# INTERREG MED programme 2021-2027

# Territorial diagnosis and SWOT analysis

Final Report 23 March 2020



Programme co-financed by the European Regional Development Fund



# TABLE OF CONTENTS

Intro	duction		7
1.	Genera	l Characteristics of the Mediterranean area	9
1.1.	Natural,	physical and geographic characteristics	9
1.2.	Social an	d territorial cohesion	10
1.2	.1.	Demography	10
1.2	.2.	Employment	13
1.2	.3.	Education	14
1.3.	Economy	y and development perspectives	15
1.3	.2.	Regional disparities and catch up process	15
1.3	.3.	The potential of Blue Economy in the Mediterranean area	16
2. coope	Econor eration	nic development and innovation: potentialities and perspectives for a stre	onger 18
2.1.	EU Strate	egic priorities	18
2.2.	Key issue	es for a smarter Mediterranean area	19
2.2	.1.	Research, development and innovation	19
	a.	Room for improvement in Mediterranean regions	19
	b.	Key challenges for the future	20
2.2	.2.	Information and Communication Technologies to support Mediterranean challenges	22
2.2	.3.	Accessibility and mobility in Mediterranean Regions	23
	a.	Accessibility of Mediterranean areas	23
	b.	Sustainable mobility	25
2.2	.4.	Business competitiveness, especially of SMEs	26
2.3.	SWOT ar	nalysis for a smarter Mediterranean Area	28
2.4.	Perspect	ives for the INTERREG MED programme 2021-2027	31
2.4	.1.	Lessons learnt from 2014-2020 INTERREG MED programme	31
2.4	.2.	Added value of the INTERREG MED programme 2021-2027	31
3. 3.1.	Sustain EU strate	able development: necessity of adaptation in a fast-changing environment	33 33
3.2.	Kev issue	es for a greener Mediterranean area	34
3.2	.1.	Renewable energies production, energy distribution and energy efficiency	34
3.2	.2.	Water management, waste management and sea protection	37
3.2	.3.	Climate change adaptation, risk management and prevention	41
	a.	Accelerated climate change in Mediterranean regions	42



	b.	Increasing natural risks in Mediterranean regions	43
	C.	Sea level rise and coastal erosion	46
	d.	Desertification	48
3.2	2.4.	Protection of the environment and biodiversity	50
	a.	Increasing pressure on very rich and diverse natural resources	50
	b.	Protection measures that can still be improved	51
3.2	2.5.	Which way towards sustainable tourism?	52
3.3.	SWOT A	nalysis for sustainable development in the Mediterranean area	54
3.4.	Perspec	tives for the INTERREG MED programme 2021-2027	57
3.4	1.1.	Lessons learnt from the 2014-2020 INTERREG MED programme	57
3.4	1.2.	Added value of the INTERREG MED programme 2021-2027	57
4.	The te	rritorial dimension of the Mediterranean area	59
4.1.	EU strat	egic priorities	59
4.2	l.1.	General context	59
4.2	L.2.	Rationale of Policy Objective 5	60
	a.	Regulatory framework	60
	b.	Focuses of the Policy Objective 5	60
4.2.	Key Ter	ritorial issues for the Mediterranean area	62
4.2	2.1.	Coastal areas	62
4.2	2.2.	Sea	62
4.2	2.3.	Hinterland /remote areas	63
4.2	2.4.	Mountainous areas	65
4.2	2.5.	Islands	66
4.3.	Perspec	tives for the INTERREG MED programme 2021-2027	66
4.3	3.1.	Lessons learnt from 2014-2020 INTERREG MED programme	66
4.3	3.2.	Added value of the INTERREG MED programme 2021-2027	67
4.4.	SWOT a	nalysis and Implementation conditions	70
5.	Goveri	nance perspectives for the INTERREG MED programme	73
5.1.	EU strat	egic priorities	73
5.2.	Key issu	es for a better governance in the Mediterranean	74
5.2	2.1.	Sea Basin Strategy	75
5.2	2.2.	Macro-regional strategies in the Mediterranean area	75
5.2	2.3.	The WestMed initiative	76
5.2	2.4.	Cooperation with neighbouring countries	77
5.2	2.5.	Cooperation with regional programmes	78
5.3.	Perspec	tives for the INTERREG MED programme 2021-2027	79



5.3	.1.	Lessons learnt from 2014-2020 INTERREG MED programme	79
5.3	.2.	Added value of the INTERREG MED programme 2021-2027	82
5.4.	SWOT a	nalysis and Implementation conditions	82



# <u>MAPS</u>

Map 1 : Transnational cooperation programme Mediterranean 2021-2027	7
Map 2 : Mediterranean biogeographical region	10
Map 3 : Population projection in 2030 in 24 agglomerations	11
Map 4 : Population density in the MED area, 2017	11
Map 5 : Population growth in the MED area, 2016 (Eurostat/GISCO)	12
Map 6 : European migrant crisis, 2015	12
Map 7 : Unemployment rate EU countries, 2018	13
Map 8 : Young people Neither in Employment nor in Education or Training, 2018 (NEETs)	14
Map 9 : Tertiary educational attainment in the EU, 2018	15
Map 10 : GDP per head (PPS), 2017	16
Map 11 : Large-scale areas of high interactions between Blue Growth and sites of conservation interest in EU Mediterranean Countries	17
Map 12 : Regional innovation performance, 2019	20
Map 13 : Innovation performance change 2011-2019	20
Map 14 : Households with broadband access at home, 2018	23
Map 15 : Accessibility potential by road, 2030	24
Map 16 : Mediterranean wetlands, 2020	38
Map 17 : Water ecological status – country comparison	39
Map 18 : Coastal hotspots of plastic pollution in the Mediterranean	39
Map 19 : Place-based circular economy – production and new economic systems	41
Map 20 : Negative climate change impact under a 2°C warming scenario	43
Map 21 : Projected increase in multi-hazard climate-related exposure, 2050	44
Map 22 : The impact of Climate change on Europe	45
Map 23 : Projected change in frequency of coastal flooding events between 2010 and 2100	47
Map 24 : Projected change in meteorological droughts for a high emissions scenario	49
Map 25 : Distribution of EU-27 Natura 2000 sites, 2018	51
Map 26 : Sparsely populated areas and areas with low population potential	64
Map 27 : EU Strategy for the Adriatic and Ionian Region	76



# <u>TABLES</u>

Table 1 : SWOT analysis for a smarter Mediterranean area	28
Table 2 : What innovative solutions for Mediterranean risks?	46
Table 3 : SWOT analysis for sustainable development in the Mediterranean area	54
Table 4 : Crossing of environmental priorities and INTERREG criteria	58
Table 5 : Correspondence between territories and governance bodies	68
Table 6 : SWOT analysis for the implementation of the Policy Objective 5	71
Table 7 : Member States participating in the different sea basins	75
Table 8: Associated partners of the INTERREG MED programme	80
Table 9 : SWOT analysis of the implementation of the INTERREG Specific Objective "Better cooperation governance"	83

# <u>GRAPHS</u>

Graph 1 : Distance to service by type of municipalities in the EU	26
Graph 2 : Changes in greenhouse gas emissions outside the Emission Trading Scheme, 2005-2015 and Europ targets	oe 2020
Graph 3 : Share of renewable energy in the EU Member States, 2018	
Graph 4 : Mean Temperature Anomalies in the Mediterranean Basin	42
Graph 5 : Top tourist regions in the EU, 2017	53

# <u>BOXES</u>

Box 1 : Importance of the coordination with existing initiatives and networks	22
Box 2 : Connecting Europe Facility	25
Box 3 : Clean Energy for Islands Initiative	36
Box 4 : Situation of wetlands	37
Box 5 : Perspectives with the circular economy	40
Box 6 : The storm "Gloria" – January 2020	47
Box 7 : Focus on nature-base solutions	48

# Introduction

#### Objective of the report

The objective of this diagnosis report is to provide detailed information about the MED area and bring relevant inputs to the MED task Force in charge of drafting the 2021-2027 transnational INTERREG MED programme.

Its aim is to provide a wide picture of the socioeconomic and environmental situation of the Mediterranean area, highlight the main trends for the coming years and identify possibilities and opportunities for transnational cooperation. It considers the institutional context of the Mediterranean area, the strategies, programmes and cooperation bodies that should be considered for future EU MED cooperation activities. It also suggests, when relevant, profiles of projects that could contribute more efficiently to reach cooperation objectives.

This report considers an enlarged geographical area as mentioned in the Orientation Paper of the Commission, including regions of three new countries (Andorra, Bulgaria and North Macedonia) (**Map 1**).





Source: Draft Orientation Paper of the European Commission « INTERREG Euro-Mediterranean Area 2021-2027 », 2019

#### Source of information

The diagnosis was elaborated considering EU strategic orientations (EU regulations, orientation papers<sup>1</sup>). It includes information, maps and diagrams provided by key resources like Eurostat (regional yearbook, statistical atlas), EU cohesion reports, analysis and working documents from ESPON, the European Environment Agency, CPMR, Plan Bleu, UfM, WWF, etc.

A series of telephone interviews have been conducted with Task Force members responsible for drafting the next Cooperation Programme. The purpose of these interviews was to refine as far as possible the needs assessment and SWOT analysis and to highlight the faced challenges.

<sup>1</sup> Orientation Paper dedicated to the Interreg Euro-Mediterranean Area 2021-2027 and to other cooperation areas (IPA-CBC, cross border cooperation, Mediterranean and Atlantic area...)

#### Structure of the report

This diagnosis report is structured around five chapters that cover the main issues addressed in the 2021-2027 EU regulations, in the Orientation Paper of the Commission and that are relevant for the Mediterranean area. Beyond the thematic analysis, it emphasises the strong connexions that can be observed between the various intervention fields and the added value that could result from a better coordination between these issues. It attaches also a particular attention to territorial features that constitutes strong specificities of the Mediterranean area (coastal areas, hinterlands, islands, mountainous and remote areas).

The chapters of the report are the following ones:

- 1. General characteristics of the MED area
- 2. Economic development and innovation
- 3. Sustainable development
- 4. The territorial dimension of the Mediterranean Area
- 5. Governance perspectives for the INTERREG MED programme

#### DISCLAIMER

<u>Geography of the programme</u>: The geographic area used to elaborate this diagnosis corresponds to the proposal indicated in the Orientation Paper of the European Commission for the INTERREG MED programme 2021-2027 (integration of Spanish, French, Bulgarian regions, as well as Andorra and North Macedonia). As of the writing of this document (March 2020), this geography has not been approved yet and may be modified following discussions between Member States.

<u>Health crisis 2020</u>: The global health crisis caused by the COVID-19 may have mid and long-term effects on the socio-economic context, on growth, employment, innovation and research in the countries and regions involved in the INTERREG MED programme. As of the writing of the diagnosis, these effects cannot be measured precisely and are therefore not included in the analysis. It is important to note, however, that amongst the main Mediterranean challenges for the years to come, questions linked to the environment and climate change play a major role. The analyses delivered on these themes will remain relevant despite the health crisis and may constitute direct or indirect opportunities to respond to certain effects of the current crisis.

# 1. General Characteristics of the Mediterranean area

#### 1.1. NATURAL, PHYSICAL AND GEOGRAPHIC CHARACTERISTICS

The Mediterranean area is characterised by a **strong identity, specific geographic and climate features** shared by countries and regions located on the northern and southern shore of the sea.

This area hosts 150 million people living on the coasts and doubling during the tourist season. Despite its limited dimension (0,7% of the global ocean surface), the Mediterranean Sea hosts 30% of global sea-borne trade by volume, 25% of worldwide sea-borne oil traffic and is the world's second largest market for cruise ships. These activities put a strong pressure on the environment and protection measures are implemented at international level with 400 UNESCO sites and 236 marine protected areas.

On the north shore of the Mediterranean Sea, the INTERREG MED programme covers a vast territory stretching from the Portuguese regions on the Atlantic coast, to Cyprus at the eastern edge of the Mediterranean. It covers regions of 10 EU countries (Portugal, Spain, France, Bulgaria, almost the entire Italy, Slovenia, Croatia, Greece Malta and Cyprus), Andorra and 4 candidate countries (Bosnia and Herzegovina, Montenegro, Albania and North Macedonia)<sup>2</sup>. The eligible geographic area extends around 25% of the area of the European Union.

The territory has extremely diverse natural, physical and geographic characteristics. It enjoys a maritime coastline of more than 15 000 kilometres and fertile arable plains, which were the cradle of Mediterranean agriculture, with its vine growing and olive and citrus fruit plantations. It also has high mountain ranges such as the Alps, the Pyrenees, and the Pindos. Another characteristic of the MED area is the presence of islands (Balearic Islands, Corsica, or Crete) including two member states (Cyprus and Malta).

With the geographical extension of the programme, additional hinterland regions must be considered as compared to the previous programming period: Extremadura (ES43), Castilla La Mancha (ES42), Comunidad de Madrid (ES30), La Rioja (ES23), Comunidad Foral de Navarra (ES22), Auvergne (FRK2), Limousin (FRI2), Yugozapaden (BG41), Yuzhen tsentralen (BG42), North Macedonia (IAP) and Andorra. These regions (or states for Andorra) are characterised by the presence of mountains, rural and or remote areas with specific challenges (agriculture, geographical isolation, risk of desertification, climate change...).

The juxtaposition of such diverse regions creates both opportunities and challenges for developing the programme area. Its climate, coast, and mountains are true assets (both as a place to live and for tourism) and the programme area is rich in biodiversity and agricultural potential. Yet, the region is also more vulnerable to climate change, and environmental protection needs to be given a high priority.

The Mediterranean biogeographical region is in direct contact with continental, Alpine and Atlantic biogeographical regions which contribute to its large diversity (**Map 2**). As for the Mediterranean Sea, it harbours a tremendous diversity of marine organisms, many of which are endemic to the region. It is estimated that the Mediterranean contains 8–9% of all the world's marine creatures. Many of the lesser-known sponges, sea squirts, sponges, crustaceans etc... can be found hidden amongst the vast underwater meadows or Posidonia beds that grow in shallow coastal waters.

<sup>&</sup>lt;sup>2</sup> This geography of the programme is taken from the Orientation Paper "INTERREG Euro-Mediterranean Area 2021-2027" of the European Commission, 2019. As of writing the diagnosis (March 2020), this geography is only a proposal which has yet to be debated by the Member States.



#### Map 2 : Mediterranean biogeographical region

Source: European Environment Agency, 2017

#### **1.2. SOCIAL AND TERRITORIAL COHESION**

#### 1.2.1. Demography

Today, the MED territory is home to more than 150 million people, or in other terms, almost a quarter of the European population (24.3% of the EU27 population)<sup>3</sup>. This area hosts large and dense urban centres, including many capital cities (Lisbon, Madrid, Roma, Ljubljana, Zagreb, Sarajevo, Podgorica, Tirana, Skopje, Valletta, Athens, Nicosia) and important metropolises (Barcelona, Valencia, Marseille, Lyon, Milan, Naples, Thessaloniki). However, at Mediterranean level, urban density and urban growth are much more important in eastern and southern countries (**Map 3**).

The population density of coastal areas is significantly higher than the European average (142 people per km2 in the MED area compared with 116.3 in Europe as a whole<sup>4</sup>).

On the contrary, one can notice a lower density in hinterland areas of France and Spain, south of Italy, Greece and in many islands (Corsica, Sardinia, Sicilia, Crete, Cyprus) (**Map 4**). In the overall disparities can be very high with a population density varying from 1 318 people/km<sup>2</sup> in Malta<sup>5</sup>, to 23.9 people/km<sup>2</sup> in Portugal's Alentejo region<sup>6</sup>.

 $<sup>^{3}</sup>$  Eurostat, population au  $1^{st}$  January 2012

<sup>&</sup>lt;sup>4</sup> Eurostat, population on 1<sup>st</sup> January 2012

<sup>&</sup>lt;sup>5</sup> Eurostat, population density on 1<sup>st</sup> January 2011

<sup>&</sup>lt;sup>6</sup> Eurostat, population density on 1<sup>st</sup> January 2011



Map 3 : Population projection in 2030 in 24 agglomerations

Source : La Méditerranée, à l'aube d'une métamorphose, Institut d'Aménagement et d'Urbanisme Ile-de-France, Note rapide, mai 2012.

#### Map 4 : Population density in the MED area, 2017



number of inhabitants/km<sup>2</sup>



Administrative boundaries: © EuroGeographics © UN-FAO © Turkstat Cartography: Eurostat — GISCO, 05/2018

Demographic figures reveal that the MED area is globally attractive especially along the coasts and around the main urbanised areas. There are however important discrepancies with some hinterland regions of Portugal, Spain, France, south of Italy, Greece, as well as Croatia and Bulgaria where one can observe a decrease of the overall population between 2005 and 2015 (**Map 5**).

In the overall, since the 1990, migration overtakes natural population growth as the main source of population growth. In 2016, 10.7% of the EU population were born abroad, either outside the EU or in another EU country, an increase of 0.7% compared to 2011. In the MED area, and in their broad trends, migration flows tend to correlate with overall population growth.



#### Map 5 : Population growth in the MED area, 2016 (Eurostat/GISCO)

Map 2.3 Total population change in NUTS 3 regions, 2005–2015



EU-28 = 2.84 DK, DEA, DED, DEE: data before 2007 was extrapolated. PL52: NUTS 2 Source: Eurostat, DG REGIO

#### Source: EUROSTAT/GISCO, 2016

During the 2014-2020 period, migration became a major issue with, in 2015, an arrival of 1,8 million new migrants in the EU. This population concentrated mainly in Germany, Austria, France and Italy but revealed very serious management flows issues for southern countries located on the main migratory routes (Greece, Italy and Spain to a less extent) (**Map 6**).





Source: Maximilian Dörrbecker, Wikipedia. Eurostat and Frontex data

The rapid influx of non-EU citizens in southern EU countries represents a challenge for national and local authorities to provide asylum seekers shelters and food in the areas where they arrive. Integrating them into EU society requires language training, education and help in finding a job or setting up a business.

Numerous activities focusing on migration have been developed under the **European Agenda for Migration** (Action Plan against Migrant Smuggling in May 2015). The Seahorse Mediterranean Network, the European and Mediterranean Coast Guard Functions Forums have also helped to improve cooperation between the countries involved.

However, initiatives and projects are still relatively scattered across the region, and law enforcement capacities, data availability, accessibility, processing and understanding are quite dissimilar and fragmented between countries. Beyond its EU implications (support to and cooperation between countries confronted to the arrival of migrants), the transnational dimension of migration could be especially tackled in a larger political context with the Asylum and Migration Fund (AMIF), Border Management and Visa Instrument (BMVI), and Internal Security Fund (ISF).

#### 1.2.2. Employment

With the financial crisis of 2008, unemployment rate increased in EU countries with a pic of 13% in 2013. The following years, this trend decreased regularly to reach 6,3% in October 2019. However, strong disparities remain with regions having still more than 14% of unemployment in the south of Spain, south of Italy, Greece, Bosnia and Herzegovina (18%), Montenegro or North Macedonia (**Map 7**). Among the 280 EU regions for which data are available, 71 had an unemployment rate of less than 3.5 % in 2018, half the average of the EU (6.9 %). They included twenty regions in Germany, fifteen in the United Kingdom, nine in Poland, seven in Czechia, five in Hungary, four each in the Netherlands and Austria, two in Belgium and Romania and one each in Bulgaria, Italy and Slovakia. In contrast, 30 regions had a rate of at least 13.8 %, double that of the EU: twelve regions in Greece, eight in Spain and five each in France and Italy.





Source: Eurostat, regional yearbook, 2019

The long-term unemployment share, which is defined as the percentage of unemployed persons who have been unemployed for 12 months or more, stood at 43.2 % on average in the EU in 2018. In the EU regions, more than threequarters of the unemployed had been out of work for at least a year in the French overseas region Mayotte (81.8 %), Epirus (77.2 %) in Greece, North-West (76.8 %) in Bulgaria and Attica (76.0 %) in Greece.

#### 1.2.3. Education

The Europe 2020 strategy's target was that at least 40% of 30-34-year-olds in the European Union (EU) should have completed tertiary education by 2020. Reaching the level of 40.7%, the EU crossed this threshold in 2018. Since 2002 when the series started at 23.6%, there has been a steady increase. This growth pattern was even more significant for women (from 24.5% in 2002 to 45.8% in 2018) than for men (from 22.6% to 35.7%), meaning women are above and men still below the overall Europe 2020 target.

