

Annex 04 Territorial analysis

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List of abbreviations

ACRONYM	FULL MEANING
ACI	Italian Automobile Club
AGER	Waste Management Agency of Puglia Region
ANCE	National association of Building Constructors
ANPAL	National Agency for Active Labour Policies
AQP	Apulian Aqueduct
ATECO	Classification of Economic Activities
ARA	Albanian Road Authority
ARPA	Regional Agency for Environmental Protection and Prevention of Puglia Region
ARTI	Regional Agency for Technology and Innovation
ASSET	Regional Strategic Agency for Sustainable Development of the Territory
BES	Equitable and Sustainable Well-Being

Blue Boost	BOOSTing the innovation potential of the triple helix of Adriatic-Ionian traditional and emerging BLUE growth sectors clusters through an open source/knowledge sharing and community based approach project
CEFTA	Central European Free Trade Agreement
CENSIS	Centre for Social Studies and Policies
China - CEE Institute	China – Central and Eastern Europe Institute
CREA	Research Council in Agriculture and the Analysis of Agricultural Economics
CSP	Center for Social Policy
D.A.Re	Regional Agricultural and Food District
DeFishGear	Derelict Fishing Gear Management System in the Adriatic Region
DGR	Decree of the Regional Government
DHITECH	Apulian District of High Technology
DHS Program	Demographic and Health Survey Program
Di.T.N.E	National Energy Technological District
DOCG	Denomination of Controlled and Guaranteed Origin
DOP	Protected Designation of Origin
DTA	Aerospace Technological District
EC	European Commission
EEA	European Environment Agency
EEC	European Economic community
EGAM	Management of Mining Activities Entity
EM-DAT	International Disaster Database
ENEA	National Agency for New Technologies, Energy and Sustainable Economic Development
ERA	European Research Area
ERDF	European Regional Development Fund
ESF	European Social Fund
ETF	European Training Foundation
EU	European Union
EUROSAI	European Organization of Supreme Audit Institutions
EUROSTAT	Statistical Office of the European Union
FDI	Foreign Direct Investments
FESR	European Regional Development Fund
FLAT	Flood and Landslide Assistance and Training
FSE	European Social Fund
GDP	Gross Domestic Product
GFCM	General Commission for Fisheries of the Mediterranean
GHG	Greenhouse Gas
GII	Global Innovation Index
GSE	Energy Service System Operator
H – BIO	High-Tech District Biotechnology and Health
HFCs	hydrofluorocarbons
HRST	Human Resources in Science and Technology
ICCAT	International Commission for the Conservation of Atlantic Tunas
ICESP	Italian Circular Economy Stakeholder Platform
I-COM	Institute for Competitiveness
ICT	Information and Communication Technologies
IGP	Indication of Geographic Protection
ILO	International Labour Organization
INDIRE	National Institute for Documentation, Innovation and Educational Research

INSME	International Network for Small and Medium Enterprises
INSTAT	Albanian Institute of Statistics
IPER	Institute for Entrepreneurship and Economic Development
IRENA	International Renewable Energy Agency
ISCED	International Standard Classification of Education
ISMEA	Institute for Studies, Researches and Information on Agricultural Markets
ISPRA	Italian National Institute for Environmental Protection and Research
ISTAT	Italian National Institute of Statistics
ITS	Higher Technical Institutes
JRC	Joint Research Center
LASPEH	Low Adriatic Species and Habitat
LIPU	Italian League for Bird Protection
MAB	Man & the Biosphere
MATTM	Ministry for Environment, Land and Sea Protection
MEDISDIH	Mechatronics Technological District
MIUR	Italian Ministry for Education, University and Research
MoD	Albanian Ministry of Defence
MONSTAT	Statistical Office of Montenegro
NACE	Nomenclature Générale des Activités Economiques
NANOTEC	Institute of Nanotechnology
NCPA	National Civil Protection Agency
NEET	Neither in Employment or in Education or Training
NSSD	National Strategy for Sustainable Development
OECD	Organization for Economic Cooperation and Development
PEEREA	Protocol on Energy Efficiency and Related Environmental Aspects
PhD	Doctor of Philosophy
PORTS	Partnership for the Observation and study of new Routes and Transnational Sea-highways project
PPS	Purchasing Power Standard
RAEE	Waste of Electric and Electronic equipment
RCI	Regional Competitiveness Index
REEHUB	Regional Energy Efficiency HUB Project
ReOPEN SPL	Regulation, Organisation, Planning, Efficiency in Local Public Services
R&D	Research & Development
ROP	Regional Operational Programme
SDG	Sustainable Development Goals
SIC	Site of Community Importance
SLED	Support for Low-Emission Development in South Eastern Europe
SMART ADRIA BG	Smart Adria Blue Growth
SME	Small and Medium-sized Enterprises
SNPA	National System for Environmental Protection
SPA	Special Protection Area
STG	Guarantee Traditional Speciality
Svimez	Association for the development of industry in Southern Italy
TEN-T	Trans European Network
TSG	Traditional Specialty Guaranteed
TERNA	European electricity transmission grid operator

TRITON	Development of management Tools and diRectives for immediate protection of biodiversity in coastal areas affected by sea erosion and establishment of appropriate environmental control systems project
UAA	Utilised Agricultural Area
UNDP	United Nations Development Programme
UNECE	United Nations Economic Commission for Europe
UNESCO	United Nations Educational, Scientific and Cultural Organization
VET	Vocational Education and Training
WB	World Bank
WDPA	World Database on Protected Areas
WELCOME	Water Landscapes sustainability through reuse of Marine litter project
WFD	Water Framework Directive
WHO	World Health Organization
WTO	World Trade Organization

Objective and authors

The objective of this document is to point out key socio-economic and environmental characteristics of the territories included in the eligibility area of the 2021-2027 Interreg IPA CBC Italy-Albania-Montenegro, as proposed by the EC in the Border Orientation Paper.

The analysis is mainly focused on key data available for the territories concerned, both from national and regional statistic offices, but also from other available international and national analyses. The analysis has not the ambition to cover all possible aspects of a very complex and heterogeneous cross-border maritime area, but to point out key needs and potentials, which may be realistically addressed by cross-border cooperation projects in 2021-2027 programming period.

This analysis was carried out during the months from July 2020 and March 2021 by a team of experts both of the Regional Agency for Innovation ARTI (Giorgio Ampolo, Giuseppe Cillis, Ivano Dileo, Annamaria Fiore, Carlo Gadaleta Caldarola, Zoe Godosi, Rossana Mancarella, Canio Manniello, Pietro Picuno, Francesca Schiavone, Dina Statuto) and of the 2014-20 MA/JS (Antonio Agrosi, Chiara Campanile, Aurora Losacco, Davide Marciano, Aferdita Mezini, Mauro Novello).

1. Geography and context of analysis

The Programme Area is located strategically between Eastern Europe and the Mediterranean Sea. It covers a total surface of 66,562 km². Albania is the largest territory of the cross-border cooperation area (around 43%) whereas Molise region is the smallest one (4,460.6 km², 6.7%).

Table 4. Geographical data of the Programme area

	Km ²	% of total Programme Area	Coastline length (Km)
Albania	28,748 (d)	43.2%	418 (b)
Puglia	19,540.9 (a)	29.4%	903 (c)
Montenegro	13,812 (e)	20.8%	294 (b)
Molise	4,460.6 (a)	6.7%	36 (c)

Total Programme Area	66,562	100.0%	
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Source: (a) ISTAT, 2013; (b) EC, 2011; (c) MATTM-Regioni, 2018; (d) United Nations, 2002; (e) United Nations, 2007.

Geomorphologically, the cross-border area is mainly characterized by a) extensive coastal areas, b) extensive plains in Puglia c) extensive mountain areas in Montenegro, Albania and Molise. The coastal areas extend both in the Adriatic and Ionian Seas for 1651 km of coast line, including also the Tremiti Islands (6 islands offshore Puglia and Molise) and 21 small islands across Albania and Montenegro. While the territories of Albania, Montenegro and Molise are characterized by abundant water resources, Puglia topography is essentially karst with scarce water resources. The most important lakes of the Balkans are located in the area, i.e., the cross-border lakes Skadar (Albania – Montenegro) and Ohrid, (Albania - Northern Macedonia), while Puglia features some important coastal lakes.

Puglia covers an area of 19,540.9 km². It is Italy's 7th largest region (out of 20). Located in Southern Italy, it extends from Mount Gargano in the northern part of the region to Santa Maria di Leuca (Salento Peninsula). Puglia is mainly flat (53.3%) and hilly (45.2%), which has helped both human settlements and productive activities, such as agriculture also facilitated by a Mediterranean climate. The Gargano peninsula represents the only mountainous area of the region (ISTAT).

Puglia borders with Molise in the north, and Campania and Basilicata in the north-west. Also, Puglia borders the Adriatic Sea to the east, the Ionian Sea to the south-east and the Strait of Otranto and the Gulf of Taranto to the south.

Across the Adriatic and Ionian Seas, Puglia faces Albania, Bosnia-Herzegovina, Croatia, Greece, and Montenegro. The capital city is Bari (in the province of the same name). The other five provinces are Foggia, Lecce, Brindisi, Taranto and Barletta-Andria-Trani.

The 900 km of coastline in the Puglia region (including also the Ionian coast, and corresponding to about 12% of the almost 8,000 km in Italy), are characterized by a high environmental diversity, both from a naturalistic and morphological point of view.

With an area of more than 4,460.6 km², **Molise** is the smallest region in Southern Italy and the second-last in Italy. Molise is bordered by Abruzzo, Campania, Lazio and Puglia. The territory is mostly formed by mountains (55.3%), and hills (44.7%) (ISTAT). The mountainous area extends between the Abruzzo Apennines and the Samnite Apennines.

Although bordering Puglia, the climate of Molise is much colder than that prevailing in most of Puglia. The capital city is Campobasso.

The coastal area is the smallest in Italy: the region has about 36 km of sandy coastline to the northeast facing the Adriatic Sea.

Albania extends for 28,748 km² on the Balkan Peninsula in Southeastern Europe and borders the Adriatic Sea, it shares borders with Montenegro and Kosovo to the north and north-east, Macedonia to the east and Greece to the south. Albania shares maritime borders with Croatia and Italy. Tirana is Albania's largest and capital city. Other important major port cities are Durrës and Vlorë, which was Albania's first capital. Elbasan and Shkoder are among the most important historic cities.

The coastline occupies a length of 418 kilometres, while the territory is mostly formed by mountains and the highest peak is Maja e Korabit (2,753 m), located in the Korab Mountains on the Macedonian border. The Adriatic Sea separates Albania from Italy via the Strait of Otranto (fewer than 100 km). Albania's borders host the country's three major lakes: Shkodra, Ohrid and Prespa.

Montenegro is a mostly mountainous country located in the west-central Balkans covering 13,812 km². It covers both Sub-Mediterranean and Mediterranean regions and borders with Croatia and the Adriatic Sea (southwest), Bosnia & Herzegovina to the north-west, Serbia (northeast), Kosovo (east) and Albania to the south-east. The coastal area of Montenegro extends from the Bay of Kotor in the north to the delta of the Bojana River in the south. The coastline length is 294 km.

The capital city is Podgorica, while Cetinje is the former Royal Capital City, still seat of some national and governmental authorities. Besides Podgorica, other main cities are Nikšić, Herceg Novi, Pljevlja, Budva, Bar, Bijelo Polje and Cetinje.

2. Demography

Among the territories of the Programme area, Puglia region covers more than 50% of the total population. According to EUROSTAT (2020), all the territories (with the exclusion of Montenegro) registered a decrease in total population during 2009-2019, even if the population density has not registered particular changes over time. All the territories in the Programme area are affected by migration, particularly in Albania the phenomenon is quite relevant.

Table 5. Demographic data of the Programme area, 2019

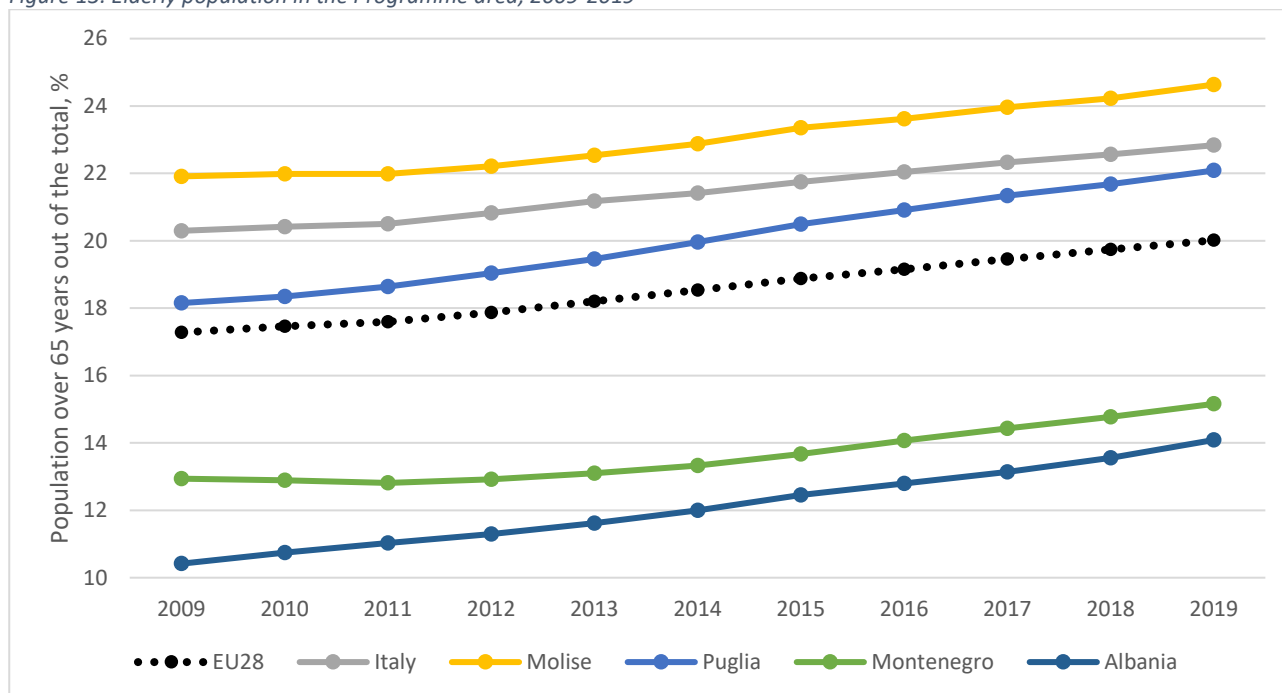
	Inhabitants (2019)	% of the Programme Area population	2009-2019 rate of change (%)
Puglia (% of Italy)	4,029,053 (6.7%)	51.5%	-0.4%
Molise (% of Italy)	305,617 (0.5%)	3.9%	-3.6%
Total Programme area- Italy	4,334,670	55.4%	-0.6%
Italy	60,359,546	--	2.3%
Albania	2,862,427	36.6%	-2.5%
Montenegro	622,182	8%	0.8
Total IPA countries	3,484,609	44.6%	-1.9%
Total Programme Area	7,819,279	100.0%	-1.2%

Source: EUROSTAT.

However, one of the most important data regards the increasing amount of old population; indeed, data show that in the same period the population aged 65 and over accounted for an increase of +21.2% in Puglia, +8.4% in Molise, +18.1% in Montenegro and +31.8% in Albania. In any case, in Montenegro and Albania this trend is less marked than the EU average (Figure 1).

In light of the spread of the COVID-19, this information shed light on the understanding of how and to what extent this pandemic has spread and has had a very strong diverse effect on certain age groups but also of the consequence on the sustainability of welfare and health systems.

Figure 13. Elderly population in the Programme area, 2009-2019



Source: ARTI's elaboration on EUROSTAT data.

2.1 Population trends

Puglia is the most densely populated territory of the Programme Area (209.3 inhabitants/km² in 2018). The total population in Puglia on 1st January 2019 is of 4,029,053 (EUROSTAT). On 1st January 2020, less than a quarter of individuals lives in the region's largest towns (Bari - pop. 322,316, Taranto - pop. 195,227, Foggia - pop. 149,904, Lecce - pop. 96,534 and Brindisi -pop. 85,881) (Demo-ISTAT).

During 2014-2019 the regional population has continuously decreased; particularly, at 1st January 2019 people aged 15-24 decreased by 1.1% compared with the previous year. The elderly dependency ratio rose steadily over the decade 2009-2019, reaching the percentage of 34.1% in 2019 (in 2009 was equal to 27.2%), although lower than the national data (35.7%) (ISTAT).

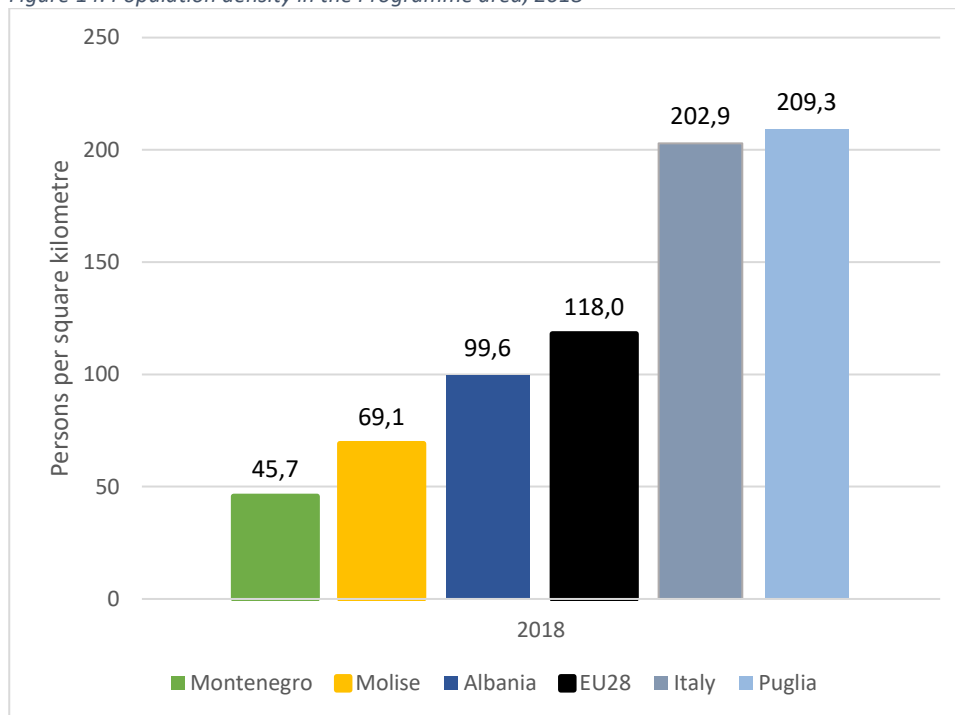
The population in **Molise** at 1st January 2019 was of 305,617 (for a population density in 2018 equals to 69.1 inhabitants/km², the smallest population density in Italy after Valle d'Aosta), with a decrease of more than eleven thousand individuals in the last 10 years and an important increase in the 65 and over age class (EUROSTAT). During 2009-2019 the female population slightly decreased as a percentage of the total population (moving from 51.3 to 50.7%). The elderly dependency ratio reached in 2019 the value of 38.5, the highest one among southern Italian regions (ISTAT). The region is formed by two provinces: Campobasso and Isernia, covering together less than 1% of Italian population.

On 1st January 2019 the population of **Albania** was 2,862,427 inhabitants by experiencing a decrease by 0.3% compared to 1st January 2018 (INSTAT). During 2019 the natural population increase (births-deaths) is 6,624 inhabitants, by experiencing a decrease of 7.1% compared to the previous year. According to INSTAT, on 1st January 2020 the elderly dependency ratio has increased from 20.5 % to 21.6% compared with 1st January 2019.

In **Montenegro**, the total population on 1st January 2019 was 622,182, with a population increase over the decade 2009-2019 of 0.8%, the only territory in the Programme area to have recorded a positive rate of

change (EUROSTAT) for a density of 45.7 inhabitants for km² (EUROSTAT). The old dependency ratio is quite low and lower if compared with the EU28 one (22.7% vs 31.0%) (EUROSTAT).

Figure 14. Population density in the Programme area, 2018



Source: EUROSTAT.

2.2 Migration trends

Migration flows out of the Programme area is still an issue as they have continuously increased over the last years.

Puglia registered in 2019 a strong reduction in the internal migration balance (-3%) (ISTAT). This trend deserves special attention if you consider that in 2018 about three thousand units who attained a university degree and belong to the population aged 25 and over emigrated to the north-central regions (ISTAT, 2019a). Albanians still represent the second most important foreign community in Puglia (after Romanians). Conversely, the total amount of citizens from Montenegro appears modest in relation to the overall foreign population in the region (ISTAT).

In **Molise** the internal migration balance has been negative over the period 2016-2019. Conversely, the foreign migration balance remained positive during the same period, although this has not been enough to make the total migration balance positive (equal to -5.7 per thousand inhabitants in 2019, ISTAT).

In **Albania**, in the period 2014-2018 a total of 199,108 Albanian citizens emigrated abroad, equal to 7% of the population (ISTAT). In 2019, net migration (immigration-emigration) is -23,082 inhabitants, 12.3% less than the previous year (INSTAT, 2020f). For the most part, they are from European countries as regular residents, other ones are refugees coming from Syria, Libya and Iraq.

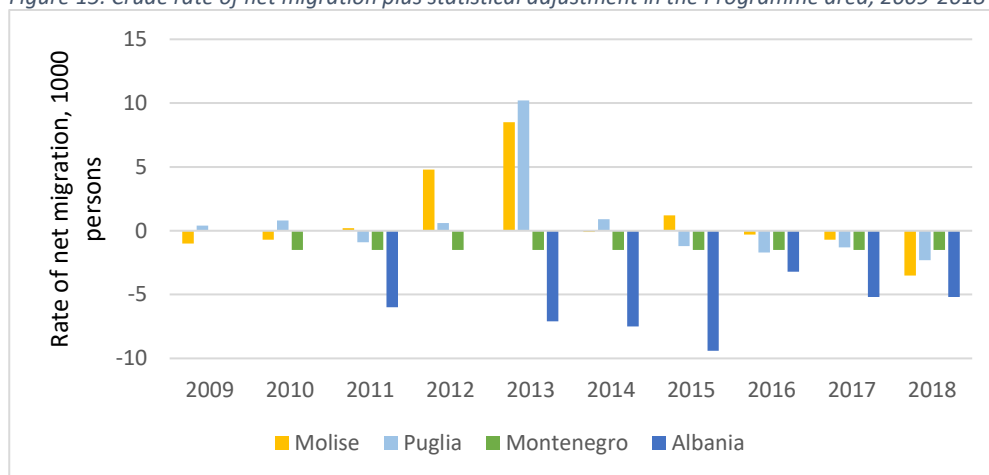
Starting from 2017, in **Montenegro** the internal migrations are characterized by flows from internal and rural areas to the coastal cities. Concerning net migration Montenegro recorded a decrease in every year from

2008 to 2018¹. According to the estimations of the International Organization for Migration in Montenegro approximately over 4,000 citizens emigrated abroad, equal to 0.8% of the population.

Between 2011 and 2018, an estimation of 1,513 Italian citizens officially registered in Albania and 140 in Montenegro, while 112,184 Albanian citizens (4.37% of total immigration) and 623 Montenegrin citizens (0.02% of total immigration) registered in Italy, according to ISTAT data.

In order to make it possible to compare the different territories constituting the Programme area, among the indicators available in EUROSTAT, the crude rate of net migration (plus statistical adjustment)² has been selected. The figure displays that, whenever the data are available, Albania shows the biggest rate of net migration (up to 9.4 every 1,000 persons). In the period 2016-2018, all the territories show a negative rate of net migration: up to 2014 (and apart 2011), this indicator was positive for Puglia.

Figure 15. Crude rate of net migration plus statistical adjustment in the Programme area, 2009-2018



Source: EUROSTAT.

3. Economic profiles

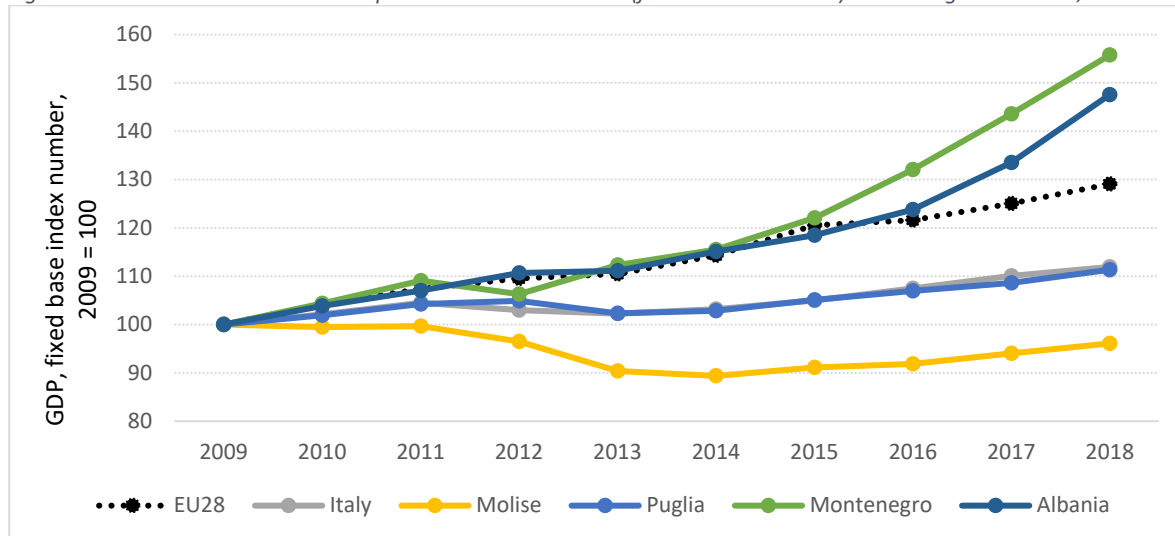
3.1 Economic trends and firms' structure

After the 2008 crisis that severely affected all the countries both on the Adriatic and Ionian Sea sides, over the last years the territories of the Programme area have started to show a slight growth. Indeed, regardless Molise that experienced a significant decrease in terms of GDP growth, the other partners display encouraging signs of recovery in terms of GDP. Nevertheless, these values are still below the EU averages. These territories are historically specialized on agriculture, tourism and traditional manufacturing even if, especially in the case of Puglia, advanced sectors such as aerospace, mechanics, automotive, mechatronics, and so on, are also increasing.

¹https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Enlargement_countries_-_statistics_on_migration,_residence_permits,_citizenship_and_asylum#Population_change:_natural_change_and_net_migration.

² The crude rate of net migration plus adjustment is defined as the ratio of net migration (including statistical adjustment) during the year to the average population in that year. The value is expressed per 1000 persons. The net migration plus adjustment is calculated as the difference between the total change and the natural change of the population.

Figure 16. Real GDP variation rates expressed as index numbers (fixed base 2009=100) in the Programme area, 2009-2018



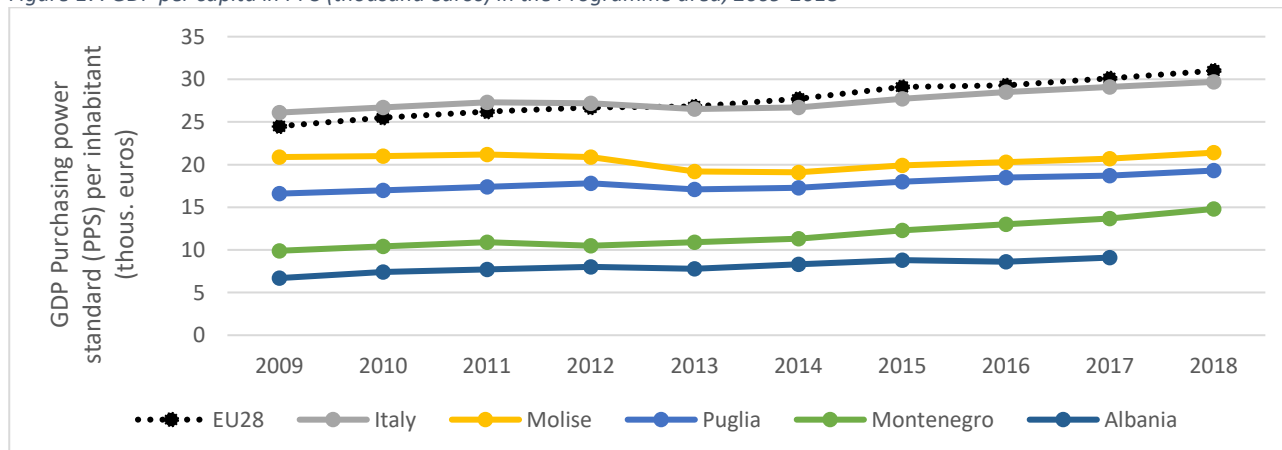
SOURCE: ARTI's elaboration on EUROSTAT data.

Among the partners, Albania accounted for the smallest GDP per capita level. Conversely, Montenegro recently experienced an increase of GDP (mostly in tourism, then construction and industrial production), with a significant increase in 2019 also in terms of GDP per capita.

Most of businesses of the Programme area are SMEs; also, local units are mainly concentrated in commercial activities. This sector provides more than 30% of the total units in the area.

The on-going pandemic crisis and the subsequent lockdown heavily affected the economic structure of the Programme area, in terms of production lost and GDP decrease. Very recent data on the impact of the pandemic crisis show the substantial decrease rates of the GDP for 2020 in the entire area.

Figure 17. GDP per capita in PPS (thousand euros) in the Programme area, 2009-2018



Source: EUROSTAT.

Still for the 2014-2020 programming period, **Puglia** has been included among the less developed regions of those benefiting from European Structural Funds (i.e., with a GDP per capita less than 75% of the EU28 average). In 2018 the regional real GDP amounted to 76,649.18 million euros, in slight but steady growth from 2013, corresponding to 4.3% of the national one (EUROSTAT). Regional GDP per inhabitant at PPS was just 19,300 euros in 2018, among the lowest in the country. If compared with the previous year, increased by 3.2%.

Agriculture still represents one of the most important sources of wealth for the region. Indeed, Puglia is an export leader of wheat, olive oil and tomato. Furthermore, Puglia region is historically specialized in traditional manufacturing such as textiles and metal products, but also in some more advanced sectors, such as aerospace technologies. The biggest steel production plant of Europe is located in Taranto. Whereas

industry in the last years was more important in the region, the service sector represents the 76.7% of the total added value (vs 19.2% of the industry)³.

In 2017, in Puglia there were 270,624 local units of active enterprises, corresponding to more than 5% of all local units in Italy. Of these, 106 Apulian local units consist of large enterprises while the vast majority are micro enterprises under 10 employees (95.8%). Overall, the local units employed 822,628 workers. For the most part, local units are concentrated in commercial activities (32.3% out of total local units); professional, scientific and technical activities (15.3%) and construction (10.7%). Over 22 thousand the local manufacturing units: for the number of employees, the most relevant are the food industries (26.5 thousand of employees); the manufacture of metal products (15.8 thousand); clothing (13.9 thousand) and metallurgy (11.8 thousand) (ISTAT).

The highest concentration of firms is located in the provinces of Bari (a third of the total regional local units) and Lecce (21.7%).

In Puglia important private research centres such as Cetma, Alenia, Augusta, Planetek, Masmec, Bosch group, Mer Mec, STMicroelectronics and Itel are located.

Due to pandemic crisis, during first semester of 2020 regional GDP decreases by almost -9% (Svimez, 2020).

For the 2014-2020 programming period, **Molise** has been included among the regions in transition (i.e., with a GDP per capita between 75% and 90% of the EU average).

GDP per inhabitant of Molise in PPS was equal to 21,400 euros in 2018, below the Italian value (29,700 euros). In 2018 the regional real GDP amounted to 6,463 million euros, representing the 0.4% of national GDP (EUROSTAT). Overall, the real GDP declined by 3.9% during 2009-2018 and the annual growth rate was negative throughout the period until 2014. In 2015, this indicator showed a slight recovery and in 2018 registered a growth rate of +2.2% compared to the previous year (EUROSTAT).

Molise is mostly characterized by the presence of SMEs and a very small part of large enterprises (only 2 local units above 250 employees).

In 2017, there were 22,425 local units of active enterprises that employed 62,848 units of personnel, mostly concentrated in commercial activities (27.6% out of total local units); professional, scientific and technical activities (15.9%) and construction (11.9%). Among the manufacturing activities stand out for the number of employees the manufacture of motor vehicles; the food industries; the manufacture of metal products (ISTAT). After the 2007-2008-economic crisis, the economic system increasingly slowed down, especially in the fashion industry and construction. The main areas of specialization focus on automotive, mechanics, textiles and clothing, and agri-food. Industries are located in the industrial clusters of Termoli, Campobasso-Bojano, Campobasso-Ripalimosani and Venafrò-Pozzilli.

Because of COVID-19 pandemic it is expected a GDP decrease by 10.9% (SVIMEZ, 2020).

During 2018 **Albania** performed a real GDP annual growth rate by +10.5% when expressed in euros (+5.1% when expressed in national currency). Starting from 2014, the Albanian economy started to grow faster than the pre-crisis period. It is expected that this trend may be negatively affected by the devastating earthquake that hit Albania in November 2019 which caused damage estimated at 7.5% of GDP, a situation further exacerbated by the consequences of the measures taken to halt the spread of COVID-19 (WB, 2020b). The latest figures for the Albanian GDP (first quarter of 2020) show a reduction of 2.5% compared to the previous quarter. The sectors that have resisted are Agriculture, Forestry and Fishing (+0.71%), Real estate activity (+0.19%), and Arts, entertainment and recreation services, other services (+0.02%) (INSTAT, 2020e).

In 2017, GDP per capita in PPS amounted to 9,100 euros, representing the lowest level of the Programme area (EUROSTAT).

Services constitute the main percentage of the whole economy for 2018, by 47.7% of GDP. Industry and construction increased in real terms and represent 21.3% of GDP. Agriculture, hunting and forestry accounted for 18.4% of GDP, increased by 1.2 % in real terms (INSTAT, 2020d).

³ <https://ec.europa.eu/growth/tools-databases/regional-innovation-monitor/base-profile/puglia>.

Other strategic sectors are coastal tourism, agriculture, hydropower and mining. All of them are nature-based sectors and the reliance on natural resource is cause for vulnerabilities (EC, 2019a). Small and medium-sized enterprises in Albania account for 99.8 percent of the active enterprises in 2018 (INSTAT, 2020m).

Interestingly Foreign Direct Investments (FDI) are draining as throughout 2019 new investments have not been registered (China-CEE Institute, 2020). At the same time, still nowadays remittances play an important role for the Albanian economy, since this country has witnessed a considerable migratory phenomenon over the past decades. An evaluation by the Bank of Albania estimates for the remittances 1.15 billion per year in 2017 and 2018, or around 12% of Albania's GDP (Bank of Albania, 2018).

GDP in the first quarter of 2020 registered a decrease due to COVID-19, in volume terms has decreased by 2.52% compared with the first quarter of 2019 (INSTAT, 2020g).

Over the last years, **Montenegro** experienced a rapid economic growth: according to the latest EUROSTAT data, the real annual growth rate of gross domestic product for 2018 is 8.5%. Due to the recent independence of the Country, there was a "boom" of private investment, generating a constant economic growth in the last years.

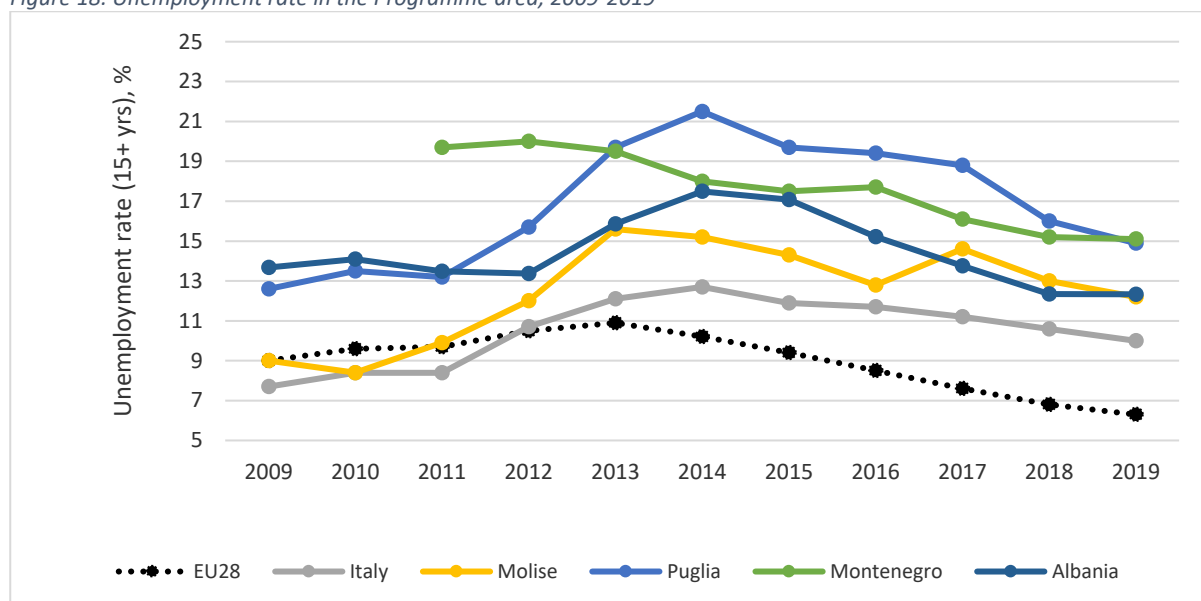
In 2018, the GDP per capita annual growth rate has been 8.7%, even though GDP per capita in PPS for the same year has been still lower if compared with the EU-28 average (14,800 vs 31,000 euros, respectively) (EUROSTAT).

The economy of the country is service-oriented, and tourism represents the leading sector and the principal source of income, given that foreign tourists generate over 20% of the country's GDP (EC, 2019c). SMEs in Montenegro play a significant role. In 2017, they represented 80.1% of the overall employment and generated nearly 70% of total value added (EC, 2019d). COVID-19 pandemic may strongly impact the economic structure of Montenegro. Indeed, it is expected a recession in the economy, mostly on tourism and remittances coming from EU countries such as Austria, Germany and Italy. Estimates about real GDP growth for the year 2020 see the GDP of Montenegro fall by 5.6%, the worst results in the baseline scenario for the Western Balkans region (ILO, 2020).

3.2 Labour market and employment

Despite the unemployment rate dropped to historical lows in Albania and Montenegro, on the whole in the Programme area unemployment continues to be higher than the EU average. After the peak reached in 2014, Puglia and Molise began to reduce the unemployment rate, but at a lower pace with respect to national average.

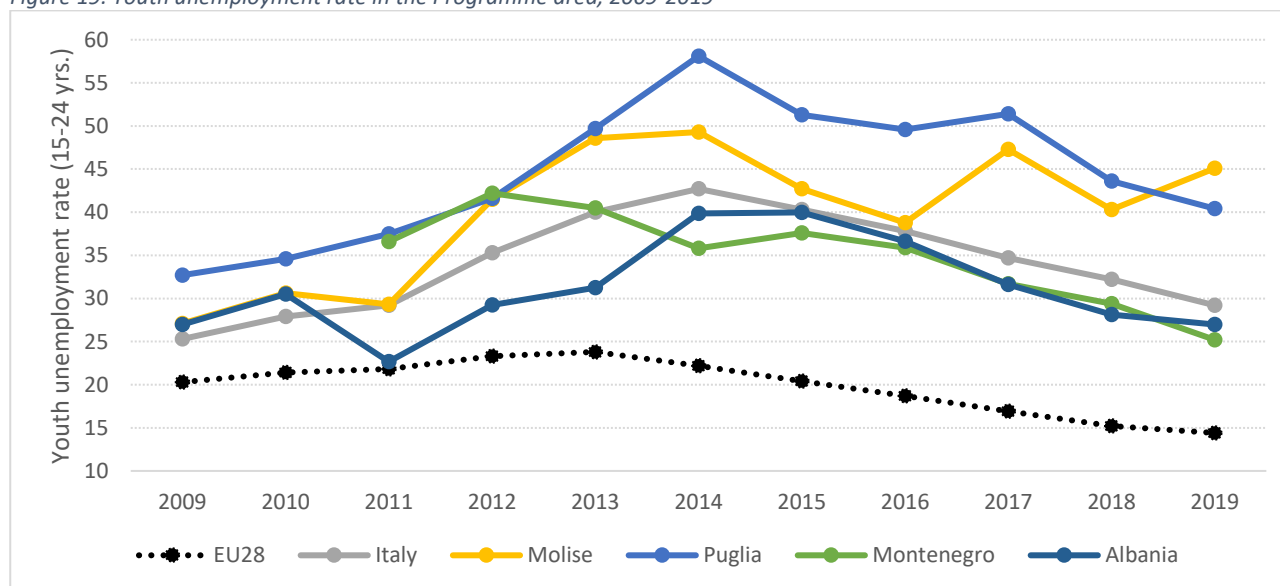
Figure 18. Unemployment rate in the Programme area, 2009-2019



SOURCE: EUROSTAT; WB (Albania).

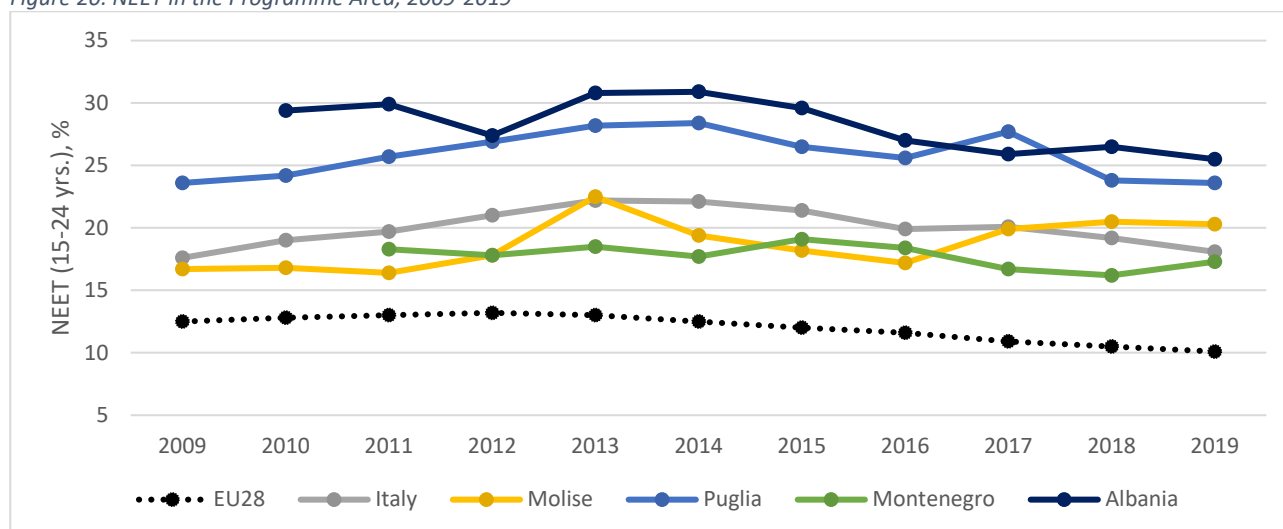
Also, youth unemployment depicts a structural issue as well as the participation of females in the labor market, who are still underrepresented. The share of young people neither in employment nor in education and training (NEET) are substantially higher than the EU.

Figure 19. Youth unemployment rate in the Programme area, 2009-2019



SOURCE: EUROSTAT; WB (Albania).

Figure 20. NEET in the Programme Area, 2009-2019

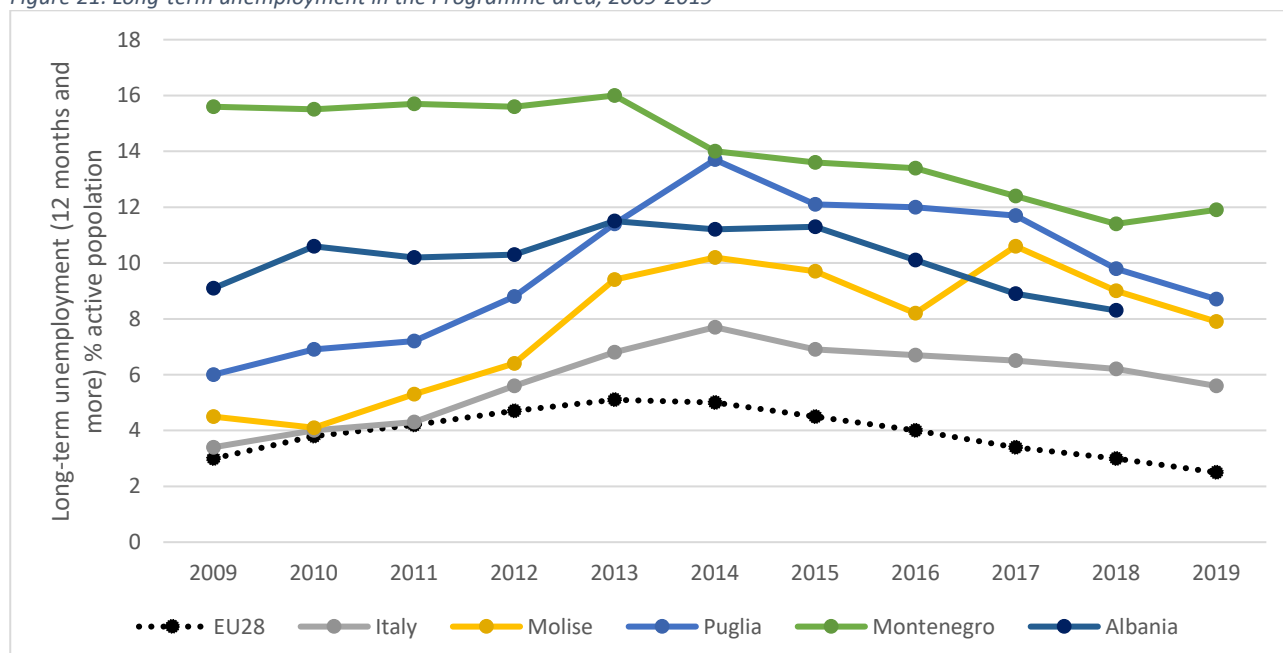


SOURCE: EUROSTAT; INSTAT (Albania).

The COVID-19 lockdown further exacerbated the situation since it increased unemployment horizontally in all the sectors. Detailed policy options to support the unemployed people in the Programme area are needful, mostly addressed to more vulnerable social groups. Substantial impacts are expected also on the unemployment rate of older persons, as a consequence of the high number of SMEs closing during the pandemics.

Finally, also the long-term unemployment rate is an issue at stake for territories in the Programme area. Over the decade 2009-2019 there has been a substantial reduction in the proportion of 12-month (or more) unemployed over the active population, but is still far from European average.

Figure 21. Long-term unemployment in the Programme area, 2009-2019



SOURCE: EUROSTAT.

In **Puglia**, the total number of employees in 2019 was 1,234 million persons (equal to 5.3% of the employed in Italy): 8.6% in the primary sector; 22.3% in the secondary sector; 69.1% in the services sector. Females account for 35.6% of the total employment (ISTAT). In 2019, 10,789 were employed at Taranto steel production plant, which is the biggest in Europe, but this is going to progressively decrease, due to the severe economic and environmental crisis. Other employed people work in wholesale and retail trade, transport,

banking and insurance services, real estate services, accommodation and food service activities, and public administration (defense, education, human health and social work activities).

The employment rate (age class 15-64) grew by 0.8 percentage points in 2019 compared with 2018 and by 4.2 percentage points in the years between 2014 and 2019, although the overall figure is lower (46.3%) than the national average (59%) (EUROSTAT). Youth unemployment (age group 15-24) increased by 7.7 percentage points in the period 2009-2019 but it slightly decreased in 2019 compared to the previous year (-3.2 percentage points) (EUROSTAT). This data underlines a long-standing dynamic regarding the youngest part of the workforce.

More relevant and worthy of attention is the data on NEETs (not in education, employment or training) for the age group 15-24: even though the rate decreased in the period 2017-2019 (-4.1 percentage points), in 2019 the figure remains considerably higher (23.6%) than the EU28 average (10.1%) and the Italian one (18.1%); this data is even more critical in the 25-34 age group: in 2019 it is more than twice if compared with the EU28 one (41.9% vs 16.6%) (EUROSTAT).

In **Molise**, the total number of employed people in 2019 was 109 thousand. Of these, 6.4% in agriculture and fishing; 24.8% in industrial and construction activities; the remainder in service activities. Female employment, on the other hand, was 39.4% of total (ISTAT).

In 2019, compared with 2018, the employment rate (15-64) increased by one percentage point whereas, from 2014 to 2019, it registered an increase of 6 percentage points (EUROSTAT). During 2009-2019 the unemployment rate for people aged 15-24 strongly increased by 18% whereas in 2019, compared with 2018, it increases by 4.8%.

During 2017-2019 NEETs rate (15-24) increased by 0.4 percentage points (EUROSTAT) and in 2019 the percentage reached 20.3%, twice as much compared to the EU28 (10.1%). In the 25-34 age group the percentage of NEETs in 2019 is 34.7%: it increased of 7 percentage points in the period 2009-2019 (EUROSTAT).

In **Albania**, according to Labour Force Survey estimates employment is 1,266 thousand persons in 2019 (INSTAT, 2019b): compared with the previous year, the employment rate (15-64 years) increased by 1.7 percentage points (EUROSTAT), whereas the unemployment rate is 12.3%, substantially the same that in 2018 (WB).

Females account for or 44.5% of total employment. Compared to 2018, the average monthly gross wage for an employee in Albania increased by 3.5% in 2019. The gender pay gap is 10.1% (INSTAT, 2019b).

The share of employed people aged 15-24 is somewhat unchanged in 2019 compared to 2018 (INSTAT). Youth unemployment rate (15-24 years) is 27%. Compared to 2018, youth unemployment rate has decreased by 1.1 percentage points (WB) as well as the long-term unemployed to the total active population (-2.9 percentage points between 2014 and 2018, EUROSTAT).

NEETs rate in the age group 15-24 decreased significantly (more than 5 percentage points) in 2013-2019 and of 0.4 percentage points in 2017-2019 (INSTAT). In 2019, the percentage of NEETs in 15-24 age group is 25.5%. The service and agricultural sectors have the highest share of employed with respectively 43.5% and 36.4% of the total employment (INSTAT, 2019c).

During 2014-2019, in **Montenegro** the employment rate for individuals aged 15-64 increased by 5.6 percentage points and in 2019 compared with 2018 it increases by 1.3 percentage points (EUROSTAT). These results arise from the private investments also on the construction sector and tourism sector, which is a significant generator of economic growth. Revenues from tourism account for more than a fifth of GDP. Another important element fostering labour market growth is represented by incentives for self-employment and active employment policies (Government of Montenegro, 2019).

Although increased, in 2019 the percentage of females employed continue to be lower than the males one (49.7% and 62.3%, respectively) (EUROSTAT).

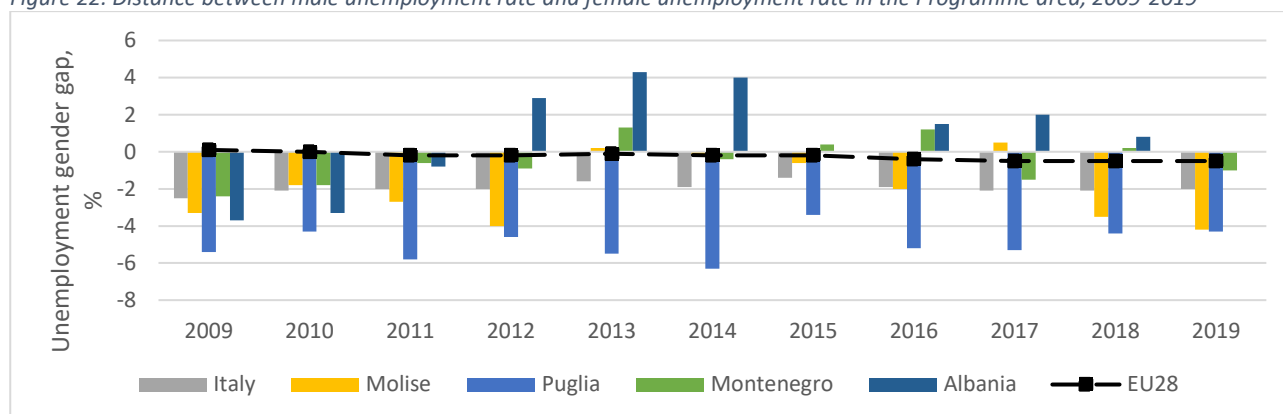
The total unemployment rate decreased by 3.1 percentage points during 2014-2019 (WB).

During 2017-2019 NEETs in the age group 15-24 increased by 0.6 percentage points. In 2019 the share is still higher than the EU28 one (17.3% and 10.1%) (EUROSTAT).

3.3 Gender gap in labour market

As already anticipated, critical in the Programme area is also the persistently low rate of female participation at the labour market: female unemployment rate is wheresoever higher than the corresponding average rate in EU. Considering the distance between the male unemployment rate and the corresponding female rate, and apart Albania for some years, it is evident how much is higher this gap, especially in Puglia (Figure 10).

Figure 22. Distance between male unemployment rate and female unemployment rate in the Programme area, 2009-2019



Source: ARTI's elaboration on EUROSTAT data.

After all, achieving gender equality and empower all women and girls constitutes a specific goal to be attained in the Agenda 2030: "despite improvements, full gender equality remains unreached". Moreover, lockdowns connected to COVID-19 pandemic "are increasing the risk of violence against women and girls" and "women bear additional household burdens during the pandemic" (United Nations, 2020).

At this aim, some indicator connected to labour market have been selected to be discussed here relative to the Target 5.5 "Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic and public life".

Table 6. Selected indicators for SDG 5 "Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic and public life" in the Programme area

SDG5 indicator	Year	Italy	Puglia	Molise	Albania	Montenegro
Proportion of elected seats held by women in deliberative bodies of local government (%) –	latest data (in parentheses)	31.78 (2019)	6.1 (2017)	14.3 (2017)	43.61 (2019)	27.77 (2017)
Proportion of seats held by women in national parliaments (% of total number of seats)	2009	21.27	18.5	20.0	7.14	11.11
	2019 (2014 for Puglia e Molise)	35.71	19.4	25.0	29.29	23.46
	2009	33.78			22.47	24.5

Proportion of women in managerial positions (%)	2018	26.99			22.61 (2017)	28.77
Proportion of women in senior and middle management positions (%)	latest data (in parentheses)	23.15 (2018)			29.3 (2013)	23.83 (2018)

SOURCE: ARTI's selection on United Nations Global SDG Indicators Database; BES (Puglia and Molise).

Apart Albania (with a proportion of 43.61), in the deliberative bodies of local government the share of elected women does not exceed one third of the total seats. The minimum share is in Puglia (only 6.1 in 2017). The situation is not better if we consider the seats occupied by women in national parliaments, even if there has been a decisive increase between 2009 and 2019 (and between 2008 and 2014 for Puglia and Molise). The percentage of women in management positions from 2009 to 2019 has not particularly increased: on the contrary, in Italy it even decreased (data for Puglia and Molise not available). The share of women in senior and middle management positions does not exceed the 30% wheresoever. The societal structure and the lack of effective public support structures for working women in the Programme area may certainly play a major role in these trends.

3.4 Foreign trade relations

Data on trade between the two sides of the Adriatic involved in the Programme area show that there are many areas of trade not yet fully exploited. Up to now, essentially agricultural products, food processing and textile-clothing-footwear sectors have seen the greatest concentration of trade contacts between the two shores of the Adriatic involved in the Programme.

Except for Albania, all the territories have shown in 2019 growing trends for exports.

According to the Italian Trade Agency in its last report (2020), the data show that in 2019, among the Italian regions, the strongest growth for exports was in **Molise** (+11.7%, total exports equal to 756 thousand euros) and **Puglia** (+9.1%, total exports equal to 8.8 billion euros), second only to Tuscany and Lazio (15.6% and 15.3% respectively). The first three export Countries for Puglia are France, U.S.A., and Germany, whereas for Molise are U.S.A. for the most part (about a third), Germany, and Netherlands (ICE website, 2020).

In 2019, the **Albanian** export amounted to 2.4 billion euros, decreasing by 3.8% compared to 2018. The share of Albanian exports to EU countries represented the 77% of the total export, even if decreasing compared to 2018 (-3.4%), with Italy as main commercial partner (48%), followed by Kosovo (10%), and Spain (8%), while exports to Montenegro accounted for 2% of the total (INSTAT, 2020e).

For **Montenegro**, in 2019 the value of exports of goods was 415.5 million euros. Compared to the same period last year, exports increased by 3.8%. Main trading partners in exports were: Serbia (more than a quarter of total exports), Hungary (10.8%) and Bosnia and Herzegovina (7.2%) (MONSTAT, 2020c).

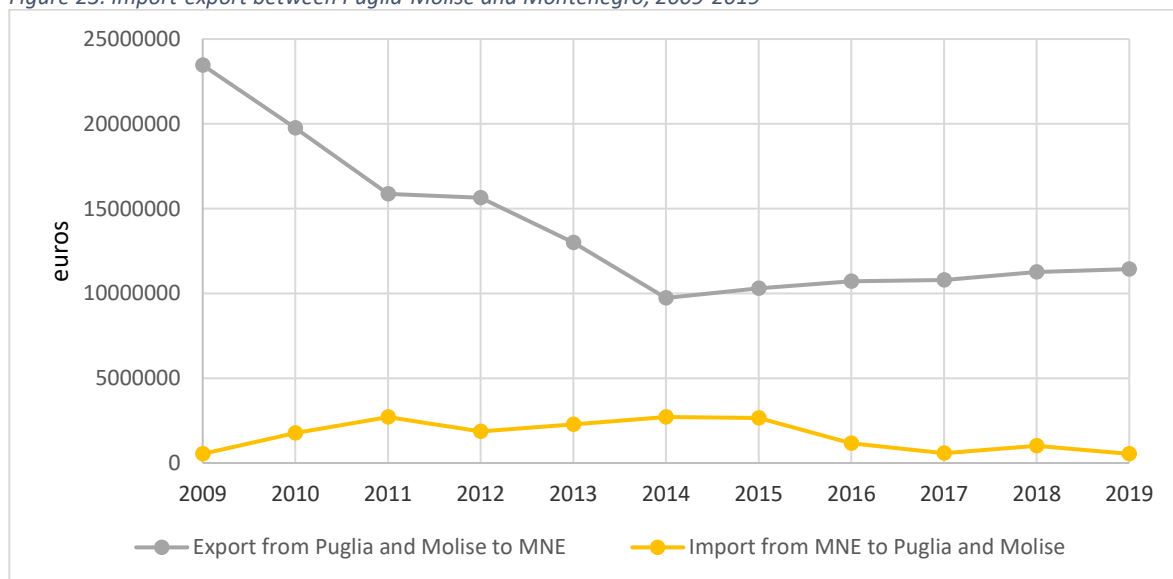
In terms of foreign trade in goods between Albania and Montenegro, according to INSTAT Albania data, the export of goods from Albania to Montenegro in 2019 was approximately 44.5 million euros decreasing by 2.6% compared to 2018 and representing around 4.8% of total national exports. The import of goods from Montenegro to Albania in 2019 was approx. 17.1 million euros decreasing by 3.4% compared to 2018 and representing around 0.3% of total national imports.

Trade relationships between Puglia-Molise and Montenegro are not particularly strong and are mostly limited to the flow of goods from Puglia to Montenegro. With the exception of the period between 2012 and 2016, the Molise-Montenegro interchange has never exceeded several tens of thousands of euros. Moreover, over the decade 2009-2019, no significant time trend can be detected in the data. Indeed, since 2013, Apulian exports to Montenegro have stabilized at a value of about 10-11 million euros and have not reached anymore the peak of 23 million euros recorded in 2009. Currently, they account only for about 0.15% of the total Apulian exports on average.

Manufacturing products are the most affected by the foreign trade between Puglia and Montenegro: in particular, the weight of agri-food products has steadily increased out of the total Apulian exports (from 10.5% in 2009 up to 30.1% in 2019). On the other hand, exports of electronic and optical devices, which accounted for one-third of total manufacturing exports in 2009, fell steadily to zero in 2014 but recovered only slightly over the last two years. Other relevant manufacturing exported goods in the last years have been the products of other manufacturing activities (in this category: furniture, jewels, toys, musical and medical instruments, etc.) (from 7.4% in 2009 to 19.9% in 2019) and the fashion sector (textiles, clothing, leather and footwear: around 21% on average). Finally, the weight of agriculture products out of the overall trade between Puglia, Molise and Montenegro, between 3% in 2018 and 6.9% in 2014, is not entirely negligible.

It should be noted, however, that since 2013 the trade of these products between Molise and Montenegro has fully ceased.

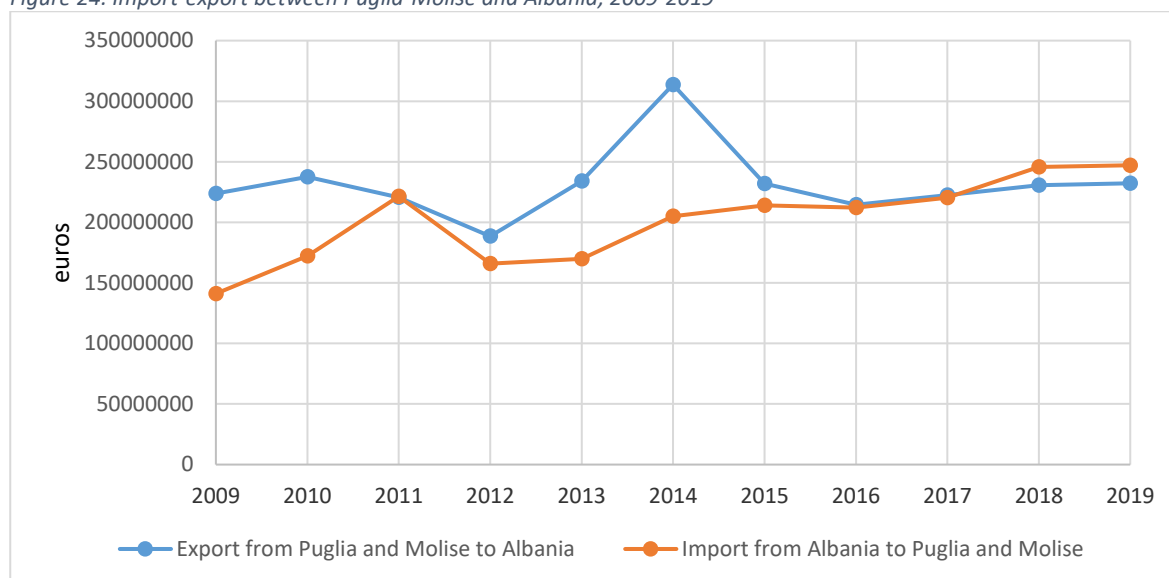
Figure 23. Import-export between Puglia-Molise and Montenegro, 2009-2019



Source: ARTI's elaboration on ISTAT data. Data extracted on July 2020.

As regards Albania, the order of magnitude of the commercial exchange is certainly different: these are million euros between Molise and Albania and hundreds of million euros between Puglia and Albania (on average, about 1% out of total export for Molise and 3% out of total Apulian export). In this case, the balance has been positive for the western shore of the Adriatic up to 2017 and the flows mostly represented by exports from Puglia to Albania. Anyway, in the last years, Albania has progressively improved its export flows towards the two Italian regions (Figure 12).

Figure 24. Import-export between Puglia-Molise and Albania, 2009-2019



Source: ARTI's elaboration on ISTAT data. Data extracted on July 2020.

Once again, the manufacturing products concentrate the most of the trade flows. Over the period 2015-2019, the sector that has almost completely absorbed the import and export flows between Puglia and Molise on the one hand and Albania on the other has been the textile, clothing and footwear sector: in fact, this has concentrated more than 90% of Albanian exports and more than 60% of Apulian and Molise exports. This is because many Italian companies have outsourced entire production phases abroad: an intermediate passage of semi-finished products that then return to the Italian regions as finished products, to be branded and resold. For the remaining part, the only sector able to express at least a 10% export quota to Albania in all five years under consideration is the agri-food sector and, until 2018, chemical products recorded an appreciable export quota (at least 6% of total exports). Finally, it should be pointed out that in 2015 coke and refined petroleum products exceeded 14% of total exports from Puglia and Molise to Albania.

4. Innovation, Research and Education

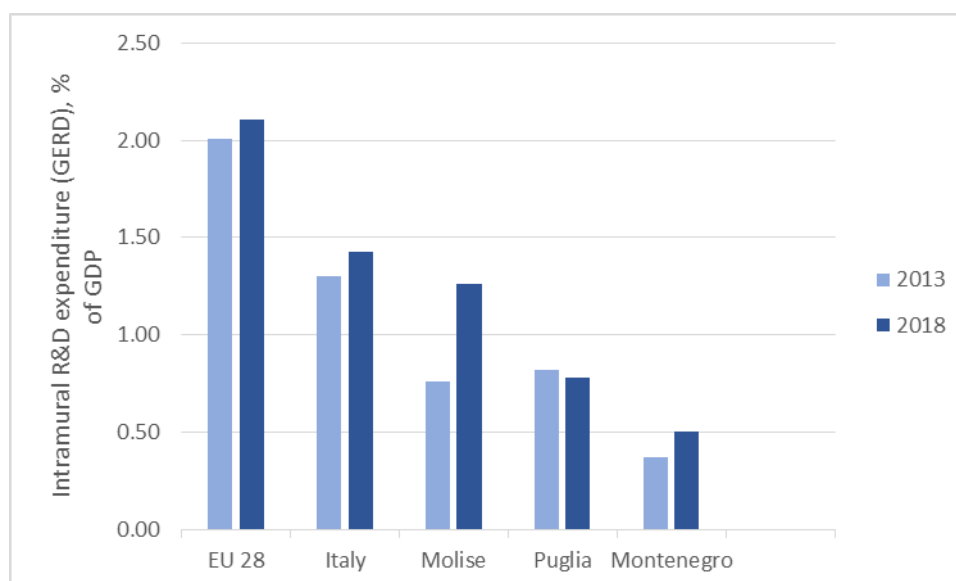
4.1 Innovation, Research and Digitalization

The territories included in the Programme Area, although they have achieved decisive improvements, still do not show innovative performance of particular relevance. However, Puglia has many good practices in particular referred to the thickening of research-industry relations. Montenegro appears to be on a growth path based on innovation both from a regulatory and design point of view.

Apart from Puglia, the intramural R&D expenditure in the Programme area increased from 2013 to 2018 but it is still low if compared with the EU28⁴.

Figure 13. Intramural R%D in the Programme area, EU28 and Italy

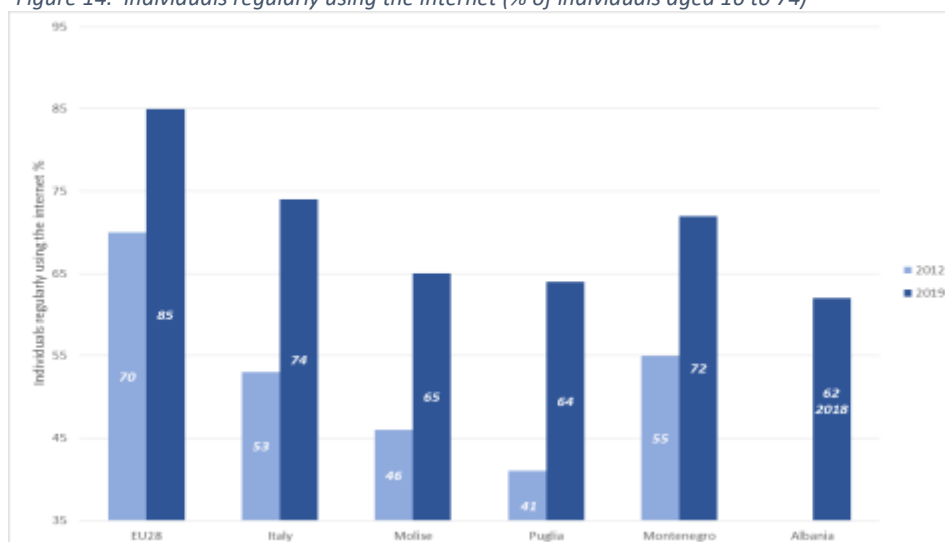
⁴ Data on Albania are not available. In 2008 according to the WB expenditure for R&D in Albania was 0.15% of the GDP.



Source: ARTI's elaboration on EUROSTAT data.

Rural and disadvantaged areas across Europe, including the territories of the Programme Area, have been in particular affected by poor ICT outreach and internet connection which is presenting one of the significant obstacles towards economic development⁵.

Figure 14. Individuals regularly using the internet (% of individuals aged 16 to 74)



Source: ARTI's elaboration on EUROSTAT data.

⁵ The data on access to the internet shall be also analysed against the efficiency of the networks: according to the speed testing portal speedtest.net, in October 2020 Italy's broadband speed is on average for mobile 40.65 Mbps (48th place worldwide) for fixed 75.42 Mbps (49th place worldwide), Albania mobile 56.44 Mbps (23rd place worldwide) fixed 41.52 Mbps (84th place worldwide), Montenegro mobile 41.47 Mbps (44th place worldwide) for fixed 54.90 Mbps (61st place worldwide).

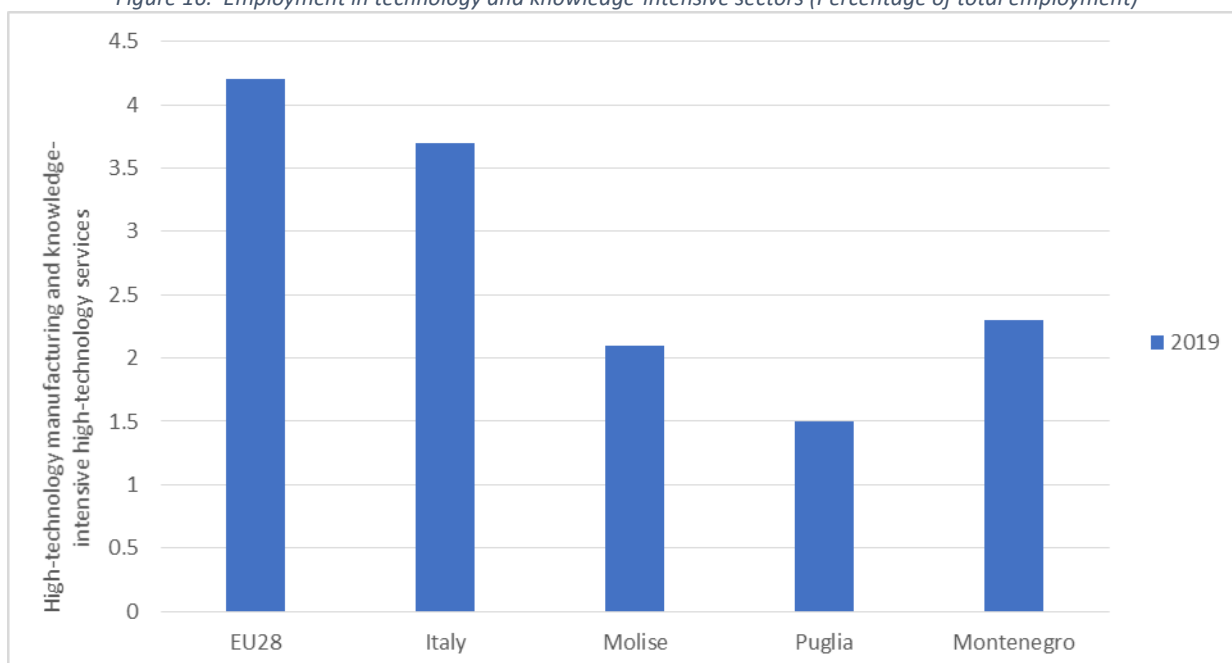
Figure 15. Households with broadband access



Source: ARTI's elaboration on EUROSTAT data.

Finally, all the territories of the Programme area show lower employment level in technology and knowledge-intensive sectors compared with the EU28⁶.

Figure 16. Employment in technology and knowledge-intensive sectors (Percentage of total employment)



Source: ARTI's elaboration on EUROSTAT data.

Due to the COVID-19 pandemic, the use of internet and digital technologies became essential, thus they should have a key role for the next agenda of the cross-border area. This claims for increasing efforts to enhance R&D investment and build up capacities in various technology domains. Decisive for all territories will be the availability of ICT expertise. By strengthening knowledge information society and enforcing ICTs it may contribute to reach objectives related to research and innovation.

⁶ Data on Albania are not available.

Puglia is a moderate innovation region (Regional Innovation Scoreboard, 2019). In the ranking of the 268 European regions included in the last edition of the Regional Competitiveness Index (2019), Puglia occupies the 235th position for value of the RCI composite indicator, but gains some points (218th place) in relation to its innovative performance. Puglia shows a good positioning in Europe in general and in particular with respect to its "peer" regions, as regards specialization in high potential sectors (ATECO K-N sectors: financial and insurance activities; real estate activities; professional, scientific and technical activities; business support services) measured not only through gross value added, but also through employment in those same sectors. Still compared to its "peers", it shows a relative advantage in terms of pervasiveness of innovation, both on the production system side (number of innovative SMEs, turnover from innovations, strategic innovations) and on the research side (scientific publications and R&D expenditure) (ARTI).

Despite the increasing attention to innovation by policymakers and the improved dynamics of the high-tech activities, Puglia is still lacking substantial innovation performance. During the last decade, intramural R&D expenditure increased its share on GDP, reaching its maximum level in 2015, 0.99%. After 2015, the value has decreased again: compared with 2015, in 2018 the share of R&D expenditure decreases (the value was equal to 0.78%), and continues to be lower compared with EU28 and Italy (2.11% and 1.43%, respectively) (EUROSTAT).

During 2009-2019 the share of employment in high-tech sectors on total employment level remains stable, somewhat low in 2019 (1.5%) if compared with the EU28 and Italian percentages (4.2% and 3.7%, respectively). In the period 2015-2019, persons with tertiary education and/or employed in science and technology (HRST) as percentage of active population increased by 2.4 percentage points but in 2019 this share (28.8%) is still below compared with Italy (36.1%) and the EU28 (46.6%) (EUROSTAT).

In the period 2009-2019, the percentage of households with broadband access increased up to 77% despite in 2019 is still below the EU (89%) and Italian percentages (84%) (EUROSTAT). Despite increased by 10 percentage points during 2015-2019 (from 55% to 65%), the percentage of individuals regularly using the internet is below the EU28 share (85%) and the Italian one (74%) whereas the percentage of individuals who have never used a computer slightly increases from 42% to 45% between 2015 and 2017 (EUROSTAT).

In recent years, Puglia has invested in the infrastructure of ultra-wideband: in Italy, it is the region with the highest percentage of real estate units reached, 81.5% (I-COM). Moreover, currently the capital city, Bari, is among the 5 Italian cities to have started the experimentation of 5G in Italy.

Nowadays in Puglia, the most important stakeholders in innovation policy are ARTI, InnovaPuglia and PugliaSviluppo (Regione Puglia - Competitiveness, research and innovation Thematic portal). In Puglia there is also a technological park "Tecnopolis" and some academic centers for technology transfer (BaLab, digital innovation hub MEDISDIH), several business incubators and a number of private labs registered at the Italian Ministry for University⁷. Besides Universities, in Puglia there are 27 Institutes of the National Research Council, of which 5 are main locations, including the Institute of Nanotechnology (NANOTEC) in Lecce. In Puglia is also located a research center of ENEA, the National Agency for New Technologies, Energy and Sustainable Economic Development. Moreover, in 2019, there were 93 active academic spin-offs in the region, over 1,823 at the national level, the leading sector was scientific research and development (NACE code M72)⁸. In December 2019, 431 innovative start-ups were located in Apulia (the eighth region in Italy and +11% over the previous year): compared to Italy, in Apulia innovative start-ups are more frequently found to meet intellectual property and human capital requirements, as specified by a national law (the third requirement is related to R&S expenditure). The sector most represented is software production, which alone is able to absorb over 30% of both regional and national startups. Over the period 2015-2018, the total number of Apulian innovative SMEs has increased from 17 to 81⁹.

It is worth to mention the regional intervention "Talents' Extraction" which aims to accompany and enhance innovative and knowledge-intensive business ideas expressed by the Apulian territory and attract to Puglia the best skills in the field of business acceleration to fill a shortage on the supply side, and the most promising

⁷ <http://albolaboratori.miur.it/Regione.aspx?LabCat=302> decree D.M. 8 August 2000 no. 593 art.14, comma 9-15.

⁸ <http://www.spinoffitalia.it>.

⁹ www.registrodelleimprese.it.

entrepreneurial resources and non-Apulian talents to strengthen the competitive capacity of the regional innovative system. With a first public call of April 2018, the Factories were selected (25 selected out of 28 eligible), groups of public and private entities that will transfer skills and know-how to the Teams, according to the best standards of business acceleration. With a second public call "Teams' Selection", on a continuous basis, informal groups of at least three people sharing an innovative business idea, are invited to apply to receive the accompanying services and tutorship provided by the Factories.

Interestingly, thanks to the SmartPuglia2020 strategy (that was prepared between 2012 and 2013 and formally approved in 2014) Puglia region started to implement a more synergic policy model thanks to the interrelation between the Smart Specialization Strategy and the Digital Agenda strategy in the attempt to identify a new policy approach for integrating cross-cutting policies on R&D and innovation, with other vertical policies.

The most important sectors and technological fields in advanced manufacturing are Aerospace and aeronautics, Agribusiness, Biomedical and Pharmaceutical, Mechanics and Mechatronics, Renewable Energy, Nanotechnologies. In these same sectors from a decade at least are active the 6 Technological districts recognized from Italian Ministry of the University and the Research located in the provinces where those production and technological chains are particularly based. We refer to the Regional Agricultural and Food District (D.A.Re.) in Foggia; the Mechatronics Technological District (MEDISDIH) and the Apulian Technological District Human Health and Biotechnology (H-BIO) in Bari; the Apulian District of High Technology (DHITECH) in Lecce; the National Energy Technological District (Di.T.N.E), and the Aerospace Technological District (DTA) in Brindisi (Regione Puglia - Competitiveness, research and innovation Thematic portal).

The **Molise** Region is narrowing the gap with the richest Italian regions. During 2009-2018 the intramural R&D expenditure steadily increased. Despite it is still lower compared to the Italian data (1.43%), in 2018 it represents 1.26% of GDP, higher than the value of the Puglia region in the same year (EUROSTAT).

Because of the fragmentation of the local industry as well as the lack of collaboration among university and industry, Molise still suffers structural weakness and poor innovation-oriented practices and digital-mindset. Nowadays, Molise is still characterized by a low level of ICT diffusion; it also has a modest regional innovation infrastructure system with low developed broadband network and logistic facilities.

In the period 2015-2019, persons with tertiary education and/or employed in science and technology (HRST) as percentage of active population increased by 1.7 percentage points but in 2019 the share is close to the Italian percentage (35.9% vs 36.1%) but still lower if compared with the EU28 one (46.6%) (EUROSTAT).

This aspect flows into poorly employment rates in the high-tech sector. In fact, in 2019 employees in the high-tech sector accounted for only 2.1% of the total employed population, far away from the Italian and European average (3.7% and 4.2%, respectively) (EUROSTAT). According to EUROSTAT, the percentage of individuals who use internet regularly increased progressively during 2009-2019 (from 40% up to 65%) but remains lower than the Italian and EU28 percentages (74% and 85%, respectively).

As regards innovation performance, **Albania** in 2020 was in the 83rd position out of 129 countries throughout the world, last in Europe behind the other Western Balkan countries such as Macedonia, Serbia, Bosnia and Montenegro (GII, 2020).

According to the WB Enterprise Survey (2019), the share of firms investing in R&D increased from 1% in 2013 to 15.4% in 2019 (EC, 2020). About 0.1% of the population work in the research sector in 2018, that is less than one-third of the EU average. It follows that the low level of innovation limits Albania's capacity to increase productivity growth and thus impedes to produce goods characterized by high value added (EC, 2020). Despite the number of patents applications increased during 2011-2018 (from 3 to 18), the value continues to be low (EC, 2020).

Albania does not yet have robust innovation plan and business incubators, technology parks whereas a strong institutional support capable to promote the collaboration between innovative industry, university and government still misses (EC, 2020).

Compared with 2018, in 2019 the percentage of enterprises with 10 or more employed that used the computer for work purposes slightly increased (from 97.3% to 97.5%), as well as enterprises that have

specialists in the field of ICT (from 22.9% to 23.4%). Yet, less than 8% of businesses used the internet for e-commerce and suffers the lack of digital skills. This delay slows down the digitalization process that is important for creating spill-over effects in other sectors such as tourism (INSTAT, 2019f). Although Albania performs relatively well in terms of mobile broadband penetration (around 63%), fixed broadband penetration in households remains a challenge. Only 1% of the population in rural areas having access to broadband internet (EC, 2020).

Montenegro considers innovation as the main leverage for economic reconstruction and modernization. In fact, recently Montenegro started a set of initiatives aimed at establishing a new institutional framework mostly based on the implementation of several programmes. Consequently, a new regulatory and policy framework need in terms of innovation activities (ERA, 2016).

From 2013 to 2018 the intramural R&D expenditure as percentage of total GDP increased from 0.37% to 0.5% but remains low compared with the EU28 percentage (EUROSTAT). Government supports almost 50% of the total budget for R&D activities¹⁰.

From 2015 to 2019 persons with tertiary education (ISCED) and/or employed in science and technology increased by 1.1 percentage points and in 2019 was 36.7%, higher than Puglia and Molise but lower compared to the EU (46.6%) (EUROSTAT). In the period 2011-2019, the share of employment in technology and knowledge-intensive sectors at the national level remains stable between 1.9% and 2.5% of total employment (EUROSTAT).

The percentage of households with internet access increased during the last years (from 52% in 2012 to 72% in 2019) but the share is still far from the EU28 percentage (89%).

In 2016 Montenegro adopted the National Roadmap for European Research Area (ERA, 2016) as a reference document indicating the national priorities within the European policy. A very important challenge is represented by the enhancing of public-private partnership for establishing the first Centre of Excellence in BIO-ICT, and Science and Technology Park “Technopolis”. However, despite initiatives and reforms, much has to be done in the area of R&D capacity, technology transfer, and innovation in Montenegro (EC, 2019e).

Montenegro defined six priorities for the Strategy of Innovation Activities (2016-2020), included ICTs. ICTs are present in all other priority areas, including the information systems in public administration, education, industry and healthcare (Government of Montenegro, 2016).

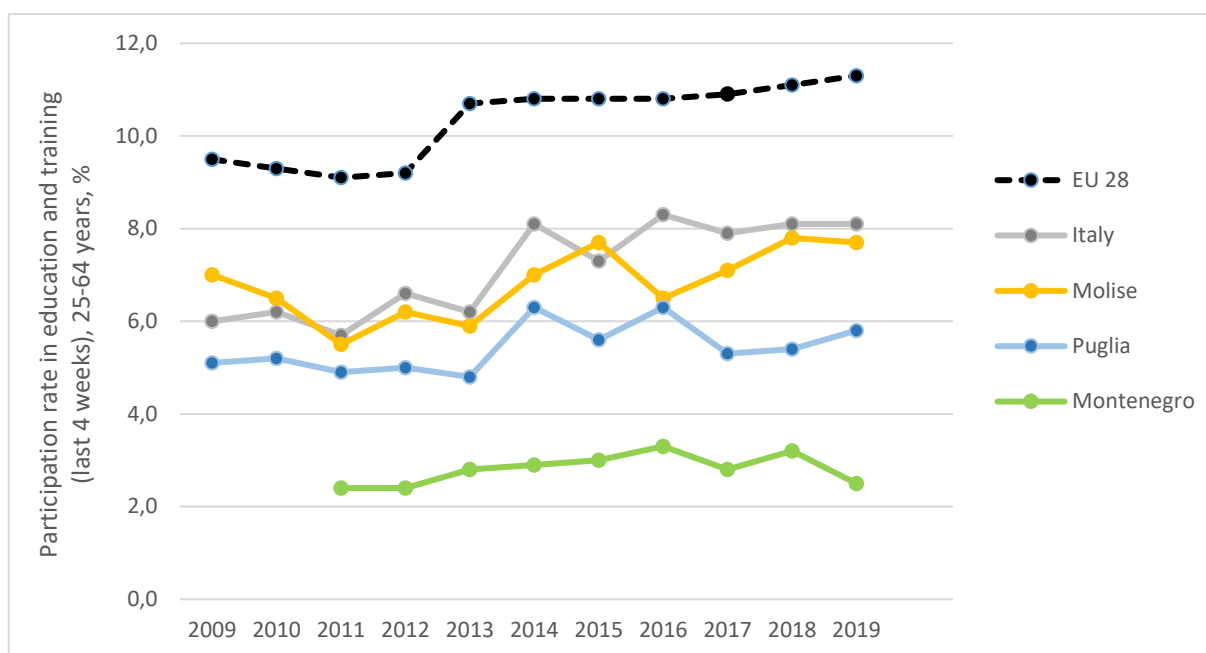
4.2 Education and university system

The education and university systems have consistently improved in the last years, both in terms of students enrolled and in terms of quality of organization. However, Puglia and Molise still show lower participation rates in education and training (25-64 age group) compared with the EU28 and Italy. In Montenegro these percentages are far from the EU8 averages¹¹.

Figure 17. Participation rate in education and training aged 25-64, 2009-2019

¹⁰ www.insme.org.

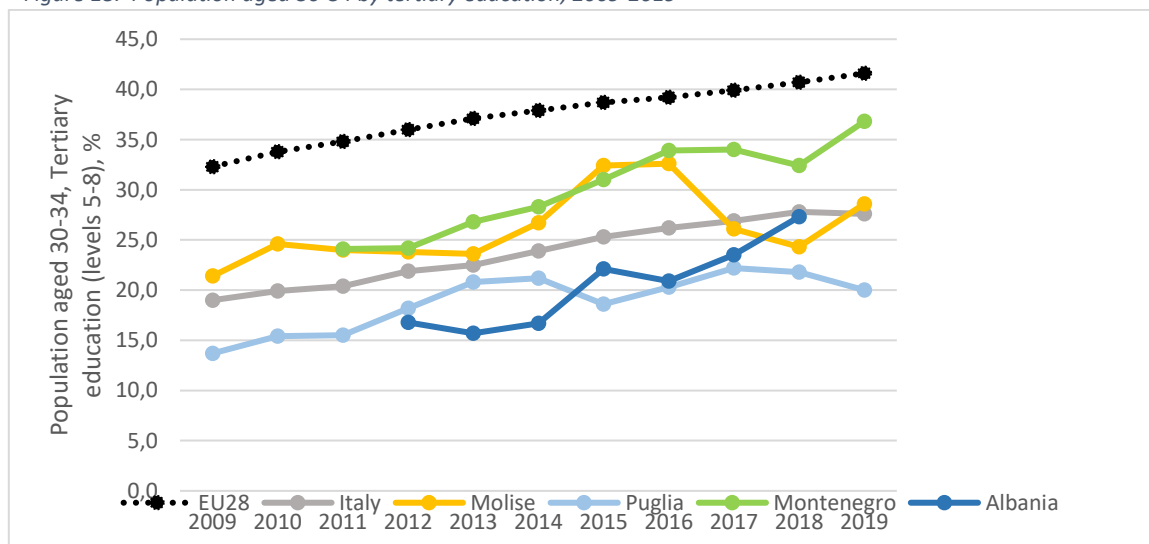
¹¹ Data on Albania are not available.



Source: ARTI's elaboration on EUROSTAT data.

Also in terms of population in 30-34 age class who attained tertiary education (ISCED levels 5-8) the percentages are lower than the EU28 for all territories of the Programme area. However, in 2019 Molise showed a percentage higher than the Italian one; conversely, in Puglia the share is lower than both the EU28 and the national ones. In Montenegro the percentage increased and during 2012-2018 in Albania the same indicator increased by more than 10 percentage points.

Figure 18. Population aged 30-34 by tertiary education, 2009-2019

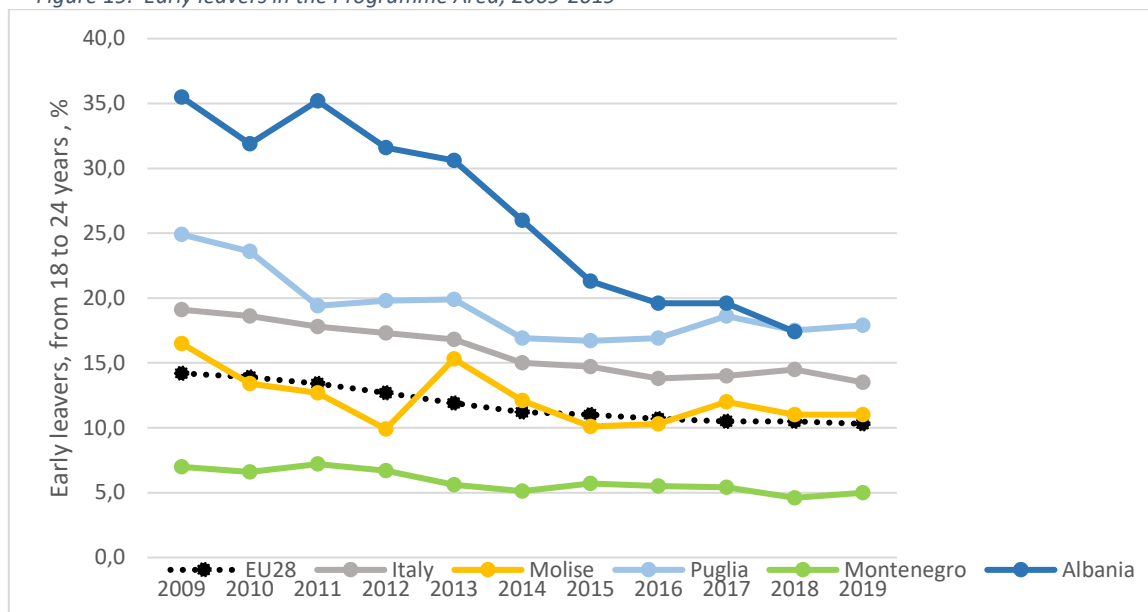


Source: ARTI's elaboration on EUROSTAT data.

Whereas in Montenegro the percentage of school early leavers is lower than the EU28, in Puglia, Molise and Albania the percentages are higher.

It will be important to adopt actions to stimulate the increase of the share of people in tertiary education, including those in scientific and technological fields; a particular attention should be paid to the high school drop-out rates.

Figure 19. Early leavers in the Programme Area, 2009-2019



Source: ARTI's elaboration on EUROSTAT data.

In 2019, **Puglia** accounted for a participation rate in education and training of 5.8% (25-64 age group), lower than the EU28 (11.3%) and the national one (8.1%).

Educational levels are closely associated with school drop-out rates. In Puglia, the school drop-out rate is still very high in 2019 (17.9%) and above the national one (13.5%) (EUROSTAT). However, the 2019 value is lower compared with that of 2013 (19.9%) (EUROSTAT).

The share of 25-64 years old who attained tertiary education (ISCED 11, levels 5-8) was in 2019 of 15.2%, lower than the Italian percentage (19.6%) and more than twice lower than the EU28 share (33.2%); in the same year, the share of the population aged 30-34 who attained tertiary education decreased from 2014 to 2019 by 1.2 percentage points, and in 2019 was 20%, lower than EU28 (41.6%), Italy (27.6%) and Molise region (28.6%) (EUROSTAT).

The Puglia university system is formed by five universities: 3 public, 1 public Polytechnic and 1 private. The University of Bari is the most significant one as it registers the biggest amount both in terms of students (43,271 enrolled students and 6,668 matriculated in the academic year 2017/18, and 7,551 graduated in 2017) (MIUR) and departments/centres (23 Departments, 22 between Interdepartmental or Interuniversity Research Centers, 5 Centers of Excellence)¹². In Bari is also located the Polytechnic University (consisting of 5 departments, various laboratories, 9,768 enrolled students and 1,569 matriculated in 2017/2018 academic year, and 1,955 graduated in 2017) and a private University specialized in Law and Economics (which consisted of 1,544 enrolled students and 255 matriculated in 2017/2018 academic year, and 264 graduated in 2017).

Other two public Universities are located Foggia, that is specialized in Medicine, Agricultural Studies, Humanities, Economics and Law and accounts for 10,174 students enrolled and 1,889 matriculated in the academic year 2017/2018 and 1,510 graduated in 2017; and in Lecce with 16,649 enrolled persons and 2,915 matriculated in 2017/2018 and 3,119 graduated in 2017 (MIUR).

The share of students graduated in Puglia universities in the 2017-2018 academic year was more than 4% on national data (MIUR).

In 2019 **Molise** accounted for a participation rate in education and training of 7.7% in the age class 25-64, quite close to the national one (8.1%). From 2014 to 2019 the participation rate slightly increased (0.7 percentage points). The share of early leavers was in 2019 of 11%, lower if compared with the national one (13.5%) but higher compared with the EU28 percentage (10.3%).

¹² <https://www.uniba.it/ateneo/sedi-strutture/centri-di-ricerca>.

The region is relatively strong in tertiary education. In fact, the share of the population of 25-64 years old who attained tertiary education (ISCED levels 5-8) was 19.3% in 2019; this value is very close to the national value in the same year (19.6%) but lower than the EU28 value (33.2%).

In 2019 population in 30-34 age class who attained tertiary education is higher than the Italian one (28.6% vs 27.6%) and represents the highest value among the southern regions (EUROSTAT).

The University of Molise was established in 1982; it is a public higher education institution located in the urban setting of the large town of Campobasso. This institution is a medium-sized university encompassing some campuses located in Termoli, Isernia, Pesche. It offers courses and programs such as bachelor degrees, master degrees, doctorate degrees in several areas of study.

Enrolled students were in 2017/2018 academic year 7.726 whereas matriculated were 1,162. The share of students graduated in Molise universities in the 2017-2018 academic year on national data was 0.42%¹³ equal to 1,268 units (MIUR). In the same academic year, most of graduated people were in law, economics and social sciences.

Recently, **Albania** has made important progress. Despite the percentage is still high, the share of early leavers decreased from 31.9% in 2009 to 17.4% in 2018 (EUROSTAT).

After a consistent increase since 1991, the gross enrolment ratio in tertiary education has fallen from 66% in 2014 to 55% in 2018; this is in part due to the closure of private universities awarding a high volume of reportedly low-quality degrees, as well as migration outflows are driven by the pursuit of education and career opportunities abroad (OECD, 2020a). However, during 2012-2018 the percentage of individuals aged 30-34 years old who have completed tertiary or equivalent education increased by more than 10 percentage points (EUROSTAT).

Based on law on pre-university education Albania is composed by pre-school education, basic and lower secondary education (this is divided into primary and lower secondary education); then, upper secondary education which is offered in high schools (high schools can be general, vocational and oriented) (EC, 2019a). In Albania, there are 39 higher education institutions: 14 public institutions and 25 private institutions; these institutions provide education at 1, 2 or 3 levels (bachelor's, master's and PhD) (Nuffic, 2018).

In 2019, 34,891 students have graduated in tertiary education, 1.6% more than 2018; in the same year, the most of graduated were in Social sciences, journalism and information (27.8%) and Business, administration and law (15.4%) (INSTAT, 2020i).

In **Montenegro** in 2019 the participation rate in education and training aged class 25-64 is 2.5%, far from the EU28 percentage (11.3%). In 2018, the percentage of early school leavers is 4.6%, lower than the EU28 value (10.5%). The share of the population aged 30-34 who attained tertiary education (levels 5-8) in Montenegro increased progressively from 2011 until 2019 (24.1% in 2011 vs. 36.8% in 2019).

The indicator accounting for the share of 25-64 years old having completed tertiary education displays also good results. In fact, the indicator reports a share of 25.8% in 2019 (from 19.5% in 2011).

Higher education in Montenegro is based on the principles of Law on Higher Education, adopted in 2003, which regulates the fundamentals of higher education system according to Bologna Declaration principles.

The education system in Montenegro is organized through pre-school education, primary education, general secondary education, secondary vocational education, and higher education institutions¹⁴.

In Montenegro there are 1 public university (University of Montenegro), 2 private universities, 9 independent private faculties and 1 independent public faculty (EC, 2017). The education system at higher education institutions includes both academic and applied study programmes, as well as various professional development and training programmes, organized at undergraduate, postgraduate and doctoral level (EC, 2017).

¹³ <http://ustat.miur.it/dati/didattica/italia/atenei-statali/molise>.

¹⁴ https://eacea.ec.europa.eu/national-policies/eurydice/content/montenegro_en.

4.3 Vocational Education and Training and life-long learning

VET systems in the Programme area are still relatively young. If Puglia is performing well, the other territories need to consolidate and strengthen their VET strategies. As regards Albania and Montenegro, significant efforts have been implemented in recent years in order to meet EU targets for 2020 set by Riga Conclusions. There is a wide room for cooperation, in forms of joint and coordinated VET offer, in the general effort to meet the needs of qualified staff and to increase entrepreneurial capacity in the Programme area.

As an economic consequence of the COVID-19 crisis, many SMEs and micro-enterprises closed down, with a clear increase of unemployment. The need for re-qualification of the new unemployed work force is clearly growing.

In Italy, Vocational Education and Training (VET) is conducted by the “Istituti Tecnici Superiori” (ITS) which have been introduced in 2010 in the national education system. The goal of ITS is providing individuals with professional competencies skills to meet the needs of the labour market. Therefore, SMEs, large companies and other stakeholders (such as high schools, universities, trade associations, chambers of commerce, etc.) are involved in the study paths’ planning and in the implementation of the education activities.

The Decree 25/01/2008 (which establishes ITS) defines 6 strategic technology areas related to ITS: energy efficiency, sustainable mobility, new life science technologies, new technologies for the “Made in Italy” (business services, mechanics, agri-food, fashion, household), ICT and innovative technologies for cultural heritage¹⁵.

Puglia hosts 6 ITSs in 4 technological areas: Made in Italy (mechanics and agri-food), Sustainable mobility (logistics and aerospace), ICT (digital) and innovative technologies for cultural heritage (tourism). 2 of these ITS are in Bari, 1 in Taranto, 1 in Foggia, 1 in Brindisi and 1 in Lecce; since 2010, the number of institutes has doubled, passing from 3 to 6 (JRC, 2018).

In May 2019, there were 1,379 enrolled students and 50 active programmes offered by ITSs in Puglia; compared to 2013, the number of students who obtained the diploma increased consistently, passing from 70 students to 377 (INDIRE, 2020a).

The number of employed from courses that were completed in 2018 (and monitored in 2020) were of 189 individuals, increased if compared with those employed who completed the courses in 2013 (and monitored in 2015) (INDIRE, 2020a); in 2018, also individuals who get diploma from courses completed in 2018 increased if compared with those of 2013 (INDIRE, 2020b). Most of the former-students who were employed were enrolled in programmes related to the mechanic sector, followed by agri-food and tourism sector, ICT sector, logistic, and aerospace sector (INDIRE, 2020b).

According to last available data (May 2020), there are 130 enterprises as partners of the ITSs and a total of 879 companies involved in the internship paths for the ITSs students (INDIRE, 2020b).

In addition to ITS, Puglia Region indicates 405 accredited training; most of them are private bodies whereas others are institutions (Sistema Puglia, 2020).

In order to implement a life-long learning policy, Puglia Region has launched “Welfare to Work” (already implemented in the Programme Period 2007-2013) consisting of educational vouchers both to unemployed people and those who have a public income support (ANPAL, 2018). Private companies receiving regional funds to guarantee training courses to employees are 79,914 for a total of 454,653 employees (ANPAL, 2018).

Molise has 1 ITS which was established in 2010 and belonging to the “New Technologies for Made in Italy/Agri-food. In May 2020, there were 51 enrolled students and 2 active routes. The ITS has only 1 partner company involved in the programmes and 58 enterprises which offer traineeship paths to ITS students (INDIRE, 2020a).

¹⁵ <http://www.indire.it/progetto/its-istituti-tecnici-superiori/>.

The number of students with high school diploma slightly increased, passing from 12 in 2014 to 20 in 2018; in the same year, there were 14 former-students who have found employment (INDIRE, 2020a).

The ITS system in the region is still relatively weak, both in terms of number of students and stakeholders involved but also in terms of variety of technological areas.

In November 2014, **Albania** adopted the National Employment and Skills Strategy and Action Plan (2014-2020) which was subsequently extended to 2022. This reform process established 2 VET programmes, the vocational schools and the vocational training centres which have been delivered at 3 different levels: the first level is dedicated to semi-skilled workers and its scope is to provide skills to access the labour market or for continuing studying; the second level's goal is to train technicians and provide them a professional training certification; the third-level allows to attend post-secondary and/or higher education paths (ETF, 2020a). However, this VET system in Albania needs to be strengthened since the cooperation with industry is weak and the main consequence is the increasing low skilled labour force characterized by scarce practical and technical expertise (ETF, 2020a).

Montenegro is implementing its Vocational Education and Training Strategy (2015-2020) together with the Adult Learning Strategy (2015-2020). The government identified professional figures requested by the labour market in order to fund specific training and education paths and attract as many students as possible. Initial results seem to be promising both in terms of students involved and individuals who already got a professional certification and found a job (about 50%) (ETF, 2020b).

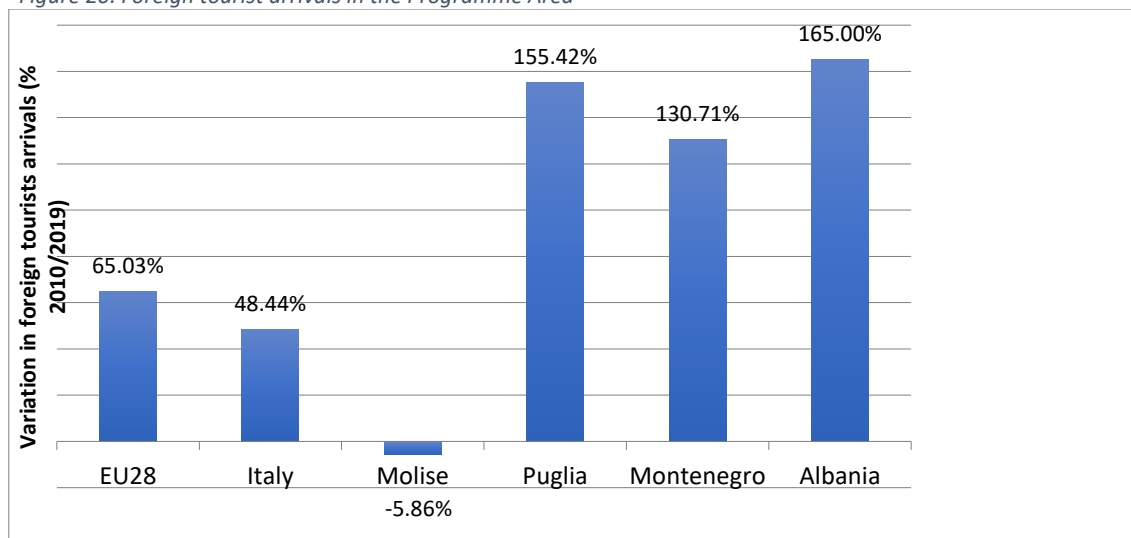
5. Tourism and culture

5.1 Tourism

The Programme area is characterized by a remarkable potential for tourism development and significant growth opportunities for the overall industrial chain.

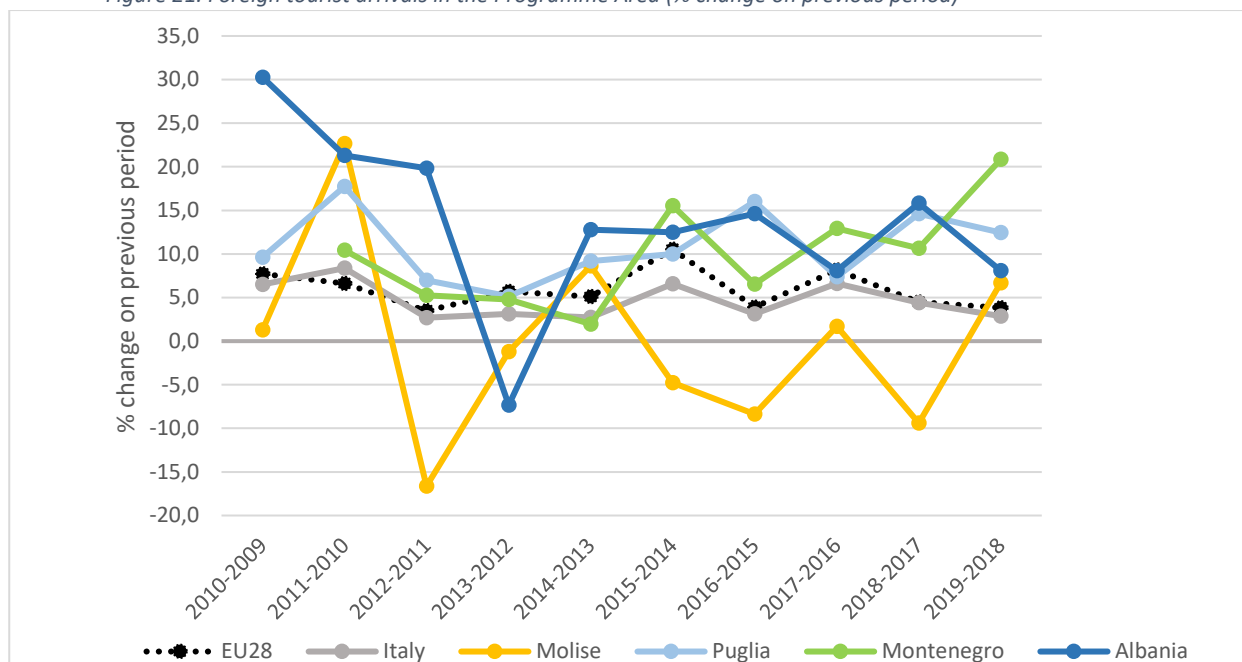
Apart from Molise, all the territories of the cross-border cooperation area have registered significantly progress both on the side of foreign arrivals and overnights stay but also in terms of employment growth.

Figure 20. Foreign tourist arrivals in the Programme Area



Source: ARTI's elaboration on EUROSTAT¹⁶, INSTAT¹⁷ and MONSTAT¹⁸ data.

Figure 21. Foreign tourist arrivals in the Programme Area (% change on previous period)



Source: ARTI's elaboration on EUROSTAT, INSTAT and MONSTAT data.

However, the tourism supply continues to be seasonal whereas the connectivity/accessibility system between the two parts of the Adriatic Sea (and outside the area) is still an issue and existing infrastructure and accommodation capacities inhibit a consistent development of tourism. Being one of the most important sectors in the area, tourism is still concentrated in coastal areas and only few main cultural and natural sites on the inland.

To provide a more dynamic development in continental areas, it is necessary to put in place adequate tourism services. The potential of the Programme area is highlighted in different analyses, such as the Travel & Tourism Competitiveness Report 2019 of the World Economic Forum, which sees Italy ranking 8th in the world for travel and tourism competitiveness, Albania substantially increasing its position from previous year from 98th to 86th, like Montenegro from 72nd to 67th. In a similar report by Bloom Consulting Country Brand Ranking, which analyses not only the touristic economic performance but also the digital demand/searches, the CBS ratings and the online performance, Italy is listed at the 10th position in the world and 5th in the European ranking list, Albania at the 97th in the world and 34th in the European list, Montenegro at the 99th in the world and 35th in the European list.

The cross-border area may build also on destinations with a solid reputation among travellers and tourists, as shown for example by the travellers' choice of the private platform tripadvisor.com, which lists in 2020 as top emerging destinations both Saranda (Albania) as 2nd place and Monopoli (Puglia) as 8th place in its world ranking list.

Although both sustainable and slow tourism is becoming part of the National and Local Strategies (see Puglia365 for Puglia, Piano Strategico Regionale per lo Sviluppo del Turismo for Molise, National Strategy for sustainable tourism development 2019 – 2023 for Albania, National Strategy for Sustainable Development

¹⁶ "Arrivals at tourist accommodation establishments, Foreign country: Hotels; holiday and other short-stay accommodation; camping grounds, recreational vehicle parks and trailer parks".

¹⁷ "Arrival/Departure of Albanian and foreign passengers by Travel Mode, Citizenship".

¹⁸ "Arrivals and overnight stays of tourists by type of accommodation establishment".

Until 2030 for Montenegro), these territories suffer the lack of a joint long-term vision which claim for new institutional agreements. At the same time, they lack a joint organisation, such as a dedicated EGTC, Euroregion, association or another kind of joint body, which could develop and run an entire local development strategy on behalf of the Programme bodies, while involving a representative number of local actors.

The consequences of the COVID-19 crisis in 2020 for the tourism sector are particularly severe because the restrictions in spring and autumn 2020-2021, when cultural tourism has its peak, and partially in summer for Albania and Montenegro, combined with the interruption of several international air connections to the airports of the area lead to a dramatic decrease of overnight stays and of demand for touristic services. It is also likely that the worldwide health situation may partially convert tourism destinations into innovative tourism paths, including green, cultural, culinary, winery, wellness, experience, proximity tourism, and many more targeted forms of tourism, in the attempt to reduce the seasonality of the entire Programme area and to cope with the new circumstances resulting from the measures applied in 2020, which may also repeat in the future.

It is well-known that tourism is a clear cross-cutting resource for the Programme area, thus it should be included in other policy domains. This is particularly true as regards transport and cultural development; indeed, transport development not only improves the access of individuals from abroad but it also stimulates and increases internal mobility, as it is considered strategic for the valorization of various tourism assets. For instance, the limited number of international air connections, mainly direct ones, makes travelling to the regions such as those included in the Programme area with large coastline less comfortable compared with other regions, such as in coastal and insular areas of Spain; the same is for the case for train connections. Its gaps limit the possibility of discovering the cultural and natural heritage using public transport, especially in a cross-border cooperation context characterized by an extremely fragmented distribution of the whole natural and cultural heritage. It follows that the new challenges for the whole area may pass through diverse tourism segments, connected to new forms of hospitality and leisure facilities such as social tourism, both in rural and beach contexts as well as in the old town centers.

In this sense, Puglia region is experiencing social tourism initiatives aiming at facilitating access to tourism for less economically advantaged people trying to intercept how these different tourism products can be tailored to the needs to the beneficiaries also including disabled persons and elderly.

Facilitating travel for people with disabilities and the elderly is an exceptional business opportunity. Due to increasing ageing people, it will be also essential for the entire cooperation area to consider senior tourism as crucial to the reformulation of tourism or the range of available products and destinations, thus for increasing new market opportunities.

The tourism sector represents a cross-cutting strategic asset in **Puglia**. In the period 2009-2019 total arrivals increased by 180%, and by 12.5% in 2019 compared with 2018 (EUROSTAT); the same is for nights spent at tourist accommodation establishments that increased by 133.4% during the same period (2009-2019) (EUROSTAT).

In the ranking of the Italian regions Puglia region overcomes those regions with a consolidated tourist vocation such as Sardinia and Sicily. However, despite this remarkable growth, both internal and foreign tourism in Puglia is still seasonal, that is mainly concentrated in the summer months (Puglia Promozione, 2020).

Most of the tourists come from the EU, in particular from France, Germany but also the UK and USA (Puglia Promozione, 2020). As regards the national tourism, most of the tourists come from Campania (13.2%), Lazio (11.6%) and Lombardy (11.2%) (ISTAT).

Although the number of non-hotel facilities in Puglia has grown during 2015-2019 (+46%), the accommodation capacity has remained almost unchanged (in 2019 Puglia region registered +3% compared to 2015) (Puglia Promozione, 2020). In 2019, the province of Bari was the main incoming destination in terms

of arrivals (28% of the total), alongside with Lecce (25.5%), and Gargano-Foggia (22.9%) (Puglia Promozione, 2020). In the same year, the added value represented 13.6% of the total whereas employees directly and indirectly involved in the tourism chain accounted for about 15.4% of the total (Puglia Promozione, 2020). At the end of 2019, 26,045 companies operating in the tourism sector have been registered; compared with 2014, it was registered an increase of 15.8% whereas the increase is even higher in terms of employment (39.1%) (Unioncamere Puglia, 2020a).

Between 2016 and 2019, there has been a growth of passengers' arrivals at Apulian airports (+23.9%), due to the expansion of airport connections (nationals and internationals) both in Bari and Brindisi hubs. However, in 2020 this positive trend had a sudden slowdown as a consequence of the COVID-19 pandemic. According to last available data, the total number of arrivals during January-August 2020 was only 1,868,628 (65.4% are national arrivals, 34.6% international arrivals of which 32.7% come from the EU) whereas in the entire 2019 arrivals achieved 8,243,337 (Assaeroporti).

Maritime tourism is the most important among the different typologies, even though other forms such as food, religious and cultural tourism are progressively growing during the last years. Slow and sustainable tourism is one of the flagship element of the Apulia Region's tourist promotion.

The COVID-19 crisis had a relevant impact on the tourism sector of the region, especially for accommodation activities. Despite a general contraction, the overall sector -including food services sector- reacted quite positively after the first lockdown, notably takeaway activities registered a promising growth (Unioncamere Puglia, 2020d).

Molise has a very high potential in terms of tourism destinations. However, both total arrivals and nights spent decreased during 2009-2019: particularly, whereas arrivals of foreign tourists decreased by 4.7%, the nights spent at tourist accommodation establishments decreased even further (25.8%).

Most of the tourists are from Italian regions while in 2019 the highest share of international tourists is represented by Denmark and USA (ISTAT).

Molise is characterized by seasonal tourist flows concentrated in the summer season. According to Federalberghi (2019), the share of tourism firms on the national percentage is the lowest among the Italian regions (0.5%). According to ISTAT, the share of added value for accommodation and restaurants on total added value was 3.6% in 2017, increased by 0.5% compared to the previous year.

With the Regional Law 7/2014 was established the formula of the "Albergo Diffuso" to promote the development of sustainable tourism in all its forms.

In **Albania**, the foreign demand for tourism consistently increased in the last decade. In fact, the percentage of foreign arrivals consistently increased year by year during 2009-2019, demonstrating a very high growth of Albania as tourism destination (INSTAT, 2019d).

The tourism sector provides a direct contribution of 8.5% to GDP and an indirect added value of 26.2%; also, it employs about 7.7% of the total labour force in Albania (Ministry of Tourism and Environment of Albania, 2018). According to the INSTAT 1st edition of Tourism survey "Accommodation establishments" (July 2020), in 2019 the total number of registered accommodations was 1,405, that is 6% more than the previous year for a total of 88,946 beds (+10.2%). 80.1% of registered accommodation are hotel: this big percentage is also due to incentives given through the Law 114/2017, which is a real example of the implementation of the National Tourism Strategy aiming to "long-term sustainability of public interventions and investments".

However, Albania is strictly dependent on European demand. In 2019 the total number of arrivals at Tirana International Airport was 3.338.147, of which 50.5% are from Italian airports, 10.6% from German airports and 8.2% from United Kingdom (Tirana International Airport, 2020b).

The lack of efficient internal road and rail connections and to other neighbouring countries as well as the lack of efficient motorway and railway network systems, are certainly obstacles to exploit the full tourism potential for Albania.

Albania also met the idea of tourism in its broadest sense by introducing alternative forms of tourism, such as sightseeing, cultural, culinary, sportive, historical, religious, etc. Indeed, the Law no. 107/2014 “On Planning and Territorial Development” emphasizes sustainable territorial development through the rational use of land and natural resources. Nevertheless, the current tourism policy seems to be weak for sustainable tourism in Albania as the priorities for short-term economic development are higher than interest for the environment.

Reported data are about trends in Albania, until December 2019. The trend of the last months is strongly affected by lockdown due to COVID-19 pandemic. In the first quarter 2020, the variables for occupancy of accommodation establishments refer that the number of arrivals decreased by 10.4 % and the number of nights spent has decreased by 9.4 %, both compared to the first quarter 2019 (INSTAT, 2020a; INSTAT, 2020I). From January to June 2020 the total arrivals have been 60.6% less than the same period in 2019 because of the COVID-19 pandemic (Tirana International Airport, 2020a; Tirana International Airport, 2020b).

Albania government refers that will implement a sovereign guarantee of 5 billion (0.9% of GDP), providing loans for the tourism sector and active processing exporting companies with the government bearing interest costs¹⁹.

Montenegro experienced a significant growth in the tourism sector, both in terms of added value and foreign arrivals. According to MONSTAT, the percentage of foreign arrivals in 2019 increased by about 85.9% from 2014 and more than 130 %, compared to 2010 (MONSTAT).

During 2014-2018, the number of nights spent increased by 35.4% (MONSTAT, 2019b). Also, the number of beds increased during 2017-2019 by 6.8% (MONSTAT). This last figure is strictly connected to the strengthening of the flight policy that makes Montenegro one of the most popular destinations among the European countries.

In Montenegro, there are two international airports, in Podgorica and Tivat on the coast side. In 2019 the total number of arrivals was 2,652,801, 51.3% of which were registered at Tivat Airport. Most of the airport connections are with Russia (27.4%), Serbia (20.9%), Germany (7.1%) and Turkey (4.9%); the traffic passengers with Italian airport is for a total of 4.3% of the total arrivals (MONSTAT, 2020a).

According to OECD (2020), the tourism sector’s direct contribution to the economy accounts for 11.7% of the GDP, but, if we add indirect contributions (such as yachts and cruise ship related spending), tourism sector receipts are for approximately 25% of the GDP. In terms of sustainable tourism Montenegro is making efforts to close public and private stakeholders according to the principle of integrating environmental concerns into all development plans.

It is expected that the COVID-19 shock may worsen significantly the economic trend, which strongly relies on tourism and remittances coming from EU countries such as Austria, Germany and Italy; this reduction is also due to the increasing travel restrictions (OECD, 2020b). Because of lockdown and travel restrictions, in July 2020 in collective accommodation (camping sites, tourist resorts, vacation facilities, boarding houses, motels, etc.) Montenegro registered a decrease of 82.7% arrivals compared to July 2019 and a decrease of realized overnight stays by 85.5% (MONSTAT, 2020b).

5.2 Natural heritage and biodiversity

Natura 2000 sites have been specifically designated to protect areas that are crucially important for a range of species or habitat types listed in the Habitats and Birds Directives and are considered to be of 'Community' importance because they are endangered, vulnerable, rare, endemic or because they provide outstanding examples of features typical of one or more of Europe's nine biogeographical regions. However, nature reserves, national parks or other nationally or regionally protected sites are only established under national or regional laws, which may differ from country to country. Natura 2000 sites include various types of

¹⁹ <https://www.imf.org/en/Topics/imf-and-covid19/Policy-Responses-to-COVID-19>.

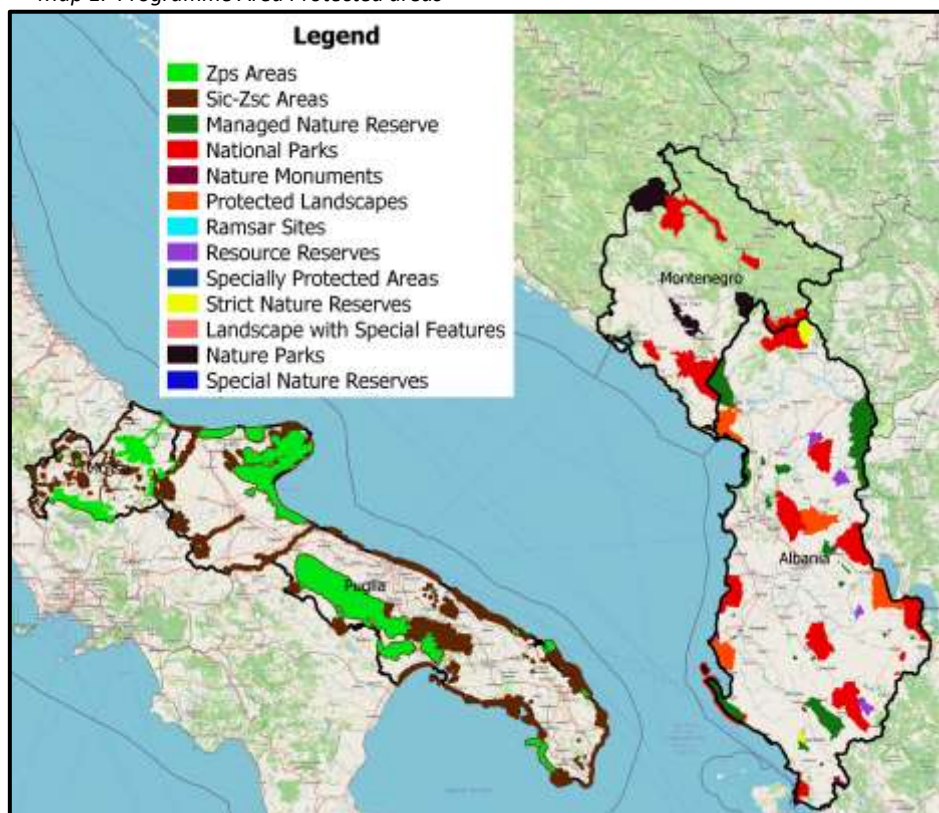
terrestrial, marine and freshwater ecosystems. However, in the Natura 2000 network some ecosystems are most present than others. By the way of example, forest ecosystems account for about 50% of the network area, while agricultural ecosystems (pasture land and other agricultural areas) cover about 40%. Currently almost 6% of the EU's marine area is included in the Natura 2000 network and work is underway to complete the designation of marine sites that will ensure the conservation of habitat types and species protected by the Birds and Habitats Directives in marine ecosystems²⁰ Specifically, the overall cooperation area stands out for the presence of wide and rich natural areas and biodiversity. The variety of natural heritage as well as the differences in terms of planning and management between both the sides of Adriatic sea claim for more interconnected strategies and action plans.

Table 4. Natural protected areas in the Programme area

	Protected areas (Ha)	% of total area	% of Programme area
Puglia (a)	829,067	42 %	43.49 %
Molise (b)	131,627 *	29 %	6.9 %
Albania (c)	745479	25.93 %	39.1 %
Montenegro (d)	199,734	14.46 %	10.47 %
Total Programme Area	1,905,907		100.00 %

Source: a) www.miniambiente.it/pagina/sic-zcs-e-zps-italia; b) www.miniambiente.it/pagina/sic-zsc-e-zps-italia; c) <https://www.protectedplanet.net/en>; d) <https://www.protectedplanet.net/en>; *Since some areas are shared with Abruzzo and Lazio region, the calculation of the areas was carried out by attributing to the Molise Region the part of the site actually falling within its territory.

Map 1. Programme Area Protected areas



Source: ARTI's elaboration on WDPA.

²⁰ https://ec.europa.eu/environment/nature/natura2000/marine/index_en.htm.

The presence of important natural assets is still far away from becoming the main reason for attracting visitors. This depends on the one hand on the weak international image and reputation and, on the other hand, on the sluggish territorial marketing strategies. The most significant constraints also rely on the fact that the areas which have a special natural value are not yet well-organized or equipped to offer a quality standard stay to a large number of guests.

Over the last two decades, the overall Programme area is affected by bad management which has led to the massive impact of human activities (due to lack of environmental awareness) on biodiversity both terrestrial and marine which further slows down the sectoral development, whereas Albania e Montenegro region, in particular, has been influenced by illegal hunting, uncontrolled fishing, low skills and financial availability. Natural environments also play a direct role in health and well-being. The post-Covid management of natural resources may move from a strong and global sustainable stewardship of nature and biodiversity in order to create new green jobs opportunities and entrepreneurial mindset.

Puglia shows a wide variety of natural landscapes and inlands scenarios: from the hilly areas of Daunia, Gargano, Murgia and Valle d'Itria, to the flat countryside. Puglia is rich in natural resources, biodiversity and protected areas.

The current Regional System for Nature Conservation consists of:

- Sites of Community Importance (SIC) identified according to the Directive 92/43/EEC and Special Protection Areas (SPA) identified by the Directive 49/709/ EEC;
- National, marine and terrestrial protected areas established by national legislation (L. 394/91, L. 979/82);
- Regional, marine and terrestrial protected natural areas established by the Regional Law no. 19 of 24/07/1997;
- Wetlands of international importance, areas protected internationally by the Ramsar Convention of February 2, 1971 (Lavarra et al., 2014).

Particularly, the protected areas include 2 National Parks (195,894 hectares), 16 State Natural Reserves (11,183.6 hectares), 1 Marine Protected Area (548 hectares), 2 Marine Natural Reserves (3890 hectares) while the regional protected natural areas have 12 Regional Natural Parks (54,711, 5 hectares) and 7 Regional Nature Reserves (5,889.7 hectares). Overall, the protected areas cover a surface of 829,067 hectares, equal to 42% of the regional surface and 43.49% of the total Programme area. Finally, three wetlands of international importance (Ramsar Areas) have been identified in Puglia: Le Cesine (647 ha), Saline di Margherita di Savoia (3.871.00 ha) and Torre Guaceto (548 ha)²¹. These are characterized by the presence of ecosystems of main importance for birdlife as are on the route that migratory bird species use to move from the African continent to the Eurasian one and vice versa (Lavarra et al., 2014).

Puglia region overall holds 87 NATURA 2000 Sites (Regione Puglia, 2018). Specifically, there are 7 Zps areas (294,261 hectares), 75 Sic-Zsc (303,577 hectares) and 5 "category C "areas, i.e. sites that simultaneously fall into both of the above classifications (231,229 hectares)²².

Murge, the Dauni mountains and the small strips in the Ionian and Salento peninsula -but especially in the Gargano- claim for particular attention in terms of environmental conservation. From a quantitative point of view, 28% of the territory falls into low and very low anthropogenic pressure classes, about 8% in the high and very high classes, while the most of part falls into the anthropogenic pressure class "middle" (Lavarra et al., 2014).

In the technical report on the regional ecological network included in the Regional Territorial Landscape Plan, some regional values are summarized as follows:

- 50 habitats of the Mediterranean region out of 110 in Italy;

²¹ <https://www.minambiente.it/comunicati/nasce-il-ministero-della-transizione-ecologica>.

²² <https://www.minambiente.it/comunicati/nasce-il-ministero-della-transizione-ecologica>.

- 2,500 plant species, 42% of the national ones;
- 10 species of amphibians out of 37 present in peninsular Italy;
- 21 out of 49 reptile species found in peninsular Italy;
- 179 species of nesting birds out of 250 present in Italy;
- 62 out of 102 mammal species present in peninsular Italy (Regione Puglia, 2015).

Despite a high level of human activity, Puglia records high levels of biodiversity, even compared to many other regions. This heritage is particularly surprising if one considers that just 6% is a wooded area, with a Utilized Agricultural Area (UAA) of almost 1,259,000 hectares (about 65% of the regional surface) with a fairly high population density, absence of mountains and the presence of the second plain of Italy²³.

In this context, the project LASPEH (funded by 2014-2020 Programme) gather together a number of organizations in order to face the loss of biodiversity in the Low Adriatic area. Therefore, the goal is to reinforce actions towards nature conservation in the Natura 2000 sites and this effort consists in defining a common transnational strategy and fostering the exchange of best practices²⁴.

Although it is one of the smallest regions in Italy, **Molise** has a territory worthy of protection from the point of view of biodiversity conservation. Nowadays, there are 4 natural reserves plus the National Park that shares with the territory of the Abruzzo and Lazio, and 2 oases of wildlife protection²⁵. In 2019, the 'Bosco Casale' Regional Nature Reserve was born and the Lipu Oasis of Casacalenda (Campobasso) was transformed into a protected area.

The protected areas cover a surface of 131,627 hectares equal to 29% of the total regional area and 6.90 % of the total Programme area²⁶.

Overall, Molise region has 88 NATURA 2000 sites. Specifically, there are 3 Zps areas (33,877 hectares), 76 Sic-Zsc areas (65,607 hectares) and 9 "category C" sites (32,143 hectares), i.e. sites that simultaneously fall into both of the above definitions²⁷. The southern area of Campomarino, characterized by Mediterranean dunes and pine forests, should be protected in order to ensure the preservation of the ecosystem (Autorità di Bacino Distrettuale dell'Appennino Meridionale, 2019).

The southern area of Campomarino, characterized by Mediterranean dunes and pine forests, should be protected in order to ensure the preservation of the ecosystem (Autorità di Bacino Distrettuale dell'Appennino Meridionale, 2019).

Albania is one of the richest biodiversity in Europe: natural areas have a high diversity of Mediterranean vegetation. On the coast, there are many ecosystems such as lagoons, wetlands, dunes, river deltas. The lakes and rivers are also important for the biological and landscape diversity of the country.

The coastline is characterized by a variety of biological diversity with approximately 100 km² of wetlands. Particularly, the Albanian flora contains 3,200 species of vascular plants of which 27 are national endemics and 160 endemics to the Balkans. Approximately 30% of the European flora is present in Albania (Shuka et al., 2011).

The protected areas currently cover 798 sites but most of them are monuments and category III sites with very small and unregistered areas. Currently, the WDPA officially contains 63 protected areas registered (745,479 hectares) equal to 25.93% of the regional area and 39.1 % of the Programme area. Specifically, in Albania region there are 15 National parks, 2 Strict Nature Reserves, 24 Managed Nature Reserves, 5

²³ <https://www.paesaggiopuglia.it/osservatorio-della-biodiversita/la-rete-natura-2000.html>.

²⁴ <https://laspeh.italy-albania-montenegro.eu/>.

²⁵ <http://www3.regione.molise.it/flex/cm/pages/ServeBLOB.php/L/IT/IDPagina/657>.

²⁶ <https://www.minambiente.it/comunicati/nasce-il-ministero-della-transizione-ecologica>.

²⁷ <https://www.minambiente.it/comunicati/nasce-il-ministero-della-transizione-ecologica>.

protected landscape areas, 7 Nature Monuments, 4 Resource Reserves. We should be added 2 World Heritage Sites, 1 Specially Protected Areas of Mediterranean Importance (Barcelona Convention) and finally 2 Ramsar Sites, Wetland of International Importance. One of the 15 National Parks, Butrinti, in South West side, is a UNESCO site with its Greco-Roman archaeological area.

However, other marine protected areas have been proposed in the Strategic Plan for Marine and Coastal Protected Areas in order to protect the marine ecosystem which is threaten by tourism development, unsustainable fishery and sewage discharge into the sea (United Nations Environment Programme, 2014a). The national policy for the governance and management of protected areas is implemented by the Ministry of Environment and Tourism through the National Agency of Protected Areas of Albania (AKZM). However, the protected areas are threatened by illegal logging, forest fires and the construction of hydroelectric power plants, which have led to several protests from environmentalists and civil society, while the moratorium on logging and hunting has to some extent successfully revived the fauna and flora of some protected areas.

Starting from 2000, Albanian Ministry of Environment published and updated the National Biodiversity Strategy, this document defines the main directions for preserving biodiversity and habitats. It is the guideline to develop Natura 2000, with the aim to align the national policy with the European one, in the framework of the EU integration process (Ministry of Tourism and Environment of Albania, 2019). Albania does not have a separate law on nature conservation but it has a law on Biodiversity Protection No 9587 (2006) and the amendment to this law done on 2014 (Ministry of Tourism and Development, 2019).

However, there is some evidence for a creeping biodiversity crisis, due to the human impacts accumulated over the last decades. Because of the increasing and unsustainable activities in agriculture and forestry and the growing human population, degradation of natural habitats is emerging consistently.

The 2010 UNDP report on "Protected areas, evaluation of marine biodiversity gaps and legislation in Albania" shows the increasing erosion process along the Adriatic coast for more than one third (about at a rate of 1.59 metres/per year). Other critical issues and threats are over-fishing, illicit collection of crustaceans, exploitation of oil along the coast, invasive species and pollution of marine and coastal waters, especially the wetlands (Ministry of Tourism and Development, 2019). Uncontrolled fishing is also provoking a decline in marine fish species in the Bojana-Buna Protected landscape. To face this threat, Albania signed an invasive alien species management plan.

The objective of 6% of protected coastal and marine areas is less than 10 % of Aichi targets (Ministry of Tourism and Development, 2019).

Hunting is also another most impacting activity on biodiversity, which was not been under efficient control over the last decades. This has led to a declining trend of the population of wild species, mostly migratory birds (Ministry of Tourism and Development, 2019).

In 2014 the Albanian government approved a complete hunting ban for the whole of Albania, that was extended until 2021. However, illegal hunting is still occurring even in protected areas.

Nowadays **Montenegro** is positioned to preserve biodiversity also in function of sustainable development. A conspicuous amount of areas of international importance with rare, endemic and endangered species have been identified in the country including include 13 Important Bird Areas and 22 Important Plant Areas; looking at flora and fauna, a total of 307 plant, 111 fungi and 430 animal species is protected under national legislation (Ministry of Sustainable Development and Tourism of Montenegro, 2014a).

National protected areas cover about 199,734 hectares equal to 14.46% of the national surface and 10.47% of the total Programme area. Officially, the WDPA reports 9 national parks (81% of the total regional protected areas s), 1 World Heritage Site, 1 Ramsar Site, 1 World Heritage Site, 1 Ramsar Site, Wetland of International Importance, 1 Landscape with Special Features, 1 Special Nature Reserve and 1 Natural Monument. In addition there are more than 45 sites designated as monuments of nature, areas of special natural characteristics and natural reserves which are not officially registered. Among the parks, the Durmitor National Park is the largest one, surrounded by jagged peaks and canyons included the well-known

Tara River canyon. Starting from 1980, it was included in the UNESCO's list of "World Heritage Site" (Ministry of Sustainable Development and Tourism of Montenegro, 2014a).

Together with Tara River canyon is a part of UNESCO's network of Man & Biosphere (MAB) reserves since 1977. Ramsar sites include Tivat Saline (145 ha) (Ministry of Sustainable Development and Tourism of Montenegro, 2014a). Skadarsko Lake is one of the largest reserves of peat in Europe and represents an important carbon sink; it spans two countries, Montenegro and Albania, and is one of the most important habitats of birds in the Mediterranean. It is worth to mention the emerging of a declining trend and extinction of certain varieties because of the abandonment of traditional land-use practices (Ministry of Sustainable Development and Tourism of Montenegro, 2014a).

Montenegro hosts 16 marine habitats recognized under the United Nations Environment Programme classification (United Nations Environment Programme, 2014b).

Montenegro has, through the EU accession process, committed itself to join the Natura 2000 network.

The main and most significant systematic activities related to explorations of biodiversity in Montenegro between 2016 and 2018 were implemented through the project “Establishing Natura 2000 network”. During 2019, research continued on the establishment of the Natura 2000 network, for which budget was allocated within the State Budget (Rubinić et al., 2019).

However, Montenegro still suffers a lack of financial resources and specific skills for managing protected areas as well as technical tools and complete inventories of biodiversity. Also, the scarcity of updated and available scientific information and not systematically accessible database makes slower the progress in the sector.

5.3 Culture and creative industry

Culture and creative industry in the Programme areas are still not enough developed; nevertheless, local and national Governments are investing in this specific sector, trying to attract both national and foreign capitals. The Programme area is characterised by a rich historic and cultural heritage, as demonstrated by the number of historic and cultural sites and the Unesco World Heritage Sites located in the area.

Map 2. Unesco World Heritage Sites



Source: ARTI's elaboration on "Patrimoniomondiale.it-associazionebeniitalianipatrimoniomondiale "

UNESCO is the "United Nations Educational, Scientific and Cultural Organization" acronym. It was founded in 1946 and is supported by 44 countries. It is very famous for the "World Heritage List". This list is very important because it includes all the works that are the result of talent or nature human, whose knowledge and preservation is considered fundamental for all humanity. The list is constantly being updated and in 2018 it included 1073 works in 161 countries. The list includes works of art, works of genius, archaeological sites, natural spaces and more. Italy also holds the record for the number of World Heritage Sites, with 53²⁸.

Even if the creative industry is considered as an engine of increasing importance for the local economy, the total budget and the number of qualified human resources are not enough.

Cultural sector encompasses tangible and intangible heritage and is an underrepresented strategic asset as it stimulates the formation of new ventures and generates income and wealth.

Given its cross-cutting nature and ideas-based support, cultural resources have to be exploited through the involvement of both institutions and civil society in the policy-making process.

The COVID-19 pandemic is having a strong impact on the culture and creative industry sector, especially for theatres, museums, art exhibitions, auditoriums, arenas and public events in general, which will suffer of a severe overall reshaping and a long recovery process in the coming years.

In terms of cultural and historic heritage, that the territories of the Programme area share, there are important communities, which keep the traditions and the language of the country of origin in all territories, in particular those deriving from historic migrations. Approximately 50 Albanian communities of Italy are distributed in the Regions Abruzzo, Molise, Campania, Basilicata, Puglia, Calabria and Sicily²⁹. They are characterised by common costumes and language, i.e., the ancient Albanian language (Arbërisht), which is officially protected in Italy by law no. 482/1999.

Puglia holds several cultural attractions. This relevant heritage has been recognised by UNESCO which included the Trulli of Alberobello, Castel del Monte and Monte Sant'Angelo Sanctuary in its "World Heritage List"³⁰.

In Puglia, there are 254 cultural sites³¹ including museums, art galleries, ancient libraries and historical theatres, and 107 archaeological areas³² (archaeological parks, megalithic parks etc.). In particular, the National Archaeological Museum of Taranto presents one of the biggest collection of artefacts of the Magna Graecia-era³³.

In order to promote this wide cultural heritage, Puglia Region has started to implement the "Strategic Plan for Culture of the Apulia Region 2017-2026" (Regione Puglia, 2020). This Strategic Plan introduces a new approach towards shared planning of the sector's development strategies. In doing so, the aim is to involve all relevant stakeholders in order to shape a cultural policy based on their needs and to set a multiannual framework that ensures a long-term nature of support and planning.

In the cultural sector, Puglia may leverage also on an EU cluster involving creative industries, arts and entertainment activities, libraries, archives, museums and other cultural activities, called Distretto Produttivo Puglia Creativa. The Public foundation Apulia Film Commission plays an important role not only locally, but also nationally in the film production industry as it aims at fostering the regional audio-visual sector and the promotion of the territory. In the last decade, the capacity to attract national and international film productions has activated a business of over 80 million euros³⁴. The same applies for Apulian theatres with the Public foundation Teatro Pubblico Pugliese.

In 2018, the added value of the creative and cultural productive system in Puglia represented 4.3% of the regional added value, whereas the percentage of people employed in this sector reaches 4.4% (Fondazione Symbola–Unioncamere, 2019b). Compared with 2011, in 2017 the added value of the Cultural and Creative

²⁸ <https://www.beniculturali.it/articolo/siti-italiani-del-patrimonio-mondiale-unesco>.

²⁹ https://www.treccani.it/enciclopedia/comunita-albanese_%28Enciclopedia-dell%27Italiano%29/.

³⁰ <https://www.beniculturali.it/articolo/siti-italiani-del-patrimonio-mondiale-unesco>.

³¹ <https://www.viaggiareinpuglia.it/dir/PE1/2/it/Musei,-gallerie,-biblioteche-e-teatri-storici>.

³² <https://www.viaggiareinpuglia.it/dir/PE1/4/it/Aree-archeologiche>.

³³ <https://museotaranto.beniculturali.it/it/>.

³⁴ <http://www.apuliafilmcommission.it/ente/chi-siamo/>.

Production System Apulian industry scores an average annual increase of 1.5%, twice than the national average (Distretto Produttivo Puglia Creativa, 2018).

It is interesting to notice that the share of people employed in the age group 25-34 accounts for 23.9% of the total, a percentage much higher than the one registered in the other economic sectors (18.8%) (Distretto Produttivo Puglia Creativa, 2018).

More than 50% of the enterprises operate in the publishing and printing sector (39%) and architecture/design sector (23%) whereas the share of enterprises in communication industry is 15.6% (Fondazione Symbola-Unioncamere, 2019b). The highest revenues in the sector belong to enterprises operating in software, games and videogames industries (4.3%), and video, movies, radio and tv (3.9%) (Distretto Produttivo Puglia Creativa, 2018).

In **Molise**, there are 11 archaeological areas, 5 archaeological museums, 22 local museums and some ancient castles³⁵. Actually the Molise region has only one UNESCO site (347 Hectares), the Collemeluccio-Montedimezzo Biosphere Reserve. It was recognized in 1977 and it is located in the Isernia province, in central Italy, and includes two very large forests in a sub-mountainous area, with peaks over 1200 metres above sea level. The main habitats include silver fir woods, oaks, beech forests and the inhabitants of the small villages scattered around the reserve are engaged in agriculture. The landscape is characterized by reliefs, river and lake plains and a few water sources. It houses numerous animal species, including the salamander, italic frog, grey wolf and polecat. The demographic development in the area surrounding the reserve has followed the decreasing trend typical of inland mountain areas and both craft activities and tourism do not have a great impact on the territory. The main users of the reserve are school groups in April and May, and occasional visitors, especially in summer. As well as being important areas for the conservation of biodiversity, they are also ideal places to educate the younger generations about respect for nature and the prudent use of the area's resources, acting as outdoor classrooms, as well as privileged sites for carrying out scientific research on flora and fauna, thanks to collaborative relationships with Italian and foreign universities. The two areas are accessible thanks to an extensive network of paths (in particular, the Colle San Biagio path in Montedimezzo area is accessible to the disabled), along which running and mountain biking competitions are periodically organised, as well as picnic areas and camping areas on request. In addition, Montedimezzo has a Visitors' Centre, with sections devoted to geology, wood and fauna, a projection room, wildlife enclosures and aviaries housing wildlife in difficulty recovered from the area.

In Molise, the percentage of SMEs in cultural and creative industry reaches 1.111 units in 2018; among them, 34.1% operates in architecture/design, 33% in publishing and printing and 13.2% in communication (Fondazione Symbola-Unioncamere, 2019b). In the same year, the added value was +1.1% compared to the previous year; in addition, Molise shows the best regional dynamic among southern regions in terms of the percentage of employees on the total economy (4.6%) (Fondazione Symbola-Unioncamere, 2019b).

In 2017 the total number of live entertainment events in Molise was of 339 for a total expenditure of € 364.039, the lowest in Italy. Compared to 2016, in 2017 Molise registered the highest decrease in terms of expenditure for film events by the public (25.2%). Finally, in 2017, the expenditure for the protection and enhancement of cultural assets and activities on total current expenditure was the lowest among Italian regions (4.2%) (ISTAT, 2017).

In **Albania**, the Natural and Cultural Heritage of the Ohrid region (94,352 hectares), the site of Butrint (9,434 hectares), and the Ancient and Primeval Beech Forests of the Carpathians and Other Regions of Europe (86,269 hectares) are considered UNESCO heritage (transboundary property)³⁶ and there are about 2000 cultural monuments making it one of the largest areas in the Mediterranean in terms of cultural monuments, according to the National Strategy for Sustainable Tourism Development 2019-2023³⁷

³⁵ <http://www.molise.beniculturali.it/index.php/aree-archeologiche>.

³⁶ http://whc.unesco.org/en/list/?search=Albania&id_search_region=1&order=region.

³⁷ <https://turizmi.gov.al/wp-content/uploads/2019/12/National-Tourism-Strategy-2019-2023-EN.pdf>.

Butrint site is one of the 15 national parks in Albania region and is also a UNESCO site: an ancient Greek town, then Roman town. After a period of abandonment, it was occupied by the Byzantines, the Angevins and the Venetians, only to be finally abandoned in the late Middle Ages. Sites include a Greek theatre, a baptistry, a 9th century basilica and fortifications.

Despite its rich heritage, for the vast majority of communities that have no direct links with the country, Albania has still a quite imprecise image, based on pre-conceptions and lack of information.

Ministry of Culture is currently working on the development of a national culture strategy, in order to align its standards to the *acquis communautaire*. However, as pointed out by Kern (2018), statistical information related to cultural industry, e.g. number of SME, employees, produced GDP etc. are still not well collected. Thanks to various collaborations with Serbia, Croatia, the Former Yugoslav Republic of Macedonia and Kosovo, the Ministry of Culture is making the country a hub for cultural exchanges in the Balkans, the Ionian Region and beyond. This requires infrastructures to welcome artists and creative entrepreneurs as part of mobility programmes (Kern, 2018).

Because of budget constraints (in 2018, the total public budget managed by Ministry of Culture was only 0.3% of the national budget) and due to very scarce human resources, it is very difficult to support local talents.

In Albania, there is no national film commission to attract foreign investments and filmmakers. Even if Albania is participating to Creative Europe and Eurimages programmes, there is still a lack of European exchanges experiences in order to foster EU culture integration process (Kern, 2018).

Since 1997 the Albanian National Center of Cinematography is the only governmental national institution aiming at financing and promoting Albania's film production.

Montenegro is characterized by the presence of a rich cultural heritage which consists of plenty of old fortresses, cities and many other cultural monuments. However, cultural heritage protects some of them, whereas others need of increasing interventions of extraordinary maintenance or have been reconverting for touristic aims.

Among others, Boka Bay has one of the most significant numbers of preserved cultural and historical monuments in Montenegro. The Natural and Culturo-Historical Region of Kotor (14,600 hectares), the Durmitor National Park (36,016 hectares), the Venetian Works of Defence between the 16th and 17th Centuries (0.6 hectares) and Stećci Medieval Tombstone Graveyards (transboundary property) (17 hectares) are considered UNESCO heritage³⁸.

The Ministry of Culture of Montenegro in 2011 adopted the "Cultural Development Program 2016-2020" which establishes development trajectories and identifies 11 sectors and 40 activities in the cultural and creative industry sector; in the same year, Montenegro adopted the Law on Crafts that introduces criteria to define craft activities (IPER, 2019).

According to last available data (2017), the gross added value of the cultural and creative sector was 53 million euro, accounting for 1.5% on the national added value whereas 4.4% of employees are engaged in cultural and creative occupations and 3.2% of the total number of employees in business entities (IPE, 2019). Between 2014 and 2017 most of business entities operated in communication, publishing, computer programs and audio-visual (IPER, 2019).

The Film Centre of Montenegro is a newly established public institution with the aim of creating the proper, stimulating environment for the Montenegrin film community and its promotion to Europe and the world.

6. Other key economic sectors

Agriculture and food and fisheries

³⁸ http://whc.unesco.org/en/list/?search=montenegro&id_search_region=1&order=region.

For the Programme area, agriculture, food and fishing have an important social and economic role for the future development of the region. Territories of the cross-border area will face common challenges such as the scarcity or lack of innovation and productivity, quality and food safety controls (especially for Albania and Montenegro), but also difficulties in promoting typical and strategic food products which in turn result in a lower export propensity, that is further exacerbated by the effects of the COVID-19 pandemic.

Nevertheless, the pandemic has strengthening the strategic re-positioning of the whole agri-food supply chain, including fishing, proving its countercyclical nature compared to other supply chains. It follows that improvements in quality, traceability and overall standards are necessary to face demand shifts, as a result of commerce slowdowns.

Other pandemic affecting vegetables and animals has a strong impact on agricultural, food and fishery sector, such as the *Xylella fastidiosa* for olive grows, alien fish species destroying maritime ecosystems or bird flus regularly affecting industrial farming, need to be addressed as well and they may be addressed more effectively together with the neighbouring regions and countries.

Agriculture and agri-food are one of the strengths of the **Apulian** economy. Thanks to the Mediterranean climate, Puglia stands out for the production of raw materials related to agriculture including vegetables, fruit and cereals. Puglia, together with Sicily and Calabria, accounts for 46% of the Organic Utilized Agricultural Area (UAA) (ISMEA, 2019).

In 2019, Puglia registered a slight increase (1.7%) in terms of added value; olive products, citrus fruits and cereals registered also good performance (ISTAT, 2020a). Unfortunately, the sector suffers the effects of *Xylella fastidiosa* that strongly influenced the production.

Puglia shows important performance on the side of wine production and employees in high quality agri-food products: in 2017 4,066 operators were involved, corresponding to 4.8% of the total operators at national level in the sector (CREA, 2020).

Puglia has long supported the agri-food by the introduction of ad hoc measures and the brand Products of Quality Puglia, which brings together products of different types, including those having a brand of origin (DOP, IGP, STG, DOCG). In 2018 there were 22 quality agri-food products (equal to 5% out of the 413 products recognized in Italy) and 38 quality wines (7% out 538 at national level), divided between DOP (Protected Designation of Origin), IGP (Indication of Geographic Protection) and TSG (Traditional Speciality Guaranteed). Apulian quality agri-food products specifically concern 12 PDO products, 8 PGI products and 2 products STG (CREA, 2020).

Between 2016 and 2018 Puglia registered an increase in the export of table grape, wine, legumes but a reduction in the olive oil export (CREA, 2020). In fact, despite it is the first Italian region on the side of olive oil production (almost 50% of the total), Puglia registers only 7% of the sector's Italian exports. This is probably due to the low capacity to reach international markets and the low impact of certified production (ISMEA, 2019). As regard wine, in 2017 the share of exports represented only 2.2% of the total (ISMEA, 2019). Over the years, the increasing amount of small and medium firms operating in agriculture and agri-food claims for a strong demand for innovation. This represents the solid foundations on which the Food Technological District and the limited liability consortium D.A.Re. were born and have grown.

In April 2020 Puglia Region recognized seven different Food Districts, with the aim of promoting, through agricultural and agri-food activities, sustainable local development, social cohesion and inclusion, the protection of the territory and rural landscape.

Finally, agri-tourism plays a key role for the development of the territory, the permanence of agricultural producers in rural areas, the integration of farm incomes and the improvement of living conditions, but also transversally to enhance and guide the tourist flows.

Another historical economic sector in the region is fisheries. Almost 4,200 employees work in fishing (4,700 if we add those employees in the canning industry) (Unioncamere Puglia, 2020d). The number of companies in fisheries and aquaculture sectors increased between 2014 and 2019 and in 2019, the region accounts for 774 active companies in fishing and aquaculture, and 52 food processing and conservation industries of sea products (Unioncamere Puglia, 2020d).

Between 2014 and 2019 fishing loses 200 employees, mainly due to the depletion of fish stocks, the price of fuel, fleets obsolescence, weakness in the integration of the supply chain and low propensity of young people

to be employed in the sector. Fisheries exports grow (13 million in 2019), while shipbuilding reduced (Unioncamere Puglia, 2020d).

Most of the population of **Molise** is devoted to agricultural activities, which are not significantly performing due to the small size of the farms, mostly family businesses. In 2018, Molise registered a decrease of 2.3% in terms of added value (ISTAT, 2020a).

In recent years, however, to improve the productivity of the countryside, agriculture also introduced modern cultivation techniques that are mostly applied along the coasts, where tobacco, sugar beets and vegetables emerge.

In the agro-industrial sector, most of specializations are in traditional sectors: meat, milk and cereals. Although the progressive decrease of pastures and breeding livestock but also the presence of small and historical farms, the region is still an important milk producer.

Over time, fishing played a crucial role in the economy of the southern part of Molise; in fact, in the past it represented the main source of income for coastal population. Currently, productive maritime fishing takes place only in the port of Termoli.

The “Programma Triennale della Pesca e dell'Acquacoltura 2017-2019” has given impetus to investments in the sector in view of a renewal both in terms of infrastructure but also of modernization of techniques in aquaculture. However, fishing accounts only for a very small part of total added value of the region.

The recent lockdown affected consistently the sector and the whole supply chain connected to restaurants and tourism facilities.

Agriculture is one of the main sectors of the **Albanian** economy: it accounts for about 23% of the country's GDP and employs about 43% of the total employees. Agricultural land represents 38% (517,000 hectares) of the total territory ³⁹.

According to INSTAT (2020b) in 2019 the vegetables production was 1,258,012 tonnes, increasing by 7.9%, compared with the previous year; conversely, both cereals and olives production decreased by 1.79 % and 16.38 %, respectively (INSTAT, 2020b). Within the fruits value chain, the highest production share is represented by apple, nuts and watermelon & melons.

Albania has one of Europe's longest history of viticulture. Thanks to the climate conditions two harvests a year are available and products can be offer to the markets with very competitive prices. The most important wine regions are located in the center but also the mountainous areas in the north, east and south. The wine production has strongly increased from 7 thousand MT in 2000 to more than 18 thousand MT in 2014 (Skreli and Drini, 2019). Nevertheless, wine production is relatively small compared to its potentialities. Part of the industrial channel is also informal processing sector which is quite large (the reported wine production is only 60% of estimated production). The informal sector is represented by unregistered wine producing companies or restaurants (Skreli and Drini, 2019).

Citrus production is also very important in the Southern Albania (Vlore/Sarande).

Regarding exports, fruits and vegetables accounts for 10% and 20% of the agriculture exports, respectively. The best foreign destinations are neighboring countries such as Bulgaria and Romania. This is probably due to the lower demand in terms of safety and quality standards compared to the Northern European partners. (Drini and Van der Lei, 2018).

In the sector of medicinal and aromatic plants (MAPs) Albania is historically considered one of the leaders in the world for quality and a key exporter worldwide (Drini and Van der Lei, 2018).

Imports of olive oil dominate in Albania, with a percentage of 70% compared to 30% in exports, mostly from Italy and Greece, whereas exports move mainly towards neighboring countries, Kosovo and Montenegro, but also as far as Kenya and U.S.A. Furthermore, wine imports have been increasing over the last decade while exports remain low, with the consequence of a strong trade imbalance (Skreli and Drini, 2019).

Although agriculture and food are the main sources of employment and income especially in rural areas, the sector suffers important constraints and limits. Economic, political and social changes have affected the

³⁹ https://ec.europa.eu/info/food-farming-fisheries/farming/international-cooperation/enlargement/agriculture-eu-enlargement/candidates_en.

strong decrease of population in rural areas with the consequence of consistent decrease of farms. Inadequate irrigation and drainage systems, low technological development and poor organization of farmers makes slower the growth of processing industry (Drini and Van der Lei, 2018).

Regarding fishery, in 2019 catches in all fish categories increased by 0.9% compared with 2018. Marine fishing represents 36.6 % and Aquaculture 34.8 % whereas Inland waters represent 18.46 % of the total catches (INSTAT, 2020c).

In 2019, the category Inland waters increased by 14.2% compared to the previous year, whereas coastal lagoons category registered a strong decrease (73.2%) (INSTAT, 2020c).

However, over the period 2007-2017, the catch grew significantly in Albania (EUROSTAT, 2019).

In 2019, there are 651 licensed fishing vessels. The fleet operates almost entirely in Geographic Sub-Area (NSR) (19 licensed entities more than 2018). In 2019, the port with the largest number of licensed vessels was the port of Durres, with 37.33 % of the total fleet (INSTAT, 2020c).

In **Montenegro**, agricultural land represents 38% (517,000 hectares) of the total. The sector accounts for about 8% of the country's GDP⁴⁰. It covers a relatively small area and is quite heterogeneous on the production side: from olive and citrus in the coastal region to fruit and tobacco in the central areas and extensive sheep farming in the northern region.

Agricultural enterprises are mostly small sized and family-run. Montenegro joined the Central European Free Trade Agreement (CEFTA) on 6 September 2007 and is a member of the World Trade Organization (WTO).

In Montenegro there is a significant supply of olive oil, coming from Greece, Croatia and Italy. Although Montenegro shows potentialities in the oil sector, its production is almost entirely carried out by family businesses, that still suffer difficulties in accessing modern technologies.

Imported food products are often preferred than domestic production due to their standardization and high levels of food safety.

In 2018, Montenegro's fishing fleet is quite small and consisted of 190 vessels (19 trawlers, 18 seiners and 153 are small coastal fishery vessels (Joksimović et al., 2019). Overall, fishing is a small sector without the related industrial branch (Joksimović et al., 2019).

The Ministry of Agriculture and Rural Development adopted the Fisheries Strategy of Montenegro for 2015-2020, with the Action Plan for transposition, implementation and enforcement of the EU acquis, adopted by the Government of Montenegro in 2015. Financial resources devoted to the modernisation of the fishery amount to 10 million € (Joksimović et al., 2019).

The sector still suffers the need for more reliable collection of data in line with the EU data standards regards the fishing fleet, catches, landings, aquaculture and processing and effects on the marine environment (Joksimović et al., 2019).

Textile, clothing, footwear

In the Italian regions of Puglia and Molise, the fashion sector decreased in recent years in terms of quantity, but quality production has been preserved. The fashion industry in Albania is also relevant, and it can also count on extensive incoming and outgoing trade relations with Italy.

In **Puglia**, there are 5,066 companies operating in the textile-clothing-footwear sector at the end of 2019. Among them, 770 textile industries, 3,557 operating in the production of clothing, 739 in the manufacture of footwear and leather goods. Compared to 2014, there are a total of 844 fewer companies in the sector. This decrease is often associated with the search for better competitiveness, sometimes due to disruptive competition dynamics in countries with lower manpower costs. The sector employs 36,809 people, over 60%

⁴⁰ https://ec.europa.eu/info/food-farming-fisheries/farming/international-cooperation/enlargement/agriculture-eu-enlargement/candidates_en.

of whom work in clothing, 10,000 in footwear, the rest in textiles. Also, from the point of view of employment there has been a contraction. However, medium and high-quality product companies have managed to find new spaces for competitiveness. The specializations are different: from men's outerwear to children's and women's clothing (including high fashion bridal wear); from sports footwear to safety shoes. The home textiles are also of a certain importance. The sector is particularly active in the province of Barletta-Andria-Trani (which concentrates about one third of both companies and employees), followed by the province of Lecce. In Puglia there are also 5 big enterprises. The export value of the sector amounted to 710 million euros, down 6.5% compared to the previous year. In this sector in particular there are close commercial ties with Albania, especially as an intermediate passage of semi-finished products that then return as finished products (UnionCamere Puglia, 2020c).

From 2008 to 2017, the number of local units in **Molise** fell dramatically from 261 to 153. By far the most important sector in terms of local presence and employees is the manufacture of wearing apparel. The number of employees in this region has also fallen sharply: in 2017 there were 680, compared to 2,469 in 2008, so that the share of employment in the sector on total manufacturing is only 0.8% (EUROSTAT).

In **Albania**, textile, clothing production is the main source of employment in the manufacturing sector. Not only many local companies with a solid reputation operate, but also foreign companies, who operate mainly for export. This trend has been helped by a government tax package dedicated to the fashion sector launched in 2014 (Camera di Commercio Italiana in Albania, 2018). According to the Institute of Statistics, there are about 1,300 companies in Albania with activities in the production of textiles, clothing and footwear, most of which work on behalf of foreign companies (Camera di Commercio Italiana in Albania, 2018). This manufacturing sector offers employment to about 45 thousand people, while the average gross salary is quite modest, less than 230 euros per month, among the lowest in the Albanian economy. The sector, moreover, concentrates around 40% of the country's exports (Camera di Commercio Italiana in Albania, 2018).

For Montenegro there are no recent data and information available.

Mechanics

In the Italian territories covered by the Programme, the mechanical sector is significant in terms of employment. It remains one of the strategic sectors also for Albania, as it allows technical and technological advancement also in the other manufacturing sectors for which it produces equipment and plants.

In **Puglia** the productive sector of mechanics has a long tradition, especially in the province of Bari. Many companies in the sector have created a production district recognized by the Apulia Region, district aggregating not only about one hundred companies, but also universities, research centres, public organisations and trade associations. For at least ten years now, there has also been a decisive orientation towards technological innovation and therefore a recourse of electronics in mechanics and the consequent emergence of mechatronics, confirmed by the presence of a technological district (MEDISDIH has gained significant experience in the integration of innovative activities of Large Enterprises, SMEs, Public and Private Research Organizations and the Apulian Universities). In 2017, more than 700 local units were active with more than 13 thousand people employed, representing about 9% of total employment in manufacturing (EUROSTAT)⁴¹. The sector is particularly strong in terms of international projection, with 1.8 billion euros in export value in 2019 (ISTAT). The Apulian mechanical sector is characterized by the presence of numerous

⁴¹ Data referred to NACE Manufacture of machinery and equipment n.e.c. and Manufacture of motor vehicles, trailers and semi-trailers.

specialisations, from the production of components to final products. Companies that support other regional supply chains, i.e. those that produce machinery or equipment for the agriculture, chemical and food processing industries, are particularly important (UnionCamere Puglia, 2020b). The training of engineers, designers and skilled workers can count not only on the Politechnic of Bari and the University of Salento (Department of Innovation Engineering), but also on the Istituto Tecnico Superiore Cuccovillo, among the best in Italy for the results achieved (INDIRE, 2020).

Although small in absolute value, the mechanical industry plays a not insignificant role in employment in **Molise**: the 3,500 employees, in fact, account for just under 20% of total manufacturing employment. The main sector is that of manufacture of motor vehicles, trailers and semi-trailers, which employs 3,000 people, with employment growth of 283% between 2008 and 2017. The number of local units, on the other hand, has remained substantially the same (around 50), probably testifying to a significant growth in their dimension (EUROSTAT).

The mechanical engineering production is one of the industrial realities now established in **Albania**, with particular concentration in the Vlora district. The continuous collaboration with the industries of Italy and Germany has led to the growth of a dedicated branch of industry, initially on behalf of third parties. The main sectors of the engineering industry in Albania are currently the production of machinery (such as textile machinery, agricultural machinery, construction site machinery or factory equipment), plant production, tool production, metal carpentry (iron, aluminum), shipbuilding, train construction, aircraft construction, helicopter construction, automotive industry, motorbike industry.

For Montenegro there are no recent data and information available.

7 Environment

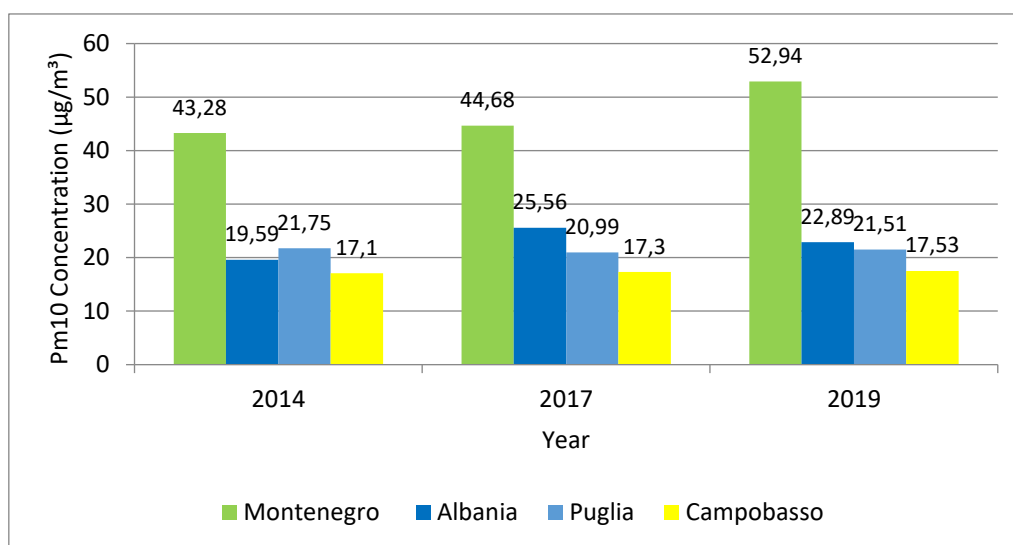
7.1 Climate change and air quality

Over the last years, the territories of the Programme area have significantly increased actions and measures in the attempt of reducing the level of emissions. The increasing temperatures and air pollutants remain a big concern, especially in the industrial areas such as those close to the steel industrial pole in Taranto and particularly in Albania, due to the increasing industrialization and urbanisation processes. At the same time, Montenegro is attempting to implement measures facing global warming in compliance with EU standards within the pre-accession process.

A main priority for the Programme area will remain to restore natural balances and degraded habitats. The restoration of natural habitats and their systems is crucial to preserve the functioning of all the mechanisms of the biosphere.

In April 2008, the European Union adopted a new directive (2008/50/EC) setting air quality limits with particular reference to the PM₁₀ concentration. This directive was transposed into Italian law by Legislative Decree no. 155 of 13 August 2010, which sets a limit value for the annual average of 40 µg/m³ for Italy and Europe, with a maximum 35 exceedances allowed in a year. In 2005, however, the WHO adopted stricter criteria for safety, asserting that the alarm threshold should be set at around 20 µg/m³.

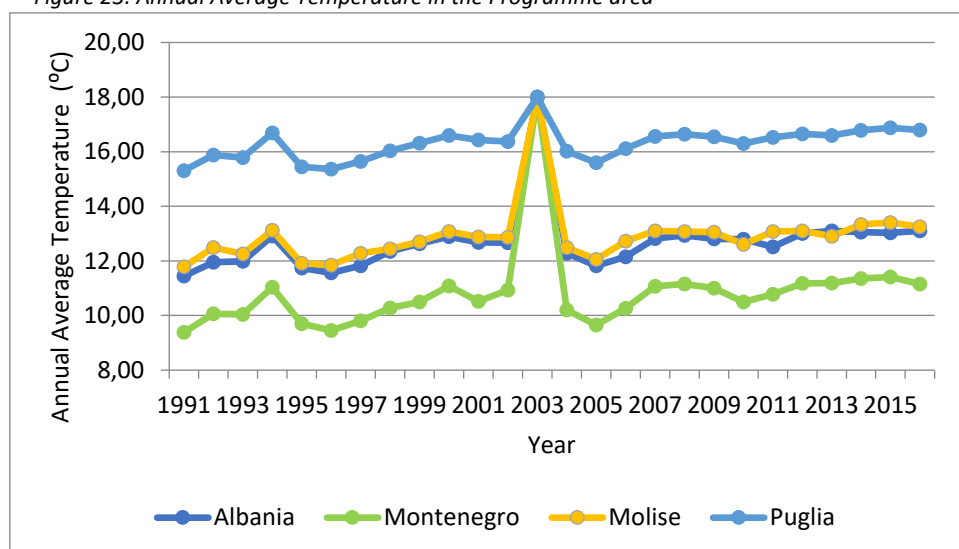
Figure 22: PM₁₀ Concentration in the Programme area



Source: ARTI's elaboration on EEA⁴².

Climate change has a direct correlation to risks of natural catastrophes, such as wildfires, floods, landslides, coastal erosion and damages for extreme weather conditions.

Figure 23: Annual Average Temperature in the Programme area



Source: ARTI's elaboration on ISTAT⁴³.

Additionally, the linkage between air quality and diseases is well-known. Particularly, the increased risk of contracting pandemic diseases, such as the COVID-19, for people living in big cities, as air pollution can cause asthma, chronic pulmonary disease, hypertension and diabetes. In 2020, COVID-19 had more serious consequences on patients with pre-existing health problems whose conditions, in many cases, may worsen with air pollution and increases consistently where industrial production and vehicular traffic are high. Common action plans and methods addressed to raise awareness of the importance of a cleaner economy may represent another strategic goal for the overall Programme area.

⁴² <https://www.eea.europa.eu/data-and-maps>.

⁴³ <https://www.istat.it/it/archivio>.

According to ISTAT⁴⁴ (2016), **Puglia** region has kept an average annual temperature of around 16 degrees over the last 25 years, with a peak of 18 degrees in 2003, which was considered throughout Europe as a “torrid and terrible year”. The anomalous hot weather in many periods of the year, indeed, due to the persistence of the “AZORES anticyclone” with the contribution of subtropical air, caused heavy impacts on agriculture, water, glaciers and above all on human health.

According to ARPA Puglia (2017), in Puglia the temperature showed positive anomalies throughout 2017; this implied regional warming for an average of +0.7°C (compared to 30 year-period 1961-1990).

In 2015 the CO₂ emissions – which represents one of the main causes of global warming – was the second-highest in Italy after Lombardy (40.6 MT/y vs 61.2 MT/y) (ISPRA, 2018a).

In 2019, none of the thresholds settled by the law has been exceeded in Puglia, except for ozone concentration; the threshold of ozone concentration fixed by the national legislation (120 µg/m³) was exceeded in the whole regional territory, particularly during the summer months (ARPA Puglia, 2019).

Considering the period between 2014 and 2019 and taking into consideration the annual average of the values recorded at the stations in Foggia, Bari, Lecce and Taranto, an average value of 21.4 µg/m³ of PM¹⁰ was recorded in Puglia region, which is therefore below the limit value (40 µg/m³) and in line with the threshold value imposed by the WHO.

Since 2010, PM₁₀ concentration was constantly decreasing at an average of 0.25 µg/m³ per year. For the first time after several years, the concentration of this pollutant decreased both in Taranto and Torchiariolo, historically considered among the most polluted areas. The highest annual concentration (30 mg/m³) was recorded in the Modugno station - EN04, the lowest (15 mg/m³) in the Cisternino site (ARPA Puglia, 2019).

Molise region has instead maintained an average annual temperature of around 12.9 degrees over the last 25 years (Istat,2016)⁴⁵ as the region has an average altitude of 868 metres above sea level (55.3% classified as mountain and 44.7% as hill). In this region, therefore, the peak temperature recorded in 2003 was felt considerably, with a variation of 6 degrees from the average value.

Following the Regional Law 375/2014, as per 2008/50/CE, Molise Government has proceeded to the zoning of the territory in 4 areas: hill, coast, valley, mountain (ARPA Molise, 2018). The zoning is useful to localize pollution sources and measures the emissions level; the elaboration of collected data allows the development of a climate change mitigation strategy.

Starting from 2010 to 2018, compliance with the regulatory standards of air quality throughout the region emerges. In recent years (2014-2019), PM₁₀ concentration did not exceed the limit imposed by the national law (indeed the value has remained almost constant at 17 µg/m³) although some daily exceedances have occurred in Venafrò but without crossing the number permitted by law (maximum 35 exceedances in one year). The worst figure about Molise air quality concerns ozone concentration which represents a serious challenge (ARPA Molise, 2018).

The average annual temperature registered in Albania region over the last 25 years has been 12.6 degrees (Istat⁴⁶, 2016) as the region has an average altitude of 708 metres above sea level. In this region, as well as Molise region, in 2003 a temperature change of about 5.4 degrees was registered.

In January 2019, **Albania** signed the Kigali Amendment to the Montreal Protocol, aiming to reduce the use of hydrofluorocarbons (HFCs) (e.g. for refrigeration installations, air conditioning) that have a strong influence on higher temperature (EC, 2019b).

⁴⁴ <https://www.istat.it/it/archivio>.

⁴⁵ <https://www.istat.it/it/archivio>.

⁴⁶ <https://www.istat.it/it/archivio>

Albania registered an increase in CO₂ emissions between 2009 and 2016 (WB). Following the signature of the Paris Agreement in 2016, Albania Government is working on the development of the Integrated Energy and Climate Plan with the goal of reducing CO₂ emissions at 11.5% within 2030⁴⁷.

During the period between 2014 and 2019, the Albania region has reported an average value of 22.68 µg/m³ of PM₁₀ which is in line with the law limit value (40 µg/m³) and slightly higher than the threshold value imposed by the WHO (20 µg/m³).

Despite efforts in aligning national policy with the European acquis, an air quality monitoring system still misses; the last report presented to EC (2019) underlines the need to monitor industries, as main responsible of pollution in the air (EUROSAI, 2019).

According to ISTAT, **Montenegro** has instead maintained an average annual temperature of around 10.8 degrees over the last 25 years, being the highest region in the programme area. This region has most suffered the temperature peak recorded in 2003 with a variation of as much as 7 degrees. This phenomenon was exceptional in both its duration and intensity, made particularly unbearable by the high level of air humidity. In the last years, Montenegro implemented a package of measures designed to deal with climate change and environmental protection. In 2018, the country adopted the 2018-2020 action plan which represents the national strategy towards the EU acquis on this field. At the same time, the “Fund for Environmental Protection” and the Law on environmental impact assessment were settled. Despite the efforts, because of administrative and financial issues, the entire scheme needs to become operational (EC, 2019d).

Montenegro is a signatory country of the Kyoto protocol and a member of the UN Framework Convention on Climate Change. In 2017 the Parliament ratified the Paris Agreement thus committing to a drastic reduction of GHG emissions at least 30% by 2030 (compared to 1990) (Government of Montenegro, 2015).

The energy sector is the main source of anthropogenic greenhouse gas (GHG) emissions. In Montenegro, this accounted for 72.37% of the total GHG emissions in 2015. (UNDP and Ministry of Sustainable Development and Tourism of Montenegro of Montenegro, 2019).

In accordance with the World Health Organization's guidelines, the air quality in Montenegro is considered moderately unsafe - the most recent data indicates the country's annual mean concentration of PM_{2.5} is 21 µg/m³, exceeding the recommended maximum of 10 µg/m³. The Pm₁₀ annual concentration is also very high. The value has increased significantly over the years from 43.28 µg/m³ in 2014 to 44.68 µg/m³ in 2017 and finally to 52.94 µg/m³ in 2019. So in recent years, this value has exceeded both the alarm threshold imposed by the WHO (20 µg/m³) and the law limit value (40 µg/m³). Contributors to poor air quality in Montenegro include steelmaking, agricultural processing, and the aluminum and tourism industries. Air pollution is particularly higher during the winter season due to heating⁴⁸.

The long term goal of the country aims at preserving its unspoilt environment (which is currently threatened by climate change) through the adaption of its sectoral and development strategies, despite attractive opportunities for local coal and lignite, and a prosperous tourism chain (UNDP and Ministry of Sustainable Development and Tourism of Montenegro, 2019).

7.2 Natural and artificial risks

Exposure to natural and artificial risks highlights different issues in the territories of the Programme area. It is evident the high risk of landslide, floods and earthquakes in Albania, due to the morphology of the territory and increasing soil use.

In Puglia, seismic, floods and landslides risks are lower; however, the area at higher risk is the northern part close to the borders with Molise.

⁴⁷ <https://www.greenclimate.fund/document/nda-strengthening-and-country-programming-support-albania-through-unep>.

⁴⁸ <https://www.iamat.org/country/montenegro/risk/air-pollution>.

Interventions are needful for the adaptation to modern seismic criteria with sound urban planning in order to contrast the increased vulnerability linked to mass migration from rural to urban areas and tourism mobility. These criticalities require new sustainable housing plans and joint regulation regarding tourism management and urban sprawl.

A common concern is the soil consumption. The degraded soil is strongly linked to coastal erosion caused by uncontrolled exploitation of the shoreline to foster tourism flows and housing construction; particularly, in Albania and Montenegro this is also due to the abusive construction and illegal housing. At the same time, de-population and abandoning of certain remote areas, especially on the mountains, lead to abandoned agricultural land, forests and water streams, which may become a threat for more populated areas on the plains and costs.

Population growth and increasing tourism lead to an increased demand for housing and other facilities, such as offices, shops, and public infrastructure. This, in turn, can lead to an increase of soil surface with a strong impact over the years on the geographical and environmental stability of the territories.

The need for a higher control of natural disasters is strictly related to pandemic crisis too. Natural disasters can impact the pandemic directly as they might exacerbate the use of health services and health infrastructure, making social distancing more difficult among people as well as the related utilities chain exploitation such as water supply and energy.

Artificial risks in relation to the maritime dimension are connected to maritime transports security and thus risk of oil spills, but also to illegal dumping, as well as linked to the underwater pipelines such as the risk of gas leaking in relation to the TAP pipeline.

In 2020, the COVID 19 pandemic provides further insights on the expected measures and actions to be implemented. Indeed, earthquakes, floods but also landslides and fires could cause increases in pandemic cases due to displacement of people from damaged buildings or where health care systems may be put into further pressure due to human injuries. This aspect stresses even more the need for the alignment and adaptation to the EU safety standards.

In **Puglia**, in 2017 the regional area at high landslide risk is of 10% (of which 3% is a higher risk level), for a total of 594.8 km², covering 18 Municipalities; 11 of them are in province of Foggia for a total of 30.175 inhabitants (ISPRA, 2018b).

About seismic risk, 73.5% of municipalities are located in “low risk area” (zones 3 and 4), 22.6% ones are in Zone 2 (medium risk area), only 3.9% of the municipalities are located in high risk Area, i.e. in the northern part close to the borders with Molise, Basilicata and Campania⁴⁹. The total population at high flood risk is 1.6% (ISPRA, 2018b).

In 2018 the higher concentration of firefighting interventions was in the areas of Lecce, Taranto and Foggia; from 2017 to 2018, firefighting interventions for forestry fires have been reduced by 61.6% (Regione Puglia – Protezione Civile, 2018). The implementation of Regional Law 38/2016 has contributed to this reduction as it promotes the prevention of the propagation of forestry fires, to fighting the illegal use of fire for profit aims and to foster the use of agriculture as fires deterrent (Regione Puglia – Protezione Civile, 2018).

The soil consumption represents another aspect to be monitored. Land degradation is a complex phenomenon affected by multiple factors and there is no homogeneous scientific consensus regarding evaluation methods. Puglia is among the top four regions with per capita land consumption values almost twice than the national data (0.86 m²/ab) (SNPA, 2020).

In 2018 Puglia region shows the highest increase in net land use (Ha) after Veneto and Lombardy regions; compared to 2017, in 2018 the soil consumption increased by 425 hectares (Munafò, 2019). Through the Regional Law 12/2018, the regional Government is working on urban planning based on the re-use of urban areas, especially the degraded ones.

⁴⁹ <https://govrisv.cnr.it/regioni/regione-puglia/>.

Despite the Regional Law 17/2006 establishes the development and periodic updating of the Regional Coastal Plan, on the other hand, coastal erosion is still a concern. The main causes of coastal erosion in Puglia are the increasing seaside tourism and related overbuilding on the coastline. The areas of Lesina (Foggia) and Taranto rank among the Italian 40 areas at the greatest risk of erosion (Legambiente, 2019b). Indeed, from 1992-2005 to 2005-2017, the erosion of shoreline increased more than twice (16.23% vs 33.18%) of the entire regional coastline and the most damaged area is the southern coast in the Salento sub region (Regione Puglia, 2019).

Besides human pandemic risks, which were made evident during the 2020 COVID crisis, animal and vegetable pandemics are also important natural hazards the region is facing. For several years and starting from southern Puglia the Xylella Fastidiosa, pandemics for olive trees is now spreading all over Puglia and soon to the neighbouring regions such as Molise. The death of millions of century-old olive trees does not only destroy the agricultural sector in this area, but also its landscape, its cultural heritage and thus its touristic attractiveness.

In 2018, in **Molise** 6.5% of the population lives in high or very high landslide risk area; this value is the highest in Italy after the Aosta Valley region (ISPRA, 2019a). Population living in medium flood risk areas is 1.4%, the lowest after Sicily and Basilicata (ISPRA, 2019a).

The Molise Region falls within an area characterized by significant seismic risk. 91.2% of the regional territory are at medium-high seismic risk and the municipalities included in this area represent 93.4% of the total whereas the inhabitants are 83.3% of the regional population) (Autorità di Bacino Distrettuale dell'Appennino Meridionale, 2019).

Molise is a highly vulnerable to forest fires, especially in the summer period characterized by a severe regime of fires, due to high temperatures and scarce precipitation⁵⁰. From 2007 to 2015 the forestry fires in Molise have been reduced by 84.1%. This last is also due to the Fire Protection Plan of Regione Molise, starting from 2009 (Regione Molise-ARPA Molise, 2016).

In terms of land consumption in relation to demographic needs, Molise presents the highest value (563 m² / inhabitant), more than 200m² compared with the national value (355 m² / inhabitant) (SNPA, 2020).

Albania is vulnerable to