional agreements were signed between Greece and Turkey in 2001 and 2006, which included monitoring programs, exchange of information and a joint committee. However, the joint committee has only met once or twice and there is inefficient and only fragmented implementation of cross-border measures against flooding.

Local initiatives do occasionally take place. For example, in 2001-2002 local municipalities made an attempt to establish a network of local governments, but that was not backed up with implementation measures. Additional actions are taken from time to time by the Greek regional authority and with the involvement of local scientists from both sides. Those parties have held discussions and composed research papers and proposals for action, but these have not been translated into practice. There are also a few local NGOs (such as the Greek EKBY) which are promoting conservation measures and public awareness of the environmental significance of the wetlands, but we have no information regarding cross-border cooperation initiatives at this level.

The variation in the countries' levels of commitment to EU policy is considered by previous studies and our interviewees to be a foci point. In broad terms, Greece has enacted and enforced EU legislation, while Turkey is not obliged to do so. However, both countries suffer from a deficiency in monitoring data and scientific-technical information, a reactive flooding management approach (on the Greek side this approach mainly includes emergency response plans and compensation), weak institutional capacities and inadequate legislative frameworks. In terms of cross-border cooperation, at present there is no sufficient data-sharing mechanism, nor any trans-boundary management program that is active.

We understand that there is no coordination of plans, and no shared depository of plans between the two sides. To the best of our knowledge, there is no coordination of environmental data.

3.2.2 The Turkish coastline

The length of the coastline of Turkey (excluding the islands) is 8,140 km. This coastline spans four seas – Black Sea, Marmara Sea, Mediterranean and Aegean Seas – but the longest of Turkey's coastlines is on the Mediterranean.

Turkey's population is 78 million (2014 – World Bank). As such, there are close to 10,000 people per kilometre of coastline in Turkey. This means that Turkey's coast is significantly more crowded than that of Greece, but less crowded than Israel's coastline. Approximately 50% of the population of Turkey lives in coastal areas, thus there is intense development pressure on the coast.

3.2.3 Turkish ICZM regulatory context

Government powers

Turkey has a highly centralized system, but established local municipalities in 1984. Local governments have held some planning powers since 1985. These powers are very limited and are subject to debate. It appears that the Greek system of local governance is more developed and that local governments have more powers in Greece than they do in Turkey.

Urban planning

There are three main plan types which are relevant to coastal areas in Turkey:

1. Macro Scale: Environmental Order Plans and Regional Plans

The Environmental Order Plan guides the spatial developments in accordance with the national and regional socio-economic plans and sets the basic land-use decisions for housing, industry, commerce etc. as well as the major infrastructural facilities. The Ministry of Environment and Urban Planning is the authority which prepares and approves the Environmental Order Plan.

Regional plans have almost the same conceptual approach to spatial issues and address the same land-use decisions as does the Environmental Order Plan. But regional plans are prepared by the Ministry of Development. There is no official coordination between these two separate planning processes.

This is perhaps that most uncoordinated approach that we have seen in urban planning processes in our study countries.

2. Development Plan and Application Plan

The Law of Development (1985/3194) grants the authority of preparing and approving Development and Application plans to local governments. Yet, particularly in the last decade, there is a tendency of the central government in Turkey to undermine the authority of the local governments through special purpose plans.

3. Special Purpose Plans

In addition to the development and application plans, the 4th and 9th articles of the Law of Development define areas in which the central government has the authority to make Special Purpose Plans: Tourism development zones, special protection areas and major infrastructure. Responsibility for these areas and works falls under several different ministries.

Special purpose plans can be differentiated into two basic groups: for the protection of a special zone or for a special use of land. Integrated Coastal Zone Management (ICZM) Plans (described below) are regarded as special purpose plans.

Special purpose plans may also pertain to uses such as tourism, ports (maritime transportation), marinas and fisheries.

Overall, planning responsibilities and practice in Turkey are highly fragmented due to the use of planning authority by a variety of central, regional and local administrations.

Coastal Law

Significantly, Turkey is not a signatory to the ICZM Protocol. This means that it is not bound to the standards set by this international law. Yet the Turkish Ministry of Environment and Urban Planning is leading a process to incorporate ICZM principles into national and local planning and environmental legislation.

The basic principles of the Turkish Coastal Law are as follows:

- Protecting of the coasts of the seas, shores of the lakes and banks of the rivers;
- Utilizing the coastal developments only for public benefit;
- Enabling free access of public to the coastlines in order to enhance social equity;
- Respecting the natural and cultural differences of the coastal areas;

- Differentiating between coastal areas which are subject to a development plan and those which are not.

Nevertheless, the Coastal Law is certainly not a comprehensive coastal management law.

The following definitions can be found in the Coastal Law regulations:

- **Coastline** is the natural line along which water touches the land and which changes meteorologically at the coasts of seas, lakes and rivers. The condition of flooding is an exemption.
- **Coast edge line** is the natural border determined by the inward motion of water from the coastline, including the land with sand, pebbles, boulders, rocks, reedy and marshland. (This definition seems to be closest to the ‘highest winter waterline’, as it includes all land which might be covered by water with the tides).
- **Coast** is the area between the coastline and the coast edge line. (This definition appears to represent what is colloquially known as ‘beach’).
- **Shore strip** is the area starting from the coast edge line and stretching inwards, with a horizontal width of 100m. The shore strip is made up of two parts, each being 50m wide. (This definition matches up with the 100 metre setback zone applicable in countries which are signatories to the ICZM Protocol).

The coast edge line is determined by a committee of five members who report to the government. The line is subject to the approval of the Ministry of Public Works and Settlement. The members of the committee should include a geologist, agricultural engineer, city planner or architect, civil engineer and a surveyor.

According to the Coastal Law, the coast edge line should be determined before the planning process starts, theoretically prior to any development along the coastal area. However, this ideal is not met in practice and there is a significant amount of illegal development in the coastal zone. Besides, the definition is not precise enough for specific ecological conditions.

ICZM plans and initiatives

Beyond the Coastal Law, a further initiative of the Turkish government is the making of ICZM plans. ICZM plans were introduced in the latest “Regulation of Making Spatial Plans”, which came into force in June 2014. Those regulations define “Integrated Coastal Areas Plan” in Turkish legislation for the first time.

Following the introduction of that regulation, the Turkish government created ICZM plans for the excessively polluted industrial-coastal regions of Turkey, Iskenderun and Izmit. Subsequent ICZM plans were created for Antalya, Samsun, Sinop, İzmir and ArtvinRize and exhibit a multi-angled economic perspective, especially focusing on tourism. All these plans are labelled as ‘draft’, with the exception of the ICZM plan for Izmit Bay, which was approved in June 2015.

ICZM plans are part of the regulatory planning system and fit under the category of “Special Purpose Plans” (SPP). SPPs are under the jurisdiction of the Ministry of Environment and Urban Planning.

There are some ambiguities about the relationship between the conventional plan types and the new ICZM plans. The coastal plans are made and approved by the Ministry, whereas local

development and implementation plans are made by local governments. Furthermore, coordination and implementation tools between the different levels of government are not well-defined in the new Regulation.

An additional criticism relates to the scope of the ICZM plans: Most are limited to a very narrow coastal area attached to the coastline and disregard the socio-economic relationship between the coastline and the hinterland.

And yet – these plans have the potential to enhance both the vertical coordination between the different levels of government and the horizontal coordination between different departments representing competing interests. As such, these plans might be a remedy for the current dysfunction in the Turkish planning system, if their place in the legal hierarchy is clarified.

Turkey has taken further action on ICZM through collaboration with several other countries on coastal projects. These include MEDCOAST's efforts for IC Meducation funded by the MED-CAMPUS (1993-96) and three coastal projects funded by the LIFE DC programme (Cirali Coastal Management and Tourism Project of DHKD/WWF Turkey; Cukurova Deltas Biodiversity Conservation Project of Cukurova University; Olu Deniz Lagoon Project of Turkish Marine Research Foundation, TUDAV).

3.2.4 Environmental challenges faced by Turkey's Thrace sub-region¹

The Thrace sub-region of Turkey has about 1.6 million inhabitants. Land in the region is primarily used for agriculture (60%) and 27% is forest land. Key crops are sunflowers and rice products.

A key trend within the Thrace region is that the population is migrating away from agricultural zones, towards the coastal area. There is also pressure from Istanbul, which is growing quickly.

The Thrace region is currently facing two important challenges:

- The river (which becomes Evros River) is very important to the region as it supports the agricultural activities. It also runs through environmentally sensitive areas. But this river is under threat of various industrial activities and continues to be polluted. Specifically, there is groundwater pollution from infiltration of industrial waste.
- There is a very high rate of population growth in the coastal area. This is putting pressure on the local environment, particularly the coastal zone. It is important to have a planned vision which involves all stakeholders.

One of the key processes being initiated by Turkish planning practitioners is the restructuring of industry to ensure less harmful effects on the environment. This restructuring involves:

- Protection of agricultural land, organized agricultural centres and organized agricultural sub-centres.
- Plans for functional linkages between cities and towns

The plans for restructuring industry were presented to the public in a series of community meetings. The community were concerned with the idea of limiting industry as they felt that the

¹ As presented by Turkish experts at the Mare Nostrum Alexandroupolis Conference, February 2014

presence of industry makes their land more valuable. Around 25% of the population are employed by industries in the region.

3.2.5 Similarities and gaps between the Greek and Turkish sides

In undertaking the above analysis, together with our earlier analysis of the Greek regulatory context for ICZM, we noticed the following key similarities:

- The coastal laws of both countries recognize the coastal zone as a public asset which should be protected for the benefit of all.
- Both coastal laws identify the importance of providing access to the coast, for the public.
- Both systems recognise that the coastal zone is not homogenous: That there are different areas within the coastal zone which should be treated differently.
- Both define their coastline, which forms the basis for further definitions of coastal land, according to natural indicators of the reach of the highest waters.

We also understand that there are several gaps between the Greek and Turkish systems, as follows:

- There is nothing in international law which requires cooperation between the two countries on matters pertaining to ICZM. Even environmental monitoring information is not shared.
- Turkey's government is highly centralized, with local government powers being very limited. Greece provides more power to local government, including the power to embed policy regarding coastal setbacks and vertical access to the sea in local plans.
- Turkey is not bound to the ICZM Protocol, whilst Greece is a signatory. This means that the countries do not start from the same baseline when preparing ICZM policy and regulations.
- Turkey's government has initiated ICZM plans, whilst Greece has not prepared any issue-based plans. The use of ICZM plans may contribute to increased coordination on this issue.
- Turkey's "coast edge line" is determined by a five-person committee, whilst Greece's coastline is determined using a more advanced system involving digital analysis of aerial photography. Whilst Greece has yet to see full implementation of its coastline demarcation, Turkey may be able to learn from the Greek methodology.

3.2.6 Recognised potential for cross-border cooperation between Greece and Turkey

At the Mare Nostrum meeting in February 2014, the Greek and Turkish sides agreed that there is potential for cooperation on the issue of flooding. Local authorities on both sides agreed that they do not have enough control of the issues directly affecting their areas. They sought cooperation, on the local level, on the issues affecting both sides. They agreed that an initial exchange of knowledge was a good start.

A shared approach to the management of the Evros river and delta would likely improve the level of environmental protection in this region. For example, the countries could cooperate on monitoring of pollution levels, as pollution of the river affects both sides.

Our analysis has shown that the two countries share some common ground: The recognition of the coastal zone as a public asset; that accessibility is a key issue in coastal zones; that the

coastal zone is not uniform and the definition of the coastline. These commonalities provide a baseline for future discussion, cooperation and knowledge sharing.

The two countries have much to learn from each other. For example, Turkey may learn from Greece how planning powers may be better dispersed and how ICZM goals might be addressed through local planning measures. Turkey can also learn from the methodology which the Greeks have developed to delineate the coastline. On the other hand, Greece may be able to learn from Turkey's ICZM Plans, as no similar topic-specific plans exist in Greece at present.

3.2.7 Refugee crisis – 2015-2016

Beyond the environmental issues faced by both Greece and Turkey, a major issue which has particular bearing on the situation at the border between the two countries is the recent refugee crisis. In 2015, countries in the European Union received 1.26 million applications for asylum from citizens of countries in Africa and the Middle East. That was more than double the number (0.56 million) of asylum applications received in 2014 (Eurostat website). The top origins of people applying for asylum in the EU were Syria, Afghanistan and Iraq respectively (Eurostat).

The main route taken by asylum seekers from Syria is north-west, through Turkey. We understand that for many, the goal is to cross the border into Greece – to be in EU territory. Thus in 2015-2016 the Greek/Turkish border has been under unprecedented pressure. We note that the mainland crossing from Turkey to Greece, through the Evros region, is hazardous given the presence of landmines along the border. In 2003, seven immigrants were killed by landmines as they attempted to cross the border (BBC News, September 2003). Thus in recent years, asylum seekers have attempted the crossing from Turkey to Greece by sea – with the object being one of the Greek islands.

In an attempt to bring order to the processing of asylum seekers and their crossing into Greece, the EU has struck two deals with Turkey in recent months: In October 2015, the two parties agreed to a *Joint Action Plan*, through which the EU would provide funding for humanitarian aid to refugees in Turkey (European Commission Press Release, 24 November 2015). In March 2016, the parties agreed, amongst other things, that *migrants crossing from Turkey to the Greek islands would be returned to Turkey* and that *for every Syrian being returned to Turkey from the Greek islands, another Syrian would be resettled in the EU* (European Commission - Fact Sheet, 19 March 2016).

The refugee crisis, which continues to unfold, should be a significant consideration if the EU plans cross-border ICZM actions or activities between Greece and Turkey in the short-medium term. In fact, the parties may wish to study whether and how the refugee crisis affects the achievement of ICZM principles in the region.

3.3 Israeli / Jordanian border

3.3.1 Cross-border environmental issues at the Red Sea

Eilat and Aqaba are located very close to each other – approximately 5km apart – on the north-eastern shores of the Gulf of Aqaba on the Red Sea. Together, the cities span approximately 40 km of coast. Both cities are small and are primarily supported by the tourism industry. Tourists are drawn to the area by the weather, the unique marine life, coral reefs, diving and other water sports activities.

Given the proximity and shared interests of the two cities, they tend to be affected by the same environmental issues and gaps in coastal management. Below are some examples of these issues.

Development pressures

Intense use and development on the coast puts stress on the environment and biodiversity of the area, particularly the unique corals, which are a major tourist attraction. Monitoring programs are crucial for understanding the impact of development activities.

Accessibility

Only about 12 km of the 40km stretch of coastline is open to the public. Much of the inaccessible parts of the coast are taken up by industrial and port activities. Development pressures, a growing population, and increasing tourism threaten future access to the beach – particularly for the local populations.

New Eilat airport

Israel is planning to build a new airport 100m from the Jordanian border. The Jordanians are concerned about the impacts of this airport.

Oil spills

An oil spill (Evrona) occurred at the beginning of December 2014 within Israeli waters and was contained mainly due to a quick response by volunteers and local organizations. As far as we are aware, no oil reached the Gulf and none reached Jordan.

According to senior personnel at SPNI (Society for the Protection of Nature in Israel), if you have an oil pipe, it will eventually leak. As such, these type of disasters must be modelled during the planning process, so that response scenarios can be prepared ahead of time.

3.3.2 Environmental initiatives on the Israeli side

Israeli National Monitoring Program at the Gulf of Eilat

This monitoring project began as a result of a public debate on the impact of the offshore aquaculture project. Its mission is to provide decision-makers, scientists, and the public with unbiased and consistent data, identifying long-term trends.

The following are monitored: Coastal waters (zooplankton, chemicals, sediments); reefs (reef census, coral census, invertebrate census, algal potential and growth); zooplankton productivity; and deep water (chemistry, physics, primary production and phytoplankton).

Collaboration activities with Jordanians take place twice a year, however issues surrounding face-to-face meeting (visas, border crossing) make it difficult.

The data from the monitoring project is made public via an internet site (in Hebrew and English) and an annual report.

Eilat Eilat Environmental Unit

Recently, this Unit made a short movie about the marine environment in Eilat. It aims to increase public awareness about the local ecosystems and reduce the impact of tourism activities (such as coral trampling, littering, collection of seashells).

3.3.3 Environmental initiatives on the Jordanian side

The issues

In the last few decades, Aqaba has been subject to heavy development along its 27km stretch of coast. Today it has a population of 120 thousand people.

Major issues which arise in planning for Aqaba include land use conflict (between industrial, tourism and recreational uses), and ensuring free public access to the beach.

Regarding access to the beach – Many beaches have been privatized. There has been a recent proliferation of gated communities and Aqaba is considered an expensive place for vacation for many Jordanians.

In 2001, ASEZA (Aqaba Special Economic Zone Authority) adopted a master plan which aims to guide development, energy policy, protection of the marine environment and water conservation, to the year 2020. The plan seeks to balance competing land use needs and open more beaches to the public.

Environmental monitoring

Since 1993, monitoring of the Aqaba environment has been a collaborative effort, with involvement from the World Bank, GEF and most recently, the Marine Science Station.

The current monitoring program focuses on seawater quality reports, bottom habitats, corals, and seagrass, and collects physical, chemical and biological data from 10 stations in 5 zones (tourist, port, marine park, industrial, and offshore zones). The data is not available to the public.

Planning

The 2001-2020 Aqaba Master Plan seeks to balance economic and social well-being with protection of environmental resources.

Aqaba is divided into zones: town, port areas (3 ports: main port, container port, industrial port), coral coastal zone, southern industrial zone, airport zone, and protected zones (reserves).

A number of developments are planned for the city:

- Upgrade waterfront promenade and beach Al-Hafayer
- Add restaurants and shops at fishing harbor
- Implement retail and residential village next to the Mamluk castle in Al-Hafaer

- New hotel convention center and condominium complex in the Al Hashimi “Great Circle area” (SARAYA).
- New Royal lagoon hotel, marina, restaurant and waterfront residential center (AYALA OASIS). This project will add an internal coastline of 1.7km.

A sea use plan (through EU project, MedSealties), and a transportation plan are under development.

Accessibility

Current regulation establishes that the first 15m from sea are owned by ASEZA; beyond that, in the adjacent 25m only soft landscaping is allowed; in the following 25m hard landscaping is permitted; beyond that, construction is permitted. Despite these regulations, hotels continue to enclose and privatize their adjacent beaches.

Many beaches charge entrance fees. The ADC and others are concerned that if this practice was not permitted, foreign investment in Aqaba would diminish. These investors support community projects and many believe that they keep the beaches cleaner and safer.

Pollution control and public awareness campaigns

The Aqaba Development Corporation (ADC) supports some NGO activity to protect the shores. One example is the Plastic Garbage Project: The Royal Marine Conservation Society of Jordan (JREDS) worked with children to collect plastic from the shores and produce environmental art projects which were exhibited in Amman. The project involved the collection of 180 tons in the first year.

3.3.4 Existing and potential cross-border cooperation between Jordan and Israel

The Technion team and ACPD managed to conduct a large meeting of local stakeholders, experts and officials from both sides in March 2015. A planned second meeting was unfortunately postponed due to the new tension which arose in the second half of 2015.

During the March 2015 meeting, participants concluded that we need better cross-border information sharing mechanisms. Below are some specific proposals which were put forward.

Southern Israel-Jordan Environmental Forum

This is an existing initiative which needs continued support. It is a place for collaborative work on the community level, focusing on the process of cooperation rather than timetable or results. The idea is that after funding ends, people will be there to make sure that cooperation continues.

The Southern Israel-Jordan Environmental Forum will create a networking platform with a goal of encouraging cross-border environmental collaboration.

Objectives:

- To create a long lasting professional forum that will initiate projects together and later on also perform as a think tank and advisory board for shared environmental issues. Emphasis on creating long-lasting, trustful relationships.
- To benefit the environment and communities of both Southern regions of Aqaba and Eilat through the creation and implementation of pilot projects. The projects may be planned together and carried out separately.

An important challenge is to ensure committed participation and to deal with cultural sensitivities. Transparency and dialogue are crucial throughout the project.

There are very positive prospects for a significant increase in the number of participants.

Environmental monitoring

Both sides have monitoring programs and given that the environment is the same, there is a strong argument to collaborate. Such a process could start with the sharing of data gathered.

Vision for a joint Eilat-Aqaba bird centre

Each city currently has an independent bird centre. The region constitutes a land bridge between Europe and Asia and the last stopping point for feeding before crossing the Sahara. As a result, it has been estimated that 500 million birds migrate through the area. This is a case in which cooperation would certainly benefit the environment. According to SPNI, the majority of such a project could be carried out at the national level, but there is an opportunity to share data, experts and publications.

Cooperation for environmental awareness

A copy of the video produced by the Eilat Eilat Environmental Unit was given to the ADC coordinator of environmental and community projects, with the offer to use the footage and do the voice over in Arabic. This is just one example of how resources can be shared.

Another potential opportunity is to convert the Plastics Garbage Project undertaken in Jordan into a cross-border program. Children from both sides could work together to collect the garbage and create art.

Accessibility

As this is an issue for the Jordanian side in particular, representatives of SPNI have pointed out that they have significant experience in matters relating to beach access that they can share with the Jordanian side.

Crisis Management

The two countries' militaries currently share contingency planning for crisis situations. Such a program could be instituted in case of environmental crisis.

Learning from other regions

The participants in the Eilat/Aqaba cross-border meeting supported the idea of meeting with Turkish and Greek representatives to share knowledge about cross-border management of ICZM issues.

CHAPTER 4 Capitalization Initiatives

4.1 Scientific Model for Coastal Setbacks

In the course of research into the Kavala case study, our partners at Kavala Municipality DUTH found that the current method used to measure setback distances in Greece is lacking and causes legal uncertainty and conflicts – particularly in cases of rough, impermeable (rocky) shores.

Thus DUTH set out to develop a scientific model to define coastal setbacks. The model takes a holistic approach to defining coastal setbacks: it is based on geomorphology and computer-based modelling of tidal activity, combined with assessment of existing uses and activities on the land and public participation processes.

Full details of the model developed by DUTH are provided in the Mare Nostrum Project Second Report: *Existing Practices and Impediments to Implementation- The Local and Cross-National Level* (Second Edition, February 2015). The steps advocated in the model are as follows:

- *Step 1: Geomorphologic Coastal Classification*
- *Step 2: Shoreline Digital Elevation Model*
- *Step 3: Determination of the Highest Winter Water Marks*
- *Step 4: Assessment of Ecological and Landscape Values of the Shoreline*
- *Step 5: Assessment of Cultural and Human Values of the Shoreline*
- *Step 6: Assessment of Public Uses of the Shoreline*
- *Step 7: Analysis of Transit and Accessibility Issues of the Shoreline*
- *Step 8: Analysis of Legal and Administrative Provisions*
- *Step 9: Public Involvement and Discussion*

The two attributes of the model which set it apart from any methods we have seen used by our study countries are that (a) it differentiates between different types of shores – acknowledging that rocky shores might require a different method of delineation than do sandy beaches and (b) it incorporates a complex scientific method for determining the coastline (Step 3 above).

The model developed by DUTH may be used as a resource by any country struggling clearly define and delineate its coastline. As we indicate throughout this report, the delineation of the coastline is a key step in improving coastal zone management practices.

The DUTH team, headed by Professor Georgios Sylaios, published an academic paper about the model for coastal setbacks in the journal of Coastal Management in October 2015. The paper is titled: *A Tool for Coastal Setbacks Demarcation over Rough, Impermeable Shores: The Test Case of Kavala Coastline (Northern Greece)*. Refer to our reference list for a full citation.

4.2 Model ICZM Observatory – Kavala

A key tool to emerge from the Mare Nostrum Project is the Kavala ICZM Observatory, developed by DUTH and Kavala Municipality. This Observatory is an interactive, GIS-based platform which allows the decision-makers and the public to share information regarding the environmental and legal-regulatory aspects of the coastal zone. This platform serves as a model tool for use by coastal jurisdictions across the Mediterranean and the world.

The Kavala Observatory GIS platform is available through the following link:

<http://dkavalas.maps.arcgis.com/apps/PublicGallery/index.html?appid=f3c948945d1f488991c9de8b6960e82d>. There is also a mobile phone application available to the general public.

The tool will continue to evolve but to date, the following layers of data are available:

- Topographic Maps
- Bathymetric Maps
- Geological Maps
- Regional Borderlines Municipal Borderlines
- Municipal Departments Borderlines
- Legal Building Permits, issued from year 2015 and onwards,
- General Urban Plan
- Defined Setback Line along the Coastline
- Existing Urban Plans
- Existing Urban Sectors
- General Urban Plan Land Uses
- Corine 1990, Corine 2000 and Corine 2012 Land Uses
- Average Building Ratio per Building Block
- The historic environmental information,
- The short-term environmental predictions, and
- The long-term climate change scenarios and local impacts.

The platform provides for direct reporting by citizens on any issue that they might encounter in the coastal zone. For example, citizens might report on illegal development, unauthorized use of the beach or any barriers to accessibility in or to the coastal zone.

We consider the use of technology – particularly GIS and the internet – as a critical aspect of coastal zone management. Having a tool which enables and promotes the sharing of information between decision-makers and the public should assist in the overall integration of coastal zone management systems.

The challenge now, for Kavala, is to continue to develop the Observatory tool: To add data, to encourage citizens to add reports and to learn to manage those reports and to incorporate them into coastal zone management processes.

4.3 Mare Nostrum Network of NGOs

A key aspect of the Society for Protection of Nature in Israel (SPNI)'s role in Mare Nostrum project was the establishment of a network of environmental NGOs interested in coastal zone management in the Mediterranean.

SPNI began the process for building such a network by surveying environmental NGOs about their needs and goals. In total, 43 NGOs from 11 countries (in the Northern and Eastern Mediterranean) participated in the survey.

From the results of that survey, SPNI was able to put together the following goals for the Mare Nostrum Network:

- Provide a platform for dialogue, information, and knowledge exchange between members.
- Create regional synergies through joint actions, campaigns, events, petitions, and position papers.
- Raise awareness among the public regarding environmental challenges in the Mediterranean, conservation efforts, and opportunities for involvement

After developing those goals, our project team launched an online platform at Open Channels – a “community hub for sustainable ocean planning and management”. The platform can be found at: <https://marenostrum.openchannels.org/>. NGOs began to join shortly after the launch. To date, 22 NGOs from 14 countries across the Mediterranean region have joined.

The first workshop of Mare Nostrum Network member NGOs took place in November 2015 at the Mare Nostrum closing conference in Valencia, Spain. The objectives of that meeting were to introduce the various member NGOs and to allow them to present their diverse experiences in confronting coastal zone conservation issues in the Mediterranean region.

The NGOs present had the opportunity to discuss their areas of expertise and the challenges they face. The members then brainstormed ways in which they can collaborate, matching each member's perspectives and expertise with the overall conservation targets of the Mare Nostrum Network.

It remains to be seen to what extent this network will continue to be active after the conclusion of the Mare Nostrum Project. The online presence and face-to-face meeting in Valencia certainly sparked interest and enthusiasm from NGOs.

Today, several core members of the Mare Nostrum Network remain connected; exchanging ideas and campaigns, and looking for joint funding and grants. They have been working together to help a member organization on an ongoing project and are looking for opportunities to meet for another conservation workshop.

Any continued cooperation or joint initiatives will depend on the will of member organizations and their willingness to prioritize investment of resources in this platform.

4.4 Ports and Cities Initiative

A striking weakness of the ICZM Protocol is its mild reference to what it has termed “economic activities”. Article 9(f) lists among these:

“infrastructure, energy facilities, ports and maritime works and structures”

The Protocol guidance regarding such facilities and structures is

“to subject such infrastructure, facilities, works and structures to authorisation so that their negative impact on coastal ecosystems, landscapes and geomorphology is minimised or, where appropriate, compensated by non-financial measures”.

Through the course of the Mare Nostrum Project, we questioned whether such a recommendation is sufficient to support a sustainable management of coastal areas in cases where large-scale infrastructure is positioned on the coast – particularly sea-ports. Ultimately, we identified a gap in the institutional-regulatory relationships between ports and their adjacent cities:

Ports are arguably the human activity which has the greatest impact on the coastal zone. Ports are considered mega-infrastructures; besides their natural need for a large amount of coastal land, they alter the coastline completely by the construction of artificial piers and docks, dredging of access channels and discharging of dredged materials. They also serve as sand-transportation barriers. Port and shipping activities contribute to air pollution, dust from unloaded bulk materials, noise, and traffic load and a significant loss of endemic creatures due to invasive species.

Despite the significance of ports and their potential to affect the coastal environment, it has been noted in the literature that ICZM initiatives rarely take ports into account (De Langen and Nijdam 2007). We see this in the case of the ICZM Protocol, where ports are exempted from its regulatory guidance.

The International Convention for the Prevention of Pollution from Ships (MARPOL) does seek to reduce some of the negative impacts of shipping activity, especially air and water pollution. This international legislation was adopted (in 1973, with amendments in 1978) and ratified by many countries. Several countries have translated the Convention annexes into their national laws. Yet this legislation does not take an integrated approach to coastal management. More specifically, it does not address the key issue of how ports relate to the cities or regions to which they are connected.

The world’s top 50 ports are contained within urban agglomerations (Hall and Jacobs 2012). As such, ports should not be seen as disconnected entities. It is essential to address the issue of the complex, interdependent relations of ports with their adjacent coastal cities.

This legal-institutional gap has led to many land-related conflicts between ports and cities. We sought to further understand these conflicts and potential solutions and therefore met and interviewed key-personalities in both port management authorities and urban planners in the municipalities. We began with port cities who are project partners: Alicante, Kavala, Aqaba, Haifa and Valencia. We then expanded our study to include other port-cities along the Mediterranean, including Marseille and Barcelona. To complement our interviews, we analysed relevant regulation pertaining to ports and cities, including national Port Laws in Spain, Greece, France and Israel.

Overall, we found that the inherent conflicts between ports and cities are similar along the Mediterranean, despite major differences in the legal-regulatory settings of the countries in our study. Conflicts are over property ownership; legal control of planning and development; types of land uses permitted in the port areas; environmental controls; public access (refer Figure 5); control and financing of infrastructure; payment of fees and taxes; and degree of formal representation of the city in port decision-making bodies. As the project progressed, we also found that in several port-cities, efforts are being made to mitigate such conflicts, through innovative institutional and regulatory mechanisms, such as binding protocols, joint committees and coordinated planning schemes. Yet there is no cross-national learning; cities and ports are not aware of the issues in other port cities or of the mechanisms being applied to bridge the gap.

Given our learning through the course of the project, we sought to advance the potential for cross-national learning, as well as for the development of supra-national legislation which applies ICZM principles to port-city relations. Our proposal is to create a Platform for Port-City Collaboration on Land-Based Regulations. This Platform would provide for representatives of ports and cities throughout the Mediterranean region to come together, share their issues and solutions, and together decide whether supra-national action is required, and in what format.

Through the course of the project we discussed the Platform with many representatives of ports and cities and the idea was met with enthusiasm. Initially, we received the support of the Mayor of Thessaloniki, who proposed to host the first meeting of the Platform. Due to administrative issues arising from the Greek economic crises, that meeting did not eventuate. Most recently, representatives from Barcelona city and ports have shown interest. We have provided our contacts in Barcelona with the relevant information and we hope to continue to support them in formally proposing the platform and hosting the launch event. Future activities will depend on the will of the relevant actors in Barcelona, as well as funding opportunities.

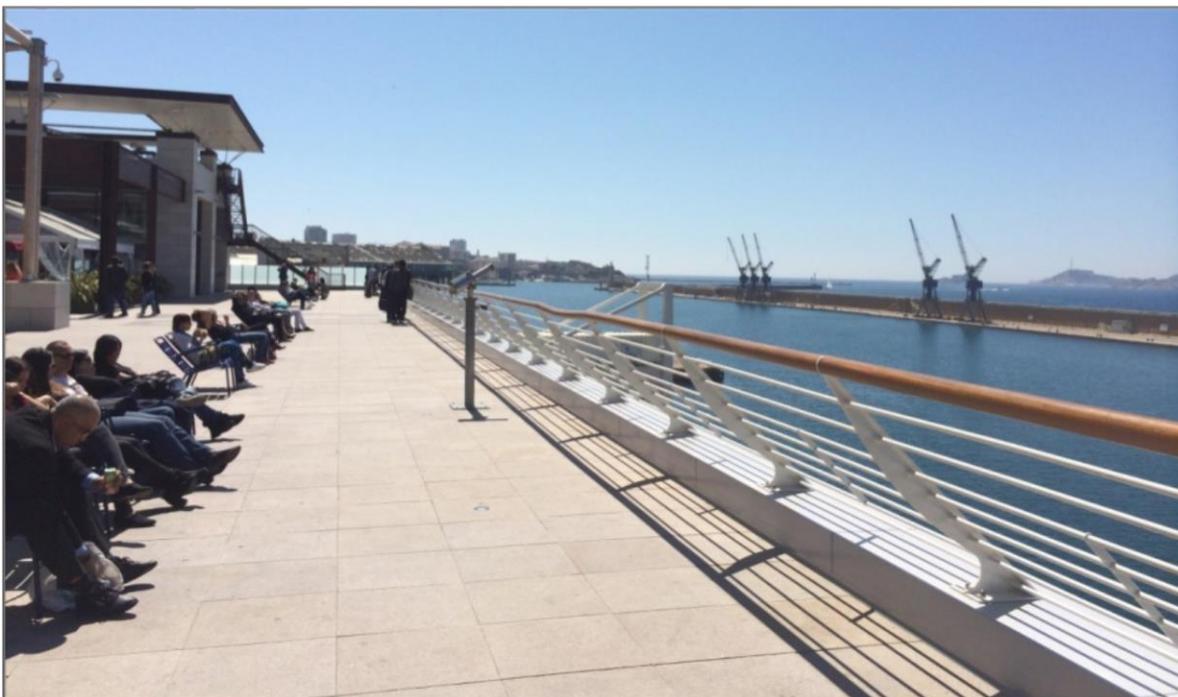


Figure 5 – Marseille Port: Viewable but not accessible from the city

(Source: C. Pellach, 2015)

4.5 Expert Forums

Apart from a platform for ports and cities as described in the previous section, our research has led us to appreciate the need for two additional issue-based cross-national forums: One for enforcement officers working to enforce planning regulation in the coastal zone; the second for cadastre experts to discuss a consistent method of delineating the coastline.

4.5.1 Enforcement forum

Poor compliance with planning and building laws and regulations is an important “unspoken” issue in coastline management. This problem is shared by all countries, though to different degrees. Noncompliance in the coastal region is generally a more severe problem than in inland, urban or rural areas. This issue has gone “under the radar” in the ICZM Protocol and the huge number of national reports, declarations, and research following the Protocol.

To date, there has never been an opportunity for the persons charged with enforcement in each country or region, to share knowledge about their problems. Although the laws and regulations do differ to some extent, the challenges of enforcement have enough in common to enable mutual learning. In addition, there is no comparative information or research about current laws and practices about planning law enforcement.

Our team proposed an Enforcement Forum which would address these issues. The Forum’s purposed would be:

- To learn about current laws and practices in each participating countries, so as to have a comparative overall picture.
- To share knowledge about “better practices’ and think-tank of new ways of approaching the tough enforcement challenges.

Using the Mare Nostrum Project as a springboard, we have begun discussions with representatives of the Catalan government in Barcelona, who are interested in hosting such a forum. We hope that this initiative will continue to develop in the coming months.

4.5.2 Forum of cadastre experts and policy makers

Across the countries we studied through the Mare Nostrum project, there is only a weak link between policy and the practical acts of defining and delineating the coastline. Given that delineation of the coastline is regarded as a technical matter, in every country in our study, it is undertaken by a closed cadastre agency. These cadastre agencies tend to be much more insular than other government departments.

We have discussed the problem of coastline delineation at length with our Greek associate partner and presented the problem at a meeting of EU cadastre experts in July 2014.

We propose a combined forum with legal and technical experts, which would provide the means for the relevant stakeholders in coastline delineation to come together. The forum would first discuss existing processes across countries. Following that discussion, they would work to see if a single definition and methodology can be achieved.

PART II

CURRENT STATE OF LEGAL-INSTITUTIONAL INSTRUMENTS IN PARTNER COUNTRIES:

COMPARATIVE VIEW

CHAPTER 5 Introduction to our Analysis

5.1 About this part

In this second part of the report, we will compare the partner countries and the policy, laws, regulation and practice relating to Integrated Coastal Zone Management. The differences between the countries allow us to identify 'better' and 'worse' practices. The comparison also serves to identify the implementation gaps, which may be reduced through the application of new legal-institutional tools.

Our analysis is based on questions and criteria which stem from four broad dimensions for comparison, which we describe in this chapter. We have derived these dimensions from a number of sources, including the ICZM Protocol and the Mare Nostrum project case studies. In Chapters 6-9, we provide a description of the legal-institutional policy for ICZM in each country, according to the dimensions. In Chapter 10, we undertake a comprehensive comparative analysis.

5.2 Definitions

Below we present some basic definition pertaining to ICZM and the coastal zone.

5.2.1 ICZM

The concept of Integrated Coastal Zone Management (ICZM, or ICM) originated in the 1970s (Belknap, 1980; Felleman, 1982) and nowadays is considered to be the primary mechanism for achieving sustainable development in the coastal zone (Portman, 2016; Garriga & Losada, 2010). There are various definitions of ICZM. These definitions are generally broad and ambitious; encompassing a wide range of issues and uses affecting the coastal zone.

For example, Cicin-Sain and Knecht (1998) present the following definition of Integrated Coastal Management (emphasis added):

*"A conscious **management process** that acknowledges the **interrelationships** among most **coastal and ocean uses and the environment they potentially affect**. ICM is a process by which rational decisions are made concerning the **conservation and sustainable use of coastal and ocean resources and space**. The process is designed to **overcome the fragmentation inherent in single-sector management approaches** (fishing operations, oil and gas development etc.), in the splits in jurisdiction among different levels of government, and in the land-water interface". (p.1, emphasis added)*

In the above definition, the authors clearly see ICM as a means to coordinate sectors, but the reference to 'most coastal and ocean uses' is very broad. An even broader definition can be found in a 2006 Rupperecht-Consult report, evaluating ICZM in Europe for the European Commission:

*"ICZM is a strategy for an **integrated approach to planning and management**, in which all policies, sectors and, to the highest possible extent, individual interests are properly taken into account, with proper consideration given to the **full range of temporal and***

*spatial scales, and involving **all coastal stakeholders** in a participative way. It demands good communication among governing authorities (local, regional and national), and promises to address all three dimensions of sustainability: **social, cultural, economic and environmental**. It thus provides management instruments that are not per se included or foreseen in the different policies and directives in such comprehensiveness" (p. 6, emphasis added)*

The above definition is extremely ambitious and yet lacks a clear goal; why ICZM? We found a more targeted definition in a 2006 report by the European Environment Agency:

*"ICZM attempts to **balance** the needs of **development** with **protection** of the very **resources that sustain coastal economies**. It also takes into account the public's concern about the deteriorating **environmental, socio-economic and cultural state** of the European coastline". (p.7, emphasis added)*

With the many definitions circulating the literature, ICZM is an established concept. Yet it represents an ideal that can never be fully implemented (Garriga and Losada 2010, 89). As Portman (2016) states:

"... even though most plans and programs pertaining to coastal areas call for the establishment of ICZM practices, there are many challenges to success". (p. 69)

We have established that ICZM is a broad and ambitious concept. Yet the Mare Nostrum project goal is more modest: We focus on implementation gaps in the land use aspects of ICZM in Mediterranean countries. This focus has allowed us to define a clear set of criteria for evaluation, which we define below.

We note that the definitions of ICZM can lead to confusion between the terms 'integration' and 'coordination'. In this report, integration refers to the interrelationship between the substantive aspects of policy areas and the capacity to minimize contradictions within policy. Coordination pertains to the working of organizations and institutions.

5.2.2 Coastal zone

The term ICZM begs a definition of the term *coastal zone*, but defining this term is not an easy task (Davis and Fitzgerald 2004, p 2). As such, as with the term ICZM, there is not one agreed definition, but several definitions which emerge from the literature.

Many of the available definitions are based on terrestrial characteristics. For example, Davis and Fitzgerald (2004) define the coastal zone as:

"... any part of the land that is influenced by some marine condition, such as tides, winds, biota or salinity" (p.2). Similarly, the UNEP (2006) relies on the following definition: "The coastal zone is a narrow band of terrestrial area dominated by the ocean influences of tides and marine aerosols" (p.V).

Some define the coastal zone using an arbitrary distance from the coastline. For example, the EEA report of 2006 states that: *"The terrestrial portion of the coastal zone is defined by an area extending 10 km landwards from the coastline"* (p. 11). The authors of that report distinguish

between “the immediate coastal strip (up to 1 km)” and “the coastal hinterland (coastal zone between 1 and 10 kilometre line)” (p. 11). As we will see throughout this report, the distances used to define elements of the coastal zone vary from country-to-country. Regarding restrictions relating to the coastal zone, the maximum distance mentioned in any of our study countries’ laws is 500 metres from the coastline.

The above two categories of definitions provide relatively simple ways to define the coastal zone. They are transparent and provide a level of certainty to the public. Yet they do not consider the spectrum of influences and risks to the coastal zone. Beatley et al (2002) state that:

“Boundaries of the coastal zone should correspond with the boundaries of the resources addressed in a coastal management plan. Coastal zones can be affected significantly by human and other activities that occur at a great distance from the coast itself. Where influences are generated further inland, a definition of the coastal zone should encompass the entire watershed or river basin that drains into coastal waters” (p. 13-14).

All of the above definitions are relevant to our analysis. As we will see throughout this report, defining the coastal zone, coastal influence zone and coastal hinterland is a key challenge faced by all countries. This is not surprising, given the complex nature of the coastal zone as a natural system. This challenge was foreshadowed by Beatley et al (2002):

“Natural systems have transient and often fuzzy boundaries that rarely, if ever, correspond to political boundaries. This makes delineating the extent of the management area difficult. Coastal regions are dynamic interface zones where land, water and atmosphere interact in a fragile balance that is constantly being altered by natural and human influence”. (p. 13-14)

5.2.3 Coastline

The coastline is defined by Davis and Fitzgerald (2004) as “the contact between the land and the sea” (p.2). As we will see throughout this report, this definition does not provide an answer to the more complicated question of how the coastline is defined and delineated.

5.3 The comparative dimensions

We have identified four dimensions for the purpose of comparison between the countries: Planning and legislative tools; Land related; Management and organisation; and Participation and information.

Land related criteria focus on physical aspects of coastal zone management. They include issues relating to planning regulations and property rights. The topics in this dimension are:

- Delineation of the coastline
- Public ownership (and permitted land uses in public land areas)
- Setback distance (and permitted land uses in setback zones)
- Accessibility
- Compliance and enforcement

Within each dimension, we have developed a set of questions and criteria for evaluation.

5.3.1 Planning and Legislative Tools

Key to Integrated Coastal Zone Management is the development of legislation and urban planning policies and strategies which guide development and preservation of the coast. Article 6 of the ICZM Protocol, states that:

(f) The formulation of land use strategies, plans and programmes covering urban development and socio-economic activities, as well as other relevant sectoral policies, shall be required.

In addition, the need for appropriate legislation, plans and strategies is mentioned throughout the Protocol. In our assessment of these issues, we will compare the partner countries on the basis of the following questions:

- To what extent is coastal zone management addressed by the country’s planning and legislative framework?
 - Is coastal zone management addressed in legislation?
 - Is there a national or regional plan that covers the coastal area? What is the status of the plans/s?
 - Do local and regional plans address coastal management issues? In which ways?
 - What is the degree of cohesion among the various legislative items – for example, planning laws; infrastructure laws; environmental laws?

5.3.2 Delineation of the coastline

The delineation of the coastline refers to the identification of the line between land and sea. This is a complex issue and laws dealing with coastal boundaries are constantly evolving and changing (Robillard et al, 2009).

The source of this topic is the ICZM Protocol, at Article 8(2)(a):

*(The parties)... shall establish in coastal zones, as from the **highest winter waterline**, a zone where construction is not allowed. Taking into account, inter alia, the areas directly and negatively affected by climate change and natural risks, this zone may not be less than 100 metres in width, subject to the provisions of subparagraph...*

The Article requires partner countries to identify the line between land and sea, using the parameter of the “highest winter waterline”. This concept stems from civil law (Robillard et al, 2009) and is based on environmental parameters which necessitate evidence-gathering and interpretation. Robillard et al (2009) lists the following evidence which is gathered by surveyors in determining the “ordinary high water” (p. 244):

1. Various geomorphological features. These include features indicative of the natural limits of water bodies such as escarpments and natural levees.
2. Vegetation. This category includes evidence such as the lower limit of terrestrial vegetation and areas where vegetation has been wrested away by wave action...

3. Changes in the character of the soil. This includes evidence such as differences in organic content due to leaching and the landward limit of stratified beach deposits...
4. Hydrological evidence.

The rationale for the requirement for delineation of the coastline may differ from country to country. For some it is important for establishing setback zones from the coastline in which development is restricted. Delineation may also be important for defining the boundary between where land-related and sea-related policies apply (For example, the setback requirements relate only to the coastal zone and not to the marine environment). On the land side, that boundary should provide certainty for property rights and the real estate market.

The rules may be based on arbitrary guidelines or on environmental parameters. The use of environmental parameters can pose difficulties in providing legal certainty: The rapidly-changing nature of the coastal environment is anything but certain. And there is no “correct balance” between the use of environmentally-led parameters for defining the coastline and more legal certainty in property rights issues. As we will see, each country gives a different solution.

Our evaluation criteria arising from this topic are as follows:

- Extent to which the definition of delineation provides legal certainty:
The highest winter water line identified in the ICZM Protocol is an environmental parameter: It changes based on the movement of the sea. It therefore affects the level of legal certainty in property and land management. On the other hand, it is possible to define the line between land and sea with more certain measures (for example, Israel uses the mean sea level as a benchmark).
- Extent to which the delineation responds to environmental changes
The coastal environment changes rapidly and it is important to take these changes into account in coastal zone management.
- Capacity for consistency across national borders:
This criterion assesses to what extent the method of delineation of the coastline is consistent and can be coordinated with the methods used in other countries. The ICZM Protocol seeks to apply a coordinated, unified set of principles to all Mediterranean countries. As such, consistency across national borders is important for the implementation of environmental policy. It is also an important tool to prevent conflict across national boundaries.

5.3.3 Public ownership (and permitted land uses in public land areas)

This topic refers to the extent to which parts of the coastal zone are publicly owned or managed. Public land ownership is tied in theory to the “public trust doctrine”, which *holds that “some of Earth’s riches should never be sequestered for private use, must be left for the public’s enjoyment, and must be stewarded by those in power”* (Takacs, 2008; 711). Thus the doctrine, developed in the Roman Empire, sees public land ownership as a tool for preserving the enjoyment of the public.

Similarly, the ICZM Protocol identifies public ownership as a means to promoting ICZM (Article 20):

1. For the purpose of promoting integrated coastal zone management, reducing economic pressures, maintaining open areas and allowing public access to the sea and along the shore, Parties shall adopt appropriate land policy instruments and measures, including the process of planning.

2. To this end, and in order to ensure the sustainable management of public and private land of the coastal zones, Parties may², *inter alia*, adopt mechanisms for the acquisition, cession, donation or transfer of land to the public domain and institute easements on properties.

The Protocol underscores the importance of public ownership as a mechanism for sustainable management. But public ownership may not be enough to protect the coast, as it does not protect against government breach of the public trust.

The protocol does not define what is to be publically owned and how it should be defined (beach? coast? setback?). This is a matter for discretion by individual countries – and one parameter on which we will based our comparative analysis. In addition, we will address the following criteria:

- The existence of a public domain (Is there a public domain?)
- The extent to which the public domain is clearly defined
- The extent of the land (distance from coast) within public ownership
- The extent to which the agency in charge is committed to the objectives of the ICZM Protocol:
 - Sustainability
 - Economic development
 - Social culture
 - Justice
 - Resilience
- The extent to which the publicly owned land is effectively managed
- The extent to which uses permitted on the publicly owned land are regulated to be temporary
- The extent to which public ownership is effective in preventing use for private interests

5.3.4 Coastal setbacks (and permitted land uses in setback zones)

The *coastal setback zone* is the term which we have selected to describe an area, or strip of land, with width being an identified distance from the coastline (however that line is defined – see discussion of delineation above) in which construction is restricted. The origin of this dimension is the ICZM Protocol, which states, at Article 8(2)(a):

(The parties)... **shall establish in coastal zones**, as from the highest winter waterline, a zone **where construction is not allowed**. Taking into account, *inter alia*, the areas directly and negatively affected by climate change and natural risks, **this zone may not be less than 100 metres in width**, subject to the provisions of subparagraph.

² By saying that the countries “may” do this, the Protocol potentially elevates the legal significance of public ownership of coastal land. We conclude this because such legal instruments already exist in each and every country and would not have been mentioned unless the authors of the Protocol wanted to elevate the importance of public ownership. For example, if expropriation is used to turn a private beach into a public one, the language of the Protocol could help the relevant national jurisdiction survive a court challenge.

In planning for environmental systems, the application of setback zones (sometimes referred to as ‘buffer zones’) is seen as an important tool to “*physically separate the human activities from physical and ecological processes when it is considered necessary for the preservation of the overall quality of the system*” (Sano et al, 2010; 1). Setback zones do not only protect the environmental values of the coast; they may also protect property from damage due to erosion or flooding.

Coastal setbacks are used as a regulatory tool in several western states. The methods used to identify the extent of these zones can be divided into two categories: (a) an arbitrary distance is specified from the coastline or (b) environmental parameters are used to determine the setback distance in a given location. The method stipulated in the ICZM Protocol falls into the first category: It specifies the seemingly arbitrary setback distance of 100 metres. A similar approach is taken by our partner countries, as we will see below. On the other hand, there are examples from the USA and Australia of setback distances being derived from predictive modelling of environmental changes; erosion, flooding and sea level change (Sano et al, 2010).

The extent of development allowed within setback zones may also vary amongst different jurisdictions. The ICZM Protocol indicates that development should be prohibited within the setback zone, but provides a great deal of scope for exemption from this prohibition. Exemptions include projects of “public interest” and in areas with geographical constraints; particularly development relating to population density or social needs.

Given the above discussion, the evaluation criteria arising from this topic are as follows:

- The extent (width) of the setback zone
- The extent to which the definition of the zone creates legal certainty.
 - Does it enable legal certainty for investors and the real estate market?
- The extent to which the definition of the setback zone reflects environmental characteristics.
- The degree of effectiveness of development controls in maximising the social and economic benefit of the coastal resources while minimising environmental damage
- The extent to which uses permitted within the setback zone are regulated to be temporary

5.3.5 Accessibility

Accessibility refers to both horizontal accessibility and vertical accessibility. Horizontal accessibility refers to the accessibility along the beach/coast, to allow people to enjoy the breadth and the length of the coastline. Vertical accessibility refers to access to the beach – perpendicular to the coastline. The source of this topic is the ICZM Protocol, at Article 8(3)(d):

(3) The Parties shall also endeavour to ensure that their national legal instruments include criteria for sustainable use of the coastal zone. Such criteria, taking into account specific local conditions, shall include, inter alia, the following

... (d) providing for freedom of access by the public to the sea and along the shore;

Apart from physical accessibility, during the Mare Nostrum project we identified the issue of social accessibility. For example, is the beach accessible to people from different soci-economic backgrounds? This issue is also reflected in our criteria.

Accessibility evaluation criteria:

- The extent to which accessibility is ensured
- The extent to which laws regarding accessibility are monitored and observed
- The extent of walkability along the coastline (measured in metres):
 - Are there any obstacles impeding the passage along the beach?
- Minimum width off accessibility “belt”
- Minimum distance between vertical access points
- The level of maintenance of pathways to the shore
- The extent to which views to the coast are protected
- The extent to which the beach is accessible to people with disabilities
- The extent to which the coast/beach is affordable
- The extent to which beaches are accommodating to social needs of diverse groups.

5.3.6 Compliance and enforcement

The ICZM Protocol does not specifically address enforcement issues. Yet this is a major topic for consideration. We have observed that despite the special restrictions on development in coastal zones, illegal development is common in some of the partner countries. In our analysis we explore the degree of compliance with coastal regulations. We also evaluate the tools used for enforcement of coastal regulation and their overall effectiveness. Our criteria for evaluation are as follows:

- Extent to which measures are taken to educate the public on compliance issues
- Degree of public “self-compliance” with land use and environmental controls
- Adequacy of legal powers for enforcement
- Adequacy of budgets and human resources for enforcement
- Degree of political support for enforcement
- Has the trajectory of enforcement policy improved over time?
- Approach of each level of government to illegal development:
 - Level of social sensitivity in approach to existing illegal development
 - Extent to which enforcement agencies prioritise demolition policy
 - Presence of reasonable tools to adjust for past negligence in enforcement practice
 - discretion to prioritise retroactive legalization or granting “rights of use” according to social, environmental, urban considerations.
- Role of the courts in applying balanced enforcement policy.

5.3.7 Management and coordination

The questions of who manages coastal issues and how the management agencies are coordinated is crucial to ensuring that ICZM is implemented. Article 7 of the ICZM Protocol states:

1. *For the purposes of integrated coastal zone management, the Parties shall:*
 - (a) *ensure institutional coordination, where necessary through appropriate bodies or mechanisms, in order to avoid sectoral approaches and facilitate comprehensive approaches;*
 - (b) *organise appropriate coordination between the various authorities competent for both the marine and the land parts of coastal zones in the different administrative services, at the national, regional and local levels;*
 - (c) *organise close coordination between national authorities and regional and local bodies in the field of coastal strategies, plans and programmes and in relation to the various authorisations for activities that may be achieved through joint consultative bodies or joint decision-making procedures.*
2. *Competent national, regional and local coastal zone authorities shall, insofar as practicable, work together to strengthen the coherence and effectiveness of the coastal strategies, plans and programmes established.*

The Article refers to both intra-governmental (vertical) and inter-sectorial (horizontal) coordination (SHAPe, 2013). The themes related to management and coordination are wide-ranging and could be the subject of an individual research project. In this report we will focus on two issues: coordination among legislative items and management of ICZM at different levels of government.

In each country, the management of coastal issues is divided differently amongst local, regional and national governments. The question is therefore, what is the optimal institutional level for the implementation of ICZM goals? The optimal level would be the level which balances ICZM goals with local needs.

The following evaluation criteria are relevant to management and coordination. We will refer to some of these in our comparative analysis:

- Extent of mix between centralized and decentralized powers (what is the optimal balance?)
 - Local knowledge
 - Degree of proximity to key political power (for better and for worse)
- Effectiveness of coordination
- Cost of coordination

5.3.8 Participation and Information

There is wide recognition among theorists and practitioners that involving the different stakeholders and the public in planning and environmental decision making is valuable (Healey, 1997). Such involvement becomes even more important in decision-making regarding public assets, such as the coastal zone, which faces a constant threat of further development.

Public participation in decision making can be carried out in many ways and different levels of involvement (Arnstein, 1969) it may include the right of the public to receive information and it may also include the right to be involved in the decision making. The ICZM protocol requires special procedures, as stated in Article 14:

*“With a view to ensuring efficient governance throughout the process of the integrated management of coastal zones, the Parties shall take the necessary measures to ensure **the appropriate involvement in the phases of the formulation and implementation of coastal and marine strategies, plans and programmes or projects, as well as the issuing of the various authorisations, of the various stakeholders**”*

In addition, the European partner countries are signatories to the Aarhus Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters. That Convention refers to a set of ‘rights’ of the public with regard to the environment, including:

- The right to receive environmental information
- The right to participate in environmental decision-making; and
- The right to review decisions or challenge public decisions made “without respecting” the two previous rights.

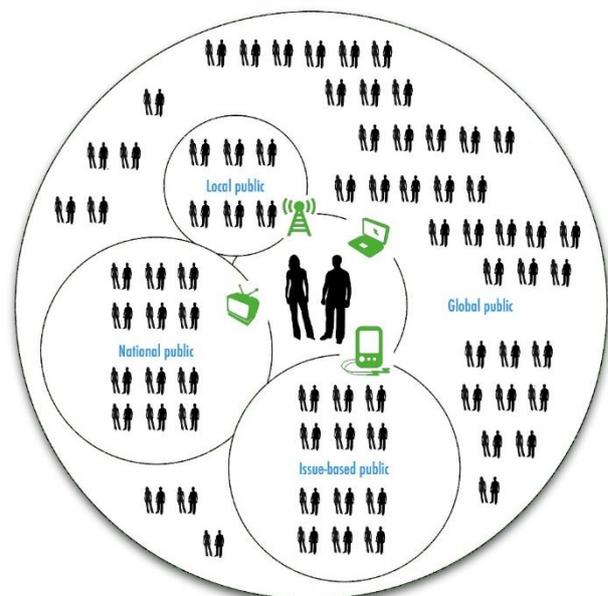


Figure 6 – Different groups within the “public”

Source: Clark and Aufderheide, 2011

The Aarhus Convention espouses the concept of open and transparent public administration, whereby the public has the right to open access to the environmental information that public authorities possess.

We will ask whether the different countries have a special procedure for involving the public in the ICZM or planning and we will use the following criteria for evaluation of the procedures:

- The type of information provided – is it comprehensive?
- The level of accessibility of information regarding the coastline.
- The level of public participation on the Arnstein ladder of citizen participation
 - In what kinds of decisions can the public participate?

- Who has the right to participate?
- In what stage of the process does participation occur?
- The methods of participation used
- The extent to which public participation processes are influential in planning and ICZM
- The extent to which the laws are in accordance with the Aarhus Convention
- The extent to which NGOs are involved in coastal issues

In the following chapters we will summarize the legal-institutional frameworks of each of the four partner countries to the Mare Nostrum project. We then follow with a comparative analysis.

CHAPTER 6 Greece³

6.1 The context: Introduction to coastal issues in Greece

6.1.1 The Greek Coastline

Greece is fortunate in that it has the longest coastline of all Mediterranean countries – approximately 15,150 km (World Resources Institute). The country's population is 10.9 million (2014 – World Bank). As such there are approximately 720 people per kilometre of coastline in Greece. Along the coastline, the population density is more than double the national average (Vezyrgiannidou, 2015) and local development is primarily based on activities related to the sea.

Greece is a popular tourist destination and saw 18 million international tourist arrivals in 2013⁴. Tourism contributes more than 20% to Greece's annual GDP. Greece's coastal areas (including islands) are significant attractions for tourists. In 2012, over 4 million of Greece's 17 million tourist arrivals arrived directly to Heraklion (Crete), Rhodes and Corfu airports⁵. Coastal areas see significant pressure for tourism-related development.

Other pressures on the Greek coastal environment include transportation infrastructure (harbours, ports and marinas), fisheries, aquaculture activities and agriculture.

6.1.2 Introduction to coastal legislation, planning and land use regulation

The Greek story of coastal legislation begins in 1837 when an early law dealing with the Greek public domain defined the “seashore” area as public property (see section 6.2 for definition). Decades later, in 1940, the country's first Coastal Law was enacted with a view of protecting the public domain status of the coastal zone. This law reinforced the “seashore” definition and added definitions for “old seashore” and “beach” as additional elements of the Greek coastal zone. Of course, both the 1837 and 1940 laws were enacted long before the term “ICZM” was coined and before the “awakening” of the environmental movement⁶. It is therefore not surprising that neither law made reference to the protection of coastal areas from an environmental perspective. Yet we know that the ICZM Protocol recommends public ownership as a tool for implementing coastal zone management and that these early Greek laws did seek to protect the coastal zone from development. Thus by designating the seashore and beach as public property, the initiators of those laws ensured a level of protection of Greece's coastal environment. That designation of the coastal zone as public domain applies in Greece to this day.

Yet this was not enough. The 1940 law was not adequate to protect the coastal zone from development. Specific protection measures were introduced in 1970, in Greece's law on “Complementing clauses concerning the Seashore”. This law applied a setback zone of 30 metres from the seashore in which construction was prohibited outside of existing older

³ This chapter is based on the Greek chapter found in the Mare Nostrum First Interim Report (updated December 2015) by Konstantinos Lalenis, University of Thessaly. In addition, we have relied on information supplied by Associated Partners Evangelia Balla (Scientific Council of the Hellenic Cadastre S.A.) and Georgia Giannakourou (University of Athens).

⁴ http://www.statistics.gr/portal/page/portal/ESYE/BUCKET/General/GREECE_IN_FIGURES_2014_EN.pdf

⁵ <http://old.sete.gr/EN/TOURISM/Greek%20Tourism%20Basic%20Figures/Basic%20Figures%202012/>

⁶ As a point of reference, it was in 1973 that the Council of Europe Committee of Ministers put forward Resolution 29 on the Protection of Coastal Areas.

settlements. In addition, it provided for expropriation of land for the purpose of providing access to the beach. As in the 1940 law, the primary motivation of this law was to protect the public domain and to ensure that the public would maintain access to the beach.

The turning point for environmental legislation in Greece was in 1976, when a law was enacted concerning “special plans and programs for the protection of the environment”. This was an ambitious law which specifically sought to protect significant environmental resources – including the coastal zone. Previously, no Greek law had focussed on environmental protection as the stated goal. But perhaps this law was too ambitious, as there is no evidence that it was effective in protecting the coastline from development. A more targeted effort was made in 1983, with the introduction of Greece’s urban planning legislation. The new law sought to protect the coastal zone by designating it as an area of “high environmental value”. Soon after, in 1986, Greece enacted a Basic Law on the environment. This law specifically recognized coastal areas for their ecological and aesthetic values, but did not contain specific provisions relating to their protection.

The courts have lagged on the issue of the protection of the coastal environment. It is only since 1998, that the Greek Council of State has supported arguments that the coast is a vulnerable ecosystem and should be protected from intensive forms of development⁷.

In 2001, Greece’s enacted a new Coastal Law to replace the 1940 law. The 2001 law prioritises the protection of the coastal zone as a public good, an environmental asset and an economic good. This law, which is in effect to the present day, restricts development on the coastal zone and beyond. Yet this law also provides for many exceptions to these restrictions – primarily reflecting a desire to exploit the tourism potential of the coast.

We understand that since its enactment, the Greek Ombudsman has recorded that the 2001 Coastal Law has not been successfully implemented. The primary issue is extensive illegal development in restricted areas and a lack of political will by municipalities and other enforcement bodies to take action against such development.

Greece has not ratified the ICZM Protocol since its adoption in 2008.

The only relevant law which has been enacted since the adoption of the ICZM Protocol is a 2011 law on “Preservation of Biodiversity and Other Provisions”. This law takes a more comprehensive approach to the definition of the coastal zone than did any of the previous laws. It defines the Coastal Zone as:

“Terrestrial and aquatic sections on either side of the coastline in which the interaction between the marine and terrestrial part acquires the form of complex systems of ecological elements and resources composed of biotic and abiotic components coexisting and interacting with human communities and relevant socio-economic activities. The coastal zone may include natural formations or small islands in their entirety”

A definition for the Critical Coastal Zone is also included:

“The part of the coastal zone in which marine and terrestrial parts are met, in immediate relation between them and interaction”

⁷ Decisions: CoS 3146/1998, 327/1999, 1129/1999, 1790/1999, 3344/1999, 1500/2000, 978/2005, 1340/2007

Whilst there is no evidence that the Protocol has directly influenced Greek legislation or urban planning policies, these definitions in the 2011 biodiversity law may signal an awakening to the significance of Integrated Coastal Zone Management in Greece.

6.2 Definition of the coastline and coastal public domain

The Greek definitions of the coastline and coastal public domain are intertwined.

The term “seashore” (“aigialos” in Greek) originates from the 1837 law on the Greek public domain. It refers to the area of the coast which might be reached by waves in their maximum capacity (excluding unusual storm events; “usual maximum winter wave run-up”).

This definition of the “seashore” also serves to define the coastline – the line between land and sea. The coastline is located at the “seashore” boundary defined by the “usual maximum winter wave run-up”.

Building on the definition of the “seashore”, the 2001 Coastal Law defines an “old seashore zone”: The area of land between the previously identified (historical, 19th Century) coastline and the newly identified coastline, in locations where the coastline has shifted towards the sea. The identification of the “old seashore” is based on several environmental and historical parameters which must be investigated on the ground. This “old seashore” is classified as private property of the State, which suggests that it does not have to remain open for use by the public. The implication is that the State can lease or rent the “old seashore zone” to private entities. Such arrangements are not possible within the limits of the current “seashore”.

The classification of the “old seashore” as private property of the State has been a source of contention and debate. It has been argued that as the “old seashore” adjoins the new one, it should remain publicly accessible. The Council of the State has supported arguments that the “old seashore” is part of the vulnerable coastal zone ecosystem and contributes to its environmental value (decision number 3346/1999). Yet the definition and classification have not been updated since 2001.

The “beach” (“paralia” in Greek) was defined in the 2001 Coastal Law as a zone adjacent to the seashore, with a width of “up to 50 metres”. This zone is essentially a buffer zone between land and sea and, like the seashore, is included within the Greek public domain. The width of the beach is decided on a case-by-case basis, with consideration of local conditions and existing development patterns. It is usually defined in spatial plans of coastal settlements and rural areas as “open space”, but may be used for roads, pedestrian and bicycle routes. But there is no requirement that the beach is defined and in many cases, it is not. Where a beach area has been defined, private property allotments begin at the outer boundary of the beach.

6.2.1 Demarcation of the coastline, seashore and beach

Of course, the above definitions of the coastline and coastal public domain must be mapped in order to be meaningful in the land policy context. The 2001 Coastal Law introduced a procedure for the delineation of the seashore/coastline. The key to that procedure was that a committee was appointed to conduct site visits to identify geomorphological features that would indicate the location of the “usual maximum winter wave run-up”. That law did not define a clear methodology for the process and no unified cartographic map was produced for the Greek coastline.

The procedure from the 2001 coastal law was resource-intensive and the mapping was undertaken on a case-by-case basis. The result is that in 2015, only 8% of Greece's coastline has been officially delineated.

In 2014, Greece adopted a new administrative procedure for delineation of the coast. The new procedure is based on the interpretation of aerial photographs. As a first stage, orthophotomaps have been computer-analysed for key environmental features and marked with a "preliminary seashore line". That line must now be checked and confirmed, or modified. The law specifies the process for arriving at the final seashore line: First the "preliminary seashore" line will be evaluated by experts, who will then develop a final proposal. The proposed line will be submitted to the authorities for approval. Finally, the Coordinator of the Decentralized Administration will ratify the orthophotomaps with the final demarcation line. The law also provides a deadline: The process is to be completed by 20 July 2017.

6.2.2 Seashore and Beach – Permitted Uses

In general, only light construction associated with seasonal tourist and recreation facilities may be erected on the seashore and beach. Examples include open playgrounds, kiosks, mobile beach bars and refreshment areas.

In order to establish those facilities, business operators must apply to the relevant municipality for the rights to use the seashore (e.g. renting deckchairs, operating beach bars etc.) under the terms of a special administrative procedure known as "*concession*"⁸ of the right to use the seashore and the beach" (temporary usage). The municipalities set the cost and the revenue generated through the process is an important component of their budgets.

The process is relatively straightforward and there are regulations regarding appropriate locations and "densities" of light or temporary installations on beaches (umbrellas, deckchairs etc.). Yet many business owners violate these regulations and the result is overcrowding of the beaches. Most business owners who transgress in this way pay fines to the municipalities, but these fines are negligent in comparison with the profits generated. As in this scenario both businesses and municipalities profit, there is no political will to protect the beaches from overcrowding.

6.3 Setback from the coastline (in which no construction is allowed)

In Greece, no construction is allowed on the "beach", as defined above. As such, where the beach has been delineated, it plays the role of a de facto setback zone. But, as we have noted above, the 'beach' zone is not always defined.

In addition to the provisions of the law relating to the beach, since 1970 Greek law has stipulated that construction may not occur within 30 metres of the coastline (L.D 439/1970). A 2013 tourism law increased that distance to 50 metres where the construction of *tourist accommodation in tourist resorts and mixed use resorts* is concerned. The reasoning behind this provision is that tourist buildings (especially hotels) may have greater impact on coastal environment than smaller-scale developments, given that they are usually taller and need much more space in order to be functional.

⁸ A "concession", as the word is used in this context, refers to a right of use.

Exceptions to the 30 metre setback requirement include infrastructure installations which have a synergy with the coast. In addition, building within settlements developed before the year 1923 are not subject to these rules.

6.4 Accessibility in the Greek coastal zone

In the previous sections we have shown that it was early established in Greek law that the seashore and beach are in the public domain. More specific practical requirements – including the provision of access to and along coastal public land – have been introduced over time.

In addition to the publicly owned “seashore”, the government may expropriate a zone of land of 10-15 metres beyond the highest winter waterline, for access purposes.

In 1970, the same law which set a compulsory 30 metre coastal setback (L.D 439/1970) also provided for compulsory expropriation of land to be used for the construction of access roads to the coast. The minimum width of these access roads is stipulated at 10m. Building on this provision, the urban planning law of 1983 (L.1337/1983) provides for the creation (through the expropriation of privately owned property) of public access routes to the beach and seashore. It also provides for the acquisition and demolition of existing buildings in the coastal zone.

The 1983 law also prohibits the erection of fences within 500m of the coastline. This prohibition only applies to land which is not designated for residential use. In addition, in the year following the introduction of that law, a Presidential Decree (236/1984 A 95) was published which included an extensive list of land uses that are exempt from the prohibition. Exempted uses include agricultural installations and farms, hotels and tourist facilities, industrial installations and mines, military installations, large-scale transport infrastructure (e.g. ports), schools, hospitals, sports facilities, prisons, monasteries, cemeteries, natural monuments and archaeological sites. As such, the uses to which this prohibition applies are very limited.

Since the introduction of the above laws, several decisions of the Council of State have reinforced the principle that citizens should have free access to the coast. In some decisions, the Council has indicated that blocking that access would contravene Article 24 of the Greek Constitution (on the protection of the environment)⁹. Two decisions (CoS 3521-22/1992) specifically refer to the prohibition against fencing, finding that it responds appropriately to the constitutional imperative to protect the environment, without violating the constitutional right to property ownership.

The 2001 Coastal Law repeats the principle that the seashore and beach are to remain openly accessible. Any use or works on the beach or seashore should not hinder the level of public accessibility. Exceptions are made for the benefit of national defence, public order and security, protection of the environment, protection of heritage and public health.

In practice, the specific requirements for the provision of access roads and prohibition of fencing are poorly enforced. Access to the sea is obstructed in many areas – often by approved private uses such as hotels and businesses.

⁹ Council of State decisions 1585/1990, 2993/1998, 1129/1999, 1790/1999, 3344/1999, 2506/2002, 4542/2009, 2713/2013, Hatzopoulou, 2010

6.5 Compliance and enforcement in the coastal zone

Illegal development has historically been pervasive in Greece. Approximately one quarter of all houses and apartments constructed each year between 1991 and 2001 were illegal. Most of these were constructed in Attica and along the coastline (Technical Chamber of Greece, 2005), including several informal coastal settlements and summer homes (Figure 7).

The 1983 urban planning law (1337/1983) was the first to deal with illegal development. That law prescribed a process for legalization of illegal developments built prior to 1983 and stipulated that illegal developments built after 1983 should be demolished. But the legalization process could not be used uniformly over all land; illegal developments on public land (including seashores and beaches) was to be demolished, regardless of the date of construction. These principles were enshrined in the Greek constitution in 1985.

Over the years, various laws and addendums have introduced categories of illegal development which are exempt from demolition, regardless of the year in which they were developed. In 2011, a new law (L. 4014/2011) introduced the concept “regularization” to allow specified categories of illegal development a right of use for the next 30 years, on payment of a penalty fee. That provision contradicted earlier provisions (Law 1337/1983) which stated that illegal development cannot be legalized. In light of the Greek economic crisis, it appears that the focus of the 2011 provision was the collection of fines which would feed into public funds. In April 2013, the Council of the State ruled that the previous law (Law 4014/2011) was unconstitutional.

The most recent law (4178/2013) nullifies any previous laws which allowed for legalization, though still provides exceptions for types of development which may be legalized. As was the case in 1983, illegal development on public land, the beach, or seashore may not be legalized and must be demolished. Demolition of illegal developments on the public domain is a responsibility of the Ministry of Finance Regional Directorates of Public Property (RDPP).



Figure 7 – Informal summer homes near the city of Kavala

(Source: Google Maps)

The issue of illegal development is complicated by the fact that, as explained above, the majority of the Greek coastline and coastal public domain have not been delineated. In the absence of a clearly defined coastline and coastal zone, responsible authorities have continued to issue building permits on land which may be officially defined as public domain in the future.

The Council of State has stated that when considering applications for building permits in coastal areas where the coastline has not yet been delineated, authorities should also consider the potential boundaries of the seashore¹⁰. Significantly, the Council has also ruled that where a building permit was issued prior to the delineation process being completed, the RDPP may not issue demolition notices, except in cases where the “public interest” overrides the interests of the affected property owner¹¹.

To date, demolition of illegal developments in the Greek coastal zone has been very rare. In addition, other enforcement measures available in the law, such as fines and imprisonment, are rarely used. Few resources are devoted to the purpose of enforcement. Given that local authorities issue building permits, it would be appropriate for these authorities to take responsibility for enforcement. Yet local authorities have little political will to carry out enforcement measures. In 2010, the Greek Ministry of the Environment established a special Inspectorate Agency for Demolition of Illegal Constructions. This agency has to date not taken any significant action against illegal development in the coastal zone.

6.6 Management and coordination

Greece has four levels of government: Central Government, Decentralized Administrations, Regions and Municipalities.

At the Central Government level, coastal management falls under the responsibility of five ministries:

- The Ministry of Finance, which is responsible for delineating and managing the coastal public domain.
- The Ministry of Environment and Energy (YPEN, which is responsible for national spatial planning and environmental protection initiatives
- The Ministry of Shipping and Insular Policy, which is responsible for maritime policy, safety and security of shipping, marine pollution prevention, maritime transport, designation of ports and implementation of the EU Integrated Maritime Policy.
- The Ministry of Economy, Development and Tourism is responsible for granting licenses for all tourist ports and marinas.
- The Ministry of Culture and Sports, which is responsible for the protection of the country’s cultural heritage.

Decentralized Administrations provide region-based representation of the Central Government. Thus these administrations hold significant powers and responsibilities in coastal matters. These include the ratification of the delineation of the coastal public domain (seashore and beach); the demolition of illegal buildings in the coastal zone; and the control and supervision of works to

¹⁰ CoS 3483/2003, 378/2002

¹¹ CoS 3998/2008, 4568/2011, 4963/2012, 3942/2013, 3354/2014, 3622/2014.

protect the coastal environment. Decentralized Administrations also have the power to provide environmental licenses and to approve town plans.

The roles and responsibilities of regions and municipalities in coastal zone planning and management are limited. They prepare spatial plans, but these are approved by Decentralized Administrations. Their functions also include the issue of operational licenses and building permits.

Coordination

The OECD¹² has found that the Greek central administration lacks the management, oversight and co-ordination structures to support effective implementation and long term management of policy measures. Co-ordination and information sharing mechanisms are weak throughout the Central Administration.

In recent years there have been some policy developments towards a more coordinated approach, specifically aimed at the implementation of EU policies and related laws. For example:

- The National Committee of Maritime Environmental Strategy was established on adoption of the Marine Strategy Framework Directive into Greek law
- A cross-sectoral committee was created to implement the EU Integrated Maritime Policy.

A committee has to date not been created to deal with ICZM. Such a committee might be initiated in the future, following Greece's ratification of the ICZM Protocol.

6.7 Public participation and access to information

Greece does not have any special provisions for public participation in matters relating to the coastal zone. Public consultation procedures are established in Greece's various pieces of planning and environmental legislation. During the development of any urban or regional plan, the legislation requires that the relevant authorities conduct a Strategic Environmental Assessment (SEA). In addition, any project with the potential for significant impact on the environment is subject to an Environmental Impact Assessment (EIA) before it can be approved. The public may make submissions during both the SEA and EIA processes.

Besides public participation in the administrative process, planning and environment decisions may be challenged before the Greek Council of State, by any interested person or party, in accordance with the Aarhus Convention and the relevant European legislation.

Over time, the Council of State has significantly broadened the concept of the legal standing in cases concerning the protection of the environment. Those who may challenge decisions relating to the environment include environmental NGO's and extend to bar associations, which decide on general matters of national or social interest.

¹² OECD, 2011:26

CHAPTER 7 Spain¹³

7.1 The context: Introduction to coastal issues in Spain

7.1.1 The Spanish Coastline

The Spanish coastline is around 7,270 km long (World Resources Institute) and its character is varied. Approximately one quarter is classified as beaches. More than half of the country's coastline (55%) borders the Atlantic Ocean, where tides can extend well inland, creating wetlands and riverbed deltas. The remaining 45% is on the Mediterranean Sea. Spain's population is approximately 46.4 million (2014 – World Bank). That is, 6,380 people per kilometre of coastline.

Spain's nearly 500 coastal municipalities account for 7% of the country's territory and 45% of the population. Population density in the coastal zone is about four times the average inland¹⁴. For example, in Valencia, the density for coastal areas is 782 inhabitants per square km, compared with 207 inland¹⁵. Furthermore, as 75% of tourists visiting Spain head for coastal areas, the population pressure on the coast increases greatly in peak tourist periods. Thus there is great pressure on the natural and urban systems in Spanish coastal areas.

Over the past 50 years, the Spanish coastline has developed into an important strategic economic asset. Coastal tourism generates nearly 10% of GDP and 12% of employment in the country (Exceltur, 2014). In addition, maritime trade plays a growing role; Spain has 45 State-owned ports and almost 375 regional ports (FEPORTS, Observatorio Portuario, 2013). The coast and offshore oil deposits are increasingly important resources for the energy industry. These economic functions have replaced traditional coastal activities such as fishing and agriculture, particularly in areas where conditions are most favourable to tourism – the Mediterranean, South-Atlantic and Canary Islands coasts.

7.1.2 Introduction to coastal legislation, planning and land use regulation

The first Spanish coastal law was introduced in 1969. This law promoted the development of the coast for tourism purposes, with the result being widespread construction on the coast (Negro et al; 2014). Environmental considerations, as we know them today, were not taken into account in this law.

In 1978, the new Spanish Constitution was developed. The Constitution defines the state public domain as those areas "established by law... the maritime zone, beaches, territorial waters and natural resources of the economic zone and the continental shelf" (Article 132.2). It also includes the obligation of public authorities to ensure "the rational use of all natural resources, in order to defend and restore the environment" (Article 45.2).

Those articles of the constitution required the Spanish authorities to rethink their approach to the environment in general – and to the coastal zone in particular. As a result, in 1988 the

¹³ This chapter is based on the Spanish chapter found in the Mare Nostrum First Interim Report by Pablo Gorostiza Frieyro and Sara Ibáñez of FEPORTS. In addition, we have relied on information supplied by Associated Partners Pablo Molina Alegre (Garrigues Law Firm) and Marta Lora-Tamayo Vallve (National University of Distance Education).

¹⁴ FEPORTS assessment based on data from Strategy for Coastal Sustainability, Ministry of Environment, 2007

¹⁵ FEPORTS assessment based on data from Instituto Valenciano de Estadística, 2013

government adopted a new coastal law. This 1988 law established the framework for coastal management as it is practiced today in Spain.

Given the pattern of development which had taken place up to that time, the preamble to the 1988 Coastal Law described a Spanish coastline characterized by various threats to its use and conservation, including an accelerated process of land use, the gradual privatization of the coast and the destruction of natural areas. The body of the Law expanded on the principles for environmental protection set out in Article 45 of the Constitution. Apart from the Constitution, the law was influenced by a series of environmental criteria set by the Council of Europe Committee of Ministers Resolution 29/1973 on the Protection of Coastal Areas, as well as the European Coastal Charter of 1981.

The 1988 Coastal Law focussed on the identification, protection, use and monitoring of the part of the coastal zone which the law labelled the Marine Terrestrial Public Domain (MTPD). The definition of the MTPD is discussed in detail at Section 7.2 below. The two main objectives for the MTPD in the law are:

- To ensure its public character and preserve its use by all citizens.
- To protect and preserve the coastline's natural characteristics, against the threat of degradation.

Overall, the law was very ambitious: It sought to reverse a trend of significant development on the coast which had been taking place over several decades. The law also generated significant controversy. For the first time, Spanish law prioritised protection of the coastal environment over tourism and economic development. In response, a number of regions appealed to the Constitutional Court, arguing that the law usurped their powers. Several parties argued that the law would slow economic growth, particularly in the areas of tourism and construction. Others argued that it did not respect previously existing property rights arrangements. But the law prevailed.

Despite the fact that the law was ambitious, several aspects were implemented over the years 1988 – 2013. The boundaries of the MTPD were delineated, degraded sections of the coastline were recovered and restored; and uses within both the MTPD and the zone of protection were regulated in accordance with the new regulatory framework. Yet enforcement against illegal development on the coast – particularly within the setback zone – was initially lax and many illegal structures were built. Only during the second half of the previous decade, was the Spanish government particularly focused on coastal policy and enforcement of laws relating to the coastal zone. This then engendered intense reactions among various interest groups, eventually leading to a renewed debate on the application of the law.

Spain ratified the ICZM Protocol in 2010 and it came into force in the country in 2011. In an apparently unrelated move, in mid-2012, the government initiated a process of rewriting the Coastal Law. The reason for this initiative was that the 1988 law provided rights of use within the MTPD to 2018 (30 years – discussed below) and the approach of that deadline led to pressure to revise the law. The new law – Protection and Sustainable Use of the Coastline and Amendment of the Coastal Law – was approved in May 2013.

The preamble to the new law describes various obstacles to the implementation of the previous coastal legislation. The law's objectives include providing greater legal certainty and long term

applicability. It also seeks to safeguard the integrity of the MTPD, while preventing urban development that is at odds with goals for the coast.

The new law redefined the MTPD and the procedure for its demarcation, changed the rules governing rights of use in the MTPD; and relaxed the rules relating to development within the coastal setback zone beyond the public domain (the “protected zone”).

The introduction of the new law was greeted with suspicion by various civil-society groups, particularly those advocating for conservation. Yet the Spanish authorities argue that the changes are necessary in order to ensure that the law is implemented to a further degree.

7.2 Definition of the coastline and coastal public domain

The primary definition relating to the coastal zone according to Spanish coastal law is the Maritime Terrestrial Public Domain (MTPD). The MTPD is defined according to geomorphological conditions, including the highest reach of the waves “during the strongest known storms”. The reach of the highest waves essentially indicates the coastline – the line between land and sea. Yet under Spanish law, the coastline is not defined separately from the boundary of the MTPD.

The 1988 Coastal Law defined the MTPD in very strict terms – including all sand dunes and artificially flooded areas – and did not include technical criteria for identifying the maximum reach of the waves. The 2013 Coastal Law clarifies and narrows the definition, as follows:

- It includes technical criteria for defining the coastline “reached by the waves during the strongest known storms”. The coastline is defined by taking the highest tide reached “at least 5 times over a period of 5 years”.
- Sand dunes, which in the 1988 law were included in their entirety in the MTPD, are now included only to the extent that is necessary to ensure “stability of the beach”.
- Artificially flooded areas are now not considered part of the MTPD, unless they were already publicly owned before being flooded. This does not apply if the flooded lands are navigable (e.g. marina).
- Certain population centres are excluded: Pre-existing residential areas, built before 1988, in which construction has caused the loss of the coast’s natural characteristics. These areas were included in the MTPD based on demarcations made prior to the introduction of the 1988 law, but the government was unable to correctly demarcate the MTPD in these areas following passage of that law.

In the Spanish system, the public domain is state-owned and must be intended for a public use. According to the Constitution, the public domain is inalienable (cannot be sold, is not subject to trade) and “non-prescriptible” (there is no time limit after which the administration may not remove an illegal development¹⁶).

Furthermore, the Constitution (Article 132.2) recognizes Public Properties as those stated by law, including the maritime zone, beaches, territorial waters and the natural resources of the economic zone and the continental shelf. These are the only elements of the public domain which the Constitution defines with such precision; indicating the extent of importance that the legal system accords to the coastal public domain.

¹⁶ In other areas, the administration cannot touch illegal development after 6 years from its construction.

7.2.1 MTPD – Permitted Uses

In general, only light and removable structures (predominantly seasonal beach uses) are permitted within the MTPD. In order to erect such structures, business owners must obtain a license from the DG for Coastal & Sea Sustainability (Ministry of Agriculture, Food and Environment)¹⁷. The 1988 Coastal Law provided that such licenses could be gained for a period of one year. The 2013 Coastal Law increased that period to four years. According to the preamble to the new law, this change is intended to give businesses more certainty over time. It also appears that it was intended to reduce the pressure on the bureaucratic system (fewer applications over time). Yet some critics are concerned that extending the timeframe for licenses will be harmful to the beach environment, as private operators will not dismantle their facilities. In practice, FEPORTS have noted that in the Valencia region, most of the licenses issued include the dismantling of seasonal facilities at the end of each summer.

The 1988 Coastal Law established a set of regulations guiding the establishment of seasonal beach uses (May – October). These include maximum occupancy rates, minimum distances between the establishments and maximum surface areas, depending on the type of business. For example, these uses were permitted a maximum surface area of 20 square metres and could be located at a minimum distance of 100 metres from any other facility for temporary facilities located within the MTPD. But these provisions were not adequately enforced, until the mid-2000's, when the government established stricter controls. The new measures generated conflicts between the authorities and many owners of existing seasonal establishments with larger floor spaces than those allowed. Those conflicts were exacerbated by the recent economic crisis. As a result of the conflicts, and in the absence of new provisions to replace those from 1988, local authorities are assessing seasonal beach uses ("concessions" for private or public use) on the basis of the characteristics of each beach (specifically – whether they are urban or rural, based on the classification of the 2008 Coastal Law).

7.2.2 Demarcation of the coastline and MTPD

It took the Spanish authorities approximately 20 years to complete the demarcation of the MTPD according to the parameters set in the 1988 Coastal Law. It appears that the delay was due to the demarcation process not being prioritised. The Coastal Law did not set a deadline by which the demarcation should be completed. In early 2006, almost 20 years after the adoption of the Law, only about 60% of the coastline had been demarcated. It is possible that there was an element of uncertainty and lack of technical criteria for defining the "highest reach" of the waves and that the process improved with modern technology. Today, approximately 3% of the Spanish coastline has not been demarcated, in areas containing coastal settlement built prior to 1988.

The 2013 Coastal Law establishes that changes to the demarcation of the MTPD can be initiated by the government or at the request of an interested party. This may lead to review of any point on the previously demarcated line.

The 2013 law requires that the government register the MTPD with the Spanish Land Registry. This process should enable citizens to access accurate information about the legal status of land within the coastal zone. Apart from recording the information with the land registry, the law also requires that information on the MTPD is published on the Ministry of Environment website.

¹⁷ The Seasonal Beach Use Plans are drafted by Municipalities and approved by the Ministry's Provincial branches. Once approved, the Municipalities, under public procedure rules, tender and grant the particular services in the Seasonal Plan.

7.3 Setback from the coastline (in which construction is restricted)

The 1988 Coastal Law stipulated that development would be restricted within 100 metres from the edge of the MTPD. The setback zone was 20 metres in urban areas or on land with plans approved prior to 1988.

The 2013 law added two cases in which the 100 metre setback may be reduced to 20 metres:

- In population centres which, despite not being classified as urban in 1988, had urban characteristics at the time (i.e. road access, water supply, waste-water disposal and electricity supply).
- Around rivers, but the setback distance will also take into account geomorphologic characteristics, vegetation and distance from the river mouth.

These changes were ostensibly initiated for practical reasons; to ensure that the law can be implemented more easily, without generating land use conflicts. Yet they have been a source of consternation among environmental conservation organizations, especially since they could result in the rezoning of land for urban development purposes.

The Coastal Law notes that where the State (Autonomous Region) and municipalities identify areas requiring additional protection due to their environmental characteristics, the setback zone may be increased in width by 100 metres (total 200 metres from the coastline). The Spanish definition of the MTPD and setback zone is illustrated at Figure 8.



Figure 8 – A schematic depiction of the Spanish coastal zone

7.3.1 Permitted uses and development within the 100 metre setback zone

No development is permitted within the 100 metre setback zone. The 1988 Coastal Law prohibited even alterations to previously existing buildings within this zone, but allowed repair and “improvement” (refurbishment / renovation / restoration) works.

These restrictions were problematic for owners of properties which were built legally prior to 1988 and after 1988 found themselves in the setback zone. Suddenly, in 1988, these landowners lost the ability to renovate their houses according to their needs.

The 2013 law does relax the rules regarding renovation of buildings which existed within the zone prior to 1988. Landowners may undertake improvement works, provided that they do not involve an increase in the volume, height or surface area of the buildings. The 2013 law also changed the procedure for managing any construction works within the setback zone. Instead of applying for administrative authorization for works, building owners are now required to submit a “statement of responsibility” which applies to all future works. That document is to include statements to the effect that any works undertaken will not result in an increase in the volume, height or surface area of the existing buildings, and that they will comply with standards relating to energy efficiency and water saving, when applicable. This change will simplify the process for landowners in the setback zone and reduce the administrative burden on responsible authorities.

Despite these changes owners of property within the setback zone feel that they are unfairly disadvantaged by the law.

7.4 Access to and along the Spanish coastal zone

According to the Spanish Constitution, the public has a right of access along the beach. This is reiterated in the Coastal Law, which includes specific provisions to ensure that this right is protected.

7.4.1 Horizontal accessibility

The Coastal Law requires that a transit way, at least 6 metres wide, must be provided along the edge of the MTPD. This transit way may pass through private property. It may be extended in width to up to 20 metres, but it appears that this is not common practice.

In practice, parts of the coast are not accessible. Past projects and current concessions create barriers to accessibility.

7.4.2 Vertical accessibility

The Coastal Law requires that in urban areas, access roads to the beach are provided at a minimum interval of 500 metres. Pedestrian access must be provided at a minimum interval of 200 metres – whether on private or public land.

These vertical access roads and paths are delineated in the relevant statutory plan. Once the land is earmarked, the responsible authority may then expropriate it for access purposes. In practice, there were no expropriations of land for the purpose of providing access to the coast to the year 2008. Since 2008, following a reduction in the relevant compensation rates, the incidence of expropriation for the purposes of providing access to the coastline has increased.

7.4.3 Protection of views

In order to protect view lines to the coast, the Coastal Law (2013) stipulates that within the 500 metres of the coast, buildings must stand in such a way that the widest parts – *pantallas arquitectónicas* – literally, architectural screens – are perpendicular to the sea. In practice, the *pantallas arquitectónicas* must be defined in the relevant building regulation or codes.

7.4.4 Socio-Economic issues

Entrance to Spanish beaches for recreational purposes is free, by law (Article 31 of the Coastal Law). There are parking fees at many beaches.

7.5 Compliance and enforcement in the coastal zone

Prior to 2008, illegal development on the Spanish coastal zone – particularly the MTPD – was common. Buildings were developed in the MTPD and setback zone – for example, Figure 9. Since the (almost complete) demarcation of the coastline, illegal development within the MTPD has been almost eliminated. The demarcation process has also helped to raise awareness of the importance of the coast.



Figure 9 – Illegal hotel built prior to 2008

(Source: R. Alterman, 2014)

7.5.1 Rights of Use

The 1988 Coastal Law instituted a system of “concessions”, granting rights of use for pre-existing development which became incorporated within the MTPD as a result of the law. In essence, landowners whose existing properties became incorporated into the MTPD were granted right of occupancy and use for 30 years (with an option to renew that lease for another 30 years). There is no doubt that this tool is focused on the landowners and not on protection of the environment, as it did not require the total demolition of buildings on land which was deemed to be sensitive coastal land. Yet the relevant landowners now had a limited right of use, uncertainty and no compensation rights associated with the restrictions. They could not renovate their properties or bequeath them as an inheritance for the next generation. All this caused a great deal of frustration amongst affected land owners.

In response to that frustration, the 2013 law introduced major changes to the rights of use. The maximum duration of the rights was extended from 60 years (30 plus 30) to 75 years, calculated from the date of the application. Such extensions are not granted automatically; the law states that “*the concession holder may request the extension of the concession since the entry into force of this Law*” (i.e., from June 2013), and “... *before the expiry of the period for which it was granted*” (which in most cases will be July 2018).

In the granting of such extensions, the 2013 law stipulates the following:

- Depending on the applications, the government reserves the right to grant them in terms of less than 75 years and apply extensions.
- Along stretches of coastline “in a situation of serious regression” – parts of the coast in which the coastline is shown to be in retreat (based on technical criteria to be established in future regulations) – the government reserves the right to take special actions. These might include refraining from granting titles in the MTPD, or charging a special fee to concession holders in the MTPD or on adjoining lands for the purposes of erecting coastal defences.
- In cases of industrial use, the concession is conditional on the property receiving a favourable report from the regional environmental agency.

The new law also explicitly introduces the possibility of termination of the concession if the works and installations on a relevant property run a real risk of being reached by the sea. It also relaxes rules governing coastal defence works undertaken by holders of concessions: Such works are now allowed, on the condition that they do not negatively affect the coastal environment, even if they occupy the beach.

Finally, the new law allows transmission *causa mortis* and *inter vivos* (actual and anticipated inheritance) of concessions and extends the work that individuals can carry out on their properties, imposing only the limitation that those works not involve an increase in volume, height or land surface coverage.

Despite all of these changes, the new law still does not really solve the complex property rights issues experienced by landowners with properties in the MTPD.

7.6 Management and coordination

7.6.1 Management

In Spain, the State (central government) holds the power to pass basic legislation on environmental protection, while the Autonomous Regions and local authorities are empowered to establish ancillary law and regulation. Spain's Coastal Law is part of the national suite of environmental legislation and defines the roles and responsibilities of the three levels of government, as follows:

Central government

- Demarcation of the MTPD regarding the right-of-way strip (which varies in width between 6-20 metres) and access to the coast.
- Coastal protection and environmental restoration projects.
- Through the River Basin Authorities, water resources management of River Public Domain.
- Other powers related to infrastructure, major commercial ports, control of ships, fishing, cultural heritage (basic regulation) and research on the territorial sea and the exclusive economic zone.

Regional governments

Under the Spanish Constitution, regional governments hold the powers conferred by their respective Statutes of Autonomy, among them the power to conduct spatial planning, including in coastal areas.

Under a process of revision of Regional Statutes which took place over the past decade, some regions (Catalonia, Andalusia and the Balearic Islands) have been granted additional powers over the management of the MTPD – transferred powers from the State. This transfer of powers has already taken place in Catalonia and Andalusia. In these regions, the regional government is empowered to manage the MTPD (e.g. grant authorizations for seasonal services and facilities), while the state retains the power to demarcate and protect the MTPD.

Municipalities

Local governments hold the power to plan and manage land use in the Zone of Influence (500 metres from the coastline), though final approval must be granted by the regional government, given the importance of urban planning in ensuring the protection of the MTPD. Municipal governments are also charged with managing beach services, including ensuring security and cleanliness, treating wastewater and solid waste, safety and lifeguard services.

7.6.2 Coordination

One of the most criticized aspects of the Coastal Law is that it does not articulate a system of coordination between the government bodies involved in coastal management. It merely refers to the general principles which must guide relationships between public powers (Article 116). Thus coordination between government bodies has been lacking, resulting in numerous conflicts.

There have been cases in which each administrative body has exercised its powers with a focus limited to the territory assigned to it under the Law, resulting in fragmentation and occasionally, harmful effects to the coastal environment.

An example of the poor coordination between the central government and the Autonomous Regions has been the lack of a coastal sectoral dialogue to facilitate coordination between the two levels of government, as is the norm within the framework of other policies whose implementation requires close collaboration between central and regional administrations.

The Spanish government made attempts to improve coordination in the period 2004 – 2008T. The Ministry of Environment promoted a Master Coastal Sustainability Plan, which included the signing of Framework Agreements with the Autonomous Regions, the establishment of a permanent coastal sustainability observatory and the creation of the National Coast Council. Yet despite the signing of several Framework Agreements, the progress on achieving better coordination has been slow.

7.7 Public participation and access to information

Spain ratified the Aarhus Convention in December 2004 and this ratification came into force on March 31, 2005.

Spanish law does not incorporate any requirements specifically related to public participation and information on coastal matters, but the law (Laws 27/2006 and 9/2006) guarantees the following rights to citizens:

- Access to environmental information held by public authorities, without having to justify a particular interest.
- The right to receive information about the rights conferred by Law 27/2006 and be advised for its proper execution. This information must be provided within one month of receipt of any request to an administrative body or public authority. This period can be extended to up to two months, provided there is sufficient reason for the delay and that applicants receive some response within the first month.
- The right to receive requested environmental information in the form or format of choice, unless the public authority reasonably justifies delivery in another form or format, or unless the information has already been disseminated in another form or format, which the applicant can access easily.
- The right to receive assistance in the search for information.
- The right to be told the reasons for any possible refusal, as well as the right to know the list of fees and prices, where applicable, which citizens may be charged for receipt of the information, and the circumstances in which they may be levied or waived.
- The right to be informed at an early stage of the decision-making process on environmental matters.

CHAPTER 8 Malta¹⁸

8.1 The context: Introduction to coastal issues in Malta

8.1.1 The Maltese Coastline

Malta is the smallest of the Mare Nostrum partner countries. It has an area of just 316 square kilometres, its population is about 430,000 (2014 – World Bank) and its coastline is 198km in length (World Resources Institute). There are therefore 2,170 people for every km of coastline in Malta.

Given Malta's small size and reliance on coastal activities including fishing and tourism, how the coastal zone is managed and protected affects the entire country. The coastal zone contains significant cultural and natural heritage, such as old fortifications, watch towers, spectacular cliffs and protected *Posidonia oceanica* meadows. Yet as we will see below, the legislative and policy framework include only sparse references to the coastal zone and the protection of these resources. Many of the country's major infrastructure installations, including desalination plants, sewage treatment plants and power stations are very close to the coast.

A post-war trend in Malta has seen the shifting of populations from older settlements towards coastal communities. Both this trend and the introduction of international tourism in the 1950s have contributed to increasing pressure on the coastline and sparked a booming construction industry. Up until today, the construction sector is seen as a major contributor to economic growth, despite the fact that Malta has staggering numbers of vacant properties. Along the coast, a series of vacant hotels and unfinished apartment blocks testify to a trend of overdevelopment. In 2005, as much as 27% of the area within 1km of the coastline had been developed (MEPA, 2011).

8.1.2 Introduction to coastal legislation, planning and land use regulation

The first comprehensive planning document providing strategic guidance on land use in Malta was the *Structure Plan for the Maltese Islands*, developed in 1990. The plan provided a vague definition (see below) of the coastal zone and indicated that the relevant authorities should prepare a comprehensive policy for this zone. Despite various papers and reports addressing coastal issues in Malta, no specific policy was ever developed.

Malta signed the ICZM Protocol in January 2008. It has not yet ratified the Protocol and has not explicitly adopted any of its principles into the country's legal framework. The latest planning and environment legislation in Malta is the Environment and Development Planning Act 2001. That Act does not make any reference to coastal issues.

The Malta Structure Plan was replaced with the Strategic Plan for Environment and Development (SPED) in July 2015. That plan mentions the vulnerability of coastal and marine areas, while also stressing the importance of those areas to the country's economy. It defines the "terrestrial extent" of the coastal zone on a map, but the accompanying objectives and policies are generalised and vague. In fact, the SPED provides even less specific policy guidance on coastal

¹⁸ This chapter is based on the Malta chapter found in the Mare Nostrum First Interim Report by Anna Spiteri, Dirk De Ketelaere, Suzanne Maas, Mirjana Plantan, Lucia Garcia and Maurice Said from IRMCo, as well as the primary sources.

issues than did the Structure Plan. For example, whilst the Structure Plan stipulated that construction and specific uses should be prohibited on the country's beaches, the SPED is silent on this matter. Thus the introduction of the SPED appears to have taken Malta backwards in terms of the establishment of ICZM principles within the country's legal and policy framework.

8.2 Definition of the coastline and coastal zone

That 1990 Structure Plan defined the coastal zone as "*the interface between two environmental domains, the land and the sea*". This definition was intended to be expanded upon but never was, until the Structure Plan was replaced with the SPED in 2015. The SPED does not give a standard definition of the coastal zone, but does provide an indication of the "terrestrial" extent of the zone on a map which forms part of the document. The map differentiates between urban and rural coastal land. Importantly, though, this map could not be used to settle legal disputes regarding the classification of specific parcels of land, as it does not show property ownership data.

The coastline itself is not defined in the SPED or in any other Maltese policy or law. It is therefore unsurprising that the Maltese coastline has not been demarcated.

8.3 Sandy beaches

Although not defined in the law, sandy beaches were identified in the 1990 Structure Plan as "*one of the country's most valuable resources, especially due to their recreational use by the local population and by tourists*" (15.33). The Structure Plan also recognized that the beaches are threatened by human activities.

8.3.1 Permitted uses on the beach

The Structure Plan 1990 policy RCO 16 stated that "no form of permanent construction will be allowed in sandy coastal areas and existing constructions will be removed wherever practicable". It also prohibits the removal of sand from the beaches and states that all works for the enhancement of the beach will be subject to Environment Impact Analyses.

The Structure Plan also prohibited overnight camping and the use of vehicles on sandy beaches (policy RCO 17) and the removal of "sand binding vegetation" from sand dune areas (RCO 18).

The Strategic Plan for Environment and Development (SPED), which replaced the Structure Plan in 2015, is silent on all of these matters. In other words, development is no longer explicitly prohibited on Malta's beaches.

The Policy & Design Guidance - Kiosks (May 1994) states (in Paragraph 5.2) that kiosks or stalls will not be permitted on sandy or other beaches in accordance with Structure Plan Policy RCO 16. Exceptions may be made to allow a temporary kiosk structure in areas where no such facility exists, on the condition that the new facility is sited in such a manner that does not adversely affect the landscape or ecology of the area. Interestingly, although the Structure Plan has been officially replaced by the SPED, this Policy and Design Guidance has not been retracted.

8.4 Public ownership

The 1992 Structure Plan contained the following policy (CZM3): “*All the coastline will be brought into public ownership within a specified period.*” That policy was never implemented and the current plan – the SPED – does not mention public ownership of the coast.

We understand that for several years now, the opposite trend from that intended by CZM3 has been taking place: Parts of the coast which were publicly owned have been sold to private developers.

8.5 Setback from the coastline (in which construction is restricted)

The Maltese legislation and policies do not require that development is set back from the coastline. Decisions regarding development are made on a case-by-case basis.

8.6 Access to and along the Maltese coastal zone

8.6.1 Physical accessibility

The 1990 Structure Plan included a requirement, within policy CZM3, for accessibility:

“Public access around the coastline immediately adjacent to the sea or at the top of cliffs (including in bays, harbours, and creeks) will be secured. This will include taking shorelands into public ownership, Government acquisition of illegal developments and encroachments, and suitable construction works. In the few cases where this is not practical (for example where security considerations are paramount), nearby detours will be established.”

Coastal Objective 3 of the SPED includes the words: “*To ensure that existing coastal recreational resources are protected, enhanced and accessible...*” Of course, these words are much less targeted than the above extract from the Structure Plan.

In practice, the access requirements of the Structure Plan were often not adequately enforced by the planning committee and many areas that have been developed along the Maltese coastline are not accessible to the public.

Yet the requirement for accessibility to the coast was a key consideration in a 1999 appeal to the Malta Environment and Planning Review Tribunal¹⁹ regarding a proposed yacht club in Dragonara Road, St. Julians. The application had been refused by the Development Control Commission²⁰, primarily because the proposal ran counter to the policies of the 1990 Structure Plan regarding public access along the coast. The Tribunal affirmed the decision of the Development Control Commission and refused the appeal. It remains to be seen whether the requirement for accessibility found in the SPED will be used in a similar fashion to refuse development proposals.

¹⁹ PAB/00293/99

²⁰ The decision-making body on planning applications – see <http://www.mepa.org.mt/topics-planning>

8.6.2 Protection of views

Under Coastal Objective 1, the SPED underlines a need to preserve “*visual access from promenades*”. At this stage, it is unclear to what extent this objective is achievable or to what extent it will be monitored and enforced.

8.6.3 Socio-economic accessibility

The Maltese legal and policy framework does not contain any requirements regarding the social accessibility of the coast. In practice, the beaches which have not been privatized are open to everyone. On the other hand, much of the beach has been privatised by hotels along the coast.

8.7 Compliance and enforcement in the coastal zone

Illegal use and development of land is prevalent in Malta, particularly in the rural area of the coastal zone. Common illegal uses and developments include the use of boathouses as summer residences, as well as kiosks and caravans on the coast, and the use of public coastal land by bird hunters and trappers.

The authority responsible for enforcement of planning law and regulations is MEPA – the Malta Environment and Planning Authority. The Malta Tourism Authority (MTA) may also enforce against certain kinds of illegal development.

The tools for enforcement which exist in the framework of Maltese legislation include ‘restrain and enforcement notices, demolition, and legalization fines – a new tool in which the owners of illegal structures pay fines in order to legalize the development and use of those structures. None of these measures apply to buildings constructed prior to 1967 – buildings from that period are assumed to be legal.

Lack of information on land ownership in the coastal zone has to date hampered effective enforcement against illegal development and the implementation of policy measures to increase public access to the coastal zones.

There is also a lack of political will to enforce against illegal development: The Maltese government tends to side with powerful lobby groups, such as the construction industry and boathouse owners. Perhaps for this reason, demolition is an extremely rare measure. We are aware of only two cases in recent history. As at 2013, there were 12,000 pending (unenforced) enforcement notices. Many illegal buildings are approved in retrospect.

An example of the issue of illegal boathouses and the lack of enforcement in this matter is the process which took place in Armier Bay. In 1991, the owners of several boathouses that were used as summer houses in Armier Bay strongly resisted the police and army personnel who sought to demolish these illegal structures. Over a period of several years, the boathouse owners organised themselves and set up a company, Armier Developments Ltd, in order to submit an application to redevelop the boathouses into organised clusters of beach houses. After many years of conflict, in March 2013, Prime Minister Joseph Muscat confirmed an agreement on the Armier boathouses. The company claimed that the agreement would allow them to replace old boat houses with “summer rooms”. The project is expected to feature some 1,000 rooms for use during the summer only.

8.8 Management and coordination

8.8.1 Management

As Malta is a small island, the management of the coastal zone is the responsibility of the national government. As we have shown above, the issue of ICZM is addressed only on a surface level in Maltese policy. Although demands for a comprehensive coastal strategy date back to the 1990s, to date no such strategy has been produced.

8.8.2 Coordination

The Maltese government agencies are extremely fragmented and there is a general lack of coordination across the relevant agencies. There are a total of fourteen government departments whose responsibilities have relevance for coastal zone management (refer Mare Nostrum Project First Interim Report). The Malta Environment and Planning Authority (MEPA) is responsible for regulating and controlling development on land and at sea, but the development of different sectors which may impact the coastal zone (e.g. agriculture, transport) is the responsibility of several separate agencies.

8.9 Public participation and access to information

Maltese legislation does not contain any specific provisions relating to public participation and information in matters of coastal management. The Environment and Planning Development Act and various environmental regulations do contain general provisions relating to public consultation processes. Those provisions are consistent with the requirements of the Aarhus Convention and European directives (e.g. EIA and SEA) regarding public participation. There is evidence that MEPA is attempting to make public participation processes more participatory and more inclusive of the public²¹.

NGOs play an important role in raising awareness and lobbying for the causes they uphold. For example, the NGO Fliemkien għal Ambjent Aħjar (FAA – *Together for a Better Environment*), have been instrumental in raising media attention through organized protests and online petitions. They are active on advocacy and lobbying for the protection of historic buildings, trees, gardens and other cultural and natural heritage, and have a long track-record of raising opposition against new developments which might harm those natural and cultural resources. Recently, a group of NGOs issued a statement together saying that recent plans by MEPA to fast-track the planning application system by-passes and violates national and European legislation, as the plan would not allow adequate time for public consultation and participation processes. Despite all of their efforts, however, NGOs are weak in fighting against development on Malta's coast.

Interestingly, the role of NGOs has been recognized by Maltese authorities and according to the Maltese Voluntary Organisations Act (Cap. 492, 2007), NGOs may choose to be recognised as legal entities in objecting to plans or development.

²¹ See for example, MEPA newsletters <http://www.mepa.org.mt/outlook11-article8> and <http://www.mepa.org.mt/outlook6-article10>

CHAPTER 9 Israel

9.1 Introduction to country and coastal issues

Israel is a small, densely populated country – one of the most densely populated in the Mediterranean. It also has a very short coastline - only 205km long (World Resources Institute) and the country's population is approximately 8.2 million (2014 – World Bank). As such, there are 40,000 persons per km of coast in Israel; the highest rate amongst countries along the Mediterranean. In addition, 70% of the population live within 15 km of the coast.

Over the years, the Israeli coastal zone has been subject to intensive development of housing, industry, tourism, defence and infrastructure facilities. In 2014, only 7% of the coast was used for bathing and recreation (Adam Teva V'din, 2014). Since 2004, these threats that have been managed and controlled through integrated and innovative legislative and planning tools.

However, pressures of development and environmental changes pose continuing and new threats to the coastal zone. For example, Israeli coastlines are threatened by the presence of extensive existing development rights. Another ongoing threat is the erosion of cliff faces along the coast. These threats will need to be addressed with new or modified tools. In this chapter we will describe the experience of Israeli coastal zone management to date, as well as old and new challenges.

9.2 Coastal legislation, planning and land use regulation

In Israel, statutory provisions relating to coastal zone management were first introduced through **National Outline plan for the Mediterranean Coast (NOP 13)** in 1983. NOP 13 applies to this day. Its declared purpose is as follows (translation by authors):

- A. *Designate [coastal] land for the following uses:*
 1. *bathing, recreation and sport;*
 2. *tourist facilities;*
 3. *the preservation of antiquities, nature reserves, national parks, forests and coastal reserves;*
 4. *ports;*
 5. *other uses that require location along the coast;*
- B. *Settle conflicts between various uses which must be located near the coast and prevent the establishment of uses that do not require location near the coast;*
- C. *Provide guidelines for regional and local planning schemes concerning the coastal area covered by this plan;*
- D. *Determine attitudes to the area covered by this plan, with consideration of the national master plan for roads, NOP3.*

The plan designates uses for all of Israel's Mediterranean coastline, in an effort to reduce land use conflicts and to ensure that uses which do not require proximity to the coast are not developed on the coast. It also establishes a coastal setback zone in which development is restricted.

NOP 13 provides a foundation for coastal management in Israel. Yet it has been criticized for the fact that it did not adequately protect the country's coasts, for two reasons:

The first reason is that the ambiguous definition of the NOP 13 setback zone was exploited by developers who sought to develop lucrative residential real estate projects as close as possible to the coastline. Examples of controversial projects that have been built on the coast since the introduction of NOP 13 include the Herzliya Marina high-end tourist accommodation, Kfar Ha-Yam tourism resort in Hadera and Hof Ha-Carmel hotels in Haifa (Figure 10).



Figure 10 – Hof Ha-Carmel hotel project, Haifa. Locally called “the monster”

(Source: www.zalul.org.il)

The second reason is that NOP 13 maintained the previously existing institutional divide between the sea and the coast. The terrestrial zone was protected by NOP 13, while the marine environment was protected only by a dedicated national planning committee – the Coastal Waters Committee. This situation prevented a holistic consideration of plans with both marine and terrestrial implications (Alfasi, 2009).

By the 1990s, the inadequacies of NOP 13 as a management tool for Israel’s coasts became apparent. During this period, Israel was experiencing massive waves of immigration from Russia and Ethiopia, with accompanying demands for housing and employment. Moreover, Integrated Coastal Zone Management (ICZM) and sustainable development had become key issues on the international environmental agenda, spearheaded by the 1992 Rio Summit. These conditions led to Israel’s Ministry of the Environment, together with environmental NGO’s, preparing a draft “Coastal Conservation Law” by 1998. The draft law was “aimed at preserving and restoring the coastal environment and its fragile ecosystems, reducing and preventing coastal damage and establishing principles for the management and sustainable development of the coastline” (UNEP, 2001).

After many years of drafting, negotiations, consultations and Knesset (Israel’s parliament) hearings, the Protection of the Coastal Environment Law was finally adopted in 2004. This legislation was modelled on the then-draft ICZM Protocol to the Barcelona Convention. The 2004

Coastal Law introduced innovative ideas and a new approach to managing Israel's coasts and the threats posed by development.

The Coastal Law's overall objective is to "reduce damage to the coastal environment" (Section 3). As we will discuss in greater detail below, the law defines the "coastal environment" (or coastal zone) as land within 300 metres of the coastline. The law calls on "any authority authorized to grant a license, permit... for any activity within the seacoast... [to] do so, as far as possible, in a way that is designed to reduce damage to the coastal environment" (Section 3).

Significantly, the 2004 law did not replace NOP 13. And the Coastal Law and NOP 13, both important legal instruments for ensuring that the coast is managed effectively, are not fully synchronized. One of the main inconsistencies is that there are different rules for demarcation of the coastline, as we will describe below. Another important difference is the definition of the coastal zone. While NOP 13 defines only the terrestrial part of the coast according to its uses, as we will detail further on, the law defines the coastal environment in a more integrated way, including both land and sea components.

The 2004 Coastal Law established the National Committee for the Protection of the Coastal Environment (CPCE): A powerful body whose approval is necessary for any development within the coastal zone. This Committee assesses new plans and permit applications to ensure that their impact on the coastal environment is not unreasonable. The **Committee is compelled to prioritize the public interest in its consideration of use and access to the coastal zone.** Specifically, the CPCE cannot approve a plan or permit within the coastal setback without weighing the justification for its approval against the value of protecting and reducing damage to the coastal environment and the public right of way along the beach. The committee is also required to determine the measures needed to reduce damage to the coastal environment and to restore the coastal environment if such damage is caused. In reaching its decisions, the Committee must differentiate between built-up areas and open space, emphasizing the protection of open space in the coastal environment.

The CPCE is a positive model of a decision-making body which integrates policy areas, as the committee members include representatives from different governmental offices; a representative of the country's environmental NGOs; a marine academic expert; and a marine transport expert.

A new national plan is under preparation: National Outline Plan no 1 (NOP 1). We understand that the intention is that eventually, this plan will replace many of the sectorial national plans, including NOP 13. The draft NOP 1 adopts many of the principles and parameters outlined in the Coastal Law and is a clearer, more modern, planning document than NOP 13. This draft plan is criticized, however, for being less protective of the coastal zone.

9.3 Definition of the Coastline and Coastal Zone

9.3.1 Definition of the coastline

In the Israeli planning system there are two different definitions of the coastline; both based on the standard mean sea level measurement (refer Table 1):

- NOP 13 created established a 100 metre setback from the coastline, in which construction is restricted. Article 12(2) of the plan specifies that the 100 metres will be measured from the

"highest tide"; a term that was interpreted by the national planning committee as the water line defined by the 0.00 mean sea level (MSL)²².

- The Coastal Law defines a coastal zone of 300 metres from the coastline, which is based on the 0.75 metres above mean sea level (MSL).

In practice, the 0.75m rule has been adopted by The Survey of Israel – Government Agency for Mapping and is considered the national measurement for defining the coastline. Yet significantly, the Coastal Law definition did not replace the definition in NOP 13, so both definitions apply to this day. As we will see later in this report, the presence of two definitions is a cause of uncertainty and legal disputes.

The draft NOP 1 adopts the Coastal Law's definition of the coastline. If it replaces NOP 13, the 0.75m above MSL will remain the only definition in law. The question remains whether old plans approved under NOP 13 will be required to follow the new provisions of NOP 1 (when adopted), in the case of changes to the plan.

	NOP 13	Coastal Law 2004 (and NOP 1)
Definition	0.00 mean sea level	0.75 above sea level
Practice	Not used to delineate the coast	0.75 above MSL has been adopted by the national surveying agency. Entire coast delineated according to 0.75m.
Which rule is followed?	23 Old plans with existing planning rights were approved according to the 0.00 rule Dispute between developers and environmental NGO's	Plans approved since the Coastal Law was adopted follow the 0.75m rule.

Table 1: Two Delineation Rules in Israel

9.3.2 Definitions of the coastal zone

NOP 13 defines the coast according to different uses: beaches for bathing and recreation; beaches forming part of natural reserves; and national parks (Article 8). As discussed above, NOP 13 also defines a setback zone of 100 metres in which development is restricted. The plan distinguishes between the beach, which is the part closer to the water, and the coastal zone (usually, the setback zone), which starts after the beach. The plan shows which area is which – and often expands the coastal zone beyond the 100 metre setback.

The Coastal Law defines the **coastal zone**: An area within 100 metres of the coastline. It then contains an additional definition of the **coastal environment**: "*an area extending 300 metres inland, measured from the Mediterranean coastline...as well as the area measured from the Mediterranean coastline... seaward to the limit of the territorial waters and including, on land – surface and subsurface, and in the sea – the seabed and sub-bottom, as well as natural and landscape resources, natural and heritage assets, and antiquities*". Neither NOP 13 nor the Coastal Law distinguish between urban and non-urban areas.

²² National Committee meeting protocol 26/12/2000

The draft NOP 1, also, does not define the beach. It defines the coastal zone in the same way as does the Coastal Law, but adds differentiation between urban and non-urban beaches. It also introduces a new definition – the coastal hinterland, defined as the area of land immediately beyond the coastal zone.

9.4 Public domain

9.4.1 Designated public land

The Lands Law of 1969 defines the status of public land, using two definitions: the land beneath the coastal water, and the beach. The land beneath the coastal waters is public land owned by the state and cannot be sold (Article 108, Israel Basic Lands Law, 1960). According to the Lands Law, the land on the “beach” has a different special legal status as “designated public land”. But the law does not define the term “beach”. The lack of clear definition of the “beach” creates uncertainty regarding the extent of land that is considered “designated public land”. Only the coastal zone is defined (as detailed above).

The ideology behind the special status of *designated public land* is to preserve these types of land, such as the seashore, for the public interest. Yet Israeli law does not give the highest level of protection to these lands (Weisman 1993). The law does not forbid the change of use to private uses, or sale of the land to private entities. Privatization in the Israeli system is restricted and transactions of designated public land that require registry need ministerial approval, and so does the change of use. Moreover, these restrictions and conditions do not apply to transactions that do not require registry, such as renting or leasing.

The law requires registering the public designated land in the public registry, however this is only a procedural requirement and not a substantial one. A piece of land can be designated public land even without the registry.

Public land in Israel is managed by the National Lands Authority. Beaches are managed by the local municipalities, who are also responsible for the management of the sea within their municipality borders. Beach nature reserves are managed in Israel by the National Parks Authority.

9.4.2 Permitted uses²³ - Public Domain

In addition to the 100 metre setback rule, NOP 13 sets out the permitted uses in each of the different classifications of the coastal zone. As mentioned above, these include beaches for bathing, tourism, natural reserves and ports. For example, in beaches which are designated for bathing and recreational uses, the permitted uses include sunbeds, umbrellas, sport facilities, medical services for the beach, picnic facilities, parking and kiosks. Operators obtain permits for such uses from the relevant local authorities. In practice the majority of kiosks erected on the beach have developed into restaurants; a phenomenon we will discuss below under ‘compliance and enforcement’. Although NOP 13 does not distinguish between **urban and no-urban** beaches, in practice the beaches in urban areas are more developed than in non-urban areas.

²³ As the vast majority of land in Israel is public, the permitted uses refer to the public lands. In the rare case of private land on the coast the same rules apply.

Neither NOP 13 nor the Coastal Law contain general guidelines regarding the distance of facilities from the water. But relatively recent amendments to NOP 13 have defined clear rules regarding the distance of the facilities from the water for beaches in larger coastal cities – Tel Aviv, Haifa and Netanya. In addition, many local authorities have introduced bylaws for the management of the beach, including details of permitted uses and the minimum distance they may be erected from the water.

In addition to specifying permitted uses, following recent amendments, NOP 13 now requires a more **consolidated approach to the installation** of amenities on the beach. The idea is to assemble the amenities in clusters, leaving an open and free beach between these clusters.

The draft NOP 1 follows the NOP 13 consolidated principles, but introduces a different approach from the NOP 13. It differentiates between urban and non-urban beaches:

- Urban beaches are open spaces on the coast which is used as a meeting place for the enjoyment of the public – for recreation, sports, tourism etc. In addition, the urban beach is designated as a gateway to the city from the direction of the sea.
- Open beaches are for preservation of the environment and heritage; specifically, preservation of a stretch of open spaces along the coast and of the link between the sea and the land.

Given this differentiation, NOP 1 allows for additional coastal development of urban beaches, which was not regulated by NOP 13; thus closing the gap between that plan and development in practice. For example, under NOP 13, restaurants can only be approved through permits for variance in land use, whereas NOP 1 provides a method for approving restaurants on urban beaches only.

9.5 Setback from the coastline

The Israeli law defines two setback zones: the first one, defined by the NOP 13 is the 100 metre setback zone from the coastline, in which severe restrictions apply. The second is the 300 metre zone from the coastline. As noted above, plans within this distance from the sea should be approved by the coastal committee.

9.5.1 Permitted Uses - Setback

Within the **100 metre setback zone**, construction is restricted (NOP 13, article 12(2)): The coastal zone committee (CPCE) has the discretion to approve development within the 100 metre zone, only for the uses detailed in the plan for the relevant beach – bathing, tourism, ports etc. In practice, the committee rarely approves any development within the 100 metre zone. There is no legal prohibition against permitting permanent structures in the setback zone.

The new draft NOP ONE follows the same fundamental rule of the NOP 13 that restricts construction within the 100 metre zone. The plan outlines detailed guidelines of what is permitted within the 100 metre zone in urban beaches and open beaches, respectively. Urban beaches can be more extensive and include restaurants or other public uses that are essential on the beach such as water sports facilities, which are not permitted on open beaches.

Interestingly, the draft NOP ONE also allows for construction of facilities which make the beach accessible to people with disabilities, on both types of beaches. This is the first time that such

facilities have explicitly been mentioned in a coastal planning document. This follows a court case from 2009 (Tel Aviv District Court, 1197-09), in which the Green Party contested the approval of the construction of an elevator which would provide access to Herzliya beach. The objector's case was dismissed by the court, that NOP 13 was intended to protect accessibility to the beach for the wider public. The court explicitly addressed the duty of the State to ensure that the disabled, too, can enjoy public facilities.

Regarding land beyond the initial 100 metres from the coastline, NOP 13 protects additional land for environmental purposes associated with the coast. The draft NOP ONE somewhat narrows the protection of the "hinterland", by removing areas beyond existing villages, inland, from the hinterland protected zone.

The Coastal Law restricts development on land within **up to 300 metres** from the coastline (the coastal "hinterland", in NOP 1): Plans within this zone should be in accordance with the requirements of NOP 13 (or NOP 1 in the future) and approved by the coastal committee. Change of use in this zone also requires approval (Article 10).

In 2016, the national government passed Amendment 107 to the Planning and Building Law, which relates to tourism facilities. Following this amendment, tourism facilities are now classified as "national infrastructure" and as such have fast-tracked approval through a special committee. In addition, up to 20% of the floor space in tourism facilities may now be used for residential purposes. Throughout the amendment process, environmental groups severely criticized Amendment 107, citing the risk it posed to the coastal zone. Finally, following intense debate, the government decided to exclude tourism facilities in the coastal hinterland, outside urban areas – a victory for the environmental groups and for coastal preservation.

9.5.2 The problem with old plans

As far as new plans are concerned, the tools available within the Israeli legal and planning system are effective in preventing new, undesirable, development from encroaching on the coastal zone. But old plans, approved prior to NOP 13 and the Coastal Law, pose a threat. According to a research conducted by Adam Teva V'din (a leading environmental NGO in Israel), there are approximately 50 old approved plans along the coast. Once approved, development rights do not expire and high levels of compensation must be paid to landowners whose rights are diminished by changes in the planning framework (Alterman, 2010). Neither NOP 13 nor the 2004 Coastal Law introduced tools that would allow the relevant authorities to cancel pre-existing development rights within the coastal zone. Moreover, the old plans that were approved before the Coastal Law follow the 0.00 MSL delineation rule – not the more sustainable 0.75m MSL rule introduced by the Coastal Law. These old plans, which would not have been approved within the current framework, may be realised at any time.

A classic court case, which encompasses many of the issues described above, is Gueta verses the District Planning Committee (High Court case 6732/13). This case involved a plan approved prior to NOP 13, relating to land on the border of the 100 metre coastal zone. It allowed the construction of two hotels on the beach of Bat Yam. Approximately 30 years later (presumably when it became profitable to develop in the area), the developers requested approval for a detailed plan. The local and district planning committees approved the detailed plans based on the measurement of the 100 metre setback line according to NOP 13 – that is, 100 metres from the point at which 0.00 MSL hits the shore. The approval was contested by the residents living nearby and Adam Teva V'din (environmental NGO). They claimed that the measurement of the

line should be according to the Coastal Law rule of for the coastline at 0.75 metres above MSL (as noted above, the formal line adopted by the national mapping agency).

The difference between the two measurements in this case demonstrates the significance and the consequences of the different rules on property rights: The developers would be forced to shift their second hotel 14 metres inland if the 0.75m rule was applied. The district court ruled in favour of the planning committees: The legal basis for this ruling was that the Coastal Law did not cancel the NOP 13 rule. As such, the court considered that as the old plans were approved based on the 0.00 rule, the detailed plans should be based on the same. The case was appealed to the High Court, which upheld the District Court's ruling.

This leaves the legal situation to the legislator to solve. Until this is resolved we remain with the uncertainty in practice and legal disputes between developers who favour the NOP 13 rule and environmentalists and citizens who fight to protect the coastal zone. If, when adopted, NOP 1 explicitly cancels NOP 13, the 0.75m rule will be the only one stated in law, creating certainty regarding the location of the coastline and coastal zone.

9.6 Accessibility

9.6.1 Horizontal accessibility

The requirement for a right of access along the beach was introduced in 2004 by the Coastal Law. Article 5 of the law requires an open pedestrian right of way along “the entire length of the beach”, but it does not specify the required width of the right-of-way. The draft NOP 1 follows this principle, requiring free access along the beach, specifically also including the disabled.

In practice, the width is set according to the physical conditions of the beach; where possible, beach amenities are placed further away from the sea, leaving a wider sandy beach untouched and open for access and public use. Many cities have introduced paved promenades at the edge of the beach, which aid accessibility. But developments of this type can also be controversial. In the case of Tel Aviv beach, for example, NGOs and environmental activists objected to elements of the promenade project, claiming that the construction is detrimental to the coastal environment (Tel Aviv District Court, 34039-05-13).

The law lists many exemptions from the requirement of access along the beach. These include: fencing according to a plan or permit, defence land, port areas, nature reserves or national parks, and infrastructure installations (including power stations, fuel storage facilities and desalination plants). In practice Most of the coastal zone and the beach are not accessible to the public because of the presence of numerous infrastructure installations.

Two additional exemptions from the access requirement have socio economic implications. The first exempts beaches which legally charge entrance fees, allowing the operators of those beaches to erect fencing. Of course, this exemption leads to the exclusion of those who cannot afford to pay entrance fees. But in practice, this exemption is rarely applied, as building a fence requires an approved plan and an amendment to NOP 13.

The second exclusionary exemption applies to beaches designated for use by the religious community. Currently, there are 16 such beaches across the country. These beaches do not allow men and woman to bathe at the same time and are fenced to ensure that the swimmers

cannot be seen from beyond the beach. In order to ensure that the beaches cater to the needs of the religious community, the authorities cannot guarantee a right of access along these beaches. As a compromise, the CPCE usually requires that the fenced beaches are designated in locations which do not disrupt a series of connected beaches. For example, in Tel Aviv, the religious beach is located at the northern end of the city's coastline. In addition, the fenced beach is often open to the wider public on the Sabbath (given that the religious community does not use the beach on that day), and in the off-season (winter months).

The 2004 Coastal Law introduced a legal prohibition against the use of vehicles on the beach (Article 4A(a)). This was very important, in the Israeli context, to ensure accessibility and the use of the beach. In the past, vehicle owners (particularly larger vehicles, such as Jeeps) would drive onto the sandy beach and park; endangering pedestrian safety and blocking the view. The vehicle restriction has been widely enforced and in practice, the use of vehicles has decreased significantly since 2004.

9.6.2 Vertical Accessibility

Vertical accessibility is not required by NOP 13 or the Coastal Law, but is required under the (draft) provisions of NOP 1. This is in line with the CPCE (coastal committee) policy, which has been taking vertical accessibility into consideration, when reviewing plans, for several years. The committee's policy is to allow (beyond the 100m setback zone) clusters of development, with space between them to enable access to the beach. This is, of course, more relevant to urban areas than to non-urban areas.

In non-urban areas, the committee has occasionally required that the relevant landowners create and pave a path to the beach. For example, in Maagan Michael, a Kibbutz located between Tel-Aviv and Haifa, existing houses prevented access to the beach. When the kibbutz sought approval for a new plan (2009), the CPCE required that they create vertical access paths to the beach.

If the CPCE does not require vertical access when approving a plan, such a requirement may be instituted if the approval is appealed at the relevant planning appeal committee²⁴. Such was the case in 2006, when Hof HaSharon local committee initiated a plan that changed the use of a plot located 100m from the sea in Arsoof, a high end village, from public to residential (private) use. The plan was approved by the CPCE, on the basis that it does not harm the coastal environment. The Green Party (environmental NGO) appealed this decision to the National Appeals Board (appeal 06/M/03), which affirmed the approval, but added a condition that the municipality pave a vertical public path leading to the sea, in the vicinity of the relevant land, prior to issuing a building permit.

9.6.3 View Protection

Accessibility may also refer to access to sea views. Yet none of the NOPs or the Coastal Law restrict development which may obstruct the view to the sea. This is another consideration that is taken into account by the coastal committee when it reviews plans.

²⁴ Planning appeals committees are the address for both the initiators of plans and third parties to request administrative review of planning decisions. There are national, regional and district level committees.

9.6.4 Socio-economic barriers

The main socio-economic barrier to accessibility of Israeli beaches is the use of entrance fees. Since 1959, when a private citizen refused to pay entrance fees for bathing at the beach, Israeli courts have debated the issue of charging fees to access the beach. At the time, the Tel Aviv District Court ruled that that air, water and light are public assets (Rinat, Haaretz, 27/05/2016). Following that decision, in 1964, the Bathing Law was enacted. This law restricts the beach services for which municipalities may collect entrance fees (Article 6). They may charge fees for beaches which have special amenities, beyond the basic life guard services and running water. It should be noted that as the national government does not pay for these amenities, the municipalities must shoulder the cost.

Since the enactment of the Bathing Law, municipalities increasingly instituted fees for beach use. Eventually, in 2005, Adam Teva V'din appealed to the High Court on this matter. The court once again ruled that the beach should be free and open to everyone (ruling 5824/05) – thereby ensuring free access, but placing the financial burden back on municipalities.

In general, urban municipalities, such as Tel-Aviv and Haifa, take in significant revenues from the extensive use of their beaches; therefore, they can afford to maintain the beaches without charging entrance fees. But municipalities with beaches in non-urban areas do not take in comparative revenues from the use of the beach, so have more difficulty paying for the maintenance of beach services. As a result, those municipalities have begun to explore "business development" opportunities on the beach; such as renting out the beach for events (commercial and private) which create barriers to accessibility. This phenomenon has been reined in by the District Court (ruling 269/02) and the coastal committee following challenges by environmental NGO's. Municipalities authorizing these events must now consider the uses outlined in NOP 13 and operators must obtain relevant permits, including approval for variance in land uses. Relatively recently, a new initiative has taken hold: municipalities charge operators to erect and rent out gazebos on the beach. This practice has not yet been challenged in court.

Today, fifteen beaches in Israel are subject to entrance fees (due to the presence of special amenities). Ten of these are managed by municipalities and another five are managed by the Nature and Parks Authority. In 2016, the Minister of Interior has declared that in the summer of 2016 the ten municipal beaches will be open to the public, free of charge, thanks to funding from the National government (Lior et al, Haaretz, 15/03/2016).

9.7 Compliance and enforcement (public domain and setback zone)

Large-scale illegal development is not a phenomenon in Israel. Along the coast in general, only minor additions to buildings or temporary structures are built illegally. That includes some illegal kiosks or shacks. In the past, small kiosks which were built with a permit were later illegally converted into restaurants. That phenomenon is in decline due to improved enforcement measures. Some of the restaurants may also be legalized, as we will explain below.

In Israel, as is the case in many other countries, a building permit is required before construction can occur and the permit must be in accordance with the relevant plan (Section 145 of the Planning and Building Law, 1965). Notably, in 2014 an amendment to the law (number 101, 2014)²⁵ was introduced, which exempted some types of very small structures from the permit

²⁵ The Planning and Building Law, 467/1965 SH (IL), Amendment 101 SH (IL) 2450/2014.

requirement. Exempted uses include: temporary winter roofing for sidewalk cafes, fences, light-material storage facilities, pergolas, and air conditioners. There are no exemptions for permanent structure. The amendment will take some time to be implemented in practice, as many of the exemptions must be incorporated into the specific rules within statutory plans in order to take effect.

All three tiers of the planning administration are responsible for enforcement against illegal development. Prior to the 1980s, only the local level was responsible for enforcement, but since that time the district level has gradually received more powers, allowing it to step in when the local level is recalcitrant (article 207, Planning and Building Law). In addition, there is a national enforcement unit which specializes in issues or areas of national interest, including the coastal environment²⁶.

The legal category of planning and building violations in Israel is interesting: Such violations are not just administrative offences, but lower-level criminal offences. Offences are regulated through both the Planning & Building Law and the Coastal Law; the latter being stricter where violations cause severe harm to the coastal zone (article 7 of the Coastal Law). There are two layers of enforcement: Administrative and judicial. The administration is authorized to issue administrative 'stop and demolition' orders and when these are not obeyed the administration may request judicial stop and demolition orders. The courts have the discretion to issue punitive fines and even short-term incarceration of offenders (very rare) (Calor and Alterman, forthcoming, 2017).

Enforcement tools in Israel include inspection and reporting powers, stop orders (for illegal construction or use), demolition orders, and fines. Calor and Alterman (forthcoming, 2017) describe the hurdles to effective enforcement; insufficient number of inspectors at the local level, their low pay, reluctance to send out inspectors close to election times, and the ongoing hesitation by local elected officials to authorize execution of demolition orders. As a result of these hurdles, the number of actual demolitions is negligible. However, since 2014 authorities have been more active in promoting demolitions on the beach, as part of the Environmental agency's fight against the phenomena of restaurants that illegally took over the beach at the expense of the public.

Apart from demolition orders, there are two other tools that have been implemented in order to restore compliance in the Israeli system (Calor and Alterman, forthcoming, 2017). One is **Legalization by granting an ex-post building permit**. This tool empowers the authorities to directly grant a retroactive building or occupancy permit, so long as it complies with existing plans or regulations. The extent to which legalization practices are used in Israel is not clear, but as according to Calor and Alterman, there are indications that it is a common phenomenon. Within the coastal zone, the most pervasive example is the scenario in which a legal kiosk which has illegally expanded to become a restaurant applies for an ex-post permit for variance in land use. In 2006 a restaurant on the beach applied to Tel Aviv municipality for such a permit. The municipality submitted the application to the CPCE, which refused to grant the permit. But on appeal, the appeal committee granted the permit on a temporary basis (5 years), given that a new plan for Tel-Aviv beaches, which was to resolve the legalization of the restaurants on the beach, was under consideration at the time (National Appeal committee's decision 7/M/06).

The new plan for Tel Aviv's beaches which was discussed in the above case, was to implement the second compliance tool: **Legalization through plan amendment or granting of variance**.

²⁶ The role of the national enforcement administration is spelled out here: <http://www.moin.gov.il/OfficeUnits/BuildingSupervisionNationalUnit/Pages/About.aspx> (in Hebrew).

Until recently, this was a mainstream process in Israel. It involves approval of a new or amended plan that “retrofits” the land use and building rights to the existing illegal building or de facto use. Under the Planning and Building Law, if an illegal use or development is within the range of permitted variances (very small scale changes, not including additional building space), then the relevant planning authority may consider this legalization procedure.

When ruling on enforcement matters, the courts frequently issue demolition orders, but grant violators time to seek legalization through amendment to a plan. In consequence, there are many demolition orders that have been on “hold” for many years, until long-lasting procedures for changing plans are resolved.

In 2010, a dramatic policy change occurred when the Ministry of Justice instructed the District Planning Commission to reject or stall plan amendments for legalization. The problem, as highlighted by Calor and Alterman (forthcoming, 2017), is that countless violations still exist, with no clear process for legalization. Within the coastal zone, the rate of demolitions has increased within recent years, partly as a result of the national enforcement unit having taken a more active role. But still, the execution of demolition orders has many difficulties. Therefore, what will be the policy in the future is still not clear.

9.8 Management and coordination

Israel, like the other three partner countries, struggles with a lack of coordination across the different levels of government (vertical coordination) and across various authorities at each level (horizontal coordination).

Israel has a centralized system with many powers and authorities at the national level. As noted above, plans within the coastal zone require the approval of the national coastal committee (CPCE).

In examining the state of vertical coordination involved in Israeli coastal management, we identified thirteen ministries, at national level, whose responsibilities include coastal management issues. These include the Israel Lands Administration, the Treasury Ministry²⁷, the Environment Ministry, Transportation, Tourism, Energy and Water Resource Agriculture and Defence ministries.

The lack of coordination between the ministries causes difficulties for local authorities seeking to apply Coastal Law and policy. In response, in August 2015, the mayors of Israel’s twenty coastal municipalities established a coastal management forum, seeking to ensure better coordination on coastal issues.

Another initiative which has improved coordination is the new Israeli Marine Spatial Plan, currently under preparation. The body overseeing this plan is the National Planning and Building Board – the statutory body which is also authorized for terrestrial planning matters. The fact that this Board is overseeing both terrestrial and marine planning facilitates an integrated approach to the process. The preparation of the new law has seen an unprecedented level of coordination within a special with a very broad range of government and quasi-government bodies and NGOs.

²⁷ The Planning division had been under the interior ministry for many years up to the election of 2015 in which it was moved under the responsibility of the treasury office.

9.9 Public participation

Israel does not have any special statutory requirements for public participation in matters relating to the coastal zone. However, public participation is required in many planning procedures. The Planning and Building Law grants the right to interested parties to be heard in relation to district and local outline and detailed plans (article 100).

Although there is no statutory requirement that obligates authorities to involve the public in plan-making on the coast, the courts have shown an inclination to require such participation. In the case of the Green Party V. Tel Aviv Local Committee (34039-05-13), the court required that Tel Aviv municipality involve the public in its planning of a refurbishment of the beach amenities on the Tel Aviv promenade. The municipality had decided to refurbish the southern part of the promenade. The planned works included new paved paths for the disabled, new shade structures and seating areas. These works required a building permit, which does not entail the right to third party objections, or any other obligation which might involve the public. As such, the municipality did not involve the public in the planning. The Green Party, together with a few residents, filed a claim against the municipality (judicial review) requesting that the plan be abolished. In its ruling, the court required the municipality to prepare an Environmental Impact Assessment and to involve the public in planning the refurbishment. The municipality undertook those actions, but the refurbishment plan was nonetheless approved. The Green Party had sought complete abolition of the plan, so went back to the court, which dismissed the case on the ground that the plan was legal.

The above case is just one example which illustrates the important role which environmental NGO's play in protecting Israel's coastal zone. Perhaps the most significant achievement of the environmental movement in Israel was their successful lobbying for the introduction of the Coastal Law in the 1990's. Since then, they have led many successful battles, including the battle to stop municipalities from renting out their beaches for private events and the abolishment of a plan to build a beach resort in Palmahim which was approved before the introduction of the Coastal Law (in 2000):

Palmahim beach is one of Israel's remaining open beaches, but was the subject of an old approved plan for a holiday resort. Intensive public protests, led by environmental NGOs, convinced the government, in 2010, to order the National Planning Committee to reconsider the resort approval. Cancellation of the plan will trigger compensation rights for the resort developers. In 2014, a new plan was submitted by the Nature and Parks Authority, which would turn the beach into a national park. The public will have the opportunity to submit objections to that plan in 2016. However, the new plan will not progress if the government cannot find a means through which to pay compensation to the developers (Rinat, Haaretz, 23/12/2015).

CHAPTER 10 Comparative Analysis

In the previous chapters we outlined the policy, laws, regulation and practice relating to Integrated Coastal Zone Management in each of our partner countries – Greece, Spain, Malta and Israel. In this chapter we will compare the partner countries according to the ICZM parameters outlined in Chapter 5. Our analysis is limited to those issues which have been covered in the various partner country reports. We deepen our analysis by referencing three significant Mediterranean countries – Italy, Turkey and France – and their approaches to ICZM law, regulation and practice.

We note that in this analysis we do not assign weightings to the various criteria. Weight is a normative question and readers of this report can use our comparative analysis as a basis for discussion. Each individual country or authority can assign weights based on objectives and desired outcomes.

10.1 Planning and legislative tools

Legislation, strategies and plans provide the foundation for ICZM within the individual countries. We therefore begin our comparative analysis with an investigation of the primary planning and legislative tools which apply to ICZM in each of the partner countries.

Greece, Spain and Israel have each enacted a law which specifically governs the use and development of the coast (though in Israel the law works in tandem with a national statutory plan – see Table 2). National coastal legislation provides a means for governments to approach coastal management in a holistic and integrated manner. Yet when we delve deeper into the stories behind the development of the legislation of Greece, Spain and Israel, we see that not all coastal laws are equal and that the presence of such legislation goes only part of the way to ensuring an integrated approach to coastal zone management.

In Greece, the first Coastal Law was enacted in 1940, but this law focussed only on a narrow set of issues and did not address environmental concerns. It defined seashores and beaches as public goods, yet there was no reference to the obligation of the State to protect coastal areas or to limiting construction on the coast. Greece's updated Coastal Law of 2001 reflects a desire to protect the seashore environment, but still focuses heavily on its economic potential and tourism.

Israel officially began to consider the management of the coastal zone from an environmental perspective in the 1980s. National Outline Plan (NOP) 13 – The Mediterranean Coastline – was developed in 1983 and established a coastal setback zone and restricted use and development of the coast. But those restrictions were limited and did not protect the coastal zone from a range of developments – particularly those associated with tourism. Following intensive development of the coast in the 1990s, and in response to public criticism of NOP 13, Israel developed a Coastal Law, which has a stronger environmental focus. That law, which was enacted in 2004, does not replace NOP 13. It adds additional layers of restrictions for development in coastal zones. And yet – we observed a relatively high level of integration in Israel's planning processes and in the current development of Israel's Marine Spatial Plan.

Spain, like Israel, experienced an awakening regarding environmental concerns and the degradation of the coastline in the 1980s and enacted its first Coastal Law in 1988. That law contained a thorough definition of the coastal zone and established coastal setback zones and other strict measures for protection of the coastline. Yet, as we see throughout our analysis in this

chapter, the law was not fully implemented and there were issues with compliance and enforcement. In response to a growing awareness of coastal management issues and the difficulties of enforcing the previous law, Spain developed a national Strategy for Coastal Sustainability in 2007 and in 2013, enacted a new Coastal Law.

To date, Malta has not developed either a Coastal Law or a coastal strategy. The Structure Plan for the Maltese Islands, developed in 1990, indicated that the relevant authorities should prepare a comprehensive policy for the coastal zone. Despite various papers and reports addressing coastal issues in Malta, no specific policy was developed. The Malta Structure Plan was replaced with the Strategic Plan for Environment and Development (SPED) in July 2015. The SPED is a policy document rather than a legislative tool. That plan mentions the vulnerability of coastal and marine areas, but its stated objectives and policies pertaining to the coast are very generalised and vague.

When we investigate the non-partner countries, we find additional approaches to coastal zone management in legislation. Like Israel, Spain and Greece, Turkey and France both have targeted coastal laws. The French Coastal Act (1986) is complemented by Sea Development Plans and Strategic Coastline Plans. The Turkish Coastal Law (1990) is complemented by planning legislation which provides for the national Environment and Urbanism Ministry to prepare Integrated Coastal Area Plans for coastal regions.

Conversely, in Italy, there is not one coastal law: The principles of coastal zone management are addressed across several laws and codes, including the environmental protection law – Galasso Law (1985) and the Sailing Code and the Civil Code. In addition, several regions within Italy have prepared individual coastal management plans.

When we consider the coastal legislative framework of each of the above countries, we can derive a scale – from countries which address the principles of coastal zone management across a several laws and regulations, to those which take a more integrated approach, with one coastal law. At Figure 11 we attempt to place the partner and supplementary countries on such a scale. Note that as Malta does not explicitly address coastal zone management in its legislative framework, it cannot be included on this scale. Israel does not have one integrated coastal law, but the Planning and Building Board

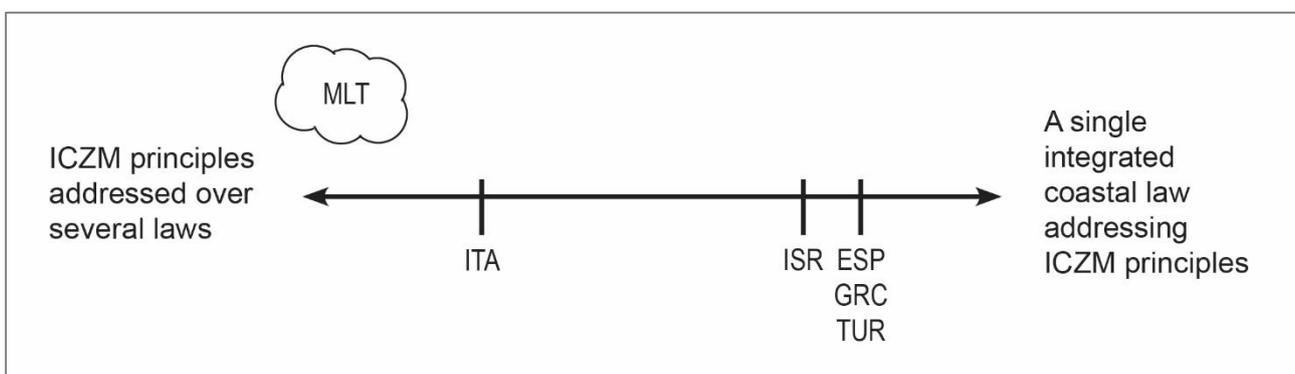


Figure 11 – Scale of integration of legislation

There are some interesting differences between the partner countries in the extent to which coastal management laws and planning policies and strategies are coordinated. In Spain, the Coastal Law is supported by the national Strategy for Coastal Sustainability, as well as regional coastal strategies. In Israel, the Coastal Law and NOP 13 are complementary; restrictions pertaining to use and development can be found in both, but differences between the two documents cause disputes (discussed below). In addition, upon adoption of Israel's Coastal Law in 2004, the Planning and Building Law was amended in order to ensure that the coast would be managed through the planning system. Greece, unlike Israel and Spain, does not have any specific coastal planning strategies or plans which support its coastal law. We understand that a national "sectoral" (topic-based) plan for coastal management is under development.

As we will see throughout our analysis, the different motivations behind the development of coastal laws and strategies (or lack of such tools), are reflected in the extent to which each country has implemented coastal zone management issues. Spain and Israel's relatively early intervention in coastal zone management issues (from an environmental perspective) may be the reason that these two countries are more advance in their implementation of ICZM tools than Greece or Malta. The fact that Malta's legal framework does not allude to ICZM tools or principles is not surprising when we consider that Malta has not developed any legislation or policies which specifically deal with the coastal zone.

- Table on the next page -

	Greece	Spain	Malta	Israel
Legislation and binding national plans dealing directly with the coastal zone and the principles of coastal zone management	Coastal Law 2001 (First coastal law 1940)	Coastal Law 2013 (First coastal law 1988)	N/A	Coastal Law 2004 National Outline Plan (NOP) 13 1983 – The Mediterranean Coastline (predates the Coastal Law). Various additions over the years.
Non-binding national strategies, plans or guidelines specific to coastal management	There are sectoral development plans for different topics, but no plan specific to coastal development (under preparation).	Strategy for Coastal Sustainability (2007, non-binding) Guidelines for Waterfronts (2008) Guidelines for Projects on Beaches (2008)	N/A	N/A
Other national strategies or plans which influence coastal management	National Development Plan (contains general reference to the coast)	N/A	SPED – Strategic Plan for Environment and Development (2015) (Previous – Structure Plan for the Maltese Islands, 1990)	National Outline Plan (NOP) 35 – Comprehensive Integrated Planning for the State of Israel
Regional strategies or plans	Each region has a Regional Development Plan – not specific to coastal management. No coastal strategies at regional level.	Each of the 10 coastal regions has developed a regional plan or strategy for coastal management.	N/A	N/A
Local planning measures	Local land use plans. Master Plan for each municipality.	Local land use plans.	N/A	Local land use plans.

Table 2 – Planning and Legislative Tools – Comparative View

10.2 Delineation

How does each country approach the delineation of its coastline (Table 3)? Originally, Greece and Spain both incorporated the “highest winter waterline” parameter into their legal definitions. The definition of the coastline using the “highest winter waterline” is based on environmental parameters and requires that surveyors (or other parties seeking to delineate the coastline) gather environmental evidence (refer Section 5.3.2 above). There is no one accepted method of identifying this line, which may create uncertainty. In addition, the term “highest winter waterline”, may be interpreted in such a way as to take into account unusual storm events which lead to unusually high tides.

	Greece	Spain	Malta	Israel
Law – definition of delineation of the coastline	“Typical /ordinary highest winter waterline” (Coastal Law amendment 2014)	Highest know tide which occurred at least five times over the last five years. Also, a procedure for updating the demarcation (Coastal Law 2013)	No definition in law.	Two definitions that are used in different contexts: - 0.00 Mean Sea Level (NOP 13) - 0.75 above MSL (Coastal Law)
Practice – method of delineation	Government agencies have developed tests to identify the highest winter waterline, including the line where vegetation does not grow due to the presence of waves.	The entire coast was demarcated prior to 2013 – according to the former definition (“highest winter waterline”). The process took more than 20 years.	None.	0.75 above MSL has been adopted by the national surveying agency.
Practice – Implementation of delineation	Only 8% (or possibly less) of the coast has been demarcated.	As above – the vast majority of the coastline has now been delineated.	Not delineated.	Entire coast delineated according to 0.75 MSL.

Table 3 – Delineation – Comparative View

Indeed, we saw from the Greek and Spanish stories (Chapters 6 and 7) that problems with interpretation of the definition of the highest winter waterline appeared to cause significant delays in the implementation process of demarcation. Interestingly, both countries have recently clarified their legal definitions of the highest winter waterline. Since 2014, the Greek definition refers to the “typical” or “ordinary” highest winter waterline; thereby removing the need to take into account unusual storm episodes. In Spain, since 2013, delineation is based on the highest known tide, reached at least 5 times within the past 5 years. Whilst these parameters clarify the definition in the law, they do not do away with the need to gather environmental evidence – the high tide line – in the ever-changing coastal zone.

Turkey, Italy and France also base their definition of the coastline on the tide and other environmental parameters. For example, like Spain's MTPD, France's "Maritime Public Domain" is defined based on the "highest tide", but also includes sand deposits/sand dunes. But France's law categorically excludes "exceptional storms" from impacting on the definition. Similarly, Turkey's "coast edge line" is defined by the "inward movement of the water over the land" and includes terrain which is associated with the coast – sand, pebbles and marshlands.

Israel uses a very different definition from that used in the other countries in our study. This definition, which is based on the mean sea level (MSL), appears to be less complicated to apply than those based on tides and environmental evidence, as it uses an agreed technical measurement. The use of the MSL has its roots in common law tradition. The mean sea level measurement is expected to be updated every 19 years; to account for environmental changes over that time. Thus, while there is recognition that the sea level is not static, for 19 years, Israeli lawmakers have certainty about the demarcation line. That line is then easily updated at the beginning of the next period. Yet in Israel there is still some uncertainty given the two different definitions of the delineation line found in the law – though both based on MSL – one in the National Outline Plan (NOP) 13 and one in the Coastal Law (2004).

In Figure 12 we place the various countries' legal definitions of the coastline on a scale – from fluid (based on tides, geomorphology, vegetation, etc.) to a more fixed definition. Note that we did not find reference to the definition of the coastline in Maltese law.

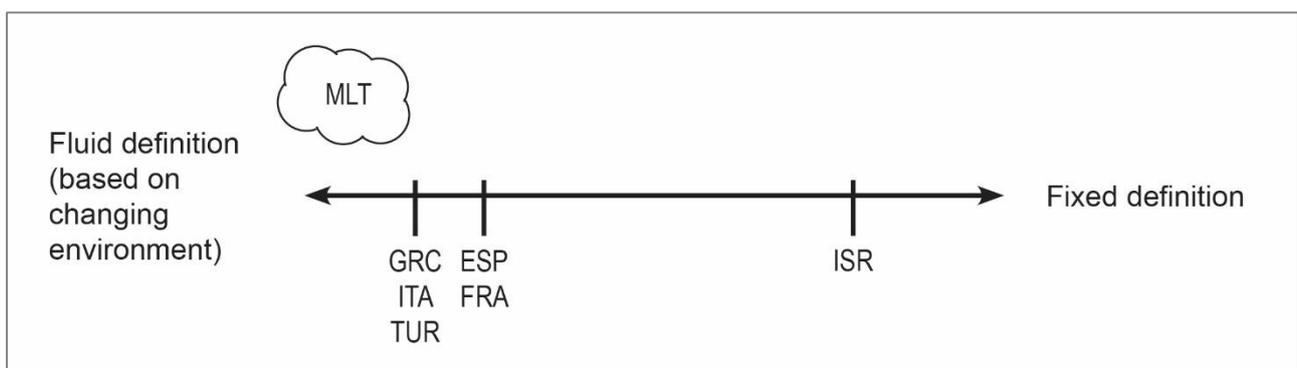


Figure 12 – Scale of the legal definition of the coastline – fluid to fixed

Legal certainty is important in the demarcation process. But given the changing nature of the sea, there is also a need for the method of delineation to take those changes into account (as there is in Israel every 19 years). In Spain, the 2013 Coastal Law set a new procedure for updating the demarcation. The procedure may be initiated by a request from an interested party and involves a public hearing. In addition, the Coastal Law requires the government to review the boundary in areas where substantial changes to the physical nature of the coast have occurred (e.g. when there is new flooding and proof that the waves rose above the existing demarcation line).

There appears to be a link between the methods used for delineation in each country and the corresponding levels of implementation of delineation. In Spain the demarcation process, based on the highest winter waterline, took 20 years to complete (97% complete since 2012). In Greece, where the method is also based on the highest winter waterline, the process is ongoing; but to date only 8% of the coast has been demarcated. In Israel, where the method is based on the MSL measure, the entire coast has been demarcated since 2005.

Another important difference is the institutional approach to delineation in each country. The Spanish and Israeli governments adopted laws which require delineation of the coastline and institutional resources were specifically allocated to this task. In Greece, the delineation process was set in motion by private property owners seeking legal clarity. Only recently has the government taken on the task of demarcation of the coastline for the entire country. Malta is a few steps behind Greece in that even the law does not mention delineation of the coastline.

One of the interesting findings of this research is that there is no coordination between the countries regarding the method and implementation of demarcation. As a result, bordering countries could be in a position where the demarcation lines from each country do not match up. This situation does not further the aim of the ICZM Protocol to apply a coordinated, unified set of principles to all Mediterranean countries.

- Continued on the next page -

10.3 Public ownership

We compared the law and practice of the partner countries with regards to public ownership of land in the coastal zone (Tables 4A, 4B, 4C). In Spain, Greece and Israel, the land reached by tidal waters is publicly owned. This is also the case in Italy, Turkey and France. This publically-owned land is colloquially known as the beach, but legal definitions of the beach vary from country to country. Beyond the land reached by tidal waters, some countries define additional categories of publicly-owned land within the coastal zone.

In Spain, the coastal law establishes the MTPD – the Maritime Terrestrial Public Domain – which comprises the beach and other features of the coast, including cliffs, dunes and ports. This definition was “narrowed” with the introduction of new regulations in 2013 (Section 7.2), causing a change in the status of land from public to private. The ownership of such land is sometimes contested by multiple landowners.

Italy and France are similar to Spain, in that their laws each define publicly-owned coastal land according to the terrain.

In Israel, the extent of coastal public land is defined by the Israel Lands Law. The law specifies that “land which is beneath the coastal waters” is publicly owned. In addition, the “beach”, which is not defined in the law, is given special status as “designated public lands” which cannot be privatised without ministerial approval. It is nevertheless noteworthy that given that over 90% of land in Israel is publicly owned, by default the majority of land immediately adjoining the beach is also publicly owned.

In Greece, the extent of public coastal land is the most difficult to define given the that it is based on three different categories of land in the coastal zone: In addition to the publicly owned “seashore”, the government may expropriate a zone of land of 10-15 metres beyond the highest winter waterline, for access purposes. The third category is the “old seashore zone”: The area of land between the previously identified (historical, 19th Century) coastline and the newly identified coastline, in locations where the coastline has shifted towards the sea (refer Section 6.2). Land in this zone is publicly owned but may be leased to private entities. Given that 92% of the Greek coastline has not been demarcated, it is not always clear where the public domain ends and private property begins. Commonly, the 10-15 metre access is provided de facto, but the land has not been expropriated.

Turkey is unique amongst the countries which we have assessed in that it sets an additional distance from the coastline within which land is publicly owned: 50 metres. Assuming that the coastline is demarcated, this definition is very clear and stable.

		Greece	Spain	Malta	Israel
How is the beach defined?	Law	Seashore – the area of the beach that is covered by the highest winter waterline. Beach – additional land beyond the seashore. Up to 50m from highest winter waterline.	No definition in law or policy.	No definition in law or policy.	No definition in law. Two types of beaches are defined in NOP 13 – bathing and preservation.
What land is publicly owned?	Law	The “seashore” and “beach” (defined above) are publicly owned. The government may expropriate 10-15 metres zone beyond the seashore – for access purposes. Additional coastline from 19 th Century – beyond highest winter waterline – based on environment. Land between the two lines may be public, if proven by law.	MTPD – Beach, reclaimed land, cliffs, dunes, state ports (2014 Coastal Law Regulations)	Old policy (1990): “All the coastline will be brought into public ownership within a specified period” (Structure Plan policy CZM3) That policy was never implemented ²⁸ .	“Land which is beneath the coastal waters” is publicly owned according to Section 108 of the Israel Lands Law. The Lands Law (section 107) defines land on the “seashore” as “designated public land”. 90% of the land in Israel is publicly owned.

Table 4A – Public Land Ownership – Comparative View – Part A

- Continued on the next page -

²⁸ The CZM3 was “strategically invoked by case officers when faced by applications which denied public access to the coast” (James Debono, Malta Today, 10/7/14).

		Greece	Spain	Malta	Israel
What land is publicly owned?	Practice	Given that 92% of the coastline has not been demarcated, the “seashore” area is contested. Commonly, the 10-15 metre access is provided de facto, but the land has not been expropriated. Kavala: The case study area is the only area not incorporated in the local plan. Private houses are within the official seashore area.	New regulations have yet to be applied on the ground, but the definition of the public domain has been slightly ‘narrowed’. Public land that changes to private is contested.	Opposite trend from that intended in CZM3: Parts of the coast which were publicly owned have been sold to private developers.	In practice the majority of land beyond the beach area is nationally owned.

Table 4B – Public Land Ownership – Comparative View – Part B

All of the coastal public land in each of the countries is nationally owned and managed (with the exception of the Sicily region in Italy), albeit by different government agencies.

In Greece, Spain, Israel, Italy and France, public land cannot be sold according to law, with limited exceptions. In Malta, the law does not specify whether public coastal land can be sold and the government continues to sell coastal land for private development. It appears that Malta has not adopted the public trust doctrine and that the actions of its government are led by financial – rather than public – interests. The public have no guarantee that the coast will be protected from further development.

In Greece, the public trust doctrine may be under threat. The government interest in selling public land for financial gain may threaten public access to the seashore. Citizens are already concerned that the agency which manages public coastal land is the Finance Ministry, which has little commitment to environmental or social objectives.

		Greece	Spain	Malta	Israel
Public coastal land owner / manager		Nationally owned. Managed by Finance Ministry (7 administrative offices – 50 regional offices. General Secretariat for Public Property).	Nationally owned. Managed by Director General of Coasts, Ministry for Environment	N/A	Nationally owned. Managed by Ministry of Finance. Ministry of Environmental Protection
Can the public land be privatised?	Law	The “seashore” cannot be sold. Land between the highest winter waterline and the line from the 19 th century can be sold.	No. – cannot be sold.	No current declared policy.	Land “beneath the sea” cannot be privatised. Designated public land can be privatised with Ministerial approval.
	Practice	Due to recent economic pressures, the government is in the process of selling public land adjacent to the seashore. The effects of this process on the seashore are not clear.	No but limited leases are provided for certain uses. The period of some leases have been lengthened.	Coastal land continues to be sold for private development.	Limited leases are provided for certain uses.

Table 4C – Public Land Ownership – Comparative View – Part C

Permitted Uses in Publicly Owned Land

In Greece, Spain and Israel, permanent construction is prohibited on public coastal land by law (Table 5). This is also the case in Italy, Turkey and France. Nevertheless, in each country there are exceptions; particularly in cases of pre-existing development (where existing use rights may apply). In Spain, the 1988 law which prohibited development on coastal public land was not enforced until 2008. As a result, massive structures were built on the beach.

In all countries, non-permanent construction associated with recreation on the beach is permitted. In Greece, leases are officially granted for such purposes, but we learnt that in practice, private entities commonly erect more facilities than their permits allow.

In all countries, the parties responsible for the maintenance of the beach carry out infrastructure works, works to mitigate erosion and works which enhance the recreational value and accessibility of the beach.

		Greece	Spain	Malta	Israel
Permitted uses – coastal public land	Law	<p>Permanent construction is not permitted on the seashore.</p> <p>Leases can be granted for temporary uses, for the benefit of the public: umbrellas, beach bars etc.</p>	<p>Permanent construction not permitted in the public domain.</p> <p>Leases/ concessions are granted for temporary beach-related uses.</p> <p>Concessions for permanent construction built up to 1988: Residential, bars, restaurants, etc. (Granted for 30 years in 1983 and then another 75 years in the 2013 Coastal Law)</p>	No current declared policy.	<p>Permanent construction prohibited but exemptions may be permitted by the CPCE (Committee for Protection of Coastal Environment)</p> <p>Construction is permitted for purposes relating to recreation and accessibility of beaches.</p>
	Practice	Leases are not requested; private entities use the beach without taking a lease and are fined if discovered.	The 1988 law was not enforced until 2008 (Illegal development in the coastal public domain was common).	Coastal land is leased for uses such as hotels, marinas, restaurants, etc.	Construction takes place for recreational purposes and accessibility of the beaches, such as promenades.

Table 5 – Permitted Uses on Coastal Public Land – Comparative View

- Continued on the next page -

10.4 Coastal setbacks

At Table 6 we compare the law and practice of the four partner countries with regards to coastal setbacks. As we outlined above, setback zones can be defined based on different measures, including a set distance from the coastline, or changing environmental parameters. Greece, Spain, Israel, Italy, France and Turkey all use the former method (set distance), whilst Malta does not apply a setback zone. The use of a set distance may provide more legal certainty than using environmental parameters, on the condition that the coastline is clearly delineated. On the other hand, this method may not reflect the specific environmental characteristics of the relevant coastal zones.

		Greece	Spain	Malta	Israel
Coastal setback distance	Law	<p>At least 30 metres is required in most cases. 50 metres is required for large-scale tourist resorts.</p> <p>In urban areas: When a local plan existed prior to demarcation, the setback line is established according to the city plan.</p> <p>Outside urban areas: The setback distance varies between 30m and 50m.</p> <p>Within 500 metre setback: Fencing restrictions</p>	<p>In urban areas or rural settlement or areas with an approved plan prior to 1988: 20 metres</p> <p>In areas that were not classified as urban or had an urban plan: - 100 metres protected zone - 200 metres in protected areas.</p> <p>Updated by Coastal Law in 2013.</p>	No coastal setback in law or policy.	<p>Two protected zones: 100 metre protected zone (NOP 13). Two rules for measurement: Delineation of the coastline based on 0.00 MSL or 0.75 MSL. 300 metre special protected area (Coastal Law) – always based on 0.75 MSL delineation line) – requires assessment by CPCE.</p>
	Practice	In practice the setback is generally not more than 30 metres.	<p>The law is generally applied in a consistent fashion, but only since 2008.</p> <p>Prior to 2008: many real estate transactions in coastal areas. Purchasers were later surprised to find that their property was within the MTPD or protection zone.</p>	No coastal setback.	Confusion in measurement of the 100m leads to uncertainty & legal disputes concerning old approved plans.

Table 6 – Coastal Setbacks: Comparative Analysis

The countries which apply setback zones (in which development is restricted) all require different setback distances (refer Figure 13). Whilst Spain and Israel do adopt the 100 metre setback prescribed by the ICZM Protocol, these countries both apply additional setback provisions. In Spain, the 100 metre setback is not applied uniformly: In existing settlements which were approved prior to 1988, the required setback distance is 20 metres. Spanish law requires 200 metre coastal setbacks in areas which are identified as requiring additional protection due to their environmental characteristics. In Israel, unlike in Spain, the 100 metre setback zone IS applied uniformly. But Israel defines additional requirements beyond the 100 metre setback zone. Within 300 metres of the coastline (includes the 100 metre setback plus 200 metres beyond), land is part of a special protected area within which development proposals must be assessed by the Committee for Protection of the Coastal Environment (CPCE).

Turkey, like Spain and Israel, adopts the 100 metre setback, but divides that setback into two distinct zones: The first 50 metres (from the direction of the water) is publicly owned and the second 50 metres may be privately owned, but with restrictions on development. Italy's setback zone is the widest, at 300 metres, but regional governments may opt to allow development within this zone. France also adopts the 100 metre setback, but this setback does not apply in urbanized areas.

Coastal setbacks are both the narrowest and the most variable in Greece, where, in urban areas, the setback distances are primarily set by individual local plans. Beyond urban areas with approved local plans, setback distances vary between 30 metres and 50 metres (*for tourist accommodation in tourist resorts and mixed use resorts*).

By applying varying setbacks based on a clear set of criteria, with a wider setback (200 metres) in areas of environmental sensitivity, the Spanish law balances legal certainty (a set distance) with responsiveness to environmental factors – both natural and man-made. Israel's setback requirements also provide a balance, given that developments within 300 metres of the coastline may be denied by the CPCE if it that committee considers that the development would pose a threat to the coastal zone. By contrast, not only does the law in Greece adopt setback distances of less than 100 metres, but there is no reference to the environmental sensitivity of particular areas in setting or evaluating development within setback distances.

In practice, there are some problems in applying the coastal setback zone and relevant restrictions. In Israel, given the confusion between the definitions of the coastline in NOP 13 and the Coastal Law (refer Section 9.3), uncertainty and legal disputes have arisen regarding the exact location of the 100 metre setback zone. In Greece, given that the majority of the coastline is not delineated (refer Section 6.3), the exact location of the setback line may be disputed.

Coastal influence zone

Among the countries we studied, France has a unique policy which creates the widest definition of a coastal influence zone. In France, every coastal municipality, in its entirety, comes under special coastal policies. The boundaries in the hinterland have no distance limit and in many cases, even go up the mountain. The rules, however, are different from the setback zone with the numeric distance discussed above. These rules are complex, may vary considerably, and may be beyond the scope of our discussion here.

Other countries in our study have also introduced versions of a 'coastal influence zone': In Spain, the 'Zone of Influence' incorporates land within 500 metres of the coast. Israel's 300 metre

protected zone (described above) is another example. Although Greece does not identify an additional zone, Greek law institutes significant restrictions on fencing within 500 metres of the coastline.

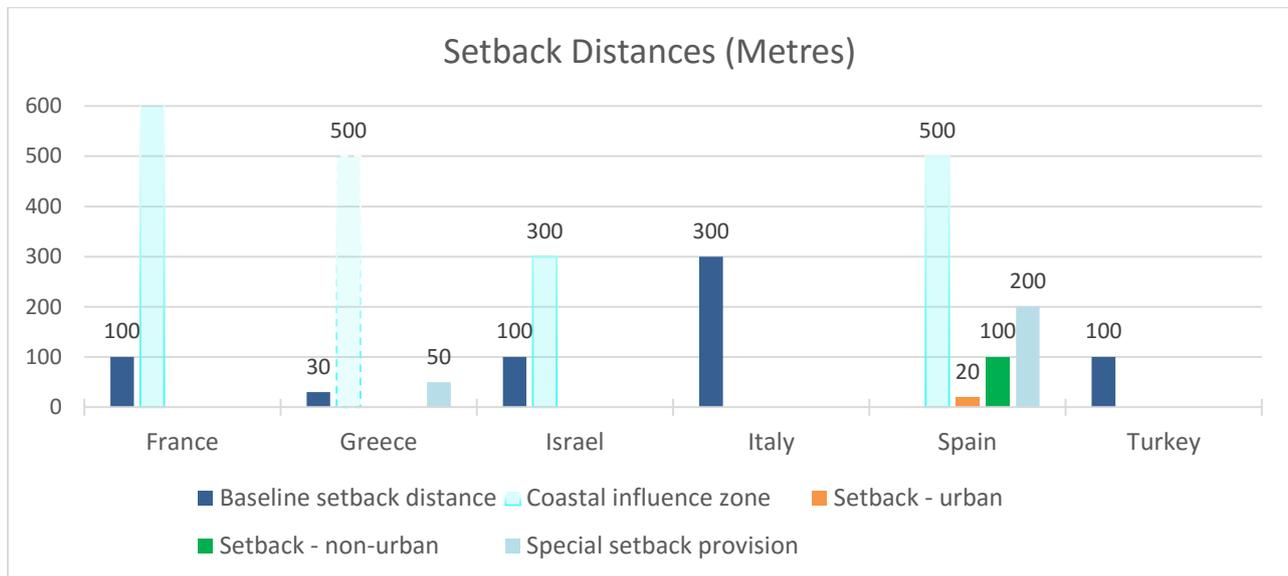


Figure 13 – Coastal setback distances and influence zones in partner and other countries

Permitted Uses in Setback Zones

In Greece and Spain, permanent development is generally prohibited within the coastal setback zone (Table 7A). In Israel, permanent construction is restricted, but the CPCE (Committee for Protection of the Coastal Environment) has the discretion to approve development. It generally denies development within 100 metres of the coastline, but tends to approve development between 100 metres and 300 metres from the coastline, after assessing the plans for their potential to impact on the coastal environment.

Restrictions on development in the setback zone vary in the non-partner countries. In France, permanent construction is prohibited in this zone. In Italy, permanent construction was prohibited within 300 metres of the coastline until 2004, but now both the setback distance and permitted uses are defined within regional plans. In Turkey, permanent construction is prohibited within the first 50 metres of the setback zone, but some categories of permanent construction are permitted within the second 50 metres.

	Greece	Spain	Malta	Israel
Permitted uses & restrictions – within setback zone	<p>In the protected zone, permanent construction is prohibited (including residential) (Coastal law L. 2971/2001)</p> <p>Exemptions:</p> <ul style="list-style-type: none"> - Old settlements (built prior to 1923) - Leasing: commerce, industry, transportation, tourism and for the public good. 	<p>Protected zone: Land uses that are prohibited include: residential, hotels & roads.</p> <p>Uses that should be located on the coast are subject to approval: fishery, camping and salt industries.</p> <p>Ministers can allow only roads and electricity.</p> <p>Existing permanent construction (built prior to 1988) in the setback zone is restricted in the extent that in can be renovated/ modified.</p>	N/A – no setback zone	<p>100 metre: Permanent construction is restricted (NOP 13). The CPCE has the discretion to approve development.</p> <p>300 metres: plans require approval from the CPCE. (Coastal law 2004).</p> <p>Existing development is also subject to review if a new plan is proposed.</p>
Practice – Is development approved?	Development is generally not approved within the setback zone (only pre-existing buildings).	Development is generally not approved within the setback zone (only pre-existing buildings). (Enforced since 2008)	N/A – no setback zone	The CPCE rarely approves development within the 100 metre zone. Development is approved in the 300m zone after plans are assessed by the coastal committee to ensure the coast is safeguarded.

Table 7A – Permitted Uses in Setback Zones: Comparative Analysis

Regarding the state of compliance in the setback zone (Table 7B), in Greece, illegal development within the setback zone is common and includes extensive development of summer houses. In Spain and Israel, significant illegal development within the setback zone is not common. In these countries, illegal building tends to consist of minor additions or alterations to existing buildings. We will discuss the issues of compliance and enforcement in detail below.

Regarding changes to existing development; in all countries, any applications for changes to existing approved plans within the setback zone are likely to be assessed on the basis of potential impacts on the coastal zone. Spanish law contains a clear set of restrictions on renovation or modification to existing development within the coastal setback. In Israel, the CPCE has developed, over the years, a set of guidelines to follow in assessing requests for changes to existing buildings; but there is no legal requirement which binds the committee to these guidelines.

	Greece	Spain	Malta	Israel
Illegal building in the setback zone	Illegal building within the zone is common practice – including extensive development of summer homes.	In general, only minor developments or refurbishment of older properties.	N/A – no setback zone	In general only minor additions to buildings or temporary structures are built illegally.
Renovation of existing buildings within the setback zone	It appears that this issue is not addressed by the law.	Legal guidelines for the type and extent of renovations permitted.	N/A – no setback zone	This issue is not addressed in the law, but the CPCE has developed guidelines for assessment.
Existing development rights (approved plans) for development which is now not permitted in the setback zone	There are no unbuilt previously approved plans. Plans and permits have expiry dates.	There are no unbuilt previously approved plans. Plans and permits have expiry dates.	N/A – no setback zone	Within the 300 metre zone: 53 plans approved prior to the Coastal Law and therefore do not require additional approval by the coastal committee (Israel's State Comptroller Report, 2013)

Table 7B – Permitted Uses in Setback Zones: Comparative Analysis

- Continued on the next page -

10.5 Accessibility

As mentioned at Section 5.3.5, the issue of accessibility is multi-faceted. It refers to physical accessibility – both horizontal and vertical – as well as to social accessibility – the level of accessibility available to diverse groups. At Tables 8A, 8B and 8C we compare the law and practice of the four partner countries with regards to accessibility.

		Greece	Spain	Malta	Israel
Horizontal accessibility	Law	<p>Rights to use and access the coast (Law 1337/83)</p> <p>But – Leasing rules enable hotels to rent beaches and limit accessibility.</p>	<p>The public has a right of access along the beach (Constitution, Coastal Law 2013)</p>	<p><i>“To ensure that existing coastal recreational resources are protected, enhanced and accessible...”</i> (SPED, Coastal Objective 3)</p>	<p>The Coastal Law grants a public right of way along the coast (Section 5)</p> <p>Fences may be built in accordance with an approved plan or permit (Coastal Law). The right of passage does not apply to military bases, ports, infrastructure (Gas) and public beaches that are not free.</p>
	Practice	<p>Parts of the coast not accessible. Infrastructure, tourism, illegal constructions and fences.</p> <p>Lack of enforcement, monitoring and information.</p>	<p>Parts of the coast not accessible. Past projects and current concessions create barriers to accessibility.</p> <p>Accessibility rights are safeguarded in most cases.</p>	<p>Many areas that have been developed are not accessible to the public.</p> <p>The requirement for accessibility in the previous structure plan was not enforced by the planning committee.</p>	<p>Most of the coastal zone and the beach are not accessible to the public because there are many infrastructure installations</p> <p>Horizontal access is well monitored (national, local and NGO awareness).</p>

Table 8A – Horizontal Accessibility: Comparative Analysis

	Greece	Spain	Malta	Israel	
Vertical accessibility	Law	<p>Non-urban areas: – every 100 metres (at least 4 metres wide)</p> <p>Fencing is restricted within the 500 metre zone from the seashore.</p> <p>Urban areas – according to the city plan.</p> <p>Expropriation is authorized on private land to create access roads to the beach. (L1337/1983).</p>	<p>In urban areas access roads to the beach are required every 500 metres and pedestrian access every 200 metres (on private and public land) (Coastal Law 2013).</p> <p>Once the urban plan draws the path, the land is declared of public interest and it can be expropriated.</p>	<p>“To ensure that existing coastal recreational resources are protected, enhanced and accessible...” (SPED, Coastal Objective 3)</p>	N/A
	Practice	<p>In non-urban areas the 100 metre rule not enforced. No authority is responsible for monitoring the passageways. In many cases they are neglected and unsafe.</p>	<p>No expropriations for access purposes to the year 2008. Since compensation rates lowered – now use of expropriation.</p>	<p>Many areas that have been developed are not accessible to the public.</p>	<p>Accessibility is an important consideration in the Committee for Protection of the Coastal Environment’s decisions.</p>
Special access beyond public beach	<p>The government may expropriate 10-15 metres zone beyond the seashore – for access purposes.</p>	<p>A transit way – strip of 6 metres wide along the beach – must remain open for public access (can be on private property).</p>	<p>No specific rules regarding access beyond the beach.</p>	<p>No specific rules regarding access beyond the beach.</p>	
Use of vehicles	<p>No specific rules regarding vehicles on the beach. But vehicles are rarely seen on the beach.</p>	<p>The use of vehicles on the beach is prohibited.</p>	<p>The Structure Plan (1990) prohibited the use of vehicles on the beach. That plan no longer applies.</p>	<p>The use of vehicles on the beach is prohibited.</p>	

Table 8B – Accessibility: Comparative Analysis

10.5.1 Horizontal Accessibility

Horizontal accessibility is addressed differently in each country's law (Table 8A). Whilst Israel and Spain both have laws which seek to guarantee public access along the coast, Greek law contains a more general provision regarding the public right to use and access the coast. In Malta, the Strategic Plan for Environment and Development (SPED) includes a general objective regarding public accessibility of coastal recreational resources.

The partner countries, France and Turkey address accessibility in national law. In Italy, the issue was relegated in 2006 (Law 296) to the responsibility of the regions. Each region must stipulate a minimum proportion of beach areas which are to be publically accessible.

In all countries, pre-existing development and infrastructure installations commonly block accessibility – and exceptions are made for such uses. In addition, in Greece, Spain, Malta and Italy many tourist facilities in coastal areas have private beaches, which interrupt the right of passage along the coast. Today, in Spain, Malta and Italy, when issuing permits for hotels and resorts, authorities require that plans include an access way, with minimum set width, along the coast. The issue has not been addressed in Greece and the problem continues to this day.

Another obstacle to accessibility is the use of vehicles on the beach. In Spain and Israel, this practice is explicitly prohibited. In Malta, the 1990 Structure Plan also prohibited vehicles on the beach, but that plan no longer applies. Greek law does not explicitly prohibit the use of vehicles, but the practice is not common on public beaches.

An additional access provision found in only Greece and Spain concerns a horizontal transit way beyond the beach. In Greece, such a path is optional; authorities may expropriate a 10-15-metre wide strip. In Spain, authorities must ensure that a 6 metre transit way must be provided along the beach. France's provisions are similar to that of Spain: A 3-metre wide strip must be provided beyond the maritime public domain, for the purpose of access. There are no comparable rules in the other countries in our study.

10.5.2 Vertical accessibility

The coastal laws of both Greece and Spain contain specific requirements for paths to the coast. A range of requirements apply, but the relevant laws in both countries apply maximum distances between vertical access paths (Table 8B). This rule also applies in France: The State is required to create access paths to the Maritime Public Domain, if there is more than 500 metres between access points.

In Greece, lack of monitoring and enforcement measures has hindered both the provision and the quality of paths to the coast. Conversely, in Spain, the main hindrance has been lack of funds for expropriation of land to create the pathways; but since 2008, land has been expropriated for these paths.

The remaining countries in our study do not have such specific provisions regarding vertical access. In Israel, however, vertical accessibility is an important consideration in the Committee for the Protection of the Coastal Environment's assessment of plans. Specific requirements relating to vertical accessibility are included in the draft NOP 1. In Italy, vertical access requirements may be initiated at a regional level.

10.5.3 Access to coastal views

Spain is the only country in our study in which national law contains explicit restrictions on development in an attempt to protect views to the sea (Table 8C). The Coastal Law 2013 specifies that within 500 metres of the coast, buildings must stand perpendicular to the sea. In Greece, local plans may seek to protect views through restrictions on building height; and some local plans in tourist areas have implemented such restrictions. In Malta, the SPED mentions a need to preserve visual access from promenades. In Israel, the protection of views is another important consideration in the Committee for the Protection of the Coastal Environment's assessment of plans.

		Greece	Spain	Malta	Israel
View protection		No general guidelines regarding views to the beach. Some local plans in tourist areas require that buildings are lower in areas around the beach.	Within the 500 metres of the coast, buildings must stand perpendicular to the sea (Coastal Law 2013).	Under Coastal Objective 1, the SPED underlines a need to preserve "visual access from promenades"	Views are an important consideration in the Committee for Protection of the Coastal Environment's decisions.
Social accessibility	Law	No reference to fees or other social issues on the coast.	No reference to fees or other social issues on the coast.	No reference to social accessibility of the coast in law or policy.	The general rule is that free access should be provided (High Court Ruling 5824/05). Local municipalities may charge fees for beaches offering "special amenities" (Bathing Places Law, Section 6).
	Practice	Entrance to most beaches is free. Entrance fees for some public beaches – mostly around Athens.	Entrance to the beach is free. There are parking fees at many beaches.	The public beach (which has not been privatized) is open to everyone. Many private beaches (hotels).	Few public beaches have entrance fees or parking fees.

Table 8C – Accessibility: Comparative Analysis

10.5.4 Social accessibility

Beach operators may charge fees for beach entry or parking. Such fees create a barrier for populations with lower socio-economic standing. The only country in our study in which legislation and case law appear to have ventured into this issue is Israel. In that country, the courts have established a general rule that free access to beaches should be provided. The Israel Bathing Places Law stipulates that local municipalities may charge fees for beaches offering “special amenities”, but in practice, few public beaches have entrance or parking fees. In fact, this is the case in the other partner countries, too: Entrance to most public beaches is free, though parking fees may apply.

10.5.5 Accessibility comparative scales

Given the above analysis, at Figure 14 we have placed the various countries on a scale, from “not regulated” to “highly regulated” in relation to accessibility matters. At Figure 15, we have placed the countries on a scale regarding level of compliance with accessibility law and regulation.

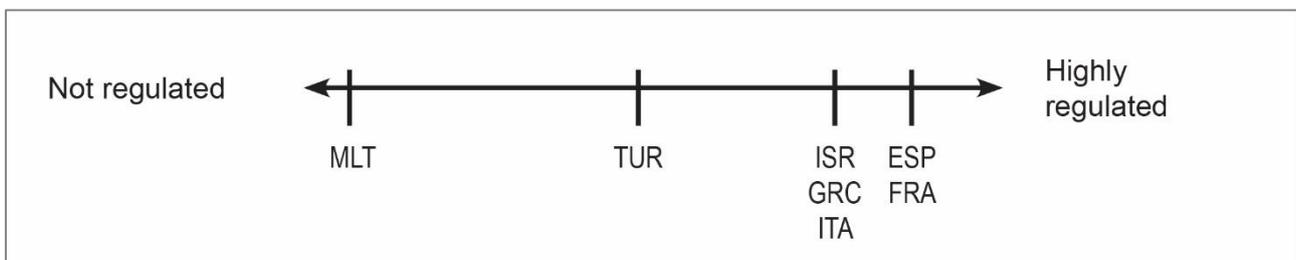


Figure 14 – Level of regulation of coastal accessibility in law

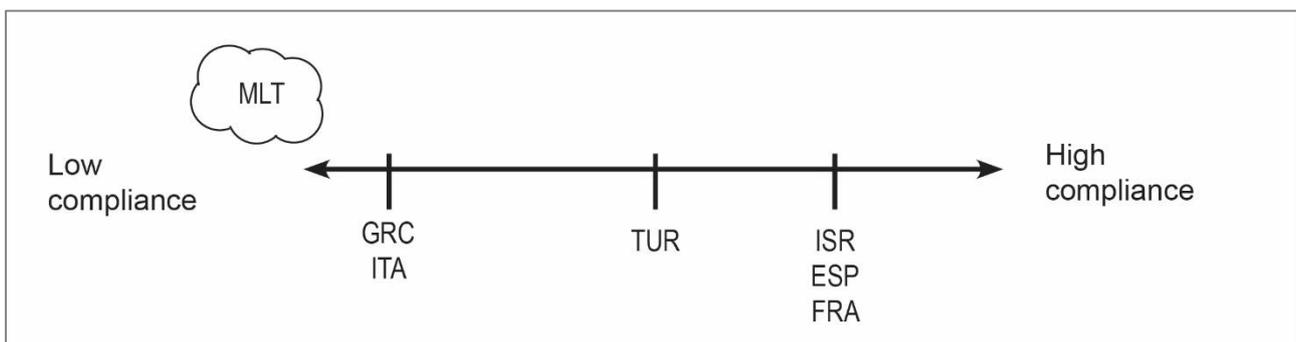


Figure 15 – Compliance with coastal accessibility law and regulation

10.6 Compliance and enforcement

The state of compliance with coastal building regulations is different in each partner country. At Table 9A and 9B we compare the law and practice of the four partner countries with regards to compliance and enforcement in coastal zones.

		Greece	Spain	Malta	Israel
State of compliance within public zone and coastal setback		Illegal development in the setback zone was common until recently – thousands of summer homes. In the public zone, some illegal extensions.	Illegal building in the setback zone consists of minor developments or refurbishment of older properties. Illegal fences or walls are common and prevent access.	On non-urban coast: Some illegal building, particularly boathouses.	In general, only minor additions to buildings or temporary structures are built illegally. Total 420 illegal constructions on the Israeli coastline.
Enforcement	Law – tools	Fines. Demolition. Legalization	Fines. Punitive measures; Demolition; “concessions”.	Restrain and enforcement notices; Demolition; Legalization fines (new).	Planning law in general is very strict and makes no distinctions between small and large infringements. Coastal law stricter than general planning law.

Table 9A – Compliance and Enforcement: Comparative Analysis

10.6.1 State of compliance

In general, in Greece and Malta, illegality is a greater concern than Spain and Israel. In Malta, where there is no defined setback zone or coastal public land zone, illegal developments are concentrated in non-urban areas and include huts and boathouses.

In Greece, illegal development in the setback zone, including thousands of summer homes, was common until recently. The decline in the proliferation of illegal developments is associated with a combination of factors, including the economic crisis, improved enforcement and increased issuing of fines. Illegal structures are less common in the public zone, but some pre-existing structures have been extended illegally.

In Spain, illegal building in the setback zone has also declined considerably in recent years – particularly since 2008, when the government made a conscious effort to improve enforcement practice. Yet to this day many private properties are fenced or walled illegally – blocking the required 6 metre transit way for vehicles (refer Accessibility above). Within the public zone, illegal construction generally consists of minor additions or refurbishment of older properties.

		Greece	Spain	Malta	Israel
Enforcement	Law – Responsibilities	Municipality (or police) in charge of enforcement, but NOT demolition. Regional government orders required for demolition. New state level authority for public coastal land. New national policies allow for firing of public servants who do not carry out enforcement duties.	An arm of the “Civil Guard” – Nature Protection Service – is responsible for enforcement.	Enforcement: MEPA enforcement officers. Malta Tourism Authority’s (MTA) enforcement unit	Special national enforcement body for areas of national interest. Coasts have priority. Special interagency committee for enforcement officers in coastal area. Cooperation between ministries.
	Practice	Enforcement personnel are few. No systematic monitoring. Major sources of info about illegality – neighbours. In summer homes neighbours are “accomplices”. Fines are the favoured tool. Demolition is very rarely used – “for the media”. No political will so authority to demolish “pushed up” to regional office.	Fines, demolition, suspension of work all used. Demolitions of construction on public land are more frequent recently. But little enforcement against illegal fences. Enforcement in the public domain is much more effective.	Demolition is rare – 2 cases in recent history. As at 2013 there were 12,000 pending enforcement notices (not enforced).	Local municipalities have difficulties in enforcing the law and carrying out demolitions, but the national body takes over where necessary.
Legalisation Practice		Not used in the public domain or the setback zone – Council of State is strict about this matter.	“Concessions” – temporary legalization.	Many illegal buildings approved retroactively.	

Table 9B – Compliance and Enforcement: Comparative Analysis

In Israel, in general, only minor additions to buildings or temporary structures are built illegally. These include some illegal kiosks or shacks. Altogether, in 2014, there were approximately 420 illegal constructions on the Israeli coastline. In the past, small legal kiosks were illegally converted into restaurants.

France, too, sees a relatively high level of compliance with coastal laws and regulations. In Italy, as in Spain and Greece, illegality has decreased considerably, due to both the economic crisis and new enforcement and demolition measures. Most of the illegal coast development in Italy is located in the south of the country. In Turkey, illegal development occurs extensively. Unlike in Greece, Spain and Italy, Turkey has not seen a decline in illegality in recent years.

At Figures 16 and 17 we place the countries on a scale in terms of the state of compliance in each – from low compliance to high compliance. Given the recent declines in illegal development in Spain, Greece and Italy, Figure 16 indicates the levels of compliance prior to 2008/2009, whilst at Figure 17 we indicate the current state.

10.6.2 Enforcement tools

Surveying the tools available for enforcement against illegal development, we see that the laws of each of the four partner countries, Italy and France allow for the use of fines and demolition. To restore compliance without taking enforcement action, Israel, Greece and Malta use different forms of retroactive legalisation; and Spain uses temporary legalization of buildings and uses for a set period of time (referred to as “concessions” in the Spanish report).

Of the available tools for enforcement, demolition appears to be the most sustainable option, as it returns the coastal zone to the public. Yet we have seen that this tool is almost never used in the partner countries. In Greece, Malta and Turkey, demolition is very rarely used: There have been only a few cases, primarily seen as publicity stunts. It appears that the relevant authorities do not have the political will to undertake demolitions. In Spain, illegal construction in the public domain is demolished by the authorities, but illegal construction beyond the public domain is not regularly demolished. In Israel and Italy, the use of demolition as a tool against illegal construction has become more common in recent years. In Israel, this may be attributed to the fact that enforcement is now carried out by a special national enforcement body.

The use of fines may deter parties from building illegally, but do not solve the problem of existing illegal development. This tool is rarely used in the partner countries; with the exception of Greece.

Legalization and temporary legalization are problematic, as they do not provide a means of deterrence against illegal construction and do not address the issue of existing construction in coastal zones. In Israel, legalization of uses such as kiosks and restaurants was achieved through granting retroactive permits for variance in land uses, to the year 2010. Since 2010, the Ministry of Justice has discouraged this practice. In Greece, retroactive legalization is commonly applied, even to residences, but this tool is very controversial and continues to be scrutinised by the courts. In Spain, temporary legalization (“concessions”) has been applied across the board to pre-1988 development in the coastal zone.

10.6.3 Responsibility for enforcement

In each country, the responsibility for enforcement against illegal development on the coast lies on a different combination of government agencies. In Greece, enforcement responsibilities are split between the municipalities and the police force. These authorities can issue fines, but require a regional government order in order to demolish illegal buildings. In Turkey, enforcement responsibility lies primarily at the local level. In Italy, responsibility is split across the regional and local governments. In Spain, the responsibility for enforcement lies with the Nature Protection Service – an arm of the “Civil Guard” which is a military force charged with police duties. In Malta, responsibility is split between the Malta Environment Protection Agency (MEPA) and the Malta Tourism Authority’s (MTA) enforcement unit. In Israel, there is a special national enforcement body for areas of national interest and a special interagency committee for enforcement officers in coastal areas.

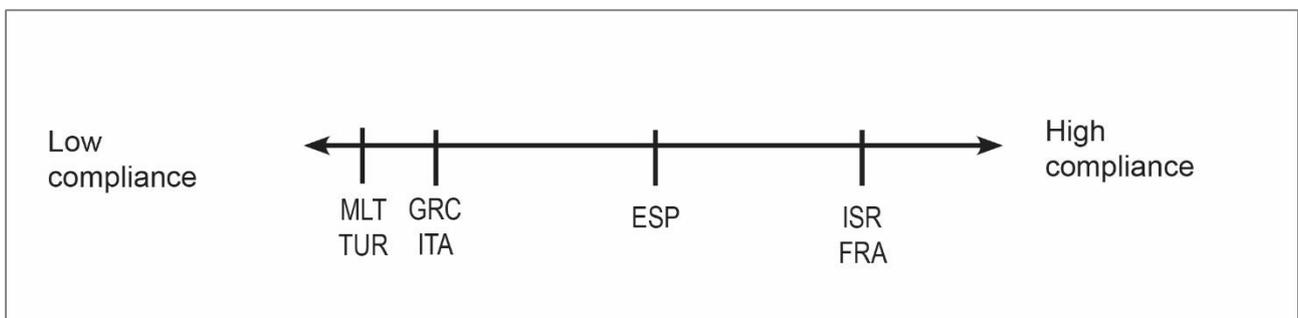


Figure 16 – Scale of state of compliance in coastal development prior to 2008/2009

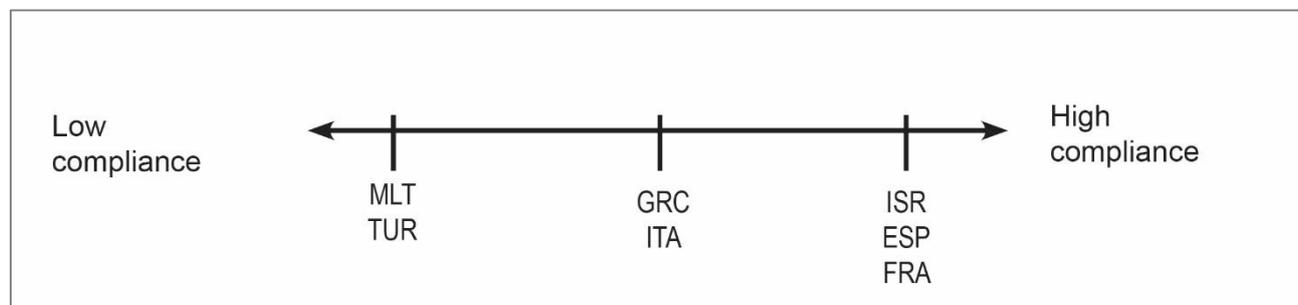


Figure 17 – Scale of state of compliance in coastal development post 2008/2009

- Continued on the next page -

10.7 Management and coordination

Total coordination is an ideal which is impossible to achieve. But we can assess the extent of coordination and its effectiveness on a comparative scale. Such an assessment merits an individual and far-reaching research project to understand the workings of managing authorities and the extent of coordination between them. Each of our partners reported non-coordination between the various management authorities, but were not in a position to undertake further research. As such, we were unable to develop a comparative scale in the course of this project.

We will address just two issues in this report: The level of centralisation in government management of the coast; and the general lack of coordination across different levels of government.

10.7.1 Centralization in management

When comparing the countries, we see different levels of centralisation in the management of planning and coastal matters (Figure 18). Malta is the most centralized, Israel, Greece and Turkey follow; then France, then Spain and Italy are the most decentralized, as in both countries responsibility for ICZM is divided across national, regional and local levels. The centralization in Malta is perhaps unsurprising, given that it is a small Island in which the government controls planning and ICZM.

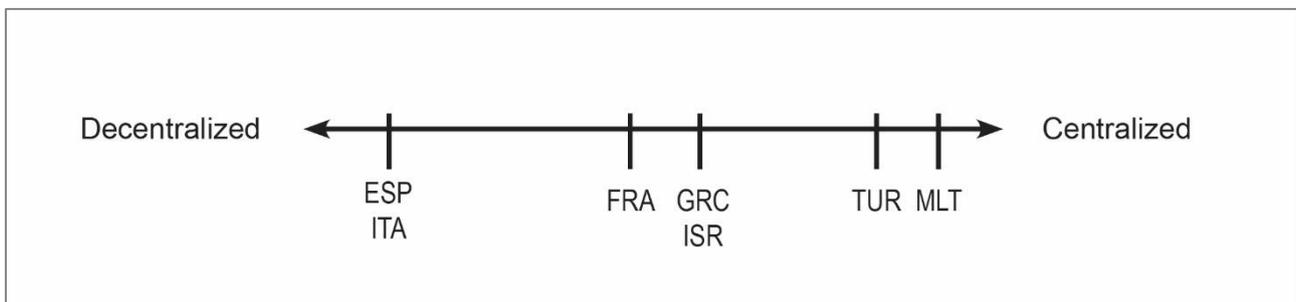


Figure 18 – Scale of centralization in management of planning and ICZM

10.7.2 Coordination

All countries struggle with lack of coordination across the different levels of government (vertical coordination) and across various authorities at each level (horizontal coordination). In Spain, over the years 2004-2008, the government made several attempts to improve the level of coordination on ICZM issues. These included the development of a Master Coastal Sustainability Plan and signing of framework agreements with the autonomous regions. In addition, the government created a National Coast Council with representatives from various government bodies. Yet none of these initiatives have guaranteed a coordinated approach to ICZM.

In Israel, there are thirteen ministries at national level whose responsibilities include management of coastal issues. This causes difficulties for local authorities seeking to apply coastal policy. In response, in August 2015, twenty mayors from the twenty coastal municipalities established a forum which seeks to ensure better coordination on coastal issues.

In Greece, apart from the Finance Ministry and local municipalities, many other public entities are involved in coastal issues. These include several government ministries, the regional offices of the ministries, the public works office and the Greek Port Authority. Works on the coast can require several authorizations from different entities. In addition, the different government bodies and agencies have different agendas when dealing with coastal issues.

10.8 Information and participation

At Tables 10A and 10B we compare the law and practice of the four partner countries with regards to information and public participation.

10.8.1 Information

We begin by evaluating the differences between countries regarding whether and what information on coastal issues should be (and is) provided to the public. We differentiate here between the requirement to make information available upon request and (more stringent) requirements to make information generally available – specifically, on publicly accessible websites.

Greece, Spain and Malta have both ratified the Aarhus Convention. That convention outlines a number of guidelines regarding the availability and distribution of environmental information including, particularly that the way in which information can be obtained is transparent to the public. The convention does not require any specific types of information be supplied. Similarly, the laws of Greece, Spain and Malta, whilst requiring that environmental information is provided to the public upon request, do not contain requirements specific to the provision of coastal information.

Israel is not a signatory to the Aarhus Convention, yet is the only country whose legislation requires that public agencies provide environmental information on their websites (Section 6A, Freedom of Information Law), including information on coastal issues. In addition, according to the Freedom of Information Regulations, relevant agencies are required to report any damage to the coastal environment as it is discovered.

In practice, in all countries, there are deficiencies in the coastal information which is available. This is unsurprising in Greece, Spain and Malta where the requirements regarding provision of information are limited. In Israel, the primary issue is that there is no coordination of available data between different agencies. Given that there is no one source of information, interested parties may need to search several databases in order to satisfy their individual queries.

- Table on the next page -

		Greece	Spain	Malta	Israel
Is information provided on coastal issues?	Law	Law 3422/2005 ratifies the Aarhus Convention. The relevant authority is required to supply environmental information upon request and to publish limited information. No specific requirement regarding coastal information.	Law 27/2006 regulates access to information, public participation and access to justice (based on Aarhus Conv.). The relevant authority is required to supply environmental information upon request and to publish limited information. No specific requirement regarding coastal information.	<i>Freedom Of Access to Information on the Environment Regulations</i> based on Aarhus Convention. The relevant authority is required to supply environmental information upon request and to publish limited information. No specific requirement regarding coastal information.	Freedom of Information Law (Amendment 2005) requires that public agencies provide environmental information on their websites (Section 6A). Damage to the coastal environment must be reported by the relevant agency (Regulations (2009, Section 1(8))
	Practice	Lack of information and data on many topics critical to ICZM. No mechanisms for publishing accessible information regarding the coastal zone.		2009 – EU Transition Facility Program: Joint Maltese-Austrian project providing guidelines to assist Maltese government with implementation of Aarhus Convention.	Information on coastal issues is available through various government and non-government agencies. There is no one concentrated source of information.

Table 10A – Information Provided to the Public on Coastal Issues: Comparative Analysis

- Table continued on the next page -

		Greece	Spain	Malta	Israel
Are there special participation procedures regarding coastal issues?	Law	Requirements regarding public participation in planning processes. Not specific to coastal areas.	Requirements regarding public participation in planning processes. Not specific to coastal areas. Requirements depend on region. Valencia Landscape Regulations: Require participation when plans or projects have significant impact on the landscape.	Requirements regarding public participation in planning processes. Not specific to coastal areas.	Requirements regarding public participation in planning processes. Not specific to coastal areas. Tel Aviv District Court case 3409-05-13 states that planning procedures in coastal areas should involve participation processes, even if not required by the planning law.
	Practice	Sporadic public participation in coastal management issues – often dependent on municipality.	Sporadic public participation in coastal management issues.	Participation procedures are poorly implemented. Eg. Tigne' Peninsula, Hilton project.	Participation in planning mostly just objections but somewhat more proactive lately
Role of NGOs		Weak NGO's but their role is gradually strengthening. Helped stall new coastal law.	NGO's and interest groups are highly focused. Lobby at EU & local levels more successful than attempts to lobby the national government.	NGOs are active but weak against development pressures on the coast.	NGO's and the public take a very active role in safeguarding the coast.

Table 10B – Public Participation and the Role of NGOs in Coastal Issues: Comparative Analysis

- Continued on the next page -

10.8.2 Participation

The laws of each of our partner countries require some form of public participation in planning processes. None have additional specific requirements for public participation in matters pertaining to coastal issues. But in a recent case in Israel, a Tel Aviv District judge expressed the position that all planning procedures in coastal areas should involve participation processes, even if not required by the planning law. This position demonstrates an appreciation of the complex nature of coastal management and planning. The decision may be used to encourage public participation in future planning in coastal areas.

Unsurprisingly, all partner countries report that public participation procedures regarding coastal issues are not satisfactory and should be improved. Objections and administrative appeals have traditionally been used as a reactive tool by the public, to achieve desired results in planning matters. In Israel, there have been recent initiatives on behalf of planning agencies to better involve the public in decision-making.

Where public participation processes are lacking, NGOs may play an important role in representing the public in coastal issues. In Greece, though environmental NGOs are weak, they have recently succeeded in mobilizing the public to stall the adoption process of a new coastal law, considered to be problematic for ICZM. In Malta, too, environmental NGOs are weak and have little influence on the national government. In Spain, NGOs have had success at local level and have also successfully lobbied the EU. But, amongst our partner countries, it seems that the most active and successful environmental NGOs can be found in Israel. Israeli NGOs take a very active role in advocating for ICZM. NGOs propelled the enactment of the Coastal Law in the late 1990s; continue to inform the public on matters relating to coastal planning and lead actions against proposed developments perceived to be harmful to the coast. See Section 9.9 of this report for more details of NGO activity in Israel.

PART III

TOOLKIT OF ALTERNATIVE INSTRUMENTS

CHAPTER 11 Introduction to the Toolkit

In PART I we surveyed the legal-institutional aspects of coastal zone management in the four partner countries. We undertook a thorough comparative analysis of the laws and practice in those countries and additional selected countries. As might be expected, we found widely different practices.

In this section we summarize the key findings under each of the dimensions used in our comparative analysis, as well as further categories which arose through our research. Under each category, we then provide a list of recommendations and associated regulatory tools, which might assist in minimizing the legal-institutional gap. These recommendations and tools make up a toolkit of alternative instruments.

Responsibility for coastline management is divided across various levels – from supra-national bodies, such as the UN and EU, to national and sub-national levels. As such, our recommendations are divided by level of governance. Furthermore, our recommendations may be applied to all countries – not just the countries in our study.

In this toolkit, all recommendations and tools are numbered. The number format for recommendations is a number preceded by the letter R (e.g. R1, R2 etc.) and the format for tools is a number preceded by the letter T (e.g. T1, T2 etc.). Tools may be relevant to several different categories, as is indicated.

These tools and recommendations were developed over the course of the Mare Nostrum Project. Some emerged from our group brainstorming/ think-tank session which took place in Kavala, Greece in March 2015. Some were tested amongst stakeholders and decision-makers from the partner countries, who attended the Mare Nostrum Final Conference, which took place in November 2015 in Valencia, Spain. Those participants gave important feedback on the tools presented to them.

It should be noted that this toolkit does not cover the full range of topics relevant to ICZM. For example, we did not directly address environmental issues such as water pollution or air pollution. Nevertheless, the recommendations and tools we have included cover a wide range of legal and policy issues identified over the course of the Mare Nostrum project. Where relevant, we also drew some insights from previous research by members of the Technion team (see list of references).

CHAPTER 12 Toolkit: ICZM Terms and Legislation

12.1 ICZM Terms

12.1.1 Summary of the issue

Our study included only a small number of Mediterranean countries. Yet in carrying out our comparative analysis, we had great difficulty in interpreting the various relevant policies, laws and regulations, given that across jurisdictions widely different meanings are attributed to the same English terms.

The most pertinent example is the use of the word “concessions” in Greek and Spanish law. This word is used in Greece in describing beach uses for which permits may be granted and in Spain to describe time-limited rights of use for existing development which became illegal prior to the introduction of the 1988 Coastal Law.

12.1.2 Recommendation for the EU / UN

R1. Place special effort on calibrating the terms relating to ICZM, through the institution of cross-national meetings between relevant experts.

From our experience, explanations in writing are unlikely to overcome the problem of interpretation, as they entail the use of the very terms which are understood differently. As such, we recommend holding meetings, real or virtual, between parties from various countries, specifically about terminology. Case examples could be used to demonstrate how different terms are used by each country. These meetings should include legal specialists, planners and experts working in the realm of cadastre.

12.1.3 Tool for use by the EU / UN

The following tool emerges from the above recommendation:

T1. Cross-national forums between parties from various countries

12.2 Integration in Legislation

12.2.1 Summary of the issue

Although most countries do have some dedicated legislation, no country had a high level of integration in legislation for the Coastal Zone. A high level of integration would see institutions and legislation which encompass, as far as possible, the full range of issues associated with coastal management. These would include, for example, clear determination of property rules; planning regulations for the entire zone; coordination with environmental regulations; fiscal responsibilities and resources; responsibilities for public works and maintenance.

Notably, there has recently been significant momentum in the area of marine spatial planning and this is apparent in many countries. However, marine spatial planning is often conducted by separate institutions, rather than integrated with the same institutions authorized to manage the terrestrial areas.

12.2.2 Recommendations for national governments

R2. Conduct an evaluation of planning and legislative tools in relation to ICZM.

Countries should evaluate their laws, policies and regulations which focus or pertain to coastal management issues, with a view to improving the integration of a full range of issues.

For ICZM Protocol signatory countries, towards the 10th anniversary of the ICZM protocol, each country should evaluate the degree to which it meets the ICZM Protocol's objectives.

R3. Use the momentum for marine spatial planning as an opportunity to enhance the integration of coastal policy.

A positive example of both integration and coordination is the new Israeli marine spatial plan currently under preparation. The body overseeing this plan is the National Planning and Building Board – the statutory body also authorized for terrestrial planning matters. Several authorities are working together with the Planning and Building Board on this matter.

12.2.3 Alternative tools for use by national governments

The following broad tools may be used by governments to improve integration in legislation:

T2. Constitutional amendments

Countries may decide to add specific reference to protecting the coastline to their respective constitutions.

T3. National Coastal Law which integrates all relevant topics

A dedicated Coastal Law is in place in most of our study countries. This tool appears to work well, but integration of a greater breadth of topics related to ICZM would strengthen the legislation.

T4. National and regional coastal strategies

Such strategies provide a platform for integrated policies for coastal zone management, to complement the relevant legislation.

T5. Incorporating ICZM principles into the existing planning framework

Given that ICZM has a significant land use regulation aspect, it is important to ensure that ICZM principles and policies are integrated within the planning framework – be it national, regional or local.

CHAPTER 13 Toolkit: Delineation of the Coastline

13.1 Summary of the issue

Delineation of the coastline is required in order to determine a coastal setback and in general, to meet ICZM principles.

Although there are some similarities between the countries in the methods that they use to delineate the coastline, there is no “standard” method or standard definition of the coastline. In addition, there appears to be no exchange of information and experience across the countries. Thus each country works on its own to try to resolve this inherently tense problem.

We see it as imperative that Mediterranean countries attempt to work together to define one coastline for the same sea. Only in this way can the ICZM Protocol be applied in a consistent manner.

Some countries, such as Israel, use more static parameters to define the coastline. These methods may be oblivious to environmental changes, creating even more entrenched property rights and public expectations: Investments in land development continue on the basis of current measurements. The use of static parameters can dilute public awareness of environmental changes.

The potential problems associated with a static coastline are exacerbated with climate change. Realistically, there cannot be such thing as a static line. Changes must occur, but it seems that these changes are currently initiated only by technical experts. We question what might happen if an environmental event causes significant changes which the ongoing administration is not equipped to handle.

At the other end of the scale, Spain’s system of delineation is much more responsive to environmental challenges. In fact, it was too responsive until recently, requiring an unrealistic level of monitoring and change. At least in Spanish system, there is a clear policy position on how significant storm events will affect the coastline. We did not identify such policy in the other jurisdictions surveyed.

Overall, we found that across the countries there is only a weak link between policy and the practical acts of defining and delineating the coastline. Delineation of the coastline is regarded as a technical matter. As such, in every country in our study, delineation is undertaken by a closed agency on the national level. These cadastre agencies tend to be much more insular than other government departments. When changes are made, they are driven only by physical changes as observed (if such changes are monitored). There is no mechanism for making gradual changes to the delineated coastline or for changes based on a change in policy. There is also no procedure or process which allows cadastre and policy experts to liaise.

For the coastline to be delineated appropriately, while allowing for changes based on the environment and policy, all countries need much stronger interaction between cadastre experts and environment and planning policy makers.

13.2 Recommendations and tools

13.2.1 Recommendations for the UN

R4. Create a cross-national forum of cadastre experts and policy-makers.

This combined forum with legal and technical experts would provide the means for the relevant stakeholders in coastline delineation to come together. The forum would first discuss existing processes across countries. Following that discussion, they would work to see if a single definition and methodology can be achieved.

Bringing focus to this issue at the UN level would also encourage countries which have not yet established a coastline (e.g. Malta) to do so, or, alternatively, to justify why a coastline is not necessary for the achievement of ICZM principles.

Once established, this forum will be the key to ensuring that the coastline of the Mediterranean is appropriately delineated.

13.2.2 Recommendations for national governments

R5. Consider an evaluation of the definition and the method used to delineate the coastline.

Ideally, such an evaluation would take place in full coordination with an international forum of cadastre experts, established by the UN.

R6. Conduct regular, periodic evaluations on change in sea level (more frequently than every 19 years).

We assume that changes will occur – whether based on incremental climate change or more severe climate-changing events – and such changes should be monitored. This recommendation involves existing institutions and does not necessarily require governments to pass new legislation.

R7. Build scenarios for future physical changes which may affect delineation of the coastline.

Such scenarios would include, but not be limited to, catastrophic climate events.

R8. The cadastre should be open and accessible to the public.

An open cadastre will provide for the public to be informed about the state of delineation of the coastline and any changes to the delineation. A digital, web-based cadastre is the most convenient form to allow for public access.

13.2.3 Alternative tools in coastline delineation

The following tools emerge from the above recommendations

T6. International forum of cadastre experts

T7. Mean Sea Level measurement

Used by Israel to determine the coastline.

T8. Terrain-based definition as the coastline

Described in Spanish and French law – identification of vegetation, sand dunes, etc. The project partners agreed that use of the “highest winter waterline” is not enough to define the coastline.

T9. Require periodic evaluations of change in sea level

T10. Scenarios of future changes which may affect delineation

T11. Require that the cadastre is open and accessible to the public

T12. Digital cadastre

CHAPTER 14 Toolkit: Coastal Public Land

14.1 Public land ownership

14.1.1 Summary of the issues

The ICZM Protocol does not require that coastal land is publicly owned, but recognises that public land ownership is a tool which may assist in reaching ICZM objectives. This recognition is echoed in national government policy: In all of the Mediterranean countries²⁹ that we studied, the land beneath the reach of the coastal waters is public land and is nationally owned. Notwithstanding, this public ownership beneath the coastal waters should not be taken for granted, as it is not a given across the world – or even in all of Europe. In some of the countries, public ownership extends inland, but the breadth of the strip of additional publicly owned land varies considerably.

The decision by national governments to reserve coastal land as public can cause legal uncertainties, particularly if that land was previously privately owned. When a government decides that private coastal land should be made public, the options include expropriation and changing the legal definition of the land.

In Greece, problems with delineation and definition of public land cause significant uncertainties among land owners regarding where the public domain ends.

At least in one country, Spain, the status of land which had been legally private was converted to public through the legal redefinition in coastal law, rather than through expropriation. This meant that land occupancy and structures became illegal *en masse*, in retrospect. The former landowners do not deserve compensation, as they would have had if the land had gone through the regular channels of expropriation.

In the Spanish case, current legislation reduces, but does not eliminate, the likelihood that existing private land will “automatically” be classified as public land if the location of the coastline changes. But such changes of land ownership based on changes to the coastline (or other nature-based changes) have overt and hidden costs. For the private landowners, the costs entail not only loss of capital value in land and buildings, but often also legal costs, as well as social burdens. For the public sector, such situations also entail significant costs in many years of human resources in public administration, as well as litigation.

There is no question about the desirability of having a public coastal land zone which is defined based on the environment. But there are questions about social justice. These questions are highlighted by the fact that in practice, that many of the relevant buildings and people have remained in situ for decades and will likely continue, and nature has not been restored. At the same time, the landowners have not received due compensation – financial or alternative land plots. Neither the landowners nor the government nor the environment have benefited. Where the buildings have remained, the coastal environment has not been restored and coastal access is limited. The burden of protecting the coast for the public at large falls unequally on a small group which has purchased land under the previous legal regime.

²⁹ Malta remains unclear.

14.1.2 Recommendations for the EU

R9. Create a fund to compensate landowners in the coastal zone.

The EU already invests large amounts in research and policy along the coast. We recommend that the EU prioritizes investment in creating legal certainty: A clear legal baseline for compensation rights on the coast. This can be achieved through a property compensation fund which can be used by governments who seek to relocate land owners in the coastal zone.

14.1.3 Tool for use by the EU

T13. Property compensation fund

14.1.4 Recommendations for national governments

R10. Avoid legal situations in which environmental forces change the legal status of land without allowing for public discretion and accountability.

This is the lesson which we learnt from the Spanish case. According to the 1988 Coastal Law, the coastline was defined by the tides and could change based on storm activity. If the coastline were to move further inland, private land beyond the MTPD could automatically change to public. The practical implications of such policy are complex and result in a burden to the landowners and public administration.

R11. Projection of scenarios – how land ownership might change.

Given that any changes to the extent of the public land zone will be based on either environmental changes or changes in policy, governments should have the ability to project scenarios of how land ownership might change in coming years. We recommend that governments undertake such projections on a regular basis. The authorities should then send the information about projected outcomes to owners of land in and beyond the coastal zone. This will allow all parties to plan ahead in the case of potential changes to land ownership.

R12. Supplement the nature-driven legislation with conventional legislation: Require expropriation proceedings and compensation for those affected.

If coastal land is to change from public to private due to environmental factors, the law should require that such land must be expropriated by the government in order to be enter into public ownership.

All countries have mechanisms in place for the expropriation of land for public uses. These mechanisms are generally triggered for infrastructure projects such as new roads, but should be considered for land in the coastal zone which is to come under public ownership.

Expropriation of land requires that appropriate compensation be paid to landowners. We recommended above that the EU create a property compensation fund for this purpose.

R13. Where there are existing building rights, provide alternative land for development.

Some land which changes from private to public may be affected by existing building rights. If this is the case, the government could provide alternative land, equal in fiscal value, for development.

We fully appreciate that alternative land would not have the premium value of the coastal view. Landowners do not have the location near the sea as a vested right. Distributive justice, however, does justify compensating the owners of land which changes from private to public, but not necessarily near the coast.

14.1.5 Alternative tools for use by national governments

Several of the tools mentioned above under ‘delineation of the coastline’ are also relevant to determining the extent of coastal public land. Here we provide tools relating to our recommendations regarding land which is brought into public ownership.

T14. Projection scenarios – how land ownership might change

T15. Expropriation of land

T16. Compensation in money

T17. Allocation of alternative land plots

14.2 Land use in the coastal public land zone

14.2.1 Summary of the issue

The countries in our study generally seek to maintain the coastal public land free of permanent structures. This policy position appears to support goals regarding public accessibility and environmental preservation.

Regardless of current policy, the question remains of what to do with uses and development for which permission was granted before the land became public. Given that the coastal laws in our study countries are relatively new, it is likely that such development is not uncommon. As such, governments will be required to consider the fate of such buildings and uses.

We saw in the case of Spain, that new rules were applied to existing buildings. But “real life” shows that this is an unsustainable approach. There are still claims in the court that are unsettled. It is not feasible: Legally and politically. In Spain, there was an outcry from foreign investors and the issues continued to drag on in court. The cost of administration and court proceedings has been high and could not have been determined from the outset. This is a drain on the public budget.

Regarding temporary uses of public coastal land – some countries, such as Spain, have clearly defined what uses may be permitted and a clear set of rules apply to these uses. In other countries there is some confusion regarding what may be permitted and in what form.

14.2.2 Recommendations for national governments

R14. Take special caution in retroactive application of coastal legislation to pre-existing buildings.

Distinguish between existing and new buildings: Attempt to exempt existing buildings, unless applicability of the new rules is feasible. Minimise the use of time limits on use of existing buildings.

R15. Take special caution in situations in which existing buildings are allowed to remain but not be renovated.

Such a policy where buildings can remain but not be renovated is a recipe for environmental and social deterioration. The assumption that pre-existing structures will somehow “die away” if not maintained has not proven to be correct. Prohibiting maintenance is an invitation for illegal works or illegal usage of deteriorating structures, or might prove to be a danger to the public. Such structures should either become fully legal or fully illegal.

R16. Clearly define what temporary uses are permitted on coastal public land.

Governments may wish to consider:

- Limiting use of the coastal public land to those uses which are inherently linked to the sea.
- Limiting uses to those which provide economic or social benefit, beyond profit to investors.

R17. Define permit procedures for temporary uses on coastal public land.

Permit procedures should include time limits for temporary structures and rules for renewal. Rules should be geared towards reducing expectations of temporary structures becoming permanent.

14.2.3 Alternative tools for use by national governments

The tools under ‘coastal public land’ above – expropriation and allocation of alternative land plots – are also relevant to pre-existing buildings. In addition, the following alternative tools emerge from the above recommendations:

T18. Clear distinction between pre-existing and new buildings on coastal public land

T19. Pre-existing buildings to remain and to be renovated, until the owners can be relocated (either through expropriation or allocation of alternative land)

T20. Clear definition of what uses are permitted on coastal public land

T21. Permit procedures for temporary uses on coastal public land

14.3 Marinas and sports facilities

14.3.1 Summary of the issue

The Mediterranean Sea is popular for yachting and other water sports such as surfing, wind-surfing and SUP (stand-up paddle boarding). These activities have historically attracted the building of facilities – permanent and temporary – on the beach or public coastal land.

Marinas have been constructed in each of our study countries. Whether or not to approve new marinas is a challenging dilemma for most. Although marinas are primarily a marine use, the concern is that they might draw ancillary facilities, such as restaurants, offices and other tourist attractions. In addition, the word ‘marina’ has notoriously been applied to projects that include not only boat facilities, but also permanent hotels and residential buildings. Despite the potential revenue from such leisure and tourist activities, we sense that the stakeholders in each country are aware of the danger such projects pose to the coast. Among our study countries, this issue was most hotly debated in Israel, reflecting the tension of a very short coastline and relatively large population.

14.3.2 Recommendations

R18. Carefully assess proposals for new marinas.

New marinas should undergo careful consideration, with an especially heavy “burden of proof” to be placed on the entrepreneurs seeking to develop, whether public or private. Such *burden of proof* should of course include a strict environmental impact assessment. In addition, we recommend a cost-benefit analysis to assess whether such a new facility is indeed justifiable in terms of leisure, opportunities and economic value added. Decision-makers could also assess the feasibility of expanding existing marinas to take care of demand.

Consider legal or financial means to deter entrepreneurs or owners of marinas from incrementally requesting permission for additional uses which might turn the area into a resort.

R19. If sports clubs seek to build new permanent buildings, these should be located beyond the setback zone – not in the coastal public domain.

Whilst storage sheds for equipment might be reasonably located within the coastal public domain, more permanent structures associated with marine recreation should be located beyond the setback zone.

R20. Consider a program to phase out pre-existing permanent facilities and moving them further inland, away from the beach.

Phase out pre-existing permanent structures which are located on coastal public land. This may be achieved through the use of T17 above – allocation of alternative land plots.

14.3.3 Tools emerging from the above recommendations

- T22. Requirement for cost-benefit analysis and environmental impact assessment for proposed new marinas**
- T23. Legal or financial means to deter entrepreneurs or owners of marinas from incrementally requesting permission for additional uses**
- T24. Requirement that new permanent sporting facilities be located beyond the setback zone**
- T25. Program to phase out pre-existing permanent structures which are located on coastal public land**

CHAPTER 15 Toolkit: Coastal Setback Zone

15.1 Width and delineation of the coastal setback zone

15.1.1 Summary of the issue

We regard the minimal setback zone of 100 metres stipulated by the ICZM Protocol as the main instrument for calibrating coastal zone management along the Mediterranean. It provides a simple, measurable baseline for coastline management.

The limited number of countries that we did study indicates that the 100 metre setback identified in the ICZM Protocol is recognized in most countries. However, some countries do not meet even the minimum 100 metre requirement and there are some widely different practices. The setback distance in Greece, for example, is so narrow (30 metres), that it is almost an irrelevant protection for most land uses. The operators of hotels, restaurants, etc. would probably not mind being located 30-50 metres from the coast.

On the other hand, some countries have adopted a two-tier conception of a protected coastal zone: An initial setback with more stringent limitations on development and beyond that, what we shall call a **coastal influence zone**. In Spain, the second tier is beyond the 100/200 metre setback, to 500 metres from the coastline (see Figure 19). In Greece, too, the zone between the setback zone and 500 metres from the coastline is subject to limited specific provisions. (But in practice, Greece has only one tier, despite the fact that the setback distance in Greece is less than 100 metres). In Israel, the zone beyond the initial 100 metre setback is set at 300 metres. In Italy, this is a matter for regional governments and may vary considerably. In France, the coastal influence zone is defined in the most extreme way (among our study countries) as covering the entire area of municipalities abutting the coast.

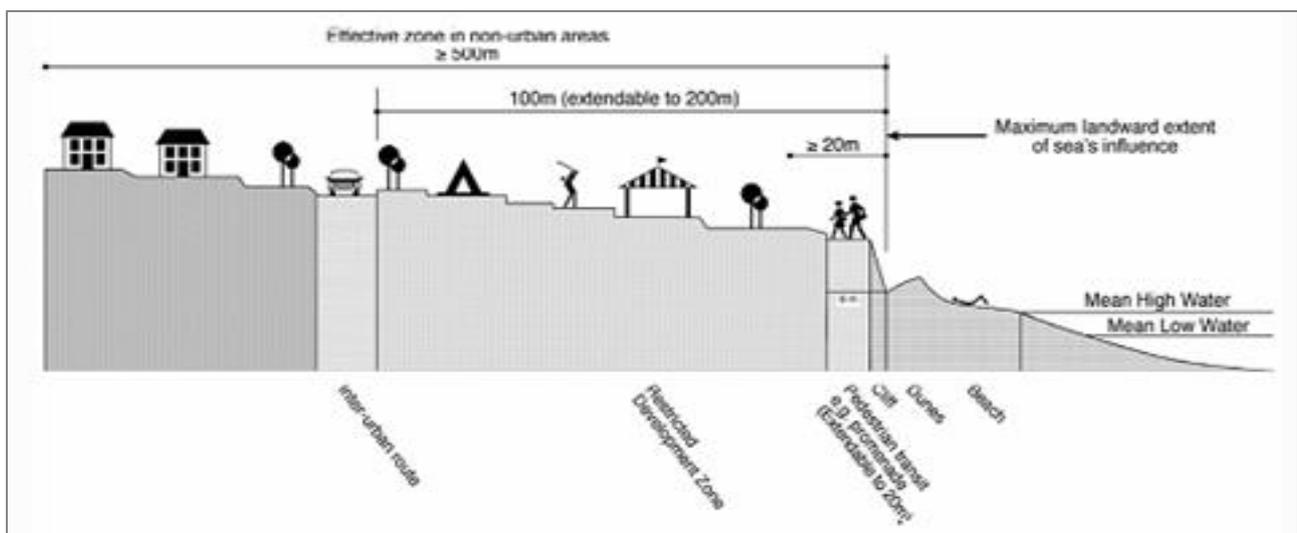


Figure 19 – The Spanish coastal setback zone and coastal influence zone

(Source: Spanish Coastal Law)

15.1.2 Recommendations for the UN

R21. Recognise that there are different practices in the different countries.

Some go beyond the minimum 100 metre recommendation. Others do not seem to meet the minimum.

R22. Assess the different practices and their impacts.

We recommend that the UN undertake a more thorough review of coastal setback laws and practices that will go beyond our sample countries. This is important both for land and marine spatial planning and has rising importance due to climate change impacts.

R23. Create a dialogue among countries with potential for refining the Protocol requirements.

Once there is more information regarding setback practices and impacts, it might be beneficial to bring representatives from various countries together to discuss the differences. The option to refine the ICZM Protocol based on these findings and discussions should remain open.

15.1.3 Tools for use by the UN

T26. Database of coastal setback requirements across several countries.

A database detailing coastal setbacks could be developed through an assessment of different practices, as recommended above. The database would ideally include setback distance; method of measurement; permitted uses; level of compliance with use and development regulations; and sea level rise projections. Having this information compiled in a database would enable assessment of current practices, with a view to improvement.

15.1.4 Recommendations for national governments

R24. Give high priority to meeting the minimal 100 metre setback specified by the ICZM Protocol.

Those Mediterranean countries that do not meet even the minimal 100 metre setback specified by the ICZM Protocol, should give high priority to meeting this goal. They should announce a target date by which this minimal setback distance will be required by law.

In addition, in countries such as Greece, where not all land is currently incorporated into a plan, the 100 metre setback zone should be put in place before planning comes into effect.

R25. Evaluate the option to extend the setback distance beyond 100 metres.

Each country should evaluate whether a setback zone beyond the initial 100 metres is more suitable for their coastline protection in environmentally sensitive areas; and should assess the feasibility of such an increased setback zone.

R26. Determine distinct setback policies for urban and rural areas.

Although the Protocol allows for distinction between rural and urban areas, some of the Mediterranean countries have left an undesirable ambiguity in the way that urban areas are defined. Good urbanism does deserve a different set of policies regarding the coast. Each country should therefore undertake a comprehensive assessment of not only current, but also projected, urban areas to determine the desired urban form and its interactions with the coastal zone. Such an assessment will allow for development of specific policies which match the desired outcomes.

R27. Consider instituting a coastal influence zone beyond the initial setback zone.

The coastal influence zone should consider environmental parameters; conservation of land and habitat; landscape and biodiversity. Any such zone should be phased in gradually.

R28. Ensure the location of the setback line is clearly defined and transparent

Setback lines may be demarcated in the cadastre, or in plans (master plans / general plans / urban plans).

15.1.5 Alternative tools for use by national and local governments

All the tools listed at Section 13.2.3 (tools for delineation of the coastline) can assist governments to define their coastal setback zones. The following additional tools also emerge from the above recommendations:

T27. 100 metre setback rule

T28. Extended setback rule

T29. Different setback rules for urban and rural land

T30. Coastal influence zone

T31. Demarcation of the coastal setback in the cadastre

15.1.6 Tools for use by local governments

T32. Demarcation of the coastal setback in local urban plans

15.2 Permitted uses in the setback zones**15.2.1 Summary of the issue**

The ICZM Protocol prohibits construction within the setback zone. Yet it remains vague regarding exemptions from the prohibition of construction in the setback zone. This breadth of flexibility regarding land uses and development is justified in our view. The determination of detailed planning needs and land uses is best handled through “local knowledge” and not through international rules.

Regarding the first tier setback zone, all the countries we studied (except Malta) have clear rules regarding the types of land uses permitted in the setback zone (first tier of protection, described above). Mostly, permanent structures are not allowed, except for very special public uses such as ports, military uses and some infrastructure. The definition of temporary construction varies across the countries.

Notably, the laws which institute setback provisions in our research countries are relatively recent and there are many pre-existing buildings in the setback zones and these are not regarded as illegal. In some countries, the pre-existing structures in the setback zones have limitations in terms of upgrading or even repair. The issue of pre-existing buildings is a major challenge for ICZM and therefore we have distinct recommendations to address this issue below.

The **coastal influence zone**, where it exists, generally has more lenient rules about what may be developed and allows for more discretion by authorities. In the instruments below we distinguish between the two tiers.

In some cases, permission to develop was granted before coastal laws or plans disallowed such development. In some countries, the landowners or developers may be eligible for full or partial compensation for their investment. Cancelling such development rights on high value coastal property might entail large sums of money that governments are unwilling or unable to pay. At the same time, the ICZM goals for the future would be grossly undermined if new, inappropriate development would be allowed to take place. We did not find ready-made instruments to deal with this issue in any country. In Israel, compensation rights are high and therefore this issue of existing plans is very high-profile. Pressure by environmentalists is pushing the government to find solutions, at least in part.

15.2.2 Recommendations for national and local governments

R29. Consider what are appropriate land uses to be permitted within the setback zones.

Definition of what are appropriate land uses may vary. Needs of communities along the Mediterranean are in flux. Consider allowing for a reasonable amount of flexibility; without, of course, jeopardising the overall ICZM objectives. For example, the rationale for temporary residential uses, which has been largely prohibited in the study countries, may be acceptable when we consider the needs for refugees along the coast.

R30. To avoid a “grey zone”, create clear distinctions between permanent and temporary construction and publicize them widely.

We found that ambiguities regarding what is permanent or temporary construction may create unnecessary conflicts. Clear distinctions between categories of construction, embedded within laws and/or regulations, will ensure that landowners do not “cross the line” into illegality, whether purposely or erroneously. (See Chapter 17 on compliance and enforcement below). Local variations to these rules, due to climate etc. could be justifiable.

R31. Reconsider rules regarding maintenance of pre-existing structures.

Pre-existing structures within setbacks are in the “twilight zone” between legal and illegal (recall that the structures may be on private land). As the status of pre-existing structures is problematic in all the study countries, we recommend that authorities reconsider rules which prohibit maintenance works.

R32. In future legislation or urban plans, avoid placing existing building in the “twilight zone”.

The legislation might specifically state that all buildings built prior to the introduction of the law are exempt from the setback rules. Alternatively, if local variations to the setback zone are permitted (for example, in existing urban areas), local authorities can exclude existing buildings from the setback zone.

R33. Make pre-existing development rights an overt policy issue.

If the EU does implement a compensation fund, as outlined at Section 14.1.2 above, governments should consider using this fund to cancel pre-existing plans and compensate the relevant land owners. Consider to what extent cancellation of plans should trigger compensation rights.

R34. Consider what restrictions on land uses might be appropriate for the coastal influence zone, beyond the setback zone.

The coastal influence zone should be less restrictive than the initial setback zone, but should protect the character of the coastal area. It might be appropriate to consider design guidelines which focus on protection of the coastal environment.

15.2.3 Alternative tools for national and local governments

Several of the tools mentioned under ‘public land ownership’, above, are also relevant to the setback zone – in particular, those dealing with maintenance of existing structures. Below we focus on additional tools emerging from the above recommendations.

T33. Clearly defined set of permitted uses in the setback zone

T34. Procedures in cases of pre-existing development rights, including extent of compensation:

- a. No compensation
- b. Compensation for expenses incurred
- c. Partial compensation – with or without time limit
- d. Full compensation – with or without time limit

T35. Design guidelines for the setback and coastal influence zones

15.3 Tourism and vacation homes: Major land use conflicts

15.3.1 Summary of the issue

Tourism is a crucial aspect of the economy in many of our study countries, given the pleasant climate and sea conditions which contribute to its overall popularity as a tourist destination. In each country, we found major conflicts between a demand for tourism and vacation homes on the one hand, and coastal preservation on the other. In addition, there is a conflict between tourism and the encroachment of other uses on land reserved for tourism.

Our country reports are replete with information on conflicts caused by the development of hotels in proximity of the coastline; illegal construction by such hotels and blocking of access to the coast. We also encountered issues caused by the arrival of cruise ships. In most countries there is some vagueness regarding definitions of tourism; what should be permitted and what should not.

In addition, in several of the countries, especially those with relatively long coastlines, there are ongoing conflicts regarding “vacation homes” on the coast. Many owners of such homes have gradually turned them into permanent housing, despite strong regulation against residential uses in the coastal setback zone. Owners of summer homes, built illegally at first, have created entire residential communities, almost by stealth. Summer homes also often include various other types of illegalities. The demand for summer homes is so strong that it is challenging many national and local governments across the Mediterranean.

15.3.2 Recommendations for national and local governments

R35. Decision-makers on the national level should try to directly address the conflict over what constitutes permitted tourism in coastal areas.

National governments might define different categories of tourism uses – e.g. hotels, low-density resorts, vacation homes. Should there be differences between urban and non-urban areas? Should there be special policies regarding short-term rental of private homes (e.g. AirBNB)? Should the approval of tourist facilities be subject to more stringent environmental assessment than other uses? Should hotels in coastal areas be subject to special design guidelines, to distinguish them from inland hotels and integrate them with the ambience of the coastal environment? In discussing these questions, governments should take into account current and future needs.

R36. Analyse the supply and demand and undertake long-term planning for the future of existing vacation homes.

Governments will need to directly address the issue of vacation homes and their future. In some countries, summer homes have been legalized over time. Some have remained as summer homes and some have become permanent residences. Governments will need to consider the sustainability of these homes and neighbourhoods, without further jeopardising the coastal environment.

15.3.3 Alternative tools for use by national and local governments

The following tools emerge from the above recommendations.

- T36. Tourism plan or other policy which clearly defines permitted tourism uses in coastal areas**
- T37. Supply and demand analysis for vacation homes**

CHAPTER 16 Toolkit: Accessibility

16.1 Summary of the issue

The ICZM Protocol identifies the importance of public accessibility in the coastal zone, but is silent about the substantive and quantitative aspects of this concept. The Protocol does distinguish between horizontal (along the coast) and vertical (to the coast) accessibility. We have added additional aspects – access to views and socio-economic issues.

The accessibility dimension is strongly tied to the idea that the coast – particularly the beach – should remain open for use by the general public. Some countries in our study have guaranteed the public's right to use the coast in their constitutions or national laws. Others take it as a generally accepted norm that publicly-owned beaches are for public use.

And yet – accessibility does not refer only to coastal public land and is an issue which should disregard land ownership as far as is feasible.

16.2 Horizontal accessibility

16.2.1 Summary of the issues

We found evidence of concern regarding horizontal accessibility in all countries in our study. Malta is the only country where the right to horizontal access is not clear, but this is a topic which has been addressed by NGOs and occasionally, by the courts.

Horizontal accessibility should certainly be assured on public land. However, each country has different requirements for infrastructure or other facilities, which may block some of the horizontal access.

Many national and local governments encounter the need to balance between preservation of the open coastline and facilitation of its use by the general public. We are referring here to uses of a temporary character (and not to permanent construction). Use of the beach (concessions) may create de facto barriers to access. As such, legal assurance of access, when balanced with legal use and construction on the beach, is not a failsafe guarantee.

The recommendations and alternative tools we present below seek to assure at least a minimal level of horizontal public access.

16.2.2 Recommendations for national and local governments

The following recommendations are scaled from the minimal level of accessibility to more generous.

R37. Assure horizontal public access on any or most publicly-owned land along the coast.

Public ownership, in and of itself, does not ensure accessibility. If there is coastal public land, whether it is national or municipal, countries and local governments should aspire to make this land accessible. Accessibility should include all pedestrians; people with

disabilities and emergency vehicles, but should take into account the constraints of natural topography; i.e. authorities should not seek to alter the natural environment to improve accessibility.

R38. Consider accessibility on private land.

Where there is no public land, or the coastal environment is not fully influenced by public land, governments should consider requiring freedom of access on private land.

In some recent theoretical conceptions of property rights, there is a notion of the “green stick” in the *bundle of rights*, which implies land owners’ obligations towards the environment. Another possibly relevant theoretical conception of property is social responsibility. Authorities should consider whether these theories are relevant to private land in the coastal zone.

R39. Consider different types of accessibility.

Beyond any publicly-owned coastal land, consider separation of pedestrian and vehicular access. Consider access for handicapped and emergency vehicles.

R40. Designate rights of way along the coastline.

In designating rights of way, authorities should distinguish between rights of way which provide pedestrian access along the waterline, and rights of way in the coastal hinterland.

The width of the strip which is provided should be a separate policy consideration. Ideally, the width should be enough to accommodate not only pedestrians, but also coast-related activities that do not entail facilities which block access.

R41. Designate a minimum width for horizontal rights of way.

In the short term, authorities should designate a minimum quantifiable level of accessibility, anchored in various statutory instruments. For example, authorities could specify a percentage of the public land area that should be accessible. This quantifiable level should pertain to zones that are indeed physically accessible (e.g. excluding steep cliffs).

R42. Assign qualitative measures for the long-medium term.

In the long-to-medium term, increase accessibility by both quantitative standards and qualitative criteria. Take into account the broader public, including children and handicapped. Consider investments in accessibility, such as a new pathway behind the dunes – further inland. Also consider topography and existing barriers.

16.2.3 Alternative tools for the use of national governments

The following alternative tools emerge from the above recommendations:

T38. Assured horizontal access along publically-owned coastal land

T39. Minimum width for horizontal rights of way

T40. Embedded responsibility of property owners to allow public access along the coast – e.g. apply the “right to roam”

Prevalent in some Scandinavian countries and parts of the UK, the right to roam is an obligation on analogous property owners to allow the public to enter their land for recreation and exercise. In the countries where this right is applied, it is anchored in the very conception of property and goes back centuries. The application of this right may be difficult in some countries as it may require constitutional change.

T41. Easement or encumbrance on private land

Easements are embedded within property titles.

T42. Acquisition of a strip of private property for access purposes

In acquiring the land, authorities would turn it into public land. Options for acquisition include expropriation with compensation and compulsory dedication³⁰ – a requirement of landowners to set aside a strip of land, for example as part of approval of urban plans. Authorities may also provide incentives for landowners to set aside land for access purpose, such as through taxation or planning regulations.

T43. Requirement for underground facilities

In order to ensure that beachside services and facilities do not interfere with accessibility to and along the coast, authorities may consider requiring these facilities to develop underground.

T44. Standards for pedestrian accessibility through temporary structures

National and local governments should set a standard for design and pedestrian accessibility within and through zones where various temporary structures are to be permitted, so that the situation pictured at Figure 20 will not be permitted.



Figure 20 - Temporary structures on the beach in Greece

(Source: R. Alterman, 2015)

³⁰ US terminology.

16.3 Vertical accessibility

16.3.1 Summary of the issue

Vertical access seems to be less well-established than horizontal access, therefore needs more attention. We found that not all countries have policies and legal instruments to ensure adequate vertical access to the coast. There also seems to be less public awareness of this issue.

Spain has embedded vertical access requirements to the coast in its national coastal law. In urban areas, vertical access roads must be provided every 500 metres and pedestrian access must be provided every 200 metres. These numerically-driven standards are very minimalistic.

Greek coastal law refers to this issue, but with very weak legal instruments for provision, enforcement and maintenance of the paths.

Vertical accessibility is likely to involve paths through private land and therefore is likely to be more complex than horizontal accessibility. This form of accessibility is less amenable to numeric standards of distance than is horizontal and therefore should be more driven by demand and activity nodes.

16.3.2 Recommendations

R43. Design national policy which takes into account the importance of vertical accessibility.

Conduct meeting with stakeholders, including local governments and owners/developers of hotels and other structures near/on the beach. The purpose of these meetings should be to determine what are feasible standards for accessibility. Create distinctions between different classifications of land – For example, urban/rural; topography; different uses of the beach. Consider catchment areas of demand versus nodes of activity on the coast.

R44. Establish a minimal level of vertical accessibility in a manner that can be easily monitored and enforced.

This implies a numeric standard for distance between pathways, varying by land classification. Governments may choose to specify minimum distances between vertical access paths (as does Spain) and minimum widths of such paths (as does Greece).

R45. Incentivise local governments and other authorities to provide high quality vertical access.

Include incentives in national or regional policies, for best practice in vertical access to the coast. Encourage authorities to provide vertical access to the coast with the minimum requirements set by law, and beyond.

R46. Develop national and local qualitative criteria for vertical access.

Criteria for evaluation of vertical access paths might include:

- Width of the path
- Ease of accessibility for various groups
- Type of hurdles to minimize (e.g. gates)
- Hours of the day which the path is open
- How inviting is the path – in terms of landscaping; lighting, etc?

R47. Consider maintenance of access paths.

Incorporate maintenance into policies concerning vertical access. There should be a distinct budget item for monitoring and enforcement of access paths.

Ensuring that maintenance is considered is not easy when it comes to vertical access, because: (a) Such access might involve more than one jurisdiction; (b) access paths will likely impinge on private property; and (c) such access paths may engender conflicts between adjacent landowners or users.

R48. Encourage local governments to provide for direct reporting by citizens of the quality and maintenance of vertical paths to the coast.

The public are likely to regularly use vertical access paths. As such, it is appropriate to provide some means of reporting when there are quality or maintenance issues with these paths. Such reporting would supplement any inspections by the relevant authority's officers.

The Kavala ICZM Observatory developed through the Mare Nostrum project is one example of how citizen-based reporting can work for coastal zone management issues. Including vertical access paths in such a model is a simple but effective way to provide for feedback on the quality and maintenance of these paths.

16.3.3 Tools

The following tools emerge from the above recommendations.

T45. Requirement that vertical access to the coast be provided

T46. Minimum level of vertical accessibility

T47. National and local qualitative criteria for vertical access

T48. Requirements for maintenance of vertical access paths

T49. GIS applications for citizen-based monitoring

16.4 Access to sea views

16.4.1 Summary of the issue

Although view protection is not specifically mentioned in the ICZM Protocol, over the course of the Mare Nostrum project, our team was repeatedly reminded of the value placed on sea views in coastal areas. Yet only Spanish law contains specific restrictions on the form of development in an attempt to protect views to the coast: buildings within 500 metres of the coastline must be built with the wider part perpendicular to the coastline.

16.4.2 Recommendations for national and local governments

R49. Within the coastal influence zone, consider a levy on residential and commercial buildings which block views to the coast.

In the absence of specific restrictions on development, authorities may consider imposing a levy on new buildings, developed in the coastal influence zone, which are above a certain height or width. Governments would need to decide on the minimum threshold for height or width of buildings at which the levy would be triggered.

16.4.3 Tools for national and local governments

The following tool emerges from the above recommendation:

T50. Levy on buildings which block views

16.5 Events on the beach and social accessibility

16.5.1 Summary of the issue

Mediterranean culture entails open-air social events on the beach. Public events are traditionally regarded as desirable and part of the public goods that the beach offers. Private events, however, are often contentious because they might temporarily block access to and along the beach. If they entail high charges, such events may engender a feeling of inequality. This issue should be handled with local sensitivity in order not to curtail local traditions, and yet maintain equal public access.

Another aspect of accessibility with social implications is fees charged for use of the beach, or for parking. Charges may come from municipalities, or from private bodies through concessions. This is not unexpected as the provision of beach services, such as for cleaning, lifesaving, etc., may entail high expenses. And yet, ensuring social accessibility is crucial because beach-orientated leisure has been traditional for many generations and is widely practiced by all socio-economic and cultural groups. Disparities may be within a given municipality or across municipalities: Some may charge more and some may charge less. Wealthier municipalities can afford to subsidize beach charges, whereas others cannot. Such disparities cannot be resolved without national government intervention.

16.5.2 Recommendations for national and local governments

R50. Prepare an assessment and projection of demand and the types of events that might occur on the beach during the year.

In order to establish policy on this issue, local governments, or other authorities overseeing the use of the beach, should have a clear idea of the likely demand for events on the beach – the types of events, seasons, days and time of day.

R51. Establish a rule regarding the maximum proportion of time in which private events can take place on the beach.

Once the demand has been assessed, authorities can establish time rules. For example, 5% of the time or one evening per week. Beware of monopolizing of the available time by particular social groups or type of events. In allocating time for events, try to take into consideration social sensitivities and egalitarian opportunities.

R52. Assign limited zones on the beach in which private events can take place.

By establishing designated zones in which events can take place, governments might make the process for approving beach uses more straightforward and clear. In addition, such a policy would reassure the public that the beach will never be “taken over” by private events.

R53. Require that event operators provide horizontal access during the time of the event.

Even during the course of a private event, users of the beach should maintain the right of horizontal access.

R54. National governments should intervene in the cost of beach access.

If we look at the coastline as analogous to national freeways/highways, we see the problem with local beach management: The current situation with beaches is similar to a scenario in which each local government is required to maintain the portion of the highway which falls into their district. National governments can assist in controlling the cost of beach access by financing maintenance and beach safety operations, similarly to national highways. Given the large financial gaps between municipalities in some countries, only a national program or fund might ensure that all municipalities can provide free access to the beach.

R55. Monitor the total price of beach access, across jurisdictions and locations.

For example, municipalities should be required to monitor the prices charged by for beach uses and to report seasonally to the relevant national or regional authority.

16.5.3 Alternative tools for national and local governments

The following alternative tools emerge from the above recommendations.

- T51. Defined times of day or year when events can take place on the beach**
- T52. Defined types of events which can take place on the beach**
- T53. Horizontal access requirements for private events**
- T54. Designated zones for private events**
- T55. Monitoring of beach access prices**
- T56. National beach fund to subsidize less privileged municipalities in beach management and maintenance**

CHAPTER 17 Toolkit: Compliance & Enforcement

17.1 Summary of the issue

The Mediterranean coast seems to be a magnet for illegal development and use. Prominent illegalities include:

- Thousands of summer homes – either illegally built or illegally converted to permanent residences;
- Caravans gradually converted to permanent residence;
- Unauthorized fences or enclosures;
- Small commercial buildings such as restaurants;
- Conversion of legally built structures for unauthorized uses – especially commercial or entertainment;
- Temporary commercial activities on the beach area without legal concessions.

There are significant differences among the countries in the degree of illegality, but in all our case countries, enforcement is a major challenge. All countries experience similar challenges, despite having somewhat different laws. The laws have small but significant differences in the capacity to enforce. Most countries reported that they are understaffed and have insufficient budget to carry out enforcement tasks. In some of the countries there has been distinct improvement in recent years.

In order to improve the state of enforcement, we must have full information about the state of illegal development – types and extent. In our research, we encountered some reluctance, at least by one local government, to release such information.

17.2 Recommendations and tools

17.2.1 Recommendations for the UN / EU

R56. Create a supra national forum of enforcement officers.

For details of how such a forum has been progressed by the Mare Nostrum project, see Section 4.5 of this report.

17.2.2 Recommendations for national governments.

R57. Plan an education program, in conjunction with NGOs, to inform the public about compliance with planning and buildings laws, with the coastal zone as a model.

The coastal zone draws a general public consensus. As such, public awareness about planning and building laws and compliance with these laws might be harnessed through this issue.

R58. Consider national legislation to oblige all relevant authorities to publicize information about non-compliant development.

Such information should also be available upon request to citizen groups or researchers.

R59. Establish means to enable citizen reporting.

Current knowledge, about planning in general, tells us that reporting of planning and building violations relies mostly on neighbours and NGOs. As such, to assist with enforcement and to encourage compliance, governments should provide the means for citizens to report (anonymously) about violations – preferably as part of a local or regional observatory. Reporting about non-compliance with planning and building laws should be integrated with environmental reporting.

R60. Assess the existing legal instruments relating to enforcement.

For example, institutional responsibilities; sanctions; incentives; legal procedures; etc.

R61. Establish an inter-agency enforcement body.

In some of the countries there are separate enforcement bodies for the different types of infringements which might affect the coastal zone: Use of the public land; planning and development; environment; public health; and public safety. There are agencies on the local, regional and national levels. We recommend the establishment of an inter-agency forum to coordinate all the different aspects of enforcement.

R62. Conduct an assessment of the budgetary and human resource capacity for enforcement.

Building on the above recommendation, consider inter-agency training and pooling of budgetary and human resources.

17.2.3 Alternative tools to encourage compliance and enforcement

The following alternative tools emerge from the above recommendations.

T57. Supra-national forum of enforcement officers**T58. Obligation on all relevant authorities to publicize information about non-compliance****T59. GIS applications for citizen-based monitoring****T60. Satellite imagery and information****T61. Inter-agency enforcement body**

CHAPTER 18 Toolkit: Management & Coordination

18.1 Summary of the issue

Coordination is a crucial element of ICZM and the concept features strongly in the ICZM Protocol. Coasts have been drawing so many interested parties throughout history, so today every country has a plethora of institutions with some relevance to coastal issues.

Full coordination is an ideal which is inherently unreachable. Coastline management is always likely to involve more than a single institution and by definition, full coordination is unattainable. To improve coordination, there needs to be an incremental learning strategy. Policies for improving coordination should prioritize national has to apply to specific bodies and specific issues.

All of our study countries fall short of coordination ideals, but some have made special efforts towards this goal. We observed some good coordination at the local and regional levels in our case studies (particularly the Haifa Municipality “Round Table” initiative – refer Figure 21). Complementing a more integrated coastal zone law (described earlier), countries should evaluate their current governance arrangements, recognizing that full institutional coordination is not a realistic goal in any context.

There are three types of coordination: Horizontal, vertical and geographic. Some key observations regarding each of these three types of coordination:

- **Vertical coordination:** In our study countries there is no lead institution in ICZM policy. Such situations might invite more conflict between institutions.
- **Horizontal coordination:** Horizontal coordination is poor, even at the local level.
- **Geographic coordination:** In some countries there is a drastic separation between urban and rural areas embedded in municipal and planning legislation and policies. This split affects the capacity for geographic coordination on coastline issues.



Figure 21 – Haifa Municipal “Round Table” for coastal zone management

(Source: Municipality of Haifa, 2015)

18.2 Recommendations and tools

18.2.1 Recommendations for national governments

R63. Conduct an evaluation of institutional and governance structure in relation to ICZM.

In order to improve coordination on ICZM issues, governments first need to have a clear picture of the key specific constraints to improving coordination. A full understanding of the relevant government's structure and practices is necessary in order to carry out such an evaluation, hence it should be carried out from within and at the highest level of government.

Considerations should include, for example:

- In most countries, the national government manages the public coastal land. Assess institutional disparities between the strong and unitary national public land owner and sub-national authorities in charge of planning and managing adjacent land.
- Tensions between centralization and decentralization. There is a tendency to consider that greater centralization is a panacea for poor coordination, but decentralization has the advantage of being closer to the public and is more participatory.
- Differences between urban and rural areas. Allow for more gradual and context-sensitive laws and policies.

R64. Create a program for incremental improvement in coordination.

Once governments understand the barriers to coordination, they can put in place a program to reduce those barriers. The program should take into account the relevant administrative culture and resources. It should consider which should be the lead institution in ICZM policies. Is ICZM to be environment-led or planning-led?

18.2.2 Recommendations for local governments

R65. Create an inter-departmental forum of municipal agencies concerned with the coastal zone (beach and coastal influence zone).

This might be the easiest way to improve coordination because it should not require any major change to laws or policy. It is undertaken in one jurisdiction and with unitary interest.

18.2.3 Alternative tools

Tools emerging from the above recommendations:

T62. National program for incremental improvement in coordination

T63. Inter-departmental forum of municipal agencies concerned with the coastal zone

CHAPTER 19 Toolkit: Participation & Information

19.1 Summary of the issue

Effective public participation and transparent information are another important feature for ICZM. The importance of public participation to the decision making process has been well defined in the EU Directive 2003/35/EC preamble, dealing with public participation and information in environmental decision making:

“Effective public participation in the taking of decisions enables the public to express, and the decision-maker to take account of, opinions and concerns which may be relevant to those decisions, thereby increasing the accountability and transparency of the decision-making process and contributing to public awareness of environmental issues and support for the decisions taken”.

Although public participation is an important aspect of ICZM, none of the countries in our study have specific legal requirements regarding participation and information on coastal zone management issues. All of the countries we studied do have participation processes embedded in their planning and building laws and regulations, but none have established special participation procedures for coastal issues since signing the ICZM Protocol.

Although the current participation practices do not support the integrated approach sought by the ICZM Protocol, it appears that the countries in our study have not identified a gap in this area. But a recent Israeli court ruling, which required special participation procedures on matters relating to the coast, highlighted the deficiencies of the current participation processes. Perhaps additional deficiencies will be identified as coastal zone management issues become more critical.

In none of the countries in our study is information about the coastal zone shared in a coordinated or integrated manner. None of the countries have effective two-way information tools – from government to public and from public to government –devoted to coastal and marine issues.

19.2 Recommendations and tools

19.2.1 Recommendations for the EU

R66. Incentivize establishment of environmental and legal-institutional observatories on the local and national levels.

As demonstrated by our model observatory in Kavala (refer Section 4.2), such observatories can serve well as a two-way information system.

19.2.2 Recommendations for national governments

R67. Encourage provisions for special public participation processes for coastal zone management.

We saw in several of the Mare Nostrum case studies that the public and the environmental NGO's can play a very important role in effective management and protection the coastal zone. However, the public and NGOs often have to fight to have a say in coastal management decision-making. It is crucial that national governments recognize the immense contribution of the public to ICZM and encourage the development of processes which will involve them on a regular basis.

National governments should create a national program to place a special focus on public participation regarding coastal matters. There are three options:

- Mandatory approach: The requirement for the program could be embedded in national legislation. Such legislation would place a duty on regional and local governments to reach out to a broad base of public groups and stakeholders. Local governments would be required to report back on their programs.
- Incentive-based approach: Create competition amongst local governments to create consistent and thorough participation education coastline matters. Rewards could include priorities in budgets for coastline infrastructure/maintenance/activities.
- A hybrid approach – mandatory and incentive-based.

R68. Review the current legal status of the general public and various stakeholders to see whether there are any limitations on *legal standing* in coastal matters.

Legal standing means the public's right to be heard by all planning and environmental authorities, as well as the right to submit appeals and submissions before quasi-judicial and judicial bodies.

Due to the special status of the coastal zone as a special public good, the legal standing should be as broad as possible. It should not be limited by categories that often limit standing in other areas – sometimes called “direct interests”. For example, it should not be limited only to landowners, residents of a nearby zone, people or entities with a direct economic interest, or specific NGOs. Rather, legal standing on coastal management matters should be extended to the wider public and all public groups.

R69. Make use of the Mare Nostrum Network to gather information about coastal issues.

As we discussed in Section 4.3, a network of NGO's was established as part of the Mare Nostrum project. This Network can be used as a tool for gathering regional or cross border information and for discussing environmental issues in the Mediterranean coastal and marine zone.

R70. Adopt national legislation which gives at least one seat to relevant NGOs in any committee or statutory body with direct or indirect authority in coastline management matters.

Israeli law requires that representatives from relevant NGOs are given a seat and right to vote in public committees and boards. This requirement has proven an important tool which promotes transparency, flow of information and sustainable decision-making. The presence of NGOs on committees also serves to create more trust between the government, NGOs and the public. When all parties work together, there is by definition more integration in decision-making.

19.2.3 Recommendations for local governments

R71. Utilize local observatories to allow for exchange of information between the government and the public.

Interactive observatories allow for the decision-makers and the public to share information regarding the environmental and legal-regulatory aspects of the coastal zone, as demonstrated by the model Observatory in Kavala.

R72. Monitor public participation in coastal zone management.

Monitor the extent to which the public are involved in decisions relating to the coastal zone, to allow analysis and reporting, with the goal of improving participation on these issues.

R73. Encourage relevant NGO's to work in coordination with the local government.

NGO's have a crucial role in protecting the environment, therefore local governments should acknowledge their contribution and find ways to work with them. For example, in Haifa, Israel, NGOs have been invited to join round table meetings on coastal zone management issues.

19.2.4 Recommendations for NGOs

R74. Establish a national network of NGOs with an interest in coastal zone and marine issues.

As part of protecting the environment it is very important the NGO's will not work in its own but establish a national network that will share information and work together on projects that will help protect the coastal zone. This will serve the coastal and marine zone but also the limited budget of NGO's.

R75. Actively share information and resources through the Mare Nostrum Network.

The Mare Nostrum Network has already encouraged sharing of information and resources. Now that the platform has been developed, we hope this cooperation will continue into the future.

19.2.5 Alternative tools

The following alternative tools emerge from the above recommendations.

- T64. Web-based GIS local observatories (e.g. Kavala ICZM Observatory)**
- T65. Citizen science – encouraging citizens to report on environmental phenomena (e.g. Haifa’s citizen science tool)**
- T66. Law requiring governments to consult with the public on coastal issues**
- T67. Incentives for governments to consult with the public on coastal issues**
- T68. Involvement of NGOs in government decisions**
- T69. Community charters – to be developed jointly by the community and decision-makers on specific issues (e.g. Malta’s Grand Harbour Charter)**
- T70. Mare Nostrum Network of NGOs**

CHAPTER 20 Toolkit: Cross-border Cooperation

20.1 Summary of the issue

As mentioned in our chapter on cross-border cooperation (Chapter 3), the Mare Nostrum project team encountered significant problems in cross-national coordination, even among European countries. Such problems are maybe even more severe among north African and Middle Eastern countries and between the north and south coasts of the Mediterranean.

It seems that to date, the cross-national meetings facilitated by the EU have not dealt with the legal-institutional issues. Thus even neighbouring countries such as Spain and France have very little knowledge of the practices of their neighbours.

20.2 Recommendations

20.2.1 Recommendations for the UN

R76. Promote cross-border dialogue as a step to coordination.

Throughout this report we have recommended a number of topic or issue-based forums which may be instituted to promote cross-border dialogue. These include:

- Ports and Cities forum
- Cadastre forum
- Forum of Enforcement Officers

20.2.2 Recommendations for the EU:

R77. Create an informal body to discuss regulatory practices.

Such a body would include not only planning agencies, but the relevant agencies in charge of public land ownership. Because much of the knowledge about regulation is found at the local level, it would be appropriate to include local governments in such a forum. Local governments might participate, for example, on a rotating basis.

20.2.3 Alternative tools

The above recommendations refer to tools outlined earlier in this report – refer T6 and T57. The following additional tools emerge:

T71. Ports and cities forum

As described at Section 4.4 of this report.

T72. Informal body, overseen by the EU, to discuss regulatory practices

CHAPTER 21 Toolkit: Managing Climate Change

21.1 Summary of the issue

We did not find adequate preparation for sea level rise in the Mediterranean. Despite the fact that the risk of sea level rise is lower in the Mediterranean than in some other seas and oceans, this is still an important factor to consider and is raised as a key threat in the ICZM Protocol.

The Mediterranean seashores will need various public works to improve environmental protection as well as to adapt to climate change. Often the financial burden is much beyond what local governments can bear. We did not encounter evidence of robust funding programs for such public works. Examples of public works include:

- Sand nourishment and restoring sand dunes.
- Protection against cliff erosion (Figure 22), such as through natural means
- Relocating current infrastructure (such as roads and rail) away from the coastal zone



Figure 22 – Cliff erosion on Israel's coastline

(Source: Israeli government report on cliff erosion, 2007 – www.gsi.gov.il)

21.2 Recommendations

21.2.1 Recommendations for the UN

R78. Carry our projections for sea level rise in the Mediterranean and disseminate.

It is important to ensure that not only scientists, but also national and local governments, receive this information.

21.2.2 Recommendations for the EU

R79. Provide funding for ICZM-related public works

We recommend that the EU considers coastline preservation as a special topic for funding assistance. We did see evidence of the usefulness of EU support in partner countries; however, projects had to compete with more general funding categories, rather than a

dedicated coastline program. (recommendation = dedicated coastline preservation and management funding support).

21.2.3 Recommendations for national governments

R80. Obtain projections for sea level rise and reevaluate critical coastal issues, including the extent of the setback zone in various topographies.

Countries should evaluate the potential impact of sea level rise on current buildings and uses.

As countries have different legal regimes regarding property rights and compensation, each country should develop potential scenarios for how to adapt to sea level rise. This should include potential need for evacuation; degree of obligation for provision of alternative housing; rights to compensation.

Countries should review all approved plans to see whether there are rights or expectations for development which should be cancelled in adaption to climate change.

R81. Assess the role of insurance companies in relation to sea level rise and the coastal zone.

Should insurance companies be encouraged to insure property owners in the case of sea level rise? Alternatively, should there be limits on their freedom to do so? (A high reliance on insurance companies may weaken adequate preparation for sea level rise).

R82. Institute regulatory instruments which will encourage landowners to distance uses and development from the coastal zone.

It appears that available funding is usually insufficient to pay for distancing of various uses under threat from the coastal zones. In order to encourage current property owners to distance their uses away from the coastal zone, national government should consider changing laws to enable a variety of instruments, such as “transfer of development rights”. We did not find evidence of use of such instruments in our study countries.

21.2.4 Alternative tools

The following alternative tools emerge from the above recommendations:

T73. Sea level rise projections

T74. ICZM-related public works as a special topic for EU funding program

T75. Defined roles of insurance companies in climate change

T76. Transfer of development rights

REFERENCES

- Alfasi, N. (2009). Can planning protect the public interest? The challenge of coastal planning in Israel. *Geography Research Forum* (Vol. 29, pp. 83-102).
- Alterman, R., Adam, R., Fox, J. and Pellach, C. Eds. (2013). First Interim Report. Existing Knowledge on Legal-Institutional Frameworks for Coastline Management. The International, EU and National Levels. Mare Nostrum Project.
- Alterman, R. Ed. (2001). National-level planning in democratic countries: an international comparison of city and regional policy-making. Liverpool University Press. Chicago.
- Alterman, R. Ed. (2010). Takings international: A comparative perspective on land use regulations and compensation rights. American Bar Association Publishers.
- Alterman, R. (2012). Land Use Regulations and Property Values: The 'Windfalls Capture' Idea Revisited. Chapter in: *The Oxford Handbook of Urban Economics and Planning* (Nancy Brooks, Kieran Donaghy, and Gerrit-Jan Knaap, eds.) pp. 755-786.
- Alterman, R. (2011). Comparative research at the frontier of planning law: the case of compensation rights for land use regulations. Guest Editorial: *International Journal of Law in the Built Environment*, 3(2), 100-112.
- Arnstein, S. R. (1969). A ladder of citizen participation. *Journal of the American Institute of planners*, 35(4), 216-224.
- Babacan Tekinbas, Belma, Yargı Kararlarında Planlama, TMMOB SPO, Ankara, 2008.
- BBC News, 29 September 2003: *Landmine deaths on Greek border*. Available at – <http://news.bbc.co.uk/2/hi/europe/3149744.stm> – Last accessed July 2016.
- Beatley, T., Brower, D., & Schwab, A. K. (2002). An introduction to coastal zone management. Island Press.
- Belknap RK (1980). Corporate response to coastal zone management: a case study of the Irvine coastal area. *Coast Zone Manag J* 8(2):123–164.
- Calor, I. and R. Alterman (forthcoming, 2017), “Beyond Enforcement: Legal and Policy Responses to Non-Compliant Development in Advanced-Economy Countries “. *International Journal of Law in the Built Environment*.
- Carmon, D. and R. Alterman. (2011). Will My Voice Be Heard? Public participation and the right to be heard in planning procedures in Israel. Center for Urban and Regional Studies, Technion (Hebrew).
- Cicin-Sain B, Knecht RW (1998). Integrated coastal and ocean management: concepts and practices. Island Press, Washington, DC.
- Davis Jr, R., & Fitzgerald, D. (2009). *Beaches and coasts*. John Wiley & Sons.

De Langen, Peter W, and Michiel N Nijdam. (2007). Charging Systems for Waste Reception Facilities in Ports and the Level Playing Field: A Case from North-West Europe. *Coastal Management*. 36 (1): 109–24.

Dimitriou E., et al., (2012). Assessing the environmental status and identifying the dominant pressures of a trans-boundary river catchment, to facilitate efficient management and mitigation practices, *Environmental Earth Sciences*. 66(7):1839-1852.

European Commission Press Release, 24 November 2015: *EU-Turkey Cooperation: A €3 billion Refugee Facility for Turkey*. Available at – http://europa.eu/rapid/press-release_IP-15-6162_en.htm – Last accessed July 2016.

European Commission - Fact Sheet, 19 March 2016: *EU-Turkey Agreement: Questions and Answers*. Available at – http://europa.eu/rapid/press-release_MEMO-16-963_en.htm – Last accessed July 2016.

European Environment Agency. (2006). *The changing faces of Europe's coastal areas*. Office for Official Publ. of the Europ. Communities.

European Parliament (2009). *Report on the impact of extensive urban development in Spain on individual rights of European citizens, on the environment and on the application of EU law, based upon petitions received*. (2008/2248(INI)).

Eurostat website: Data table: *Asylum and first time asylum applicants by citizenship, age and sex Annual aggregated data (rounded)* – Available at – <http://appsso.eurostat.ec.europa.eu/nui/submitViewTableAction.do> – Last accessed July 2016.

Felleman JP (1982). Visibility mapping in New York's coastal zone: a case study of alternative methods. *Coast Zone Manag J* 9(3):249–270

Hall, Peter V., and Wouter Jacobs. (2012). Why Are Maritime Ports (Still) Urban, and Why Should Policy-Makers Care? *Maritime Policy & Management*. 39 (2): 189–206.

Healey, P. (1997). Planning through debate: the communicative turn in planning theory, in: Fainstein and Campbell (eds.), *Readings in Planning Theory*, Blackwell publishers, 234–258.

Kibaroglu A., et al., (2005) Cooperation on Turkey's transboundary waters, Status Report commissioned by the German Federal Ministry for Environment, Nature Conservation and Nuclear Safety.

Koutrakis M. (2015) Coastal fisheries in the Gulf of Alexandroupolis, A report prepared for the Mare Nostrum project.

Lalenis, K and Papatheocharis, I. Eds. (2015). Second Report: Existing Practices and Impediments to Implementation. The Local and Cross-National Level. Second Edition. Mare Nostrum Project.

Lior, I, Shpigel, N and Ben Zikri, (2016, March 15). Entry Fees at 10 Israeli Public Beaches to Be Eliminated. *Haaretz*. Retrieved from <http://www.haaretz.com/israel-news/.premium-1.709080>

Nivolianitou Z. and Synodinou B. (2012) Environmental management of big riverine floods: the case of Evros River in Greece, 5th WSEAS International Conference on Natural Hazards (NAHA '12), September 7-9, Sliema, Malta.

Ozhan, Erdal, the Presentation in the National Workshop: Latest Developments in the Coastal Zone Management in Turkey, Marmaris, 2013.

PAP/RAC program, United Nations: Coastal Area Management in Turkey, Priority Actions Programme Regional Activity Centre, Split, 2005.

Portman M. E., Esteves L. E., Le X. Q., Khan A. Z. (2012) Improving integration for integrated coastal zone management: an eight country study. *Sci Total Environ* 439:194–201

Portman M. E. (2016) *Environmental Planning for Ocean and Coasts: Methods, Tools and Technologies*. Swinger. Switzerland.

Robillard, W. G., Brown, C. M., & Wilson, D. A. (2003). *Brown's boundary control and legal principles*. John Wiley & Sons.

Rochette, Julien, and Raphaël Bille. (2012). ICZM Protocols to Regional Seas Conventions: What? Why? How? *Marine Policy*. 36(5): 977–984.

Rinat, Zafrir. (2015, December 23). Palmahim Beach National Park Plan May Run Aground. *Haaretz*. Retrieved from <http://www.haaretz.com/israel-news/.premium-1.721599>.

Rinat, Zafrir. (2016, May 27). Thanks to this man, you don't have to pay to go to the beach in Israel. *Haaretz*. Retrieved from <http://www.haaretz.com/israel-news/science/.premium-1.693303>.

Rupprecht Consult. (2006). Evaluation of integrated coastal zone management in Europe. European Commission, Cologne. p. 6-7.

Sano, M., Lescinski, J., Marchand, M., Medina, R., & Van Rijn, L. (2010). *On the use of setback lines for coastal protection in Europe and the Mediterranean: practice, problems and perspectives*. CONSCIENCE Project.

SHAPe. (2013). *Ensuring appropriate co-ordination: An explanatory report on Article 7 of the ICZM Protocol, Including an Outline for the report on institutional framework for sustainable ICZM coordination*. Split, January 2013.

Sylaios, G. K., Lalenis, K., Anastasiou, S., Papatheocharis, I., & Kokkos, N. (2015). A Tool for Coastal Setbacks Demarcation over Rough, Impermeable Shores: The Test Case of Kavala Coastline (Northern Greece). *Coastal Management*, 43(5), 519-538.

Takacs, D. (2008). The Public Trust Doctrine, Environmental Human Rights, and the Future of Private Property. *New York University Environmental Law Journal*, 16, 711–765.

UNEP (2001). *MAP CAMP Project "Israel": Final Integrated Report and Selected Documents*. MAP Technical Report Series No. 134. Part of United Nations Environment Programme Mediterranean Action Plan.

UNEP (2006). *Marine and coastal ecosystems and human well-being: a synthesis report based on the findings of the Millennium Ecosystem Assessment*. UNEP, Nairobi.

Unsal, Fatma, (2015). *Coastline Legislation and Implementation in The Framework of Planning in Turkey*. Report prepared for the Mare Nostrum project.

Verwijmeren, J., & Wiering, M. A. (Eds.). (2007). *Many Rivers to Cross: Cross Border Co-operation in River Management*. Eburon Uitgeverij BV.

World Bank population statistics – www.data.worldbank.org

World Resources Institute, coastline lengths -
<https://web.archive.org/web/20120419075053/http://earthtrends.wri.org/text/coastal-marine/variable-61.html>

Interview with Professor Georgios Sylaios on environmental cross-border issues at the Evros Delta. By Na'ama Teschner, 29 July 2015.

Cross-border meeting between Eilat and Aqaba authorities and stakeholders. March 3, 2015, Aqaba. Participants included officials from the following organizations:

- Mare Nostrum Project:
 - ACPD
 - Technion
 - SPNI
- Aqaba Development Corporation (ADC)
- Marine Science Station / University of Jordan
- Aqaba Special Economic Zone Authority (ASEZA)
- Sindbad Group for Marine Transportation, Jordan
- Aqaba Diving Association
- Royal Jordanian Naval Force
- Jordan Maritime Commission
- Arava Institute for Environmental Studies
- International Birding and Research Center Eilat (IBRCE)
- Eilat Municipality's Department of Regional Cooperation
- Israeli Nature and Parks Authority
- Israeli National Monitoring Program
- Arava & Dead Sea Science Center (ADSSC)
- Eilat Eilat Environmental Unit

Detailed information from presentations by:

- Taghreed Al-Maaytah (ASEZA)
- Manar Obedat (ASEZA)
- Amani Al-Bawab (ADC)
- Noam Weiss – head of Eilat Bird Centre
- Nitzan Segev – Israeli National Monitoring Program
- Rina Kedem – Arava & Dead Sea Science Centre
- Assaf Admon – Eilat Eilat Environmental Unit

APPENDIX I

RELATED EU AND OTHER PROJECTS

The Mare Nostrum project is the first in the world in which partners analysed the legal and policy aspects and the implementation gap in ICZM – cross nationally and systematically. But this project took place within the context of a vast array of other projects and programs – past and present – which deal with coastal zone and environmental management. Below we present descriptions of a sample of related projects, most of them, like the present program, were financed by the EU. None of the project have focussed on land and building regulation issues – the focus of the present project.

The list below is adapted from a list prepared by Ronnie Ginat and Jesse Fox for the Mare Nostrum First Interim Report.

ENPI CBCMED Projects

The following projects were part of the ENPI CBCMED (European Neighbourhood and Partnership Instrument for Cross Border Cooperation in the Mediterranean Sea Basin) programme, along with the Mare Nostrum project.

MED-JELLYRISK

<http://www.jellyrisk.eu>

This was the only other project funded under the same category as the Mare Nostrum project:

Strategic Projects, Priority 1: Promotion of socio-economic development and enhancement of territories, Topic 1.3 Integrated coastal zone management.

The project overview (Med-Jellyrisk brochure, ENPI CBCMED):

“The Mediterranean coasts are facing increasing jellyfish outbreaks resulting from a wide variety of human activities including maritime transport, exploitation of living resources, discharges together with the impact of climate change. Jellyfish proliferation represents a growing threat for human and coastal activities (mainly leisure and aquaculture). Every summer 2 million bathers are affected by jellyfish stings meaning high cost of basic first aid treatments for the national health services. The situation has worsened over the last years due to the apparition of new dangerous varieties. Against the threat posed by jellyfishes for tourism in the Mediterranean area, MED-JELLYRISK constitutes the first-ever attempt at cross-border level in order to assess the socio-economic impacts of jellyfish blooms and implement mitigation countermeasures.”

MEDSEATIES: Inclusive governance for sustainable Mediterranean coastal metropolis

<http://www.medseaties.eu>

The project overview (Medseaties brochure, ENPI CBCMED):

“The need for integrated governance, involving multi-level decision-makers and cross-sectoral stakeholders, is getting higher in the Mediterranean Sea Basin. This is particularly true in costal urban areas, which are increasingly affected by urbanisation and environmental issues. Whereas coastal management requires local actions, local authorities are not systematically involved in the design of policies and programmes due to

the lack of financial and technical capacities. In addition fragmented efforts and limited capacity building act as a major barriers which have to be overcome to enhance the sustainable management of coastal urban areas. The participation of civil society also constitutes a major challenge. In order to contribute to a better management of coastal cities, MEDSEATIES aims to empower Mediterranean local authorities (both decentralized authorities and State local agencies) and private stakeholders in multilevel and participatory decision-making processes.”

Other EU Projects

PEGASO, 2010-2014

<http://www.pegasoproject.eu> (Algeria, Belgium, Egypt, France, Greece, Croatia, Italy, Lebanon)

The main objective of PEGASO was to build on existing capacities and develop common novel approaches to support integrated policies for the coastal, marine and maritime realms of the Mediterranean and Black Sea Basins, in ways that are consistent with and relevant to the implementation of the ICZM Protocol for the Mediterranean.

PEGASO used the model of the existing ICZM Protocol for the Mediterranean and adjusted it to the needs of the Black Sea through three innovative actions:

- Constructing an ICZM governance platform as a bridge between scientists and end-user communities.
- Refine and further develop efficient and easy to use tools for making sustainability assessments in the coastal zone (indicators, accounting methods, models and scenarios).
- Implementation of a Spatial Data Infrastructure (SDI), following the INSPIRE Directive, to organize and standardize spatial data to support information sharing on an interactive visor, to make it available to the ICZM Platform, and to disseminate all results of the project to the end users and interested parties.

The implications of accepting the precepts of ICZM and EsA (Ecosystem Approach) as fundamentally adaptive, problem solving techniques are profound for Pegaso, as its work program is being designed to achieve demonstrable social learning outcomes and documented behaviour change.

INSPIRE – Infrastructure for Spatial Information in the European Community

The INSPIRE Directive entered into force in Europe in May 2007, establishing an infrastructure for spatial information to support Community (27 Member States of the EU) environmental policies, and other policies or activities which may have an impact on the environment. It is being implemented in stages, with full implementation required by 2019. <http://inspire.jrc.ec.europa.eu>

A European Spatial Data Infrastructure will assist in policy-making across boundaries, by overcoming barriers, including:

- Inconsistencies in spatial data collection, where spatial data is often missing or incomplete or, alternatively, the same data is collected twice by different organizations
- Lack or incomplete documentation of available spatial data

- Incompatible SDI initiatives within a Member State that often function only in isolation
- Cultural, institutional, financial, and legal barriers preventing or delaying the sharing of existing spatial data
- The key elements to overcome these barriers include:
 - Metadata to describe existing information resources so data can be more easily found and accessed
 - Harmonization of key spatial data themes needed to support environmental policies in the European Union
 - Agreements on network services and technologies to allow discovery, viewing, and downloading of information resources and access to related services
 - Policy agreements on sharing and access, including licensing and charging
 - Coordination and monitoring mechanisms.

COASTANCE Project

Regional COmmon Action STrategy AgaiNst Coastal Erosion and climate change effects for sustainable coastal planning in the Mediterranean basin (Croatia, Cyprus, France, Italy, Greece, Spain), 2009 -2012. <http://www.coastance.eu>

The increasing phenomena of erosion and marine flooding risks in the mid to long term related to the effects of climate change (sea level rising, extreme storm events, increasing frequency & intensity) makes it necessary for public administrations to take a strategic approach to Integrated Coastal Zone Management (ICZM), with particular emphasis on coastal protection.

The project outputs included:

- Sustainable Technologies for exploiting sand stocks
- Sustainable Technologies for coastal protection and adaptation
- Environmental Impact Assessments of the new technologies (dredging activities, nourishment work etc.) and Strategic Environmental Assessment
- Mid to Long Term planning actions for climate change adaptation in coastal zones (EU Directive 2007/60/EC):
 - Development of Territorial Action Plans for adapting coastal zones to climate change, against erosion effects and submersion risk
 - Definition of Sediment Management Plans (SMPs) for both off-shore and littoral deposits exploitation
 - Appropriate Environmental Impact Assessment Protocols in order to ensure correct procedures in intervening along coastal zone.
 - Training and coordination of the competent authorities (ICZM and planning tools)

MAREMED – Maritime Regions Cooperation for Mediterranean, 2010-2013

<http://www.maremed.eu>

In December 2006, the regions of the Mediterranean set up a Working Group on Maritime Policy under the sponsorship of the CPMR Inter-Mediterranean Commission, in order to contribute to the design and delivery of an integrated and sustainable Mediterranean maritime policy. It addressed the thematic areas of marine pollution, integrated management of coastal areas (ICZM), adaptation to the consequences of climate change, fisheries, marine research and data, and

maritime policy governance. EU funding was allocated for the project for the creation of an integrated Mediterranean maritime policy. Partners from France, Italy, Spain, Greece and Cyprus together with the CPMR were tasked with carrying out an overview of policy implementation. The objectives of the project:

- to contribute to the development of integrated management activities across the Mediterranean basin;
- to exchange good practices and methods for developing management plans prepared by projects on ICZM, ICARBM, NATURA 2000 marine areas, protected marine areas or SPAMI projects;
- to identify pilot sites for transnational or interregional co-management;
- to assess the consistency of existing schemes with European and Mediterranean legislation and agreements (Mediterranean ICZM Protocol).

SHAPE

Shaping a Holistic Approach to Protect the Adriatic Environment between coast and sea – 3-year project, ended March 2014. <http://www.shape-ipaproject.eu>

SHAPE was a comprehensive project for the Adriatic Region aiming at creating the basis for the protection and the sustainable development of the coastal-marine environment. The project promoted strengthening of institutional capacity to preserve and manage natural and cultural resources and risk prevention, assuring the rational use of the Adriatic Sea and its resources and enabling conflict resolution among different uses. The partners involved recognize the Adriatic Sea as a single water body (same approach is also envisaged in the EU Marine Strategy Framework Directive) because of its sensitivities and the growing pressures from human activities. The SHAPE project dealt with a variety of issues, including cross-border coordination, ICZM and shipping.

The Adriatic coastal zone is an area of intense activity, an area of interchange between physical, biological, social, cultural and economic processes. The most important activity of PAP/RAC (the coordinator of ICZM activities) within the SHAPE project was to provide its expertise and know-how in bringing regional partners together for successful cross-national and cross-sectoral cooperation within the ICZM framework; it demonstrated the framework within the governance structure that needs to be in place for the Protocol implementation and provided capacity building for the partners, enabling them to take the lead in the ratification of the ICZM Protocol and implementation.

ENCORA - European Network on Coastal Research

The initiative was launched to improve sharing of knowledge and experience within Europe, in two respects:

- Overcome existing fragmentation of coastal expertise. In all European coastal states many institutions are engaged in coastal and marine studies related to science, practice or policy. Together these institutions constitute a huge resource of knowledge and experience. However, as much work is done in isolation, this resource is not fully exploited.
- Better exploit scientific knowledge in practice. Scientific knowledge is communicated mainly among fellow experts; scientific publications focus on specific disciplinary aspects and are

almost inaccessible to non-expert coastal and marine professionals. Existing publication practices are not appropriate for passing on new insight to practice.

ENCORA recognized the need for addressing the coastal zone as an integral entity and took advantage of the GISIG network (Geographical Information Systems International Group) for geo-information.

The ENCORA Project succeeded in constructing a platform formed by national networks of coastal scientists, politicians and practitioners from Europe, the southern Mediterranean and Black sea states. The ENCORA Platform was established to:

- Create contacts for exchange of knowledge and experience among coastal zone experts, including researchers as well as practitioners in order to fill information gaps.
- Create communities of practitioners, and new occasions for collaboration.
- Contribute to a State of the Art report on ICZM throughout Europe.
- Contribute, in a second phase of the project, to a European Action Plan for integrated Coastal zone management.

A Coordination Action co-funded by the EU 6th Framework Programme, 2006-2009 (Belgium, Denmark, France, Germany, Greece, Ireland, Italy, Monaco, the Netherlands, Poland, Portugal, Russia, Spain, Sweden, the United Kingdom and Ukraine).

OURCOAST

Through OURCOAST, the EC aimed to ensure that lessons learned from the coastal management experiences and practices could be shared and would be made accessible to those who are seeking sustainable solutions to their coastal management practices. It focused in particular on adaptation to risks and the impacts of climate change, information and communication systems, planning and land management instruments, and institutional coordination mechanisms.

OURCOAST sought to help fill in the gap regarding exchange of experiences and access to studies and best practices produced, and to provide a platform for exchange of knowledge. <http://ec.europa.eu/environment/iczm/home.htm>

The main final product of OURCOAST is the ICZM Database – a comprehensive compilation of hundreds of case study summaries that reflect successful examples of ICZM tools applied throughout Europe. A multi-lingual website hosts the ICZM database and provides navigation and information in ten European languages.

Three-year project (2009-2012) commissioned by the DG Environment of the EC to support and ensure the exchange of experiences and best practices in coastal planning and management

BaltSeaPlan

The project BaltSeaPlan (2009-2012) accompanied the EU Maritime Policy by supporting the introduction of Integrated Maritime Spatial Planning and preparation of National Maritime Strategies within the Baltic Sea Region. It also contributed to the implementation of the HELCOM recommendation on broad-scale Maritime Spatial Planning.

HERMES (Deep Sea Research)

<http://www.eu-hermes.net>

The project (2005-2009) provided new insights into the biodiversity, structure, function and dynamics of ecosystems along Europe's deep-ocean margin with the goal of strengthening future development of a comprehensive European Ocean and Seas Integrated Governance Policy. It represented the first major attempt to understand European deep-water ecosystems and their natural environment in an integrated way by bringing together experts in marine geology, oceanography, biology, ecology, geophysics, microbiology, geochemistry, modeling and socio-economics.

MedPAN (Mediterranean Protected Areas Network)

The project (2005-2007) created a network with the goal of facilitating exchange between managers of Mediterranean marine protected areas (MPA) in order to improve the efficiency of the management of these areas. It was funded by the Interreg IIIC South Initiative and brought together 23 partners from 14 countries around the shores of the Mediterranean.

21.2.5 ECASA (Ecosystem Approach for Sustainable Aquaculture)

The project involves 16 research partners from 13 member states with the goal of addressing the effects of aquaculture on the environment, especially in the Mediterranean.

The three main objectives:

- Identify and assess quantitative and qualitative indicators of the effects of aquaculture on the environment and vice-versa
- Assess and develop operational tools (models) to establish and describe the relationship between environmental conditions and aquaculture activities over a range of ecosystem conditions
- Develop effective environmental impact assessment and site selection.

CADSEALAND, Integrated view of land-sea interaction

<http://cadsealand.cinfai.it/project.htm> 2004-2006.

The project was the result of the merging of two different streams of activity for protecting coastal areas:

- protection of specific coastal areas (often stimulated by catastrophic events) with territorial problems. According to international documents, the percentage of protected coasts in these regions was less than 20%; serious problems of erosion were felt in the Italian, Romanian and Greek areas considered in the project.
- development of standards/guidelines for coastal management for assessing the "state of the coast", its evolution and the causes of these changes.

BEACHMED Regional Framework Operation

Strategic management of beach protection for sustainable development of Mediterranean coastal zones, 2005- 2008.

The main objective of the project was to identify and improve technical and administrative tools for the strategic management of coastal protection, in order to achieve sustainable development of the Mediterranean coastal zones.

Three main components were addressed:

- The design and implementation of technical tools regarding erosion at European level and to use resources in a sustainable way
- Establishment of tools to manage the connection between urban-land development and morphologically fragile areas (regarding ordinary and exceptional sea storms)
- Establishment of organizational tools so that all parties involved (private and public) can define, regulate and manage coastal protection.

MedSea - The European Mediterranean Sea Acidification in a Changing Climate

The Initiative was funded by the European Commission and involves 22 institutions (including 6 associated partners) from Spain, France, Israel, Greece, Italy, UK, Germany, Morocco, Egypt, Tunisia.

Experts in the project provided science-based projections of Mediterranean acidification and associated economic impacts, under the influence of climate change. The goal was to contribute to the development of regional strategies for adaptation and mitigation.

Project objectives:

- Identify where impacts of acidification will be significant.
- Generate new observational and experimental data on Mediterranean organisms and ecosystem responses to acidification.
- Provide best estimates and related uncertainties of future changes in Mediterranean Sea pH, CaCO₃ saturation states, and other biogeochemical-ecosystem variables.

CoastLearn

An internet based distance vocational training package on ICZM, an initiative of the Coastal and Marine Union – EUCC. This self-learning tool targets primarily coastal managers and planners working at local, sub-national, and national levels. The secondary target groups are university students and NGOs. It is a multilingual tool, available fully or partly in 13 languages so far. It promotes the exchange of knowledge and experience by providing practical examples and case studies.

CoastLearn is divided into thematic modules that can be studied independently. One of the modules of the training package is on the principles of ICZM:

<http://www.coastlearn.org/intro/index.html>

Additional modules include: Policy Analysis; Geographical Information Systems; Planning; Environmental Risk Assessment; Sustainable Tourism; Public participation; Biodiversity.

There is an example of a case study from Kavala that identifies the need to establish a Coastal Observatory to retain geographic data and to organize a coastal monitoring program:

<http://www.coastlearn.org/practice/kavala.htm>

Interreg

An initiative that aims to stimulate cooperation between regions in the EU on different levels. It began in 1989 and is financed under the European Regional Development Fund. One of its main targets is to diminish the influence of national borders in favour of equal economic, social and cultural development of the whole territory of the European Union. It does this by strengthening economic and social cohesion and promoting cross-border, transnational and interregional cooperation.

COREPOINT - a partnership of research centres, local authorities and coastal networks

The project aimed to advance integrated coastal zone management (ICZM) in northwest Europe through a network of local authorities, research organizations and NGOs. It involved 12 partners from Ireland, the United Kingdom, France, Netherlands and Belgium and enabled a comparison of approaches to ICZM at the northwest Europe scale; a series of workshops was hosted to promote the principles contained in the European Union's recommendation on ICZM. The objective of the project was to strengthen links between researchers and policy makers to orientate relevant research towards problem solving at the local level within the coastal zone.

Relationships between local authorities and research groups formed the basis of the project at nine study sites across North West Europe. Recommendations from the project include: continuing to advocate the use of ICZM as a means of bridging the strong land/sea divide; promoting the wider use of the ICZM Progress Indicator through wide stakeholder involvement and repeated assessment; continued support for communication, coordination and collaboration between planning and ICZM; other recommendations advocate new approaches or material for consolidating capacity building for ICZM in North West Europe.

Partners were from Belgium, France, Ireland, the Netherlands, United Kingdom, funded under the INTERREG IIIB programme, 2004-2008.

ECO-IMAGINE

About 10 years ago, the Blue Plan developed the Imagine approach in order to address sustainable coastal zone management needs in the Mediterranean. This approach facilitates the shaping of a sustainable development vision by engaging stakeholders within a participatory process based on systematic analysis. The process is intended to describe, assess and examine the past, present and future levels of sustainability of a local system by means of indicators, setting goals and monitoring the system's progress towards sustainable development. The approach was implemented in Malta, Lebanon, Algeria, Slovenia and Cyprus within integrated coastal zone management projects under the CAMP.

SUSTAIN, Assessing Sustainability and Strengthening Operational Policy

The increasing intensity of human activities along our coastline (e.g. the development of ports and harbours, land reclamation, tourism and sand/gravel extraction) has a severe impact on coastal communities and natural habitats. The key objective of SUSTAIN was to develop a fully implementable policy tool, applicable for all 22 coastal states of the EU, to ensure that the integrated management of coastal issues will be sustainable. It is based on a set of easily measurable sustainability indicators that were developed and assessed during the project to enable Authorities to measure effectively the sustainability of the coasts. The project consisted of 13 partners (including regional and local authorities, universities and NGOs) representing the North Atlantic and South Atlantic seabords, the Mediterranean, Baltic and Black Seas.

SUSTAIN developed an indicator-based methodology and scoring system (numerical value) which enables a self- assessment approach for local and regional authorities, to evaluate their sustainability performance for the purpose of improving the management of coastal zones: http://www.sustain-eu.net/what_are_we_doing/sustain_indicator_set.pdf

Funded through the INTERREG IVC programme, 2010 – 2012.

SPICOSA

An EU integrated project, aimed to create a self-evolving, operational research approach framework for the assessment of policy options for the sustainable management of coastal zone systems. SPICOSA contributed to the understanding of social interactions within coastal zone systems and how these impact the environment and future policies.

Other projects

Spatial Planning in the Coastal Zone: Disaster Prevention and Sustainable Development

This project was funded by the Swedish International Development Cooperation Agency (Sida, 2010 – 2012). Participating countries: Cambodia, Indonesia, China, Vietnam Thailand, South Korea.

The overall goal of the project was to reduce and prevent the impacts of natural disasters, climate change and sea level rise and to promote sustainable development of the coastal areas in COBSEA member countries through the application of spatial planning for ICZM and Ecosystem Based Management.

The Regional Resource Document “Spatial Planning in the Coastal Zone of the East Asian Seas Region: Integrating Emerging Issues and Modern Management Approaches” was the main outcome of Phase I of the project:

<http://www.cobsea.org/documents/COBSEA%20Spatial%20Planning%20Regional%20Resource%20Document.pdf>



Project
funded by the
EUROPEAN UNION



**ENPI
CBCMED**
CROSS-BORDER COOPERATION
IN THE MEDITERRANEAN



Mare Nostrum