Meanwhile, the share of early leavers from education and training (aged 18-24) has steadily decreased in the EU, from 17.0% in 2002 to 10.6% in 2018. Young women (8.9%) are less affected than young men (12.2%). The Europe 2020 target is to reduce the rates of early school leaving in the EU to below 10% by 2020.

The rate for young people Neither in Employment, nor in Education or Training (NEETs) decreased continuously after 2013 and was back to its 2008 level in 2018, at 16.5 %. Across the EU Member States there is a wide variation (**Map 8**). There are 10 Member States that record NEET rates above the EU average of 16.5 %. Among these, by far the highest rates were recorded in Italy and Greece, where more than a quarter of all young people aged 20–34 were neither in employment nor in education and training (28.9 % and 26.8 % respectively); there were also very high NEET rates in North Macedonia (36.3 %), Turkey (33.2 %), Montenegro (27.5 %) and Serbia (24.1 %).

Map 8 : Young people Neither in Employment nor in Education or Training, 2018 (NEETs) (% share of people aged 18-24 years, by NUTS regions)



Source: Eurostat, regional yearbook, 2019.

In 2018, the proportion of those aged 30 to 34 who had completed tertiary education increased compared with 2002 in every Member State for which the time-series is available. In 2018, at least half of the population aged 30 to 34 had completed tertiary education in Lithuania (57.6%), Cyprus (57.1%), Ireland (56.3%), Luxembourg (56.2%) and Sweden (52.0%). At the opposite end of the scale, the lowest proportions were observed in Romania (24.6%) and Italy (27.8%).

Sixteen Member States have already met or exceeded their 2020 national target for this indicator: Belgium, Czechia, Denmark, Estonia, Greece, Italy, Cyprus, Latvia, Lithuania, Malta, the Netherlands, Austria, Poland, Slovenia, Finland and Sweden.

In 2018, there were 10 NUTS level 2 regions where more than three fifths of the population aged 30-34 years had a tertiary level of educational attainment (United Kingdom, Denmark, Lithuania, Poland and Sweden). By contrast, tertiary educational attainment remained below the Education and Training (ET) 2020 benchmark of 40 % in more

than half of the NUTS 2 regions (**Map 9**). Many of them are rural or sparsely populated regions with a relatively large agricultural sector, and consequently a low level of supply of highly-skilled employment opportunities. Many of these regions are in the eastern part of Europe as well as in the Mediterranean, especially in the south of Spain, Italy, Croatia, Montenegro, North Macedonia, Malta and south of Greece.

Map 9 : Tertiary educational attainment in the EU, 2018 (% share of people aged 30-34 years, by NUTS 2 regions)



Source: Eurostat, regional yearbook, 2019

#### **1.3. ECONOMY AND DEVELOPMENT PERSPECTIVES**

#### 1.3.2. Regional disparities and catch up process

In 2008, the financial and debt crisis generated a significant decrease in national and regional Growth Domestic Products (GDP) throughout the EU with important consequences on employment, social and territorial cohesion.

The crisis has been highly disruptive in many parts of the EU. It has reversed the long-term trend towards a narrowing of regional disparities. It led to a reduction in GDP per head between 2009 and 2015 in around 40% of regions, located mainly in Ireland, Italy, Spain, Portugal and Greece. During this period, regional disparities widened slightly but in 2015, disparities started to narrow again.

Wealth creation is concentrated in relatively small regional pockets, while a higher share of regions (a greater share of the population and a much greater share of the total area) has levels of GDP per inhabitant that are below the EU-28 average. These pockets of high wealth creation are often located in capital city and metropolitan regions.

While most of the EU Member States have a monocentric pattern of economic development — their capital city region often being the central hub of activity — the situation is somewhat different for example in Italy characterised by a more polycentric pattern of development.

'Poorer' regions can be split into two distinct groups: either sparsely-populated, rural regions that are characterised by ageing populations and net emigration; or post-industrial regions stripped of their traditional industrial base, in part due to the consequences of globalisation. The poorest regions in the EU are primarily located in a band, running from Latvia in the north, through eastern parts of the EU, down into Greece and southern Italy, before extending across the Mediterranean to southern regions of Spain and onto most of Portugal (**Map 10**).

#### Map 10 : GDP per head (PPS), 2017



EU-28=100, index based on GDP in purchasing power standards (PPS) in relation to EU-28 average

Source: Eurostat, regional yearbook, 2019

#### 1.3.3. The potential of Blue Economy in the Mediterranean area

According to the World Bank<sup>7</sup>, the blue economy is "the sustainable use of ocean resources for economic growth, improved livelihoods, and jobs while preserving the health of ocean ecosystem". The European Commission defines it as "All economic activities related to oceans, seas and coasts. It covers a wide range of interlinked established and emerging sectors."<sup>8</sup> According to the UNEP-MAP (Plan Bleu), "A green economy, called the blue economy when applied to Mediterranean coastal, marine and maritime sectors, promotes sustainable development while improving human well-being and social equity and significantly reducing environmental risks and ecological shortages"<sup>9</sup>.

In the Mediterranean Sea Basin, the sectors of blue economy are key components of the regional economy and provide significant innovation and wealth potential. With 46,000 km of coastline and unique marine and fish resources, the Mediterranean Sea is the fifth largest economy in the region, with a total value estimated at  $\in$ 4.7 trillion. In 2015, the direct contribution of tourism to the gross domestic product (GDP) of Mediterranean countries was 4.5% of the region's GDP. The Mediterranean cruise industry has become the world's second largest market after the Caribbean. Intra-Mediterranean maritime trade-flow accounts for 25% of global traffic volumes.

With this potential, the Mediterranean Sea is one of the most promising sectors in terms of growth and employability. Current opportunities concern several sectors: Shipping and port equipment; Fishing and aquaculture; Tourism; Energy; Biotechnology.

Key maritime clusters can be identified either with **cross-sectoral profile** (Cluster maritime français, Cluster Maritime Tunisien, Blue Italian Growth Technology Cluster, Cluster Maritimo Espanol, Malta Maritime Forum, Maritime Hellas,

<sup>&</sup>lt;sup>7</sup> The potential of the Blue Economy, Increasing long term-term Benefits of the Sustainable Use of Marine Resources for Small Island Developing States and Coastal Least Developed Countries, World Bank 2017.

<sup>&</sup>lt;sup>8</sup> The 2018 Annual Economic Report on EU Blue Economy, European Union, 2018.

<sup>&</sup>lt;sup>9</sup> Mediterranean Strategy for Sustainable development 2016-2025 – Investing in environmental sustainability to achieve social and economic development, UNEP-MAP, Plan Bleu, 2016

Hrvatski Klaster Konkurentnosti Pomorske Industrije, Pôle Mer Méditerranée...) or **more sectoral profile** (Capenergies, Catalonia Logistics, Distretto Ligure Delle Tecnologie Marine, Cluster Energia (Valencia), Slovensko Logisticno Zdruzenje<sup>10</sup>.

However, sea related activities can also generate strong negative externalities such as:

- acidification, sea temperature and level increase, shifts in currents, biodiversity resource and habitat losses
- pollution (e.g. from industry, chemicals, nutrients and plastics)
- overfishing and other resource sustainability and efficiency issues.

In that context, Blue economy must embrace ocean ecosystem services that are not captured by the market but provide significant contribution to economic and human activity (**Map 11**). They include carbon sequestration, coastal protection, waste disposal, and the existence of biodiversity.

The Ministerial Declarations of the Union for the Mediterranean (UfM) on the blue economy (2015) and on environment and climate change (2014), the macro-regional EU strategy for the Adriatic and Ionian region, as well as the initiative for the sustainable development of the blue economy in the western Mediterranean (WESTMED) provide an opportunity to support Mediterranean Blue economy.

The UfM Ministerial Declaration envisages tangible deliverables on regional maritime governance, research, innovation and skills. It also addresses the need to include the Mediterranean in the calls for 'Blue Careers', 'Blue Labs' and 'Blue Technologies'.

# Map 11 : Large-scale areas of high interactions between Blue Growth and sites of conservation interest in EU Mediterranean Countries



Source: Blue Growth in the Mediterranean Sea: The challenge of good environmental Status. WWF report, 2015

<sup>10</sup> Economic clusters cover range of practices and approaches including industrial complex, agglomeration of interlinked industries, community-based networks, etc.). They constitute important policy tools promoting the uptake of innovation, knowledge, skills as well as access to finance. This is possible through joint actions promoted by socio-economic and institutional actors at the local, national and sub-regional levels (source: Maritime clusters in the Mediterranean Region, Union for the Mediterranean, December 2019).

# 2. Economic development and innovation: potentialities and perspectives for a stronger cooperation

As shown in the first chapter of the diagnosis, Mediterranean regions are very diverse with large and dense urban centres and less developed or less accessible areas like hinterlands, mountainous areas, rural areas or islands.

From an urban and economic point à view, one can identify a "central-periphery" pattern with a few Mediterranean cities (Barcelona, Lyon, Marseille, Milano) better connected to the "core" of Europe<sup>11</sup>. In the overall, the Mediterranean area shows performances bellow the EU average in terms of GDP per inhabitants, employment or innovation.

The presence of highly innovative urban centres and thematic clusters opens up prospects for greater territorial cooperation. Increasing concerns raised by environment and climate change issues (with particularly serious consequences for Mediterranean regions), highlight the need for innovative solutions at transnational, national or regional level (management of resources, monitoring of risks, promotion of sustainable tourism...).

#### **2.1. EU STRATEGIC PRIORITIES**

In its Europe 2020 strategy<sup>12</sup>, the European Commission noted that sustainable growth requires building a resourceefficient, sustainable and competitive economy, including green technologies, accelerating the roll-out of smart grids using ICTs, reinforcing the competitive advantages of businesses, as well as through assisting consumers to value resource efficiency. Such an approach would help to progress towards a low-carbon, resource constrained world while preventing environmental degradation, biodiversity loss and unsustainable use of resources<sup>13</sup>.

These strategic orientations have been confirmed by the 2021-2027 ERDF regulation with the Policy Objective 1 dedicated to "*a smarter Europe*" whose aim is to promote innovative and economic transformation with the following priorities:

- i. enhancing research and innovation capacities and the uptake of advanced technologies
- ii. reaping the benefits of digitisation for citizens, companies and governments
- iii. enhancing growth and competitiveness of SMEs
- iv. developing skills for smart specialisation, industrial transition and entrepreneurship

In relation to a "smarter Europe", must be mentioned the policy objective 2 "a more connected Europe" whose priorities are to enhance digital connectivity, develop Trans-European Networks, sustainable, climate resilient and intermodal mobility.

These priorities are part of the overall EU strategy to be implemented with the support of programmes like H2020<sup>14</sup>, the development of a European Research Area (ERA)<sup>15</sup> and the strategic focus on open innovation and open science<sup>16</sup>.

<sup>&</sup>lt;sup>11</sup> See the European Pentagon (ESDP 1999) where the area defined by the metropolises of London, Paris, Milan, Munich and Hamburg concentrates 40% of EU population and generates 50% of wealth.

<sup>&</sup>lt;sup>12</sup> Europe 2020 – A European strategy for smart, sustainable and inclusive growth, Communication from the Commission, Brussels, March 2010.

<sup>&</sup>lt;sup>13</sup> Communication SEC(2010) 1272, SEC(2010) 1276.

<sup>&</sup>lt;sup>14</sup> https://ec.europa.eu/programmes/horizon2020/en

<sup>&</sup>lt;sup>15</sup> https://ec.europa.eu/info/research-and-innovation/strategy/era\_en

<sup>&</sup>lt;sup>16</sup> Open Innovation, Open Science, Open to the World – a vision for Europe. European Commission 2016 / Strategic Plan 2016-2020 Directorate for Research and Innovation, European Commission, 2016.

In relation with the Cohesion Policy and the European Strategic Investment Funds (ESIF), one can also grant a specific attention to Smart Specialisation Strategies (RIS3)<sup>17</sup> implemented at national and regional level and that underpin the support for R&I through Structural Funds. One can also mention the European Cluster Collaboration platform<sup>18</sup> which provides detailed information on existing clusters with thematic, geographical or INTERREG focus.

#### 2.2. KEY ISSUES FOR A SMARTER MEDITERRANEAN AREA

In a general way, Mediterranean regions are still below the EU average in terms of innovation performance. Progress can be made regarding public and private investments and with the strengthening of cooperation between the **actors of the quadruple helix model** (government, industry, academia and civil participants). This can be relevant for example in the perspective of more "**open innovation**" where all stakeholders need to be involved and create seamless interaction and mash-up for ideas in innovation ecosystems. This can be especially relevant for intervention fields related to environment, climate change or biodiversity that represent important Mediterranean but also territorial dimensions (see part 4 of the diagnosis).

In Mediterranean regions, innovation and development potentials are significant with the existence of clusters acting in key intervention fields related to **blue growth and green growth** (environmental services, biotechnologies, sustainable tourism, management of natural resources, clean energy, marine science, fisheries...). These clusters are however mainly national ones and **progress can be made with stronger transnational interactions**. Innovation approach could also consider the perspective of **non-technological** or "**low tech**" solutions in the perspective of better resource and financial management and with the objective to promote a stronger involvement of territorial stakeholders (**high societal dimension** of key Mediterranean stakes like protection of the environment, climate change, sustainable management of resources...).

#### 2.2.1. Research, development and innovation

#### a. Room for improvement in Mediterranean regions

When referring to the most recent analyses<sup>19</sup>, a clear picture is drawn in which EU Mediterranean regions encompasses some of the less technologically developed regions in the EU, with the exception of some regions located in western Mediterranean (Catalonia, Sud PACA, Languedoc-Roussillon, Midi-Pyrénées, Rhône-Alpes, North of Italy, Slovenia). As shown in the **Map 12**, a majority of Mediterranean region is ranked as **moderate or modest innovator** which means performance between 50% and 90% of the EU average for the first group and performance below 50% for the second group.

Public investment in the EU is still below its pre-crisis level with major gaps in some of the countries most affected by the crisis.

The lacunae that we observe today originate in part from: (1) the gulf between the specific research capabilities available in the territory and the specific types of business; (2) from the difficulties experienced by the smaller firms in undertaking a process of innovation; or (3) from the difficulty faced by business in accessing technological information and equipment. In this context, public-private co-publications and patent applications are lower than the EU average and stronger efforts could be put on public private cooperation.

This means that there is still justifiable to invest in technology, innovation level and skills in most MED regions in order to enable economies to raise their levels of innovation and productivity performance, when developing goods and services.

<sup>&</sup>lt;sup>17</sup> See the Smart Specialisation Platform setup by the EC : <u>https://s3platform.jrc.ec.europa.eu/s3-platform</u>

<sup>&</sup>lt;sup>18</sup> <u>https://www.clustercollaboration.eu/</u>

<sup>&</sup>lt;sup>19</sup> European Innovation Scoreboard, 2019 ; EU cohesion Report (2017) ; ESPON Atlas (2014).



#### Map 12 : Regional innovation performance, 2019



#### b. Key challenges for the future

In a more dynamic way, one can observe a catching up process in most of the Mediterranean Regions that are experiencing an improvement of their innovation performances between 2011 and 2019 (**Map 13**). This shows a real dynamism which can support initiatives and projects in the coming years. This is especially supported by an increase in the R&D expenditures in the public sector as percentage of the GDP and by more (non-R&D) innovation expenditures in SMEs.





Source: European Commission, Regional Innovation Scoreboard, 2019

Despite a considerable spatial variation in its research and innovation potential, the Mediterranean area possesses several fields of specialisation that are common to several regions and which present a good potential for a transnational innovation strategy. The analysis of **Smart Specialisation Strategies** in EU Mediterranean countries and regions reveals that the priorities of innovation stakeholders are especially focused on<sup>20</sup>:

- Sustainable innovation (energy production and distribution; agriculture, forestry and fishing; construction/building; transports; water supply and waste management (monitoring, collect, recycling...); manufacturing and industry...)
- Key enabling technologies (Nanotechnologies, advanced materials, biotechnologies, sustainable development, energy efficiency...)
- Cultural and creative industries (Tourism and recreation; cultural arts and entertainment...)
- Public health and security (human health; pharmaceutical products; Risks, security and safety...)
- Information and communication technologies

At regional level, some specific industrial fields of innovation can be highlighted in the Mediterranean regions like:

- Agriculture and agri-food (Algarve, Midi-Pyrénées, PACA, Languedoc-Roussillon, Catalonia, Andalusia, Lazio, etc.)
- Construction and eco-construction (Andalusia, Valencian Community, Calabria, Cyprus, etc.)
- Chemicals and plastics (PACA, Rhône-Alpes, Malta, West Greece, Catalonia, Lazio, Western Slovenia, etc.)
- Transport (Rhône-Alpes, Midi-Pyrénées, Valle d'Aosta, Lazio, Cyprus, Peloponnese, Attica, etc.)
- The Maritime Sector (Abruzzo, Cyprus, Malta, etc.)
- Materials (Piedmont, Lombardy, Rhône-Alpes, western Slovenia, etc.)
- Tourism and Accommodation (Catalonia, Cyprus, Crete, etc.)
- Pharmaceuticals (Lisbon, PACA, Lazio, western Slovenia, etc.)
- ICT (Lisbon, Piedmont, western Slovenia, Catalonia, Lazio, Gibraltar, etc.)
- Biotechnologies (Languedoc-Roussillon, Lisbon, Algarve, Valencian Community, Aragon, etc.)
- Energies (PACA, Valle d'Aosta, Corsica, Languedoc-Roussillon, Western Slovenia)

Generally, these industrial fields of innovation are supported or led by networks of innovation centres/agencies, by public and/or private sector research bodies, by innovation clusters (such as competitiveness clusters in France or technology districts in Italy), by innovative businesses, local clusters, business incubators or organisations in the field of research exploitation and technology transfer, etc.

At transnational level, in absence of a common strategic framework, it would be relevant to strengthen existing frameworks and community networking focused on specific Mediterranean issues like **blue economy, environmental protection and climate change**, taking into account territorial specificities with sea, coastal, hinterland and mountainous areas.

If Interreg programmes are not dedicated to fundamental research, which is the purpose of other programmes like Horizon 2020, pilot activities in relation with local and regional stakeholders could help develop solutions useful for the Mediterranean regions in diverse issues like **environmental services, management of risks and biodiversity protection, waste management and sorting, water management** (saving, monitoring, supply systems...), **soils management** (monitoring and controlling, risk prediction, etc.) and **eco-innovation**. Relevant activities could therefore be targeted to availability, quality, and monitoring of data that are missing but relevant for assessing and addressing these common challenges. Support could be relevant for scaling up cooperation between different actors across the

<sup>20</sup> Analysis of Smart Specialisation strategies in selected Mediterranean coastal regions and countries, Creative Med project, 2014.

area. This could include support to building capacity to cooperate, identifying complementary use of capacities and pilot projects in certain areas of EURO-MED Space importance.

For a summary of innovative solutions applicable to environmental challenges, see table 2 p 46

#### Box 1 : Importance of the coordination with existing initiatives and networks

There are many EU, national and regional programmes financing RDI in the Mediterranean Area, including topics which are also, but not exclusively relevant for the Euro-Med area as a whole. However, it is difficult to refer to all the Innovation Strategies implemented in this area.

At sea basin level, BLUEMED, a marine Strategic Research and Innovation Agenda (SRIA) has been developed by the nine EU Mediterranean MS in 2015 and is now being further developed and implemented with UfM Southern partners countries. The BLUEMED initiative outlines a set of key challenges for the Mediterranean, and particularly knowledge gaps, in key sectors like ecosystems, climate change, biotechnologies, fisheries, tourism, spatial planning, etc. It supports research activities and promotes cooperation through thematic dialogue groups (policy, economy, technology and knowledge platforms).

#### 2.2.2. Information and Communication Technologies to support Mediterranean challenges

Access to high capacity telecommunication networks is vitally important for competitiveness and growth. The use of digital services and the capacity to operate successfully in a global business environment increasingly rely on fast and efficient broadband connections. Digital connectivity represents a key issue for all socioeconomic sectors (information, research, education, administration, social inclusion, health...) and is a priority for the EU.

The territorial dimension of the information and communication society has a wide thematic scope, covering issues such as enabling ICT access and use for households, citizens and business (implying issues such as ICT infrastructure and equipment, Internet connections, access to broadband and high-speed broadband, etc.). But this is only half of the equation. It is also important not to neglect ICT skills (skills vary depending on age, educational profile, income, etc.) as an enabler and that needs vary depending on the types of ICT use that is involved.

In 2018, at least 95 % of households had broadband access at home in the vast majority of regions across the Netherlands and most of the southern half of the United Kingdom (NUTS level 1); there were also very high broadband connectivity rates in the German and Finnish capital city regions, Berlin and Helsinki-Uusimaa.

In terms of the digital divide, it can be more revealing to analyse those regions with relatively low levels of broadband connectivity: in 2018, there were 48 regions across the EU that reported less than four out of every five households (less than 80%) with broadband access at home. These were principally located in eastern and southern parts of the EU, although there were also relatively low rates in two southern regions of Belgium, 10 regions of France (five rural regions of mainland France, the island of Corse, four of the five outermost regions. The lowest shares of households with broadband access at home were recorded in Limousin in central France, Severozapaden and Severen tsentralen in northern Bulgaria, Alentejo in southern Portugal, Nisia Aigaiou, Kriti (NUTS level 1) in Greece, Nord-Est and Sud-Est in eastern Romania (**Map 14**).

#### Map 14 : Households with broadband access at home, 2018

(%, share of private households by NUTS II regions)



#### Source: Eurostat, regional yearbook, 2019

The difference between urban and rural areas can be observed correlatively between coastal and inland areas, especially with the most rural and mountainous areas. At EU level, the rural development policy supports 'last-mile' connections to larger broadband projects (improved access to ICT infrastructure and services for an estimated 18 million people living in rural areas).

Progress must also be accomplished in terms of digital skills. In 2017, the gap in digital skills between city-dwellers and people living in rural areas was, on average, 14 percentage points (pp) in the EU-28. This digital divide in overall skills reached 20-25 pp in seven EU Member States — Ireland, Hungary, Greece, Lithuania, Finland, Croatia and Romania — peaking at 27 pp in Bulgaria (EU cohesion report 2017).

Due to the significant investments necessary to improve the **Next Generation Access** (NGA) and the territorial dimension of digital skills improvement, the promotion of ICT and the reduction of digital divide is largely addressed by national and local authorities. However, ICTs can be taken into account for the development of innovative projects focused on key Mediterranean priorities, especially those requiring **better information**, **access to services**, **knowledge management**, **data production and sharing**, **etc.** This might be especially relevant in the fields of **environmental protection**, **analysis and information about biodiversity**, **natural risks**, **etc**.

#### 2.2.3. Accessibility and mobility in Mediterranean Regions

#### a. Accessibility of Mediterranean areas

In the EU, accessibility of regions is related to urban concentration with high density of infrastructures around major cities and metropolises like Paris, Milan, Munich, Hamburg and with a clear centre/periphery pattern. In general, regions showing a high degree of accessibility succeed better in terms of their economy and competitiveness.

The recent work done by ESPON<sup>21</sup> shows that the clear dominance of urban regions will continue in the future, with rural regions having about 80% of the road accessibility average in EU countries. Mountain regions as well as islands will have an accessibility level lower than the average (about 70% and 80% for road and rail, respectively). Islands and sparsely populated regions will register the lowest accessibility by road and rail by 2030 (**Map 15**).

<sup>21</sup> Shaping new policies in specific types of territories in Europe: islands, mountains, sparsely populated and coastal regions. ESPON Policy Brief, 2020



Map 15 : Accessibility potential by road, 2030

Source: ESPON, 2017

According to this study, the accessibility of Mediterranean regions remains lower than the EU average but with perspectives of improvement due to Trans-European Transport Networks (TEN-T), especially in the south-eastern part of Europe (IPA countries and Greece). It must be noted that while transport connectivity is high along the coastal area and good maritime corridors cross Mediterranean Sea, connectivity is lower in the inner Euro-MED area due to geography and topography (rural area).

Likewise, a number of island regions depend on imports for essentials goods such as foodstuffs and energy as well as for most other consumer goods. Maritime freight is the central means of transport for these imports. Costs of living tend to be higher in islands compared to corresponding mainland regions due to constraints for the provision of goods. Air transport plays also a major role binding together the Mediterranean area and it is particularly important for remote regions and islands.

Cruise tourism can be an important source of tourism for many islands. The development of maritime passenger traffic in European ports during the last ten years is however very heterogeneous. Most ports have experienced an increase in passenger traffic with some exceptions for some ports in Italy or major ports in Greece between 2005 and 2015. However, ports with a decrease in maritime passengers do mostly have substantial amounts of passenger traffic today<sup>22</sup>.

Maritime freight transport is also of very high importance for coastal regions and islands in Europe. The development of maritime freight volumes during the last ten years is however very heterogeneous with the specialisation of ports following years of economic crisis, but also an indication for the competition and restructuring processes going on in the port business

<sup>22</sup> Revealing territorial potentials and shaping new policies in specific types of territories in Europe, Islands, mountains, sparsely populated and coastal regions, ESPON, 2020.

It should be noted that large Mediterranean ports show relatively good land-side connections and can serve within four-hour time (road travel) hinterland population of five to twenty million persons each.

Regarding these different aspects of accessibility (road, railway, air, maritime transports), huge investments are necessary to develop infrastructures, services and improve connexions. They must also be coordinated with regional, national and transnational strategies going often beyond the temporality of Interreg projects.

#### Box 2 : Connecting Europe Facility

The main source of funding for implementing the EU transport policy is the Connecting Europe Facility (CEF), which complements the ESI Funds by focusing support on cross-border connections (including maritime ones) and interoperability between national transport networks. Funding for the Facility amounts to €24 billion for 2014– 2020. The TEN-T Comprehensive network is mainly supported by the ESI Funds which also co-finance the TEN-T Core network, particularly non-cross-border parts and roads.

#### b. Sustainable mobility

The MED area includes some of the largest urban areas of Europe, among which are Barcelona, Marseille, Milan, Rome, Naples and Athens. Moreover, across the MED area, there is a large range of growing urban centres along the Mediterranean coast<sup>23</sup>. The high level of urbanization along the coastlines represents however an environmental challenge for the countries involved in the programme.

In 2015, the proportion of people in cities in the EU reporting to live in an area with environmental problems (19%) was larger than for those in towns and suburbs (13%) and rural areas (8%). Air pollution remains a major environment concern for health and has significant effects on ecosystems, even though emission of air pollutants has declined markedly in the EU over the years, partly as a result of EU legislation.

In Mediterranean cities, pollution is significant in the Po Valley, Naples, Greece and Cyprus<sup>24</sup>. The density of urban area offers however a favourable context to develop sustainable transport systems with potentially a high number of users. Living in cities makes it possible to access many services using less energy-consuming modes of transport (Graph 1). In the Mediterranean area, initiatives can be especially relevant in cites also concerned by the pollution of maritime traffic or tourism frequentation (seasonality).

On the contrary, it is more challenging to develop sustainable transports systems in most remote areas where the level of dependency on the car is much higher. In that case, the issue is to maintain a good accessibility level to services while encouraging the use of more sustainable types of transports.

<sup>23</sup> ESPON Factsheet, Mediterranean (MED), ESPON Project TERREVI, November 2012



#### Graph 1 : Distance to service by type of municipalities in the EU

The location of services has been simulated taking into account population distribution and distances. Source JRC

Source: EU cohesion report 2017.

#### 2.2.4. Business competitiveness, especially of SMEs

In the 2014–2020 period, Cohesion Policy was focused heavily on supporting smart growth with particular emphasis on innovation and high growth firms and with programmes aimed at increasing the innovative capacity of SMEs. In previous periods too, a substantial share of Cohesion Policy funding was devoted to improving the business environment and supporting entrepreneurship.

The MED economy is made up mainly of SMEs whose economic weight is proportionally greater than in other European economies. As a consequence, the issue of competitiveness is first and foremost one of **SME competitiveness**. There is substantial spatial variability in business competitiveness, although there are a number of common traits. Business competitiveness is founded, notably, on wide-scale **inter-firm clustering** (particularly in Italy) and **strong business creation dynamics**. There are also common constraints such as difficulties with access to finance.

The economic and financial crisis underlined the need for the European economy to become more competitive and, at the same time, more sustainable by completing the **transition to a low carbon economy** that manages the exploitation of its natural resources effectively. With the 2020 strategy the EU promoted a new growth model with a new approach to industrial policy based on the flagship initiative "*An Integrated Industrial Policy for the Globalisation Era*", which aimed at improving the business environment, notably for SMEs, and at supporting the development of a strong and sustainable industrial base able to compete globally.

For the MED area, this issue is particularly important since SMEs are preponderant in the economy.

A significant factor in competitiveness is the level of **entrepreneurial activity and of firm creation**. At 9.2%, the rate of new business creation is slightly lower in the MED area compared with Europe as a whole, which stands at 10.3%<sup>25</sup>. Across the MED area, the rate also varies considerably between countries. For example, in Cyprus in 2017, the rate of new business creation was 3%, in Spain and in Italy it was 7.2%, in Portugal and Slovenia it was 11.3%, and 15,4% in France.

A majority of these SMEs are family-owned and funded and follow a pattern of inter-generational succession. They are present in **low and medium technology sectors** (agrifood, machine tools, office supplies, optics, metallurgy, etc.)

and employ a large number of relatively low-skilled personnel. Their R&D is based more on a model of **incremental** rather than breakthrough innovation<sup>26</sup>.

It should be borne in mind that there are **many drivers to entrepreneurship** that can be driven by need – when it may constitute the only route to employment – or by opportunity – when an individual identifies a genuine business opportunity (offering a route to self-employment, to earn more, etc.). In terms of interpreting figures, the former category may reflect **social precariousness**, while the latter may be an **indicator of a form of entrepreneurship** that boosts growth.

#### 2.3. SWOT ANALYSIS FOR A SMARTER MEDITERRANEAN AREA

Innovation and economic development are an important issue for the Mediterranean regions which, on average, perform less than other European regions. In this area, different fields of action can be identified:

- Innovation and smart specialisation which are supported in all European regions while keeping in mind that fundamental research is not the responsibility of INTERREG programmes
- Information technologies which are essential for innovation and economic development and which represent a challenge for certain less equipped territories or populations. They can support activities in all priority fields of action in the Mediterranean
- Accessibility and connectivity, in connection with information technologies, for which significant investments are necessary in a context of strong geographic and territorial disparities (isolated areas, Isles, etc.).
- SMEs and entrepreneurship which are essential to the vitality of the regions and which actively contribute to their development.

#### Table 1 : SWOT analysis for a smarter Mediterranean area

	Strengths	Weaknesses	Opportunities	Threats
Innovation / smart specialisation	<ul> <li>The appeal of the MED territory</li> <li>The area includes countries and regions that are leaders in R&amp;D at EU and even world scale (Rhône- Alpes, Trentino, Catalonia, Lombardy, Lazio, PACA, Slovenia, etc.)</li> <li>It possesses a number of high-skill industrial sectors that flourish thanks to the natural environment and the capabilities of research centres (agriculture and agrifood, chemicals, materials, etc.).</li> <li>It has a strong tradition of social innovation, especially in Italy through its cooperative organisations</li> </ul>	<ul> <li>GDP per capita is 12% lower than the EU average and substantial wealth disparities exist across the MED area</li> <li>There is low investment in R&amp;D</li> <li>There is a low proportion of research personnel in the active population</li> <li>There are a low number of patent applications</li> <li>The MED territory has an innovation model based on diversification and/or new applications of existing technologies rather than on breakthrough innovation</li> </ul>	<ul> <li>Investment in R&amp;D has been rising for several years</li> <li>There has been a slight increase (except in 2008 and 2009) in the number of patent applications</li> <li>There are R&amp;D specialisations in agrifood, construction and eco-construction, chemicals plastics, maritime, and tourism, etc.</li> <li>A large, diverse and networked innovation community (a range of clusters, technology transfer centres, etc.)</li> <li>Innovation stakeholders already engaged in regional &amp; international cooperation strategies</li> <li>There is significant potential for social and eco-innovation</li> </ul>	<ul> <li>The economy has been seriously affected by the economic and debts crises since 2008</li> <li>Increasing competition from southern and eastern Mediterranean countries (driven by innovation in the agrifood sector for example)</li> </ul>

# INTERREG MED programme 2021-2027 – Territorial diagnosis and SWOT analysis – Final report

Information technologies	<ul> <li>Wide coverage of high-speed broadband</li> <li>There is an increasing use of ICT by individuals and businesses</li> </ul>	<ul> <li>Access to very high-speed networks that can still be improved, especially in isolated areas (Next generation networks)</li> <li>Private individuals possess lower ICT skills than in other European regions</li> <li>There is limited use of online</li> </ul>	<ul> <li>The development of high-speed broadband</li> <li>The presence of R&amp;D sectors specialised in ICT (Torno Wireless cluster in the Piedmont, Lombardy ICT cluster, or Telecom Valley in Sophia-Antipolis)</li> </ul>	<ul> <li>There are significant inequalities between regions</li> <li>The MED area lags behind in terms of ICT use</li> </ul>
		public services		

# INTERREG MED programme 2021-2027 – Territorial diagnosis and SWOT analysis – Final report

Accessibility and connectivity	<ul> <li>General good quality transport networks in the MED space</li> <li>Good accessibility of the metropolitan areas</li> <li>A good level of road infrastructures</li> <li>A large network of port cities, well equipped to deal with the flow of passengers and goods</li> <li>A satisfactory level of airport facilities</li> </ul>	<ul> <li>Geographical fragmentation and isolation of numerous territories, notably islands</li> <li>Badly managed urban development notably in coastal areas</li> <li>Importance of individual vehicles as a means of transport, especially in urban and surrounding areas</li> <li>Multimodal accessibility is rather low</li> <li>Connections between coastal and inland areas remain insufficient</li> </ul>	<ul> <li>Overall political agreement on the necessity to promote sustainable transports</li> <li>Technological progress for sustainable transport systems</li> <li>Better awareness of the population about sustainable development issues and use of alternative modes of transport</li> </ul>	<ul> <li>Transport is a major source of pollution</li> <li>Changing transportation modes require important investments and budgets that might not be available in every region</li> <li>Lack of European coordination of communication systems</li> </ul>
SMEs and entrepreneurship	<ul> <li>The appeal of the MED area, which is essential for the tourism sector</li> <li>The MED area possesses highly competitive regions including Catalonia, PACA, Rhône-Alpes, Piedmont, Lombardy, Lazio, and Western Slovenia, etc.</li> <li>Policy support for business has been showing results (essentially for business innovation and competitiveness, especially when it is targeted).</li> </ul>	<ul> <li>Traditional business continues to influence the area's economic profile and SMEs that are active in low and medium technology sectors</li> <li>MED area innovation is essentially incremental producing limited added value in SMEs, which make up the greater part of the economic fabric</li> <li>Business suffers from low productivity</li> <li>Despite an SME clustering trend, most SMEs remains isolated and poorly integrated within networks.</li> <li>There are wide regional disparities and regions with low competitiveness (Corsica, Sardinia, Cyprus, etc.)</li> <li>The idea of social responsibility of business is still not very developed</li> </ul>	<ul> <li>There are high business creation rates in certain MED regions (Portugal, Slovenia, and France)</li> <li>There is strong clustering of SMEs in the MED area</li> <li>Potential with stronger connection between large companies and SMEs, between R&amp;D centres, etc.</li> <li>Need to internationalise commercial activities, especially for SMEs</li> <li>Necessity to better supply business with adequate skills (rather than knowledge)</li> </ul>	<ul> <li>There is a serious recession in the majority of MED regions which is affecting business development: structural weaknesses in the economic fabric are accentuated by the economic crisis</li> <li>Business is experiencing difficulties with access to finance</li> </ul>

#### 2.4. PERSPECTIVES FOR THE INTERREG MED PROGRAMME 2021-2027

In terms of innovation research and development, there is room for improvement in Mediterranean regions with the existence of important territorial discrepancies, the presence of dynamic thematic clusters and an increasing demands related to environment and climate change issues (monitoring, data management, share of information, management of natural resources, development of ICT tools, etc.). In this context it is important to identify properly the specific added value of transnational cooperation and avoid overlapping and promote synergies with programmes and measures dedicated to research and innovation. Private partners could play an important role in the development of new solutions with the involvement of territorial stakeholders.

#### 2.4.1. Lessons learnt from 2014-2020 INTERREG MED programme

During the period 2014-2020, Interreg programmes granted a specific attention to smart and sustainable growth in line with the EU 2020 strategy. In the Mediterranean area, the INTERREG MED programme focused its Axis 1 on this issue ("promoting Mediterranean innovation capacities to develop smart and sustainable growth").

About 75M€ ERDF were allocated to this priority which represented 32% of the budget of the programme.

The objective of this axis was to strengthen innovation capacities of public and private actors of Mediterranean regions and support smart and sustainable growth. The axis granted a specific attention to blue and green growth, creative industries and social innovation (support to innovation clusters, economic sectors, value chains and networks...).

For MED stakeholder's, research and innovation are not objectives as such and specific programmes provide important support like H2020. Support to R&D and innovation **should be pursued and oriented towards Mediterranean challenges** with the perspective to strengthen networks and raise skills and competences.

#### 2.4.2. Added value of the INTERREG MED programme 2021-2027

In the field of research and innovation, different thematic and specific tools are implemented at EU, national and regional level (H2020 programme, European Research Area (ERA), European Research Associations, national research programmes, ERDF regional programme, etc.).

Therefore, **the direct support to research and innovation (R&I) must be considered carefully** as this policy area is tackled by other public policies. If Interreg programmes are not the most adapted to finance research activities, they can **promote cooperation between research bodies and create links with public policies** in key intervention fields.

This would be especially relevant in relation with **climate change and environmental issues** that constitute strong challenges and that will require experimentation, innovation and adaptation measures at territorial level. In this fast-changing environment, national, regional and local authorities will have to **develop solutions that have not been tested or shared and where transnational cooperation could play an important role**.

INTERREG can support mechanism for **sharing good practice and learning to spread know-how**. Cooperation can ensure that a solution to a specific problem becomes more effective due to **economies of scale and the achievement of a critical mass** (establishment of clusters to foster research and innovation). Governance can also improve as a result of **exchange of experience, coordination of sectoral policies, transfer of public policies**, actions and investments on a cross-border and transnational scale.

Transnational activities could be developed in coordination with existing cooperation bodies like the **BLUEMED** initiative promoting R&I cooperation on the Blue economy or the **WestMED** initiative seeking to promote blueeconomy in the Mediterranean area.

The **added value of support from the INTERREG MED programme** compared with other funding programmes (especially the regional ERDF, ESF, and EMFF) is a question of which geographic scale is most adapted to tackle Mediterranean

challenges. Intervention scales are also essential when the **coordination of public policies** is key to ensure successful and efficient interventions.

The challenge for the INTERREG MED programme is therefore less to finance new services but to **network stakeholders**, to test or pilot new ideas for which the transnational scale is critical and also to exchange good practices with the aim of incorporating them in ongoing public policies (transfer and mainstreaming process).

It would particularly be worthwhile to ensure that the successful outcomes in the most advanced regions of the programme area either directly – through policy action – or indirectly benefit the other regions.

To pursue a logic of territorially "smart specialisation", which the European Commission is encouraging for regional operational programmes, it is necessary to better focus support on innovating sectors and industries (and respective value chains) that constitute a strong added value for the MED area, and which are key elements for the development or protection of its territories.

It is worth noting also that given the characteristics of the MED area's economy, support for innovation must not be limited to support for technological innovation, but must also cater for **non-technological innovation** (organisational or social innovation, marketing innovation, eco-innovation, low tech innovation, etc.).

The transnational dimension is clearly a relevant scale of policy intervention for this type of activity and the incorporation of eco-innovative practices for example in traditional economic activities (industrial ecology (symbiosis), the development of product lifecycles, etc.).

# 3. Sustainable development: necessity of adaptation in a fastchanging environment

During the 2014-2020 programming period, international reports and analysis (see to work done by the Intergovernmental Panel on Climate Change – IPCC) have highlighted the **central challenge of climate change** and its effects on the environment and human activities for the years to come.

This issue is especially crucial in the Mediterranean area with **temperatures increasing faster than the EU average** and with a cumulation of environmental risks (sea level, extreme weather events, droughts, landslides, etc.).

In this context it is essential to better understand the changes underway and develop approaches able to consider the environmental dimension of sectoral activities (tourism, agriculture, transports, fisheries etc.). These changes have also strong territorial dimensions with area presenting specific threats and potentials (coastal areas, islands, mountains...)

#### **3.1. EU STRATEGIC PRIORITIES**

In December 2019, the European Commission presented the **European Green Deal**<sup>27</sup>, an ambitious package of measures that should enable European citizens and businesses to benefit from sustainable green transition. Measures accompanied with an initial roadmap of key policies range from ambitiously cutting emissions, to investing in cutting-edge research and innovation, to preserving Europe's natural environment.

To deliver this Green Deal, there is a need to rethink policies in many sectors like clean energy supply, industry, production and consumption, large-scale infrastructure, transport, food and agriculture, construction, taxation and social benefits, etc. To achieve these aims, it is also essential to increase the value given to protecting and restoring natural ecosystems, to the sustainable use of resources and to improving human health.

As part of this, targets have been set for reducing greenhouse gas emissions progressively up to 2050. These are included in both the **2020 climate and energy package** and the **2030 climate and energy framework**. The 2020 climate and energy package aimed at achieving in 2020 a 20% cut in greenhouse gas emissions, a 20% improvement in energy efficiency (both from 1990 levels) and a 20% share of renewables in final energy consumption. The 2030 climate and energy framework is more ambitious, increasing these targets to 40% for the first and to 32% for the other two.

In this context, climate change constitutes a major challenge. In parallel to mitigation measures that concern especially renewable energy, energy efficiency or sustainable transports (and which remain insufficient)<sup>28</sup>, prevention and preparedness are more and more crucial in front of increasing hazards.

Work on climate adaptation should continue to influence public and private investments, including on nature-based solutions. The **circular economy action plan**<sup>29</sup> will also include measures to encourage businesses to offer, and to allow consumers to choose, reusable, durable and repairable products.

In the Mediterranean context, it is important to mention also the question of water and waste management and sea pollution which have strong effects on ecosystems and biodiversity (and reversely on human activities). One of the

<sup>&</sup>lt;sup>27</sup> Communication from the commission to the European parliament, the European council, the council, the European economic and social committee and the committee of the regions - the European green deal, Brussels, 11.12.2019

<sup>&</sup>lt;sup>28</sup> Climate change mitigation generally involves reductions in human (anthropogenic) emissions of greenhouse gases (GHGs). Mitigation may also be achieved by increasing the capacity of carbon sinks, e.g., through reforestation.

<sup>&</sup>lt;sup>29</sup> A new Circular Economy Action Plan for a cleaner and more competitive Europe, Communication of the EC, Brussels, 11.3.2020

objectives of the **Seventh Environment Action Programme** (7th EAP)<sup>30</sup> was to ensure the good status of transitional, coastal and fresh water by 2020.

In the 2021-2027 ERDF regulation, the following priorities are proposed for the promotion of a "greener and low carbon Europe" (Art. 2).

(b) a greener, low-carbon Europe by promoting clean and fair energy transition, green and blue investment, the circular economy, climate adaptation and risk prevention and management by:

- (i) promoting energy efficiency measures
- (ii) promoting renewable energy
- (iii) developing smart energy systems, grids and storage at local level
- (iv) promoting climate change adaptation, risk prevention and disaster resilience
- (v) promoting sustainable water management
- (vi) promoting the transition to a circular economy
- (vii) enhancing biodiversity, green infrastructure in the urban environment, and reducing pollution

In a transversal approach and in order to ensure more efficient sustainable development, these priorities must be considered in coherence with the other policy objectives (innovation and competitiveness, connectivity, social cohesion...).

#### 3.2. KEY ISSUES FOR A GREENER MEDITERRANEAN AREA

The Mediterranean region is widely recognised as one of the world's most sensitive environmental, political, social, economic and cultural hotspots. Unique, yet fragile natural ecosystems are severely – and sometimes irreversibly – damaged by human activity. Valuable resources are depleted, with water scarcity majorly exacerbated by increasing climate variability, urban sprawl, mass tourism and pollution levels continuing to be on the rise.

Generally speaking, **MED area countries often perform below the EU-27 average in relation to the main indicators for sustainable development or green economy**<sup>31</sup> (use of renewable energy, ozone concentration levels, or the degree of susceptibility to climate change). These challenges have strong transnational dimension and would require a more efficient share of information and data and setting up of shared strategies and intervention measures.

#### 3.2.1. Renewable energies production, energy distribution and energy efficiency

Substantial progress has been made in limiting energy consumption and greenhouse gas emissions in the last few years in the EU. Most Member States have either reached or are close to reaching their national 2020 targets for greenhouse gas emissions and renewable energy. This in part has been facilitated by the crisis reducing economic activity. The current recovery may, therefore, put these achievements in jeopardy. Reaching the more ambitious EU targets of a 40% reduction of greenhouse gas emissions and 27% share of renewable energy by 2030 will require

<sup>&</sup>lt;sup>30</sup> Decision No 1386/2013/EU of the European Parliament and of the Council of 20 November 2013 on a General Union Environment Action Programme to 2020 'Living well, within the limits of our planet'

<sup>&</sup>lt;sup>31</sup> The United Nations Environmental Programme (UNEP) has been leading the development and dissemination of the Green Economy concept at the global level. According to UNEP, green economy aims "to improve human well-being and social equity while significantly reducing environmental risks and ecological scarcity". In this type of economy, revenue growth and employment come from public and private investments that reduce carbon emissions and pollution, enhance the rational use of resources and energy efficiency and prevent loss of biodiversity and environmental services
greater effort. The recent climate agreement (COP21) also commits governments to assessing every 5 years whether more ambitious targets are needed.

Some Member States have already reduced emissions markedly in Effort Sharing Decision (ESD) sectors<sup>32</sup> (**Graph 2**). Between 2005 and 2015, they were reduced by 22% in Portugal and 27% in Greece. In other countries emissions increased like in Malta (by 34%). Variations in economic growth explain part of these differences, but other factors are important as well. For example, emissions were reduced by almost 21% in Sweden, yet GDP grew on average by 1.7% a year over the period.





To reach the EU target for reducing greenhouse gas emissions, there is a need to shift towards more energy efficient and cleaner transport and to make more efficient use of existing transport infrastructure<sup>33</sup>.

The potential for renewable energy production, while varying across regions, is significant in the Mediterranean regions, although it is yet to be fully exploited. Moreover, the level of energy dependence remains relatively high; transport, households and industry are the largest consumers of energy.

Countries such as Italy, Portugal, Spain, and Slovenia are well above the European average. The average share of renewable energy in gross final energy consumption (biomass, hydroelectric, wind and solar power) stands at 18% of the EU-27's, ranging from almost 30% in Portugal and Croatia, to around 22% in Slovenia, between 15 and 20% in Greece, Italy, Spain and France, 14% in Cyprus and 8% in Malta (**Graph 3**).

The primary sources of renewable energies in MED area countries in 2018 were biomass and hydraulic power. Over the last ten years, solar and wind energies have continued to be developed but still only represent a small part of total energy production. However, MED area countries do represent more than 50% of European solar energy production (in tonnes of oil equivalent) and 40% of European wind energy production.

<sup>33</sup> European Commission: 'Assessment of the progress made by Member States in 2014 towards the national energy efficiency targets for 2020', COM (2017) 56 of 1 February 2017

<sup>&</sup>lt;sup>32</sup> The Effort Sharing Decision (ESD) No 406/2009/EC establishes annual greenhouse gas emission targets for Member States for the period 2013–2020. These targets concern emissions from most sectors not included in the EU Emissions Trading System (ETS), such as transport, buildings, agriculture and waste.



Graph 3 : Share of renewable energy in the EU Member States, 2018

(in % of gross final energy consumption)

Source: Eurostat, 2019

Energy dependence<sup>34</sup> shows the extent to which a country's economy depends on imports to meet its energy needs. The EU-27 depends on over 50% imports to meet its needs. The level of energy dependence of MED area countries varies from 45% (France) to close to 100% (Malta, Cyprus).

Islands constitute a specific target in the Mediterranean area and are directly concerned by the recent "Clean Energy for EU Islands initiative" launched by the European Commission (Box 3).

# Box 3 : Clean Energy for Islands Initiative

In May 2017 the European Commission, together with 14 Member States, signed the "**Political Declaration on Clean Energy for EU Islands**" under the Maltese Presidency.

This Declaration was born out of the recognition that islands and island regions face a set of energy challenges and opportunities due to their specific geographic and climatic conditions. The opportunities have the potential to make Europe's island communities innovation leaders in the clean energy transition for Europe and beyond - a fact the European Commission explicitly recognised in its Communication on "Clean Energy for All Europeans", reassuring its commitment to ensure that the energy concerns of island inhabitants are at the forefront of the energy transition and related policy developments.

In cooperation with the European Parliament, the Commission in 2018 set up a Secretariat to deliver the objectives of the Clean Energy for EU Islands Initiative. The Secretariat acts as a platform of exchange of best practice for islands' stakeholders and provides dedicated capacity building and advisory services.

Europe is committed to reducing the carbon footprint of the energy sector. This shift will increase the role of electricity compared to other energies. It is important to both develop renewable energy sources and ensure the continuous security of energy supplies, in the context of an increasing dependency on imported fossil fuels.

<sup>34</sup> The energy dependence indicator is the ratio between net imports and the total amount of gross domestic energy consumption and the reserves.

Energy efficiency is at the core of the EU's "Europe 2020" strategy and is central to the shift towards a low-carbon economy. **Energy efficiency is one of the most cost-effective ways of reinforcing energy supply safety and reducing greenhouse gas emissions** and other pollutants. The Commission has proposed several measures to increase efficiency at all stages of the energy chain: generation, transformation, distribution and final consumption. The measures focus on the public transport and building sectors, where the potential for savings is the greatest<sup>35</sup>.

# 3.2.2. Water management, waste management and sea protection

In the Mediterranean area, water represents one of the most important economic and environmental resource and is threatened by climate change (droughts) and human activities (pollution).

The Marine Strategy Framework Directive (MSFD)<sup>36</sup> which came into force in 2008 aimed to achieve the Good Environmental Status (GES) of European Union marine waters by 2020 through the development of national strategies for marine waters. This Directive promotes the Ecosystem Approach and encourages cooperation between EU Member States. The Water Framework Directive, adopted in 2000 sets the broad scope for action and ambitious goals for the protection of inland surface waters, transitional waters, coastal waters and groundwater.

In the Mediterranean, a specific attention should be paid to **wetlands** that represent an important link in the water cycle (**Box 4**) but are also strongly affected by human activities. Often considered as "wastelands" due to their limited interest for human activities, many of these areas have been drained to expand cultivable areas or urbanization. Nowadays, the role of wetlands in the protection of biodiversity is widely recognised as well as their important function in water cycle (cleaning and purifying role).

#### Box 4 : Situation of wetlands

Mediterranean wetlands include a wide variety of natural habitats such as river deltas, freshwater, brackish, and salt lakes and marshes, permanent and intermittent rivers, floodable forests along rivers, as well as salt pans and dammed reservoirs. Wetlands cover 18.5 million hectares in the Mediterranean region, between 1.7 and 2.4% of the total area of the 27 Mediterranean countries (and 1 to 2% of wetlands in the world).

Despite their **considerable biological and economic value**, their area has continuously decreased, and they have been profoundly degraded and often converted into agricultural, urban or industrial lands, or replaced by artificial wetlands.

Today, most Mediterranean wetlands (Map 16) are still endangered by the intensification of agriculture – which requires great quantities of water and land, and releases organic pollutants – and water management infrastructure, climate change, and the introduction of new species. 50% of Mediterranean wetlands disappeared during the 20th century, and those that remain are often degraded or artificialized.

<sup>35</sup> http://ec.europa.eu/energy/efficiency/index\_en.htm

<sup>36</sup> Directive 2008/56/EC of the European Parliament and of the Council of 17 June 2008 establishing a framework for community action in the field of marine environmental policy (Marine Strategy Framework Directive)



#### Map 16 : Mediterranean wetlands, 2020



Besides the pressure on wetlands, waste represents one of the major pressures on the environment and more specifically on water resources, and the amount of waste produced continues to increase. Waste presents several types of hazards for health and the environment: ground and surface water pollution, soil contamination and degradation of the natural ecosystems, gas emissions (dioxins for example) and particles, unpleasant odours and landscape degradation. It also contributes to climate change through emissions of greenhouse gases (methane) from landfills and incineration facilities<sup>37</sup>.

According to a study by the French Institute for Sea Research and Exploration (IFREMER)<sup>38</sup>, **the Mediterranean Sea is the most polluted European sea**. Two hundred thousand tons of plastic is dumped each year, representing more than 60% of all the trash found at the bottom of the sea. **Pollution of the sea is mainly originating from land** which raises the question of cooperation and coordination of activities and policies between coastal and hinterland areas (**Map 17 and 18**). Pollution is also originating from **maritime transport activities**, hydrocarbon exploration and exploitation.

<sup>37</sup> Plan Bleu Plan Bleu, Mediterranean Strategy for sustainable development follow-up: main indicators - 2013 update
 <sup>38</sup> Monitoring and assessment guideline for marine litter in Mediterranean MPAS, IFREMER, AMARE Interreg project, 2019.



#### Map 17 : Water ecological status - country comparison

Source: European Environment Agency, 2018



# Map 18 : Coastal hotspots of plastic pollution in the Mediterranean

Source: Stop the flood to plastic – How Mediterranean countries can save their sea. WWF report 2019

In 2014, an average of 4.9 tonnes of waste per person were generated in the EU. Much of this was produced by construction and demolition, mining, quarrying and manufacturing. Households also produced a substantial amount of waste, an average of 411 kg per person. Marine litter, escaping from waste management systems, is a growing concern.

In MED area countries, the waste generated by households continued to rise over the last few years, while the level remained stable for the EU-27. With a view to preventing and reducing the negative effects of waste disposal on the environment as much as possible, the **European directive on the disposal of waste**<sup>39</sup> lays down strict technical requirements for waste and landfills. The implementation of this Directive remains however unsatisfactory, and considerable efforts must be undertaken to improve the situation.

In the revised **Mediterranean Strategy for Sustainable Development** (MSSD 2016-2025)<sup>40</sup>, Mediterranean countries seek to promote national measures for implementing innovative waste management solutions, in line with the waste hierarchy: prevention, reduction, reuse, sorting, recycling, recovery, and, as the least preferred option, disposal (see **Box 5** below on circular economy).

It is also a priority to develop behavioural change schemes that will lead to reduction in waste volumes and to develop legal and financial frameworks to support sustainable waste management. At the regional level, an **assessment of the effectiveness high-tech and low-tech solutions** (flagship initiative), including but not limited to awareness-raising and economic measures that have been implemented, will be carried out with a view to their more widespread utilization in waste reduction efforts. Finally, the Strategy also includes a regional action to develop a **database of generated and treated waste** and related material flows. A target associated with this strategic direction is to substantially reduce waste generation through prevention, reduction, recycling and reuse by 2030.

The evaluation of water status and the development of **innovative monitoring tools** (sensors...) will also contribute to reach a better environmental status.

#### Box 5 : Perspectives with the circular economy

The circular economy is aimed at 'closing the loop' of product lifecycles by keeping resources within the economy so as to improve use of raw materials, products and waste. It contributes to meeting the EU's environmental and climate objectives and stimulates local and regional development. Waste prevention, eco-design and similar measures generate savings, increase turnover and create jobs, particularly in re-manufacturing, repair and product innovation.

The **EU action plan for the circular economy**<sup>41</sup> establishes a long-term approach to reducing waste generation, increasing recycling and reuse and reducing landfill and incineration.

Moving towards a circular economy implies a substantial transition **both in production processes and consumption behaviour**. The preconditions and consequences of these transitions vary considerably between European cities and regions.

In the Mediterranean, one can observe on the one hand room for improvement regarding circular economy innovation capacities and on the other possibilities of improvement in consumer behaviour (**Map 19**).

<sup>&</sup>lt;sup>39</sup> Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives

<sup>&</sup>lt;sup>40</sup> Mediterranean strategy for sustainable development 2016-2025 – Investing in environmental sustainability to achieve social and economic development, UNEP-MAP, 2016

<sup>&</sup>lt;sup>41</sup> Closing the loop – An EU action plan for the Circular Economy. Communication from the Commission to the European Parliament, the Council, the European economic and social Committee and the Committee of the Regions, Brussels 2015

Innovative solutions could be developed at territorial and local level, especially in territories confronted to lack of resources and/or waste management challenges. The circular economy is **especially important for islands** confronted to scarce or higher cost resources and to higher constraints for waste management.

Areas with high levels of household waste per capita and little recycling will face more drastic transition processes, especially areas where large numbers of tourists or visitors increase the amount of household waste. Among these are Malta, Cyprus and along the Mediterranean coast in Greece, Italy, Spain and the Algarve in Portugal.

Moving towards a circular economy offers also new development opportunities linked to **agricultural and forestry products**, i.e. bio-based products – and consequently the bio-economy. Following an analysis of smart specialisation strategies, there is no clear territorial pattern for the bio-economy. However, some specialisation trends can be observed (**biomass supply, biomass processing and conversion, waste**...).

#### Map 19 : Place-based circular economy - production and new economic systems



*Source: Territorial Cooperation for the future of Europe – European Territorial Review, ESPON contribution to the debate on Cohesion Policy post-2020, 2020.* 

#### 3.2.3. Climate change adaptation, risk management and prevention

European regions differ widely in relation to the challenges they face from climate change. The Mediterranean climate is characterised by hot dry summers and humid, cool winters. It is also very capricious with sudden heavy rain or bouts of high winds such as the Sirocco and Mistral. This climate has a profound influence on the vegetation and wildlife of the region.

This area is likely to experience significant increases in days of extreme heat, growing risk of droughts, declining crop yields and more multiple climatic hazards<sup>42</sup>. Coastal areas face the risk of rising sea levels, increasing sea temperatures<sup>43</sup> and growing numbers of 'marine dead' zones<sup>44</sup> (source: EU cohesion report 2017).

#### a. Accelerated climate change in Mediterranean regions

Based on global climate scenarios, the Mediterranean Sea has been classified as one of the most responsive regions to climate change<sup>45</sup>. In the Mediterranean region, average annual temperatures are now 1.4°C higher than during the period 1880-1899, well above current global warming trends, especially during summer (**Graph 4**). As for the future projections, the 2°C global mean temperature target implies 3°C warming in hot temperature extremes in the Mediterranean region<sup>46</sup>.



Graph 4 : Mean Temperature Anomalies in the Mediterranean Basin

<u>Comment</u>: Warming of the atmosphere (annual mean temperature anomalies with respect to the period 1880-1899), in the Mediterranean Basin (blue lines, with and without smoothing) and for the globe (green line). Source: Data from Berkeley Earth available at http://berkeleyearth.org/

According to meta-analysis integrating assessments covering multiple areas (water, agriculture, tourism, ecosystems and so on)<sup>47</sup>, Italy, Spain and southern and central France are likely to have the highest number of areas adversely affected, along with parts of south-eastern Europe (**Map 20**).

<sup>42</sup> The number of hot days (those exceeding the 90th percentile threshold of a baseline period) has almost doubled since 1960 across Europe. Since the beginning of the 21st century, Europe has experienced several extreme heat waves (in 2003, 2006, 2007, 2010, 2014, 2015 and 2017). Under a high emissions scenario, very extreme heat waves are projected to occur as often as every other year in the second half of the 21st century (European Environment Agency, 2017).

<sup>43</sup> An increase in sea temperature is likely to have important consequences in term of biodiversity. Wild fish stocks are responding to changing temperatures and food supply by changing their distribution which can affect local communities dependent on them.
<sup>44</sup> Dead zones are hypoxic (low-oxygen) areas caused by excessive nutrient pollution from human activity coupled with other factors that deplete the oxygen required to support most marine life in bottom and near-bottom water.

<sup>45</sup> Mediterranean Experts on Climate and environmental Change (MedECC - 2019) / Giorgi F (2006) Climate changes hot-spots. Geophysical Research Letters, 33, L08707

<sup>46</sup> Seneviratne SI, Donat MG, Pitman AJ, Knutti R and Wilby RL (2016) Allowable CO2 emissions based on regional and impact-related climate targets, Nature, 529 477–83

<sup>47</sup> See European Environment Agency (2017) for a meta-analysis

Source: Mediterranean Experts on Climate and Environmental Change (MedECC), 2018



#### Map 20 : Negative climate change impact under a 2°C warming scenario





# Source: My Region, My Europe, Our Future, Seventh report on economic, social and territorial cohesion, EC, September 2017

Estimating the economic costs of climate change is particularly challenging, but most studies indicate that these costs could be high even for modest changes in climate. Changes in the environment be costly to adapt to and will necessitate substantial investment to make regions more resilient to their consequences.

#### b. Increasing natural risks in Mediterranean regions

Climate change is expected to increase the occurrence of natural hazards throughout the EU in the coming decades.

Different studies<sup>48</sup> show that places where the effects are likely to be particularly severe (i.e. affected by increase in the probability of hazard occurrences of at least 20% for three or even four of the 7 hazards considered) are in the **South of Europe** and will progressively extend northwards to central and western Europe in the coming decades (**Map 21**). The PESETA II study estimates total damages in the EU of up to €190 billion per year by the end of the 21st century under a high economic growth scenario<sup>49</sup>, mostly from heat-related deaths and losses in agriculture and coastal areas. The costs are expected to be far from evenly distributed across Europe, and much higher in southern Europe than elsewhere. The CIRCE project estimates that Mediterranean countries could lose an average of just over 1% of GDP by 2050 notably from damage to tourism and energy<sup>50</sup>.

<sup>48</sup> Multi-hazard assessment in Europe under climate change. ForzieriG. Feyen, L., Russo, S., Vousdoukas, M., Alfieri, L., Outten Outten, S., Migliavacca, M., Bianchi, A., Rojas, R. et Cid, A. (2016).

<sup>&</sup>lt;sup>49</sup> In 2000, the Inter-governmental Panel on Climate Change (IPCC) published the Special Report on Emissions Scenarios (SRES) which describes greenhouse gas emission scenarios used to make projections of possible future climate change. The SRA1B scenario assumes rapid economic growth, a global population that reaches 9 billion in 2050 and then gradually declines, the rapid spread of new and efficient technologies, a convergence of world income and ways of life and extensive worldwide social and cultural interaction.

<sup>&</sup>lt;sup>50</sup> Regional Assessment of Climate Change in the Mediterranean. Navarra, A. and Tubiana, L. (2013)



#### Map 21 : Projected increase in multi-hazard climate-related exposure, 2050

Source: Seventh report on economic, social and territorial cohesion, EC, September 2017.

4 No data

The types of impacts will vary from one region to another with similar patterns in the same geographical areas. They can be described as follow (**Map 22**).

In terms of public policies and project engineering, innovative solutions could be developed for these different types of risk according to the specificities of the Mediterranean regions (**Table 2**)



#### Map 22 : The impact of Climate change on Europe

Source: European Environment Agency, 2018

# Mediterranean region

#### Environment:

- More heat extremes
- Less rain and river flows; Higher risks of droughts
- Higher risks of biodiversity loss; Higher risks of forest fire

#### Economy

- More competition for water
- More water needed for agriculture
- Lower crop yield: Livestock production becomes more difficult
- Producing energy becomes more difficult
- More energy needed for cooling
- Less tourism in summer, but possibly more in other seasons
- Most economic sectors negatively affected
- Very vulnerable to the spill over effects of climate change effects outside Europe

#### <u>Health</u>

- More people die because of heat wave
- More areas where people can catch disease from insect bites

#### Mountain areas

#### Environment:

- Temperature increase more than the European average
- Fewer and smaller glaciers
- Plants and animals will move to higher altitudes
- High risks of species extinction
- Higher risks of forest pests
- Higher risks of rock fall and landslides
- Hydropower could be affected

#### Economy:

- Less ski tourism

#### Atlantic region

#### Environment:

- More heavy rain; Higher river flow
- Higher risk of flooding
- Higher risk of damage due to storms in winter
- More bad weather

#### Economy:

- Less energy needed for heating

#### Coastal regions and seas

#### Environment:

- Higher sea surface temperatures
- Ocean become more acidic
- Marine species migrate north
- Change in phytoplankton communities
- More marine dead zones

#### Economy:

Risks and some opportunities for fisheries

#### Health

- Higher risks of water-borne diseases

#### **Continental region**

#### Environment:

- More weather extremes
  - Less rain in summer
- Higher risk of river flood
- Higher risk of forest fire

#### Economy:

- Forest become less valuable
- More energy needed for cooling

Types of risk	Possible solutions with public policies support
Droughts	- Water monitoring and water management solutions
	- Sustainable agriculture solutions
Landslides	- Landslides monitoring
	- Information and alert systems
Floods	- Weather forecasting
	- Information and alert systems
	- Spatial planning solutions
	- Nature based solutions
Coastal erosion	- Weather forecasting
	- Information and alert systems
	- Spatial planning solutions
	<ul> <li>Nature based solutions (protection of shores and dunes)</li> </ul>
Loss/change of	- Biodiversity monitoring; Awareness raising; contribution of professionals, citizens
biodiversity	<ul> <li>Strengthening of protected areas (management plans, effective implementation of plans)</li> </ul>
	- Spatial planning solutions
	- Nature based solutions
Mass tourism (coastal.	- Seasonality; cooperation between coastal and hinterland tourism
mountainous areas)	<ul> <li>Impact evaluation and mitigation measures</li> </ul>
	- Information, awareness raising, sensitization
Health (heat waves.	- Awareness raising; information systems
diseases)	- Alert and intervention systems
Forest fire	- Detection / monitoring, observation and alert systems (camera, drones, sensors)
	- Awareness raising, information of the population, citizenship
	- Spatial planning solutions
	- Nature based solutions
Transversal approach	- Solutions for integrated management of risks
	- Coordination between administrations
	- Development of a culture of risk within the administration and the population

#### Table 2 : What innovative solutions for Mediterranean risks?

# c. Sea level rise and coastal erosion

By the end of the 21st century, European coasts would experience mean sea level rise between 0,2 m and 0,4 m under a low emission scenario and between 0,4 m and 1,0 m under a high emission scenario.

Mean sea level rise will contribute to projected increases in coastal floods along the European coast. Large changes in flood frequency mean that what is an extreme event today may become the norm by the end of the century in some locations. The frequency of coastal flooding events is estimated to increase by more than a factor of 10 in many European locations, and by a factor of more than 100 in some locations during the 21st century, depending on the emissions scenario.

In the absence of further investments in coastal adaptation, the estimated average annual losses from coastal flooding in the 17 main coastal European cities could increase from about EUR 1 billion in 2030 to EUR 31 billion in 2100 under the high emissions scenario.

Despite a very low tide in the Mediterranean (40cm in average), coastal flooding and coastal erosion is expected to increase significantly in the next years (**Map 23**).

#### Box 6 : The storm "Gloria" - January 2020

The 20 January 2020, the storm "Gloria" hit Spain and the south of France. It produced waves of 8 metres along the coastlines with heavy rain reported in Valencia. Images from Copernicus Emergency Management Service show storm surge swept 3km inland, devastating rice paddies in the Ebro river delta south of Barcelona. In Barcelona, the assessment of how much repairing the damage might cost is over 12 million euros.



Andalou Agency

While the whole city was affected by the storm, by far the worst damage was on the coast, where some 30% of the sand on the city's beaches was washed away.



#### Map 23 : Projected change in frequency of coastal flooding events between 2010 and 2100

Source: European Environment Agency, 2019

With expected sea level rise and the perspective of more frequent storms in the Mediterranean, public authorities and citizens are confronted to the necessity to better protect the most urbanised areas and rural areas. However, this would require very heavy infrastructures and investments. Other solutions include a major shift in the land management policies with restrictions of urbanisation in the coastal areas, use of nature-based solutions (see box 7 below), a specific attention to be paid to sensitisation, information, prevention (including training when relevant) in order for the different types of stakeholders (public authorities, technicians, private actors, tourists, citizens...) to share a common understanding of challenges, better accepts constraints and changes and develop shared solutions.

#### Box 7 : Focus on nature-base solutions

While climate change is becoming more and more of a concrete reality, impacting people and places throughout the Mediterranean region, a broad range of Nature-based Solutions are available to enhance society's resilience in this new, dynamic and highly challenging context<sup>51</sup>.

Nature-based Solutions are pragmatic solutions building on the **services and resources provided by ecosystems and biodiversity**, which are more sustainable, robust and often more cost-efficient than conventional, technological man-made solutions alone. They require a **transformative change**. Using nature as a solution implies working with nature, instead of against it, and reaping the multiple benefits it offers over a long time. It requires to look at the **ecosystems as the basis of development projects** and promote socioecological approaches.

Nature based solutions can include:

- Conservation of existing ecosystems and landscapes (forests, wetlands, estuaries, grasslands, seagrass meadows)
- Sustainable management and use of existing ecosystems and landscapes (forest management, fisheries, recreational sites...)
- Restoration of valuable ecosystems and landscapes (degraded floodplains, dunes and beaches, wetlands...).
- Creation of new ecosystems services and green infrastructures (fight against heat waves, development of green roofs, parks and green corridors, urban food gardens...)

#### d. <u>Desertification</u>

Even if future global warming is limited to 2°C, as prescribed by the Paris Agreement, summer rainfall is at risk to be reduced by 10 to 30% in EU regions, thereby enhancing existing water shortages and causing loss in agricultural productivity, particularly in Southern countries. **Risks of droughts and desertification increase significantly**, especially in Portugal, Spain, south of Italy and Greece (**Map 24**).

<sup>51</sup> Outsmart climate change: work with nature! Enhancing the Mediterranean's climate resilience through Nature-based solutions. Policy Paper, UN-MAP-Plan Bleu, 2019

#### Map 24 : Projected change in meteorological droughts for a high emissions scenario

(period 2041-2070, compared with 1981-2010 - Change in number of drought events per 30 years



Source: European Environment Agency, 2020

To satisfy agricultural water needs, irrigation would instead have to be increased by 4-22% to compensate for the growing human population. This demand will conflict with other uses (drinking water, tourism, industry).

Climate change will apply also an additional stress on rates of land degradation through changes in the length of seasons, recurrence of droughts, floods and other extreme climatic events. Changes in temperature and precipitation will in turn reduce vegetation cover, soil quality and changes in land-use practices, such as conversion of land use, pollution and depletion of soil nutrients. Depending on the scenario, it is expected that in southern Europe, climate change will also increase forest fires by 10–20 percent<sup>52</sup>.

This situation is more significant in Mediterranean southern countries where agriculture is expected to experience a range of negative impacts due to water shortages (agriculture dependent on rainfall (highlands) and irrigated agriculture<sup>53</sup>.

<sup>53</sup> Assessment of the impacts of Climate Change on the Agriculture Sector in the Southern Mediterranean: Foreseen developments and policy measures, Union for the Mediterranean, 2019.

<sup>&</sup>lt;sup>52</sup> A broad overview of the main problems derived from climate change that will affect agricultural production in the Mediterranean area. Dimitrios Skuras and Demetrios Psaltopoulos, Department of Economics, University of Patras, University Campus, 2012.

#### 3.2.4. Protection of the environment and biodiversity

Mediterranean countries possess a wide diversity of natural resources including woodlands, arable lands, mountainous areas, rivers, lagoons, deltas, and wetlands. While the MED area is rich in diverse natural resources, both on land and in the sea, while it boasts numerous protected sites, its heritage is under constant pressure from human activities, including tourism, agriculture, industry, and sprawling urbanisation. A better protection of these resources is necessary which require a good understanding of ecosystems, of the state of the environment and to adopt coherent behaviour and policies at territorial level.

#### a. Increasing pressure on very rich and diverse natural resources

The Mediterranean has a rich biodiversity but also an exceptionally high rate of endemism on land and in the sea (28% of endemism for marine species).

This area is considered one of the top biodiversity hotspots in the world. Some parts of the Mediterranean are too dry for trees or dense vegetation and are, instead, covered in vast swathes of grasslands that reveal an equally rich wildlife.

The Mediterranean Region is however under tremendous pressure from humans. The coastal area is densely urbanised, the maritime traffic is very dense and increasing and it is the number one tourism destination in the world. As a result, the Mediterranean Sea is facing problems of over-occupation, pollution, over-exploitation, erosion and there is a constant threat of forest fires and chronic water shortages.

At EU level, the Birds Directive (adopted in 1979, replaced in 2009) and the Habitats Directive (adopted in 1995) require EU Member States to protect important habitats and species by establishing protected areas known as Natura 2000 sites (**Map 25**). This network represents 27,522 sites and covers 18% of the land and 6% of the exclusive economic zone in the overall European territory.

In the Mediterranean area, other tools or protected areas must be considered:

- Fisheries Restricted Areas (FRAs-GFCM)
- Particularly Sea Sensitive Sea Area (PSSA IMO)
- International Marine Park of the Strait of Bonifacio
- Pelagos Sanctuary for Marine Mammals
- Specially Protected Areas of Mediterranean Importance (SPAMIs Barcelona Convention)



#### Map 25 : Distribution of EU-27 Natura 2000 sites, 2018

#### b. Protection measures that can still be improved

In this context, one stake can be to increase the number of marine protected areas. As stated in the "Aichi objective  $11^{54"}$ , by 2020, at least 10% of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, must conserved through effectively and equitably managed, ecologically representative and well connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes.

In 2019, **9,68% of the Mediterranean Sea has been designated as Marine Protected Areas (MPAs),** although mainly in the northern countries. However, this figure represents only "paper parks" where management plans must then be duly implemented. In fact, only 2,48% of the Mediterranean is covered by MPAs with a management plan and **only 1,27% by MPAs that effectively implement their management plan.** 

This situation shows a significant possibility of progress with existing MPAs including for example<sup>55</sup>:

- Protection of unrepresented biodiversity areas (new MPAs, collaboration among administration (environment, fisheries, coastguards), collaboration between neighbouring countries (EEZ, MPAs...))

<sup>55</sup> Ecosystem-based approaches for biodiversity protection and management – Declaration – Interreg MED project Biodiversity Protection, Brussels, December 2018.

<sup>&</sup>lt;sup>54</sup> The "Aichi Targets" (twenty in number) constitute the new "Strategic Plan for Biological Diversity 2011-2020" for the planet, adopted by the Parties to the Convention on Biological Diversity of the United Nations (CBD) in October 2010. "Aichi" refers to the name of Aichi Prefecture, Japan.

- Transformation of paper parks into real conservation tools (long term management plans, enforcement mechanisms, monitoring programmes)
- Promotion of community co-management (enhanced decentralised governance of biodiversity and natural resources, management of conflicts between users, local ownership and co-management schemes...)
- Working beyond protected areas and national boundaries (use of ecoregional planning approaches and units that account for multiple hierarchical scales to reach a Good Environmental Status)

In a more general way, the management of biodiversity and natural resources require a better understanding of the role they play in our daily life (climate, health, safety...) and which is now recognise as "ecosystem services"<sup>56</sup>.

Participatory solutions constitute a key issue to understand these ecosystems and provide solutions. Indeed, the protection of the environment requires **behavioural changes**, a good and shared understanding of the threats and solutions that could be implemented in each territory. The involvement of local authorities and communities is key to establish the right diagnosis and propose well accepted and efficient solutions. This can require an **adaptation of responsibilities between the different institutional levels** (land management, management of infrastructures, town and country planning, civil security...) and a better involvement of local communities (municipalities, private actors, fishermen, tourism businesses (restaurants, hotels...), citizens...). **Awareness raising, information and even training** sessions can be necessary for local stakeholders to be more involved and implement efficient measures.

#### 3.2.5. Which way towards sustainable tourism?

The MED area combines many appealing features (climate, coastlines, landscapes, cultural heritage, etc.) making it the most popular tourist region in Europe and one of the largest tourist areas in the world<sup>57</sup>,

Within the EU, southern and Mediterranean Europe is the most visited with 193 million arrivals in 2017, followed by western Europe (171 million), northern Europe (66 million) and central and eastern Europe (70 million). Five out of the top ten destinations in the world are in the European Union: France, Spain, Italy, Germany and the United Kingdom.

The top 20 tourist regions in the EU — in terms of nights spent in tourist accommodation by resident and international tourists in NUTS level 2 regions — are shown in **Graph 5**. The ranking for 2017 was dominated by coastal and mountainous regions: the highest number of nights spent in tourist accommodation was recorded in the Spanish island destination of Canarias (104.4 million), followed by Cataluña (83.0 million nights spent) and the Adriatic coastal region of Jadranska Hrvatska (Croatia; 81.9 million nights spent) completed with Balearic Islands (ES), Veneto (IT), Andalusia (ES), Provence-Alpes-Côte d'Azur (FR), Rhône-Alpes (FR) and Valencia (ES).

<sup>&</sup>lt;sup>56</sup> Ecosystem services are the many different benefits that ecosystems provide to people. For example, a stand of trees can reduce air pollution, purify the water supply, reduce the likelihood of floods and help regulate the climate by capturing and storing carbon. It might also provide timber for buildings, a space for recreation and improve the aesthetic qualities of the landscape. <sup>57</sup> UNWTO Tourism highlights 2019.

#### Graph 5 : Top tourist regions in the EU, 2017

Million nights spent in tourist accommodation, by NUTS 2 region



#### Source: EUROSTAT, 2019

The tourism sector, therefore, offers substantial opportunities in terms of economic growth and employment (jobs in this sector are rarely threatened by globalisation). Exploiting this potential requires development strategies for infrastructures, sites and attractions, accommodation, marketing and for innovations in services.

It is also necessary to **embed sustainability in the sector** (with respect to planning, the sustainable management of coasts, biodiversity and water resources, to name but a few examples).

In the Mediterranean area, increasing numbers of tourists have led to concerns around the sustainable development of coastal areas, especially those characterised by high-density building and expanding environmental footprints. In 2017, just over half (50.3 %) of the EU-28's tourist accommodation establishments were in coastal areas, while their capacity — in terms of bed places — was somewhat lower, at 46.5 %.

This situation implies paying particular attention to the management of these flows (and their impact in terms of resource management) and considering alternative modes of development in tourism practices with, for example, inter-seasonality and taking into account other tourist areas (balance between coastal and hinterland tourism activities).

# 3.3. SWOT ANALYSIS FOR SUSTAINABLE DEVELOPMENT IN THE MEDITERRANEAN AREA

The SWOT analysis in the field of sustainable development in the Mediterranean takes up the main categories of fields of action developed in part 3 of the diagnosis. It insists in particular on:

- The conditions for the development of a low-carbon economy, by comparing the important needs of the area on the one hand and the implications in terms of public policy and financing on the other
- The protection of the environment and the sustainable use of resources which represents a particularly important issue in a very attractive Mediterranean area subject to many pressures (demography, urbanisation, tourism ...)
- Adaptation, management and prevention of climate change. This topic has become so important in the last decade that it constitutes a subject of concern as such with implications that are largely cross-sectoral.
- Accessibility, deployment of networks and promotion of sustainable transport for all. These questions are essential for the development of the Mediterranean area and constitute important issues for more remote or less equipped regions. However, they should be addressed with the most suitable tools, considering the important investments required.

#### Table 3 : SWOT analysis for sustainable development in the Mediterranean area

Priorities for European Investment	Strengths	Weaknesses	Opportunities	Threats
Low carbon economy	<ul> <li>The climatic conditions and natural resources are favourable to the production of renewable energy (notably solar and wind)</li> <li>There is a heightened awareness about the need for a shift towards a low carbon economy</li> </ul>	<ul> <li>Insufficiently developed renewable energies in Mediterranean regions</li> <li>A relatively high degree of energy dependence, especially for islands</li> <li>Low energy efficiency compared to the European average</li> <li>Significant carbon energy consumption with transport</li> </ul>	<ul> <li>An overall will of countries and regions to promote renewable energies and energy efficiency (political support)</li> <li>Ambitious objectives set at national and EU level</li> <li>Opportunities with the EU initiative clean energy for EU islands</li> </ul>	<ul> <li>Coherence with other programmes and financing tools</li> <li>Renewable energy and energy efficiency are already largely supported by national and regional programmes</li> <li>Investments required</li> <li>Energetic transition requires billions of euros of investments</li> </ul>
Protection of the environment and sustainable use of resources	<ul> <li>An extremely rich environmental heritage: the MED area supports very diverse natural habitats:</li> </ul>	<ul> <li>Increase of environmental pollution in coastal and maritime areas</li> </ul>	<ul> <li>Increasing awareness of decision makers and citizens about environmental challenges and climate change consequences</li> </ul>	<ul> <li>Human activity still growing up with increasing damage on the environment in the years/decades to come</li> </ul>

mountainous regions, arable lands, forests, rivers, wetlands - Very rich biodiversity with endemic species on the land and at sea - Many protected areas of Mediterranean importance (Natura 2000)	<ul> <li>Important loss of biodiversity and many species under threat</li> <li>Natural areas and wetlands under pressure of urbanisation and human activities</li> <li>Increasing water and sea pollution (chemicals, plastics)</li> <li>Increasing consequences of climate change on the environment (water, biodiversity)</li> </ul>	<ul> <li>Programmes and financing tools pay more and more attention to these challenges</li> <li>Innovation, science and communication technologies can help tackle environment and climate challenges</li> <li>Behavioural changes are key to better protect the environment</li> </ul>	<ul> <li>Mass tourism still growing up in the coming years in the Mediterranean regions</li> <li>Water shortage and desertification with limited mitigation capacities</li> <li>Demographic pressure in the southern shore of the Mediterranean</li> </ul>
---	--	--	--

Climate change adaptation, risk management and prevention	<ul> <li>The climate has been for a long time a positive asset for the Mediterranean (attractivity, Mediterranean agriculture, tourism)</li> </ul>	<ul> <li>Mediterranean countries are more susceptible to climate change than the EU-27 average</li> <li>Already significant consequences can be observed (extreme weather events, droughts, forest fires)</li> <li>Major difficulties expected with coastal erosion and desertification</li> </ul>	<ul> <li>Existence of a European framework as well as national policies with objectives laid down to reduce CO2 emissions</li> <li>European countries have technologies and resources to develop mitigation and adaptation measures</li> <li>Behavioural changes are key to fight climate change</li> </ul>	<ul> <li>Climate change is expected to increase in the coming years</li> <li>Necessary investments could exceed available means</li> </ul>
To promote sustainable transport and to remove the bottlenecks to essential infrastructure networks	<ul> <li>General good quality transport networks in the Med area</li> <li>Overall satisfactory accessibility, notably for large metropolitan areas</li> <li>A good level of road infrastructures</li> <li>A large network of port cities, well equipped to deal with the flow of passengers and goods</li> <li>A satisfactory level of airport facilities</li> </ul>	<ul> <li>Geographical fragmentation and isolation of numerous territories, notably islands</li> <li>Badly managed urban development notably in coastal areas</li> <li>The MED area remains dependant on road transport: prevalence of road transport over rail or maritime transport.</li> <li>Importance of individual vehicles as a means of transport, especially in urban and surrounding areas</li> <li>The density of the railway network is lower than in Northern Europe</li> <li>Multimodal accessibility is rather low</li> <li>Connections between coastal and inland areas remain insufficient</li> <li>Congestion of the major roads in cross-border areas</li> <li>Insufficient development of maritime coastal traffic and short distance maritime transport</li> </ul>	<ul> <li>The location of the Mediterranean regions and islands allow them to be hubs for tourism and trade with Asia</li> <li>Promotion of multimodal transport systems</li> <li>Reinforcement of the existing railway networks (high speed)</li> <li>Development potential for sea highways</li> </ul>	<ul> <li>Transport is a major source of pollution</li> <li>Lack of European coordination of the communication systems</li> <li>Competition with north and central European urban centres</li> </ul>

# 3.4. PERSPECTIVES FOR THE INTERREG MED PROGRAMME 2021-2027

As mentioned in the Orientation Paper for the Mediterranean drafted by the EC, the climate change issue gained momentum during the last years and is now considered as **one of the main challenges for EU population and the EU economy in the coming years**. The EU 2020 strategy clearly stated the importance of CO<sup>2</sup> reduction and energy transition (part 2 of the diagnosis).

The situation has worsened in recent years, however, with increasing **consequences on the environment and more frequent extreme weather events and increasing environmental risks in the Mediterranean** (storms, floods, coastal submersion, droughts, forest fires...). The challenges are particularly important for the Mediterranean and will require stronger coordination at transnational level to implement efficient solutions.

# 3.4.1. Lessons learnt from the 2014-2020 INTERREG MED programme

During the period 2014-2020, environmental concerns have been addressed by two different priority axes of the INTERREG MED programme:

- Axis 2 "Fostering low-carbon and energy efficiency in specific MED territories: cities, islands and rural areas" (20% of the budget of the programme)
- Axis 3: Protecting and promoting Mediterranean natural and cultural resources (34% of the budget of the programme)

The Axis 2 was mainly concentrated on energy issues with the objective to better manage energy in public buildings, increase the part of renewable energy in strategies and plans and increase the use of sustainable transports (low carbon mobility).

For MED stakeholder's energy issues remain very important for the Mediterranean area with huge investments needed to reach EU targets of CO<sup>2</sup> emissions. Such investments require large budgets usually supported by national or regional authorities (investments, tax deductions...). Transnational programmes can contribute to these objectives with a better sharing of experiences, but the efficiency of measures remain strongly dependant on national, regional and local regulation and investment capacities.

The Axis 3 was more focused on environmental issues with the objective to reduce the potential impact of human activities on environmental and cultural heritage (adaptation and coordination of public policies...) and ensure a better protection of natural resources (coastal zones management, spatial planning, marine protected areas...).

The axis three has been quite successful during the last programming period with many projects' applications and strong networking in the fields of environment, biodiversity and sustainable tourism. These themes have proven to be relatively promising for territorial cooperation stakeholders with good involvement of the different institutional levels (local, regional, national and European / Mediterranean level).

# 3.4.2. Added value of the INTERREG MED programme 2021-2027

In the field of "sustainable development" or "environment", a very large diversity of projects can be funded and implemented with the support of Interreg or regional programmes. These issues cover a very large scope of public policies at local, regional and national level (energy, sustainable transports, sustainable tourism, spatial planning, agriculture, biodiversity protection, water management, etc.). They also concern a wide diversity of territorial actors including public authorities, public agencies, private bodies, NGOs, citizens, etc.

With the climate change, environmental issues become key priorities for policy makers and for European programmes.

In this context, one of the main challenges is to identify **the fields of intervention that would constitute the most relevant targets for the INTERREG MED programme**. In order to make a hierarchy, one could consider three main criteria:

- **The "budget intensity"**: budget necessary to reach significant impact. INTERREG programmes are less relevant when heavy or large-scale investments are needed
- **Territorial specificities**: specific solutions must be developed according to the type of territory considered (coastal area, islands, hinterlands...). Territorial specificities increase the relevance of cooperation projects to share adequate and innovative solutions
- Level of emergency for MED regions: Some issues must be tackled urgently at transnational level in order to mitigate territorial impacts

As an example, crossing these criteria with the priorities indicated in the Policy Objective 2 of the EU Common regulation (a greener and low-carbon Europe) would give the following estimation (table 4)

	INTERREG budget adapted to the needs	Territorial specificities	Level of emergency for MED regions
Energy efficiency measures			
Renewable energy			
Smart energy systems, grids and storage at local level			
Climate change adaptation and risk prevention			
Sustainable water management			
Transition to a circular economy			
Biodiversity, green infrastructure, and reducing pollution			

Table 4 : Crossing of environmental priorities and INTERREG criteria

Issue less relevant for the transnational MED programme

Issue relevant for the transnational MED programme

Issue very relevant for the transnational MED programme

# 4. The territorial dimension of the Mediterranean area

Among EU programmes, INTERREG programmes play a very specific role by promoting cooperation activities within territories or larger areas presenting strong territorial features (Baltic, Atlantic, Mediterranean areas, cross border areas, etc.). This approach is based on the idea that "territory maters" and that the efficiency of public policies is strongly related to their capacity to consider economic, social, geographic or environmental specificities met at local, regional, interregional or international level.

If the thematic analysis developed in parts 2 and 3 of this report is essential to identify the main challenges of the MED area, the **hierarchy of these priorities and the implementing conditions of public policies might be very different from one region or territory to another**. At Mediterranean level it is also essential to consider gaps and development potentials that show strong disparities between regions.

As mentioned in the general introduction, the Mediterranean is a very diverse territory stretching from the Atlantic to the Middle East, and from Portugal to Cyprus regarding EU countries. If this area is confronted to common challenges (economic, social, environmental) **solutions cannot be applied uniformly** in territories as different as densely populated coastal areas, islands, mountainous regions or remote hinterland areas.

The territorial approach is then necessary to **refine the diagnosis analysis**, provide information to **differentiate the strategies and increase the added value of cooperation projects** (focus interventions where they are the most needed).

For the 2021-2027 programming period, the European Commission encourages Interreg programmes to setup territorial strategies, as proposed by the **Policy Objective 5** of the General regulation *"Europe closer to citizens, sustainable and integrated development of urban, rural and coastal areas through local initiatives"*.

It must be noted that **programmes have the possibility to develop their own approach of territorial challenges**, with the setting up of a dedicated axis as suggested by the EC or with more transversal strategies across thematic priorities.

# **4.1. EU STRATEGIC PRIORITIES**

# 4.1.1. General context

In general terms, the ESPON report "State of the European Territory"<sup>58</sup> offers some elements to bear in mind for the preparation of the territorial dimension of cooperation programmes.

The observation of a certain socio-economic and cultural fragmentation as well as the concentration of difficulties in certain European territories can have repercussions on the political cohesion of the countries and of the European Union as a whole. The increase in disparities is more pronounced between regions, municipalities and neighbourhoods than between countries, requiring territorial approaches and particularly more targeted support for citizens in places "left behind".

In addition, the increase in peripheralisation, the urban–rural divide and the polarisation around the main urban centres require integrated territorial development policies and a growing role of the local level. Moreover, the diversity of the European territory in terms of geography, administrative and governance

<sup>&</sup>lt;sup>58</sup> State of the European Territory, ESPON contribution to the debate on Cohesion Policy post 2020, Synthesis report, ESPON 2019

settings and political differences across regions emphasises the importance of tailored, place-based approaches.

In this context, interdependencies are more and more important, increasing flows at all scales, spill overs and externalities of development, linked to technologies and networks that subvert distances and create new geographies.

However, the application of these considerations within the INTERREG MED programme must be clarified, especially about the prospects offered by the new regulations, and in particular by the Political Objective 5 "A Europe closer to the citizen".

# 4.1.2. Rationale of Policy Objective 5

# a. <u>Regulatory framework</u>

For the programming period 2021-2027, the preamble of the draft CPR (indent 23) refers to the Policy Objective 5 as enabling the setting-up of territorial tools such as Integrated Territorial Investment (ITI) or Community Led Local Development (CLLD) with the objective of strengthening the integrated territorial development approach. Besides, Annex I of the draft ERDF Regulation and its list of common indicators refer very much to integrated urban development and CLLDs for local development. Even though the indicators are still being finalized by the European Commission, both draft Regulations already give some hints on what the overall expectation is.

# Article 2 of the draft ERDF regulation foresees this Policy Objective in the following terms:

(e) 'a Europe closer to citizens by fostering the sustainable and integrated development of urban, rural and coastal areas and local initiatives' by:

- i. fostering the integrated social, economic and environmental development, cultural heritage and security in urban areas
- ii. fostering the integrated social, economic and environmental local development, cultural heritage and security, including for rural and coastal areas also through community-led local development

As of March 2020, the wording of the draft Regulation is still under discussion at the Council and trilogue level, and therefore some changes may be expected.

# b. Focuses of the Policy Objective 5

PO5 is tackled in a variety of relevant institutional sources: the draft Regulations, the presentations made by EC officers and the Orientation Papers (OP) distributed to INTERREG programmes. In all of them, PO5 is considered under 3 different focuses:

- a territorial focus
- a thematic focus
- an operational focus

In the above-mentioned sources, the 3 focuses are sometimes combined and sometimes considered in isolation.

# The territorial focus of PO5

In general presentations by the EC, PO5 focuses on urban (including urban neighbourhood and functional urban areas), rural, coastal areas, mountainous areas, islands, sparsely populated areas. As put by ESPON,

policies should be developed based on a functional approach dealing with common features such as insularity, remoteness, demography and a coastal situation.

In the very specific case of the INTERREG MED programme, the OP refers to islands, the hinterland, remote areas and inner peripheries.

Inner peripheries and territories with geographical specificities face common challenges: poor connectivity, low economic development, low access to services of general interest and demographic decline. Inner peripheries usually overlap with intermediate, rural and mountain areas.

#### The thematic focus of PO5

In its communication, the EC refers to sustainable development of the territories, and integrated territorial development (cross-sectoral, multi-stakeholder, optionally multi-territorial) as the main general topic under PO5.

More in details, ESPON considers that place-based integrated strategies could tackle:

- the diversification of economic activities
- smart approaches and smart specialization (for example, renewable energy both as a way of satisfying local energy demand and of developing a niche export industry)
- access to high-quality broadband
- policy actions to counteract population decline
- accessibility (bearing in mind the needs of the current activities and development perspectives)
- environmental protection measures (including those generating opportunities for development)
- preservation of small-scale economic activities in agriculture and fisheries, also combined with agritourism and tourism-fishing<sup>-</sup>

In the specific case of the INTERREG MED programme, the OP mentions very specifically:

- the access to public services
- innovation on approaches and increase capacities for delivery of services of general interest, including RDI activities
- green urban strategies
- cooperation among islands on topics such as clean energy
- urban, rural and islands innovative actions.

#### The operational focus of PO5

In the various sources, the use of ITI, CLLD, or other integrated territorial tools are mentioned as possible tools to be used. In the case of the OP for MED, these tools are not considered, probably as they are not fully relevant for transnational cooperation.

In the OP, innovative actions are considered as relevant as types of interventions that could be envisaged (urban, rural and islands innovative actions). However, there is no further indication on how to tackle the challenges from a strategic point of view or which is the most appropriate administrative level to deal with them.

The operational aspects of PO5 are probably the key to a successful objective. The themes will be necessarily linked to PO1 and PO2, and therefore the choices made in the types of interventions and on the types of territories will be the core of the decisions needed.

The programme authorities may choose to use the PO5 or tackle the territorial issue in a more transversal way by integrating it into the Policy Objectives 1 and 2. This will depend on the conditions of

implementation of the PO5, in particular concerning the mobilisation of governance bodies and the existence of territorial strategies (issues to be clarified in the final version of the regulations).

# 4.2. KEY TERRITORIAL ISSUES FOR THE MEDITERRANEAN AREA

As stated in the introductory chapter, the Mediterranean area is characterised by very specific and diverse territorial features. Socioeconomic development conditions, can vary considerably from one region to another depending on its proximity to the coast, presence of large cities or not, accessibility/isolation, demography, climate, etc.

If common challenges can be identified, strategies, priorities and measures must be adapted to this territorial context in order to tackle efficiently local difficulties and reduce disparities.

In the following sections, the various types of territories in the Mediterranean and their challenges are detailed, as the coastal areas are not the only ones concerned by Med 2021-27. Climate change appears as one of the most urgent topics and in a broader sense, a Mediterranean sustainable development strategy must take into account the various geographical areas in the Mediterranean basin and better understand their interactions.

# 4.2.1. Coastal areas

Coastal areas are one of the core types of intervention areas of the INTERREG MED programme. They have given rise to numerous cooperation projects and are essential to the development of the regions.

Climate change is the most urgent threat to the Mediterranean coast: increasing sea temperature and rising sea levels are two of the most visible effects and have direct impact on the coasts (erosion, storms...).

Besides, sustainable development is still a challenge around the coast. Mass tourism has negative consequences as excess demand puts a strain on local infrastructure and may be a nuisance to local communities. It has an impact on the environment locally (noise, pollution, waste and wastewater, habitat loss) and globally (transport-related emissions). A Mediterranean strategy for sustainable development would be to find a better balance between human and economic activities and the protection of the environment.

Additional challenges around the Mediterranean coast relate to:

- Marine biodiversity. Some threats originate directly from the land with for example uncontrolled and illegal coastal development that can have a negative impact on the marine habitats. Some of these threats influence wetlands that are connected to sea biodiversity.
- Sea pollution. Most of the pollution discharged into the sea comes from the coast or hinterland areas (rivers, insufficient wastewater treatment...). This affects the biodiversity but also the quality of water as such (chemicals, plastics...).
- **Growing population on the coast**. Besides the pressure on resources, the Mediterranean coast is attractive as retirement location for affluent pensioners (in areas like Cannes, Savona, Genova and Trieste population is ageing due to this fact), which entails a risk of gentrification in some areas.

#### 4.2.2. Sea

The Mediterranean Sea shares a number of challenges with its coastal areas:

- **Climate change**: increasing sea temperature is leading to damage in biodiversity. Wild fish stocks are responding to changing temperatures and food supply by changing their distribution, which can affect local communities dependent on them.

- **Fight against pollution**: The Water Framework Directive has helped improve water protection in the EU. However, reducing pollution requires that other directives and regulations are fully implemented. Appropriate collection and treatment of wastewater to remove organic matter, nutrients (nitrogen and phosphorous) and other hazardous substances is essential for improving the ecological status of marine and freshwaters, preserve human health and biodiversity. Marine transports, yachting and tourism, hydrocarbon exploitation, unsound aquaculture practices contribute to marine pollution.
- Marine biodiversity. The marine ecosystem is exposed to an increasing number of threats: overfishing, habitat degradation, invasive alien species from aquaculture and ballast water discharge. 30% of endemic species are at risk in the Mediterranean.
- **Low carbon mobility**: Maritime connectivity for goods and passengers is well developed, but significant progress can be made in terms of sustainable transport.

Besides, the **marine protected areas (MPAs)** are being established slowly. The establishment of Natura 2000 protected areas is complete on land, but the process in designating marine areas for protection is slower. Though 6% of the EU seas and oceans are covered, this coverage is although partial as only 2,48% of the Mediterranean is covered by MPAs with a management plan and only 1,27% by MPAs that effectively implement their management plan.

# 4.2.3. Hinterland /remote areas

As stated in the Orientation Paper of the EC, the geography of the INTERREG MED programme could be extended to a set of new regions in Spain, Andorra, Bulgaria and North Macedonia. These regions are not necessarily coastal and some countries such as Andorra or North Macedonia do not have access to the sea (and limited access for Bosnia and Herzegovina). This context implies taking into consideration not only the coastal areas but also hinterlands of the Mediterranean, composed of rural, mountain and / or sparsely populated areas (Map 26).



Map 26 : Sparsely populated areas and areas with low population potential

The challenges faced by these territories are the following:

- Climate change and natural risks linked to it: desertification, droughts (affecting also wetlands) and soil erosion. The degradation of forests, forest fires, forests damaged by storms, diseases and pests (forests are sick) are more and more present around the Mediterranean, with an impact on the loss of biodiversity. The increasing human infrastructures (roads) are also causing this damage.
- The management of water resources, in a context of decreasing water reservoirs and increasing water pollution
- **Agriculture**: climate change already has impacts on the agriculture. Agriculture itself can be a source of pollution.
- Accessibility and declining access to quality public services and services of general interest (education, healthcare, social protection)
- The digital divide: cable/fibre access to broadband is easier in densely-populated areas, and therefore there is lower use of internet in rural areas. Public funding is needed to ensure fast and ultrafast broadband services in rural areas; The digital divide affects the access to online training, among other.
- **Demography**: several trends are observed. On the one hand, there is ageing population in these areas; on the other hand, the low population density leads to social and economic isolation and devitalisation: labour market opportunities are narrower, especially for highly-skilled employment opportunities. At the same time, the risk of poverty and exclusion is higher than in urban areas. Finally, these rural areas face net emigration and brain drain towards the urban areas.

Some of these challenges open the possibilities to establish urban-rural partnerships that would benefit the two types of territories:

Resolution: 1x1 km grid cells Source: ESPON BRIDGES, 2019 n of data: TCP International, 2019: ESPON GEOSPECS, 2012, RRG GIS Database, 2018 UMS RIATE and University of Geneva for administrative boundaries

Source: ESPON, 2018

- Elaboration of integrated territorial strategies
- Collaborations in sustainable tourism to counteract the rural decline
- Collaboration to provide accessible spaces, recreational activities and alternatives for the elderly
- Collaboration to increase renewable energy production and consumption (there are often limits for production potential in urban areas and limited demand in urban areas)
- Collaboration in circular economy to create jobs in rural areas. In general, sharing economy approaches at local level requires critical mass (share goods or collaborate in services), and also for local reuse and repair approaches
- Collaboration between large cities and their rural hinterland where the sharing of specialised services can give rise to economies of scale.
- Collaboration for healthcare provision (including e-health)
- Physical connectivity. Remote regions generally have more limited economic potential, even with significant infrastructure investments; Multimodal mobility could however be improved

#### 4.2.4. Mountainous areas

Mountainous areas represent an important part of Mediterranean regions and close hinterland areas. A **majority of regions in the MED area are considered mountain regions**. That includes IPA countries, which are especially concerned. Some of these regions are at the same time coastal or island regions (for example, Kriti or Baleares).

Within each mountain area there is also great diversity, in terms of both climate and ecosystems and human populations and infrastructure.

In general, mountains have great potential to produce renewable energy (hydropower and wind energy). However, most of it is exported for industrial and domestic use in lowland areas, bringing few local benefits.

Some countries have adopted legislation containing strategies to protect the mountain areas: Cyprus addressed the depopulation challenges, as well as Croatia, France, Greece and Italy. This legislation aims at promoting the socioeconomic development of mountain communities while protecting mountain environments. Spain takes a multi-sectoral approach implemented at sub-national level.

During the current programming period, three Integrated Territorial Investments (ITIs) have been implemented in mountainous Mediterranean areas: Sterea Ellada (Greece); Valdevecchia (Italy); Isonzo valley (Italy/Slovenia).

Some of the challenges affecting rural areas also concern mountain areas:

- **Demography**: emigration has been observed mostly in the Carpathians, the Balkans, in the Troodos massif (CY), in Southern Spain, southern Apennines and Sicily whereas stable or even rising populations can be found in the Alps or the Pyrenees. However, the ageing population and the low level of employment opportunities are common challenges
- low accessibility: in much of the Apennines or Sicily, Iberian Peninsula, Carpathians and the Balkans
- Access to public services: limited presence or reduction of these services in sparsely populated areas
- Digital divide: lower development of networks which requires significant and unprofitable investments for private operators

**Climate change** is a common challenge as well. With coastal areas, mountains are the geographical areas that suffer the most with a higher rise of temperatures. They are confronted to an increase of natural risks (melting of permafrost, landslides, avalanches) which endanger not only local people and the infrastructure

on which they depend, but also the major transportation routes that link the lowlands. Precipitation is also decreasing in southern mountains of the EU.

The increase in temperature cause already a shift of plant and animal species to higher ground and a greater risk of some of them becoming extinct and reduces potential for hydro-electricity generation.

# 4.2.5. Islands

Islands in the Mediterranean Sea face the mains following challenges:

- Vulnerability to climate change: islands are confronted to sea level rise, storms, erosion and flooding.
- Energy dependency: Islands import most of the energy they need. Access to energy networks is an important issue. They cannot develop large-scale energy production and must favour energy mix and small-scale solutions (solar, wind, etc.)
- Waste and water management / circular economy: Islands are confronted to limited resources, including water resources that are essential for economic activities, agriculture, tourism, etc. They produce also waste for which they must develop local solutions. This context requires "ecosystemic" approach, including for example the promotion of smart water management and circular economy.
- Accessibility and transport. Transport services are in general insufficient with higher management costs. Air transport plays a major role for the accessibility of these territories and the motorisation rates are relatively high like in Sicily, Sardinia, Malta, Baleares (the highest rate in Spain), Cyprus and Corsica (second highest rate in France). These relatively high figures may, at least in part, be explained by a lack of alternative modes of transport (underdeveloped rail infrastructures for example) and by the hight rate of tourists.
- **Dependency on imports of foodstuff and other consumer goods**. Cost of living in islands tends to be higher due to the constraints in the provision of goods.
- Difficulties in accessing public services: low presence of public services or reduction of these services in less populated areas
- **Demography**. Old age dependency is a challenge as elderly population increases in Sardinia, in some Aegean islands and Malta. On the other hand, islands register a high rate of early leavers from education, as students must leave home if they wish to follow certain training or education or, latter, to find jobs.

# 4.3. PERSPECTIVES FOR THE INTERREG MED PROGRAMME 2021-2027

#### 4.3.1. Lessons learnt from 2014-2020 INTERREG MED programme

For most stakeholders consulted, the focus on the specific challenges of certain types of territories are needed in the INTERREG Med programme. The attention to these areas and the exploration **of connections especially between coastal areas and the hinterland** have been mentioned as a possible evolution for projects of the next programming period.

Another interesting link with the 2014-2020 programme concerns the action of **horizontal projects**. Their success as coordinators of modular projects could help strengthen their role in the program, particularly in terms of thematic expertise and their territorial dimension.

Another interesting linkage with the 2014-20 programme concerns the involvement of horizontal projects. Their success as coordinators of modular projects around the thematic communities could evolve towards

stronger thematic and territorial expertise. That means not only when drafting the calls for proposals, but also in communication, capitalisation (at programme and project level) and for mainstreaming activities.

# 4.3.2. Added value of the INTERREG MED programme 2021-2027

In the specific context of the INTERREG Med programme, the Orientation Paper further details the aim, the scope and the types of actions that could be covered by PO5. The aims of the objective are:

- to link all areas and stakeholders to the larger European level, and tackle the perception that remote areas do not matter
- to promote capacities and empowerment to the local level to help these areas to be listened and to become increasingly involved in the definition of strategies

These two aims could indicate the added value of transnational cooperation and the INTERREG MED programme to tackle the challenges of the territories with specific needs.

The first one is to support the setting up of networks of each type of territory that would allow to connect the individual territories to the EU level (network of islands in the Mediterranean, network of rural areas, etc.), to influence strategies and get easier access to financing.

The second added value is the creation of a transnational community that would encourage local empowerment and local autonomy. These communities may last longer than projects and may allow them to act also towards other funding sources or other bodies and institutions.

#### Strong transnational territorial issues

Coast/hinterlands, islands, remote areas, mountains deserve sharing of experiences and coordinated strategies. The table below summarizes the main challenges described in the above sections and indicates which strategies, management frameworks and bodies intervene on the topics so far.

Table 5 : Correspondence between territories and governance bodies

Territorial areas	Key thematic priorities	Strategies and management frameworks	Governance and cooperation bodies
Coastal areas	<ul> <li>Sustainable development, tourism</li> <li>Climate change, natural risks</li> <li>Tourism / seasonality</li> <li>Marine biodiversity</li> <li>Pollution</li> <li>Demographic pressure</li> <li>Wetlands</li> </ul>	<ul> <li>Integrated Coastal Zones Management (ICZM)</li> <li>EU Habitat and Birds Directive</li> <li>National, regional and local planning tools</li> </ul>	<ul> <li>Union for the Mediterranean</li> <li>Plan Bleu – UNEP-MAP</li> <li>Cross border programmes (Interreg)</li> <li>Collaborative Land-Sea Integration Knowledge Exchange Platform (COASTAL)<sup>59</sup></li> </ul>
Sea	<ul> <li>Climate change, marine biodiversity (30% of endemic species and risks of extinction)</li> <li>Fight against pollution</li> <li>Invasive species</li> <li>Low carbon mobility</li> </ul>	<ul> <li>EU Maritime Spatial Planning strategy</li> <li>Integrated Coastal Zones Management (ICZM)</li> <li>Water Framework Directive</li> <li>Marine Protected Areas (MPAs)</li> </ul>	<ul> <li>DG MARE</li> <li>Plan Bleu – UNEP-MAP</li> <li>World Wildlife Fund (WWF)</li> <li>BlueMed initiative</li> <li>Union for the Mediterranean</li> <li>Cross border programmes (Interreg)</li> </ul>

<sup>59</sup> The platform is developed as part of the H2020 COASTAL "Collaborative Land-Sea Integration Platform" Research and Innovation Action project (2018-2021) which received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement N° 773782.

Territorial areas	Key thematic priorities	Strategies and management frameworks	Governance and cooperation bodies
Hinterland / remote areas	<ul> <li>Climate change (desertification / droughts)</li> <li>Degradation of forest, forest fires, forests damaged by storms, diseases and pests (forests are sick), impact of still increasing human infrastructures (roads), loss of biodiversity</li> <li>Management of water resources (including wetlands)</li> <li>Agriculture</li> <li>Accessibility / services</li> <li>Demography; risk of geographic, social, economic isolation and devitalisation, migration</li> <li>Pollution</li> <li>Digital divide</li> </ul>	<ul> <li>EU Habitat and Birds Directive</li> <li>National, regional and local planning tools</li> </ul>	Cross border programmes     (Interreg)
Mountainous areas	<ul> <li>Climate change and Biodiversity; adaptation to climate change</li> <li>Natural risks: landslides</li> <li>Accessibility/services</li> <li>Many endemic species and risks of extinction</li> <li>Renewable energy</li> <li>Demography</li> <li>Digital divide</li> </ul>	- EU Strategy for the Alpine Region (EUSALP)	<ul> <li>Alpine Space programme (Interreg)</li> <li>Cross border programmes (Interreg)</li> </ul>
Islands	<ul> <li>Climate change: sea level rise</li> <li>Accessibility</li> <li>Energy dependency / small scale local production</li> <li>Waste management / circular economy</li> <li>Water management</li> <li>Tourism / seasonality</li> <li>Dependency on consumer goods and foodstuff</li> <li>Demography</li> </ul>	<ul> <li>EU Maritime Spatial Planning strategy</li> <li>Integrated Coastal Zones Management (ICZM)</li> <li>Marine Protected Areas (MPAs)</li> </ul>	<ul> <li>DG Mare</li> <li>CPMR (Islands Commission)</li> <li>Plan Bleu – UNEP-MAP</li> <li>Union for the Mediterranean</li> <li>Cross border programmes (Interreg)</li> </ul>

# 4.4. SWOT ANALYSIS AND IMPLEMENTATION CONDITIONS

As mentioned above, the Orientation Paper offers some hints on the types of intervention that could cover this policy objective. They refer mostly to innovative actions targeted to urban areas, rural areas and islands, and to cooperation among certain types of territories (in particular, islands).

Each specific territory of the INTERREG MED programme is confronted to challenges (potentials, gaps, risks...) that have been described in the previous chapter.

For this programme, one major issue will concern the way this territorial dimension could be addressed. This could be done with the Policy Objective 5 proposed in EU regulation but also in a more transversal way to the thematic axes if considered as more suitable by the programme authorities.

The SWOT table below summarizes the operational possibilities to implement PO5 in the INTERREG MED programme, its advantages and inconvenient.
	Strengths	Weaknesses	Opportunities	Threats
PO5 integrated in the architecture of the programme with dedicated calls for projects	The programme has a territorial dimension clearly identified and easier to monitor Each territory can apply according to its needs	Could be quite complex to setup in a limited period of time. If territorial governance bodies are needed, who can it be? Where, at which territorial level? If territorial strategies are needed, which one should be considered, where, at which territorial level?	Can generate an important ERDF and territorial leverage effect if good connection between ERDF funds, existing strategies and governance bodies	Risks of implementation difficulties if governance bodies and territorial strategies not adapted to MED and ERDF requirements
PO5 integrated in the architecture of the programme without dedicated calls for projects Specific (territorial) selection criteria applied to projects of PO1 and 2	Efficiency in programme and project monitoring	Lower specialisation in the priorities of the programme More difficulties to monitor the "territorial dimension" of the programme	The specific territories could develop their own strategy to have presence in the INTERREG MED programme and the calls	Dilution of the focus towards the territories with specific needs
Specific calls for proposals for each territory (launched separately)	Better focus on specific territorial challenges	More complex implementation of the programme Risk to Risk of "missing out" certain non- targeted territories Risk of discrepancy between the content of the calls and territorial needs Need of animation activities on the programme side	Drafting of the calls with the input from the territories, or eventually from the horizontal projects Greater capacities to address targeted problems	Risk of dispersion of the programme strategy Risk of under programming in the event of weak mobilisation of targeted territories

Table 6 : SWOT a	analysis for the	implementation	of the Policy	/ Objective 5

Common calls for the different types of territories	Equality for all types of territories Easier programming task	Risk of weak mobilisation of the least endowed territories in project engineering	Each territory can develop specific cooperation strategies Possibility of cooperation between different types of territories	Risk of inequality in the mobilisation capacity of the different types of territories
Horizontal projects in charge of the various types of territories	Combination of the thematic and territorial expertise	Additional workload for Horizontal Projects	Better integration of thematic and territorial approaches of the programme	Additional complexity in the programme architecture
Focus the calls on territorial strategies (sustainable urban strategies and partnerships, urban-rural partnerships)	Focus on strategies rather than isolated interventions	Uncertainty on the relevant intervention levels in a programme like MED	Potentially good leverage effect of the ERDF when connected to existing strategies and public policies	Certain territories left behind if they are not ready to propose strategies
Integrated Territorial Investment (ITI)	Appropriate to coordinate a number of funding sources towards common integrated objectives Budget flexibility	Difficult to coordinate upstream different sources of funding Programming complexity More difficulties to monitor the territorial dimension of the programme	It can inspire new ways of coordinating different programmes on the same intervention	Relatively complex in the implementation phase when combining different sources of funding
Community Led Local Development (CLLD)	Appropriate to address the common needs of several local small actors	Designed for small territories with project communities Not well suited to transnational cooperation	It may inspire other actions in the programme (mobilisation of local communities) Allows local actors to increase their skills (bottom-up logic)	Requires the identification of communities of local actors complex and not suited to the transnational context

# 5. Governance perspectives for the INTERREG MED programme

The implementation of INTERREG programmes and projects is confronted to specific challenges as compared to thematic or mainstreaming regional programmes.

The first challenge concerns the aim to promote a **sustainable and fair development beyond national borders**, which, despite EU integration mechanisms, still represent important difficulties (legal, institutional, administrative, social, cultural, political barriers...).

The second challenge concerns the setting up and implementation of cooperation projects that require coordination and engineering capacities (bring together partners, draft complex application forms, manage partnerships, ensure operational and long-term results at cross-border or transnational level...).

To meet these challenges, INTERREG programmes provide strategic orientations and methodological tools. However, programmes' authorities, projects officers and beneficiaries must take on important administrative workload that **encroaches on the strategic and qualitative dimension of projects**.

In order to tackle more efficiently cross-border and transnational challenges during the 2021-2027 programming period, the European Commission proposes measures aiming to improve management and governance capacities of programmes and projects.

The INTERREG MED programme already experimented such measures in 2014-2020 with the PANORAMED project (Axis 4 or "governance axis"). This helped to mobilise relevant administrative but also high-level experts' resources. This also contributed to develop thematic communities around Horizontal and Strategic projects.

For the 2021-2027 programming, The EC developed an **INTERREG specific objective** dedicated to improving cooperation governance. This constitutes an opportunity to take stock of PANORAMED experience and propose new developments for the coming years.

### 5.1. EU STRATEGIC PRIORITIES

Article 14(4) of the draft INTERREG Regulation foresees a specific objective: "**better cooperation governance**". The draft Regulation contains different aspects for cross-border, transnational and Interreg cooperation in general. As concerns transnational cooperation, the objective refers to:

- enhance institutional capacity of public authorities and stakeholders to implement macro-regional strategies and sea-basin strategies, as well as other territorial strategies
- build up mutual trust, in particular by encouraging people-to-people actions, by enhancing sustainable democracy and by supporting civil society actors and their role in reforming processes and democratic transitions

Probably, the building up of mutual trust aspect refers rather to cooperation in outermost regions (new Interreg strand D). Therefore, Euro MED 2021-27 foreseen actions would refer mainly to enhance institutional capacity to implement macro-regional strategies and sea-basin strategies, and other territorial strategies.

In the first version of the draft Regulation (May 2018) the wording of article 14 was slightly different and included the enhancement of institutional capacity in general, and of efficient public administration. But this is no longer applicable to transnational cooperation, considering the draft Regulation version of May 2019. In any case, the wording of the draft Regulation is still under discussion at the Council and trilogies level (update as of March 2020), and it could still change.

This objective is a proposal that can be taken on board, or not, by cooperation programmes. It can help implement integrated capacity building and governance with a view on macro-regional and sea-basin strategies. In the case of the INTERREG MED programme, it could be **linked to the PANORAMED project or the Horizontal Projects** as shown especially in the SWOT analysis section.

#### Provisions of the Orientation Paper

The Orientation Paper for Euro Med 2021-27 includes several aspects concerning better governance. They all seem linked to the enhancement of institutional capacities to implement strategies, and it seems to go a step further as it foresees the setting-up of a platform to coordinate all programmes in the area, even though there is no strategy covering the entire territory. Coordination should also cover the mainstream programmes.

The aspects included in the OP refer to the aim of the objective as applied to the INTERREG MED programme and to the scope of the objective. In addition, the OP suggests some options for specific actions to implement the objective.

The aim of the objective is:

- to improve coordination and funding opportunities among the programmes in the Mediterranean,
- to actively promote contributions and capitalization from other national and/or regional EU Cohesion Policy "mainstream" programmes, as well as cross border programmes, to create more synergies and to avoid overlapping or duplications,
- to create more synergies and to avoid overlapping or duplications especially on the projects implemented under the 3 others policy objectives

As for the scope of the objective, the OP envisages that: coordination with the mainstream programmes takes place at the planning of actions, implementation and communication.

On the other hand, the OP recalls that this proposal for the transnational MED programme will also have consequences for the choice of investment priorities under the three cross-border programmes in the Mediterranean region. Investments under the same Policy Objectives will need to show clear complementarity with the transnational programme.

Finally, the OP suggests two specific actions for implementation:

- the creation of a platform for coordination with other programmes in the area (coordination, capitalization and synergies)
- the setting-up of a coordination mechanism with Adriatic and Ionian strategy (Governing Board) and WestMed strategy (Steering Committee); the Union for the Mediterranean, and cross-border programmes, NDICI Mediterranean area and regional programmes.

These two specific actions and other implementation options are covered in the SWOT analysis provided below.

#### 5.2. KEY ISSUES FOR A BETTER GOVERNANCE IN THE MEDITERRANEAN

In the Mediterranean area, the improvement of cooperation governance would be especially relevant at two different levels:

- To improve the governance and coherence of public policies at Mediterranean level with stronger cooperation between institutions and financing tools... <u>Better cooperation governance at sea</u> <u>basin level</u>

To improve the involvement and cooperation capacities of stakeholders within the programme area (participation of key institutions, of territorial actors not used to EU programmes or lacking engineering capacities (including citizens)), Better cooperation governance at programme level

With the first approach the focus would be on the mobilisation of key Mediterranean stakeholders at transnational level and the setting up of tools and processes that could help these stakeholders to better coordinate their strategies and policies. With the second approach the objective would be help territorial stakeholders strengthen project engineering and to develop transnational cooperation capacities.

These priorities should be implemented considering the final draft of the regulations and the institutional and governance context of the Mediterranean.

#### 5.2.1. Sea Basin Strategy

Notably, a « sea basin strategy » means an integrated framework to address common marine and maritime challenges faced by Member States in a sea basin or in one or more sub-sea basins. Sea basin strategies also promote cooperation and coordination in order to achieve economic, social and territorial cohesion.

These strategies are developed by the Commission in cooperation with the Member States concerned, their regions and other stakeholders as appropriate (e.g. third countries). Member States may participate in several strategies (e.g. Spain, France and Portugal participate in both the Atlantic and the West Mediterranean strategies). The strategies encompass existing inter-governmental initiatives and regional bodies and move from political declarations to integrated projects and investments.

In turn, some strategies may cover more than one sea basin, and, in several cases, they may overlap with other strategies (e.g. Western Mediterranean with the Atlantic and the Adriatic and Ionian Seas) (Table 7).

Atlantic	North Sea	Baltic Sea	Mediterranean	West MED	East MED	Adriatic- Ionian	Black Sea
Strategy, Action Plan	Sea basin	EU Strategy	Sea basin	Framework for Action	(sub) Sea basin	EU Strategy	Sea basin
ES	BE	DE	CY	ES	CY	EL	BG
FR	DE	DK	EL	FR	EL	HR	RO
IE	NL	EE	ES	IT		IT	
PT	UK	FI	FR	MT		SI	
UK		LT	HR	PT			
		LV	IT				
		PL	MT				
		SE	SI				

Table 7 : Member States participating in the different sea basins

Source: Commission Services.

In the Mediterranean basin, three sub-basin strategies are in place: The West Mediterranean initiative (Portugal, Spain, France, Italy, Malta), the East Mediterranean (Greece, Cyprus) and the Adriatic and Ionian seas (Italy, Slovenia, Croatia, Greece). The Black sea has its own differentiated strategy. In these southern waters, the participation of third countries is fundamental.

### 5.2.2. Macro-regional strategies in the Mediterranean area

Macro-regional strategies address common challenges faced by several MS and third countries located in the same geographical area, which thereby can benefit from strengthened cooperation contributing to the achievement of economic, social and territorial cohesion.

The strategies offer a platform for multi-sectoral, multi-country and multi-level governance, also open to non-EU countries. They play a substantial role in helping these countries to strengthen their links with the EU.

There are three macro-regional strategies covering a substantial part of the territories of some ENI CBC programmes (future Interreg NEXT):

- EU Strategy for the Baltic Sea Region (EUSBSR; adopted in 2009)
- EU Strategy for the Danube Region (EUSDR; adopted in 2010)
- EU Strategy for the Adriatic and Ionian Region (EUSAIR; adopted in 2014)

The EU Strategy for the Adriatic and Ionian Region (EUSAIR) covers partly the area of the ENI CBC Mediterranean programme and Italy-Tunisia programme. The Strategy incorporates the Maritime Strategy for the Adriatic and Ionian Seas, adopted by the Commission in 2012.

The objective of the strategy is to promote sustainable economic and social prosperity in the region through growth and jobs creation, and to improve its attractiveness, competitiveness and connectivity, while preserving the environment and ensuring healthy and balanced marine and coastal ecosystems.

The EUSAIR encompasses eight participating countries: four EU MS (Croatia, Greece, Italy, and Slovenia) and four (potential) candidate countries (Albania, Bosnia Herzegovina, Montenegro and Serbia<sup>60</sup>).





Source: European Commission, 2018

#### 5.2.3. The WestMed initiative

The WestMED initiative was created to help public institutions, academic institutions, local communities, small and medium-sized enterprises and entrepreneurs on both coasts of the Western Mediterranean to jointly develop local and regional maritime projects.

This initiative focuses on regional and local challenges, and seeks to develop knowledge of the blue economy, as well as to publicize opportunities in the region within the WestMED community. It also aims to help stakeholders find complementary partners, and to support them in setting up successful projects.

Although it focuses on the western Mediterranean and the 10 countries of the 5 + 5 Dialogue (France, Italy, Portugal, Spain, Malta and five partner countries in the south - Algeria, Libya, Mauritania, Morocco and Tunisia), its field of action and potential benefits of this initiative can easily go beyond the sub-basin. Depending on the needs to be satisfied and the wishes for cooperation, the activities may involve partners from across the Mediterranean

#### 5.2.4. Cooperation with neighbouring countries

The geography of the programme INTERREG NEXT 2021-2027 includes a total of 17 countries: seven EU member states - Cyprus, France, Greece, Italy, Malta, Portugal and Spain and nine partners - Algeria, Egypt, Israel, Jordan, Lebanon, Libya, Morocco, Palestine and Tunisia - and an IPA country Turkey. The Mid-Atlantic area is made up of three countries: two EU member states - Portugal and Spain and a partner country - Morocco. Further enlargements to third countries could be taken into account in the light of developments<sup>61</sup>. The border areas between Member States and partner countries are mainly maritime, since the only terrestrial borders are located between Greece and Turkey and between Spain and Morocco (in Ceuta and Melilla).

Based on the geography of the current ENI 2014-2020 cross-border cooperation programme and the 2014-2020 ENI CTF Italy-Tunisia, and of the ENI cross-border cooperation programmes, the eligible regions and the regions bordering the cooperation zone had 255 million inhabitants in 2017.

The main characteristics of the Mediterranean countries are the following ones <sup>62</sup>:

- Varied demographic dynamics. While in the Member States the population growth rate is almost static, the average annual population growth rate of the partner countries remains around 2% (in 2017)<sup>63</sup>.
- Most of the inhabitants of the Mediterranean area live in urban centres. In the Member States, this represents on average 76% of the total population, while in the partner countries, this percentage is 68%, with an increasingly high rate (in 2017)
- There are important differences in the economic development of the Member States and partner countries in the region. On average, in 2017, GDP per capita was close to \$26,000 in member states, compared to \$7,400 in partner countries<sup>64</sup>
- Between 2000 and 2013, partner countries had a higher growth rate, which had narrowed the gap between GDP and member states. However, in the past five years, many of these countries have suffered from a deterioration in the socio-economic situation. The negative effects of political instability have prevented further growth, further increasing the distance from the EU.
- Mediterranean coastal areas offer a lot of opportunities for economic development notably with the blue economy; Sea borders also face several challenges such as economic growth and job

<sup>&</sup>lt;sup>61</sup> The UK's potential involvement depends on the outcome of negotiations on the future relationship.

<sup>&</sup>lt;sup>62</sup> Joint paper on INTERREG NEXT Strategic Programming 2021 – 2027. INTERREG NEXT programmes on EU external borders with the neighbouring partner countries - 20 January 2020

<sup>&</sup>lt;sup>63</sup> World Bank indicators, national statistics

<sup>&</sup>lt;sup>64</sup> World Bank indicators, national statistics

creation (especially for youth), irregular migration, organised crime, security issues and environment degradation.

- Youth unemployment is high in almost all countries. This is one of the main challenges facing the Member States and the partner countries of this geographic grouping
- Environmental protection and climate change issues are important in the context of shared sea basins. Water pollution, whether from agricultural activities, industrial or urban discharges are critical problems, exacerbated by risks of marine pollution in regional seas and in the Mediterranean.

The Orientation Paper for the INTERREG NEXT MED programme gives some hints on how the governance in the Mediterranean could be established. The document puts the focus especially on the need to have a renewed coordination mechanism focused on avoiding double financing, promoting complementarities and capitalisation. The fact that ENI CBC Med programme and its successor are programmes financing projects with coincident areas makes this specific cooperation clear and straightforward.

On the other hand, Panoramed is mentioned as the mechanism to support multilateral cooperation in the Mediterranean. However, the aims of this multilateral cooperation are not indicated or suggested.

#### 5.2.5. Cooperation with regional programmes

The draft Regulation foresees that Investment for Growth and Jobs programmes indicate their links and complementarities to Interreg. The challenge in this task is twofold. On the one hand, Interreg programmes are not obliged to be included (only listed) in the partnership agreement of the member State, as mentioned in art. 7 of the draft CPR Regulation. This feature simplifies the programming of Interreg, but on the other hand makes it more difficult to establish strategic links to the regional (or *mainstream*) programmes.

On the other hand, art. 17.3 of the draft Regulation assigns the task to *coordinate* to the regional programmes. In the framework of the strategic planning, regional programmes need to indicate the interregional and transnational actions foreseen per specific objective. In addition, art. 43 indicates that each member State identifies a communication coordinator for all Funds in the member State including Interreg.

However, the current practice shows that in the majority of cases, regional programmes are focused in their own implementation and less used to establish links and complementarities especially with programmes involving a variety of regions and countries. Some exceptions exist, and even some cases in which regional programmes have designed their own coordination actions. Cooperation, capitalisation or mainstreaming initiatives have for example been setup at national level in Italy, France or Portugal.

In order to create close effective links with the regional programmes, the current mainstreaming actions in the INTERREG Med programme should be reinforced. Based on the outcomes of the 2014-20 projects, mainstreaming actions could be encouraged also in the 2021-27 programme. That could help create an environment of cooperation practice among the authorities in charge of the two goals. And the actions could continue until the outcomes of the 21-27 projects are mature enough to be mainstreamed.

#### 5.3. PERSPECTIVES FOR THE INTERREG MED PROGRAMME 2021-2027

#### 5.3.1. Lessons learnt from 2014-2020 INTERREG MED programme

The 2014-2020 INTERREG MED programme proposed an important innovation with the setting up of an "Axis 4" whose objective was to mobilise key Mediterranean stakeholders, promote coordination activities and contribute to improve Mediterranean policies and governance processes.

Within this Axis 4, a specific platform project was elaborated (**PANORAMED project**) structured around Work packages managed by national or regional institutions of MED member states. Among its main activities, PANORAMED aimed to improve the articulation of the Interreg MED programme with other programmes and public policies (Liaising WP), develop mainstreaming and transfer processes (Mainstreaming WP) strengthen thematic policies and strategies (WP dedicated to sustainable coastal tourism, maritime surveillance and innovation). With the support of these last two WP, the Axis 4 prepared and launched 4 strategic projects involving international, national and regional institutions.

**PANORAMED** can be considered as one important added value of the current programming with its capacity to mobilise stakeholders that were not used to INTERREG programmes. This can be seen especially with the mobilisation of "associated partners" representing key Mediterranean institutions (table 8). One important added value is also the setting up of transnational expert groups and the development of Mainstreaming expertise with the launch of experimental mainstreaming processes and the sharing of experience with other projects.

One difficulty concerns the administrative dimension of PANORAMED that required important coordination and management efforts with the involvement of wide diversity of partners from each MED member states. Another difficulty concerns the thematic focus of PANORAMED that did not give the possibility to cover all MED priorities.

Another added value of the INTERREG MED programme has been the setting up of "Horizontal Projects". In the beginning of the programming, the objective was to implement a system that would contribute to improve the quality, added value and impact of MED projects. This was also prompted by the specific structuring of MED projects in "modules" (modular projects) that deserved coordination efforts.

"Horizontal projects" have been setup around the 8 thematic priorities of the INTERREG MED programme. Their role was to structure thematic communities and contribute to the capitalisation, transfer and mainstreaming of projects results at Mediterranean level.

One significant added value of Horizontal projects is their **capacity to establish communities of actors going beyond modular projects and creating transnational dynamics**. These communities are now quite active and express their will to continue their cooperation in the next years.

The INTERREG MED programme managed to create links between PANORAMED and Horizontal Projects, especially with the transfer of experience from the WP Mainstreaming to the second generation of Horizontal projects that are especially focused on mainstreaming activities.

### Table 8: Associated partners of the INTERREG MED programme

Organisation	Priorities / Mediterranean dimension		Connexions with INTERREG MED programme activities
Union for the Mediterranean (UfM)	The UfM brings together all 28 countries of the European Union and 15 countries of the Southern and Eastern Mediterranean. Its mission is to <b>enhance regional cooperation</b> , <b>dialogue and the implementation of projects and initiatives</b> with tangible impact on citizens, with an emphasis on young people and women, in order to address the three strategic objectives of the region: stability, human development and integration.	-	Labelling of MED projects Promotion of Mediterranean sustainable development Political dialogue at Mediterranean level
UNEP MAP Plan Bleu	The Mediterranean Action Plan (MAP) of the United Nations Environment Programme (UNEP) is an institutional framework addressing common challenges of marine environmental degradation. Its objective is to ensure sustainable management of marine and land resources and integrate the environment in social and economic development and land use policies. The UNEP-MAD is involved in DG MARE projects (SIMWESTMED, SUPREME) Plan Bleu is one the Regional Activity Centres of the Mediterranean Action Plan (MAP). It produces studies and scenarios for the future in order to raise awareness of Mediterranean stakeholders and decision-makers regarding environment and sustainable development issues in the region.		Political dialogue at Mediterranean level Support to environmental and marine protection issues Involvement in DG MARE projects Plan Bleu is partner of MED Horizontal and Strategic projects
CPMR	The Conference of Peripheral Maritime Regions (CPMR) expresses the <b>shared interests of</b> <b>Mediterranean Regions</b> in important European negotiations. Its Inter-Mediterranean Commission (IMC) encompasses the issues raised in all the Regions bordering the Mediterranean Sea. The CPMR is the initiator of the <b>Mediterranean Cooperation Alliance</b> . The CPMR has a thematic focus on territorial cooperation, macroregional strategies, economic and social development, water and energy, transports and integrated maritime strategy	-	Project partner of modular, Horizontal and strategic MED projects Political dialogue between Mediterranean regions
BlueMed initiative	The BLUEMED initiative is a <b>research and innovation Initiative</b> funded by the EU DG Research and Innovation and jointly developed between Cyprus, Croatia, France, Greece, Italy, Malta, Portugal, Slovenia, and Spain. It contributes to the creation of new "blue jobs", social wellbeing and sustainable growth in the <b>marine and maritime sectors</b> through the implementation of its Strategic Research and Innovation Agenda.	-	Expertise and scientific contribution to MED key priorities (blue growth, marine ecosystems, enabling technologies)
Centre for Mediterranean Integration	The Centre for Mediterranean Integration (CMI) is a <b>multi-partner knowledge exchange</b> <b>platform</b> where development agencies, Governments, local authorities and civil society from around the Mediterranean convene in order to exchange ideas, discuss public policies, and identify regional solutions to address key regional challenges in the Mediterranean. Members are Egypt, France, Greece, Italy, Jordan, Lebanon, Morocco, Palestinian Authority,	-	Political dialogue at Mediterranean level

	Tunisia. Thematic focus: Education, youth, energy, climate change, green growth, water management	
ENI-CBC MED programme	The ENI-CBC MED programme is <b>composed of north and south Mediterranean countries</b> (Algeria, Cyprus, Egypt, France, Greece, Israel, Italy, Jordan, Lebanon, Malta, Palestine, Portugal, Spain and Tunisia). It is declined in four thematic priorities: Business and SMEs development; Support to education, research, technological development and innovation; Promotion of social inclusion and fight against poverty; Environmental protection, climate change adaptation and mitigation	<ul> <li>Key player to strengthen north-south cooperation</li> <li>Political dialogue between northern and southern shore of the Mediterranean</li> </ul>
Programme ADRION	ADRION is the <b>European transnational programme dedicated to the Adriatic and Ionian</b> <b>Region</b> (Croatia, Greece, Italy, Slovenia, Albania, Bosnia and Herzegovina, Montenegro, Serbia). Its aim is to act as a policy driver and governance innovator for the benefit of this cooperation area. Its priorities are: Innovative and smart region; Sustainable region; Connected region (including maritime transports, ports, multimodal links); Supporting the governance of the EUSAIR	<ul> <li>Political dialogue within the Adriatic and lonian region; coordination of strategies</li> <li>Coordination with priorities and projects</li> </ul>
INTERREG Balkan MED programme	The INTERREG Balkan-Mediterranean programme includes the following countries: Bulgaria, Cyprus, Greece, Republic of Albania, Republic of North Macedonia. The programme is focused on two key challenges: <b>territorial competitiveness and environment</b> (ecosystem management, waste and water management)	<ul> <li>Connexion with western Balkan countries</li> <li>Coordination with priorities and projects</li> </ul>
EUSAIR	The EU Strategy for the Adriatic and Ionian Region (EUSAIR) is the macro-regional strategy developed by the Commission and the Adriatic-Ionian Region countries and stakeholders. Its general objective is to <b>promote economic and social prosperity and growth in the region</b> by improving its attractiveness, competitiveness and connectivity. With four EU members and four non-EU countries the strategy contributes to the further integration of the Western Balkans.	<ul> <li>Political dialogue within the Adriatic and Ionian region; coordination of strategies</li> <li>Connexion/coordination with western Balkan countries</li> </ul>
INTERACT programme	INTERACT delivers services and products support to European Territorial Cooperation programmes (INTERREG programmes, IPA-CBC programmes, ENI CBC/INTERREG NEXT programme). Its objective is to help ETC programmes <b>implement their activities in a more</b> <b>efficient and effective way</b> . INTERACT organises thematic events and supports capitalisation, mainstreaming and transfer processes in INTERREG programmes	<ul> <li>Support to mainstreaming activities</li> <li>Support to territorial cooperation, capacity and competences, macro- regional strategies</li> </ul>

#### 5.3.2. Added value of the INTERREG MED programme 2021-2027

Considering the experience of the 2014-2020 INTERREG MED programme, there are two main experiences that can be considered as a solid basis to draw perspectives for the next period.

#### PANORAMED Project

The concept of PANORAMED project proved to be **especially useful to develop connections with** Mediterranean key players and other programmes, involve new partners in Strategic and Horizontal Projects and disseminate experience and practices (Mainstreaming expertise).

For the next period, this "concept" shows similarities with the INTERREG Specific Objective "Better Cooperation Governance" proposed in the ETC regulation, especially concerning the strengthening of institutional capacities and the support to transnational governance and strategies (including macro-regional and sea-basin strategies).

Considering the experience of the current period, the concept could however be improved with a **lighter** governance system bringing more agility in the implementation process.

The Platform could also be dedicated more specifically to animation, coordination, monitoring and mainstreaming activities, leaving the responsibility of thematic actions (strategic analysis, drafting of thematic calls...) to the programme or to specific thematic communities.

#### Horizontal projects

The development of thematic communities (biodiversity, sustainable tourism, blue and green growth, energetic transition, transports, social innovation) **represents an important added value of the 2014-2020 programming**. This type of project answers to the need to better communicate, coordinate and promote project results.

These thematic communities could then be strengthened with higher expertise and management capacities, providing to the programme a more qualitative view of territorial needs, potentialities and contributing to a better valorisation of its results.

It would however require a precise definition of the status, roles, organisation and mission of these "horizontal projects", whether in relation to the programme authorities (responsibilities, monitoring process...) or to the "modular projects" (ensuring a full commitment and collaboration of these projects with the horizontal ones).

#### 5.4. SWOT ANALYSIS AND IMPLEMENTATION CONDITIONS

All of the above leads to the question on the implementation possibilities in the MED 2021-27 programme. The options range from the lightest to the most ambitious intervention.

The lightest option implies that the programme would just coordinate on the implementation of projects to create synergies with other programmes.

The most ambitious one refers to the coordination of Mediterranean strategies and policies with a focus on certain key challenges like climate change.

A SWOT analysis can help illustrate the various options open and their pros and cons. In some cases, several options are considered (**table 9**).

	Strengths	Weaknesses	Opportunities	Threats
Selection of the INTERREG Specific Objective Coordination of Mediterranean programmes and strategies	Relevance of the INTERREG MED programme to address Mediterranean governance issues The INTERREG MED programme is already in contact with key Mediterranean stakeholders Experience of PANORAMED in 2014-2020	Influencing strategies and policies require time and institutional support going sometimes beyond Interreg capacities International key players are not always aware of or interested by Interreg activities. At least 10% of the EU financing allocated to this objective	The MED area is facing rising transnational challenges (climate change) than constitute an opportunity for political coordination	Risk of not reaching ambitious objectives if the institutional/political context in not favourable
Selection of the INTERREG Specific Objective Thematic communities coordinating with other programmes (coordination, capitalisation and synergies)	Thematic communities are positive experiences for the partners involved There are already a few strong communities operating	Thematic communities require strong management and animation capacities. Communities are fragile as they rely on animation, mobilisation capacities, personal commitment of their partners. At least 10% of the EU financing allocated to this objective.	Communities can create bridges between territorial actors and Mediterranean stakeholders	Important workload for thematic communities, that could lose focus on their typical tasks Lack of involvement of modular projects in thematic communities
No selection of the INTERREG Specific Objective The programme ensures coordination, capitalisation and	The programme focuses coordination on operational aspects (mainly capitalisation and synergies)	The programme would not target the more strategic level in the Mediterranean. Only the TA could be used for these purposes.	In times of restricted funding, it may be an efficient way to do coordination on operational aspects.	Difficult to foresee strategic/institutional impact with this approach

### Table 9 : SWOT analysis of the implementation of the INTERREG Specific Objective "Better cooperation governance"

synergies out of the TA budget.				
No selection of the INTERREG Specific Objective The programme would implement mainstreaming activities out of the TA or project budget.	Med in a good starting position for mainstreaming, as experiences exist and the HPs are involved.	So far, mainstreaming has been experimental. Extending the actions could take considerable resources. The draft Regulation indicates that the links between Goal 1 and 2 is up to the regional programmes.	Support and increased commitment of Horizontal projects	Limited success due to lack of response of some regional programmes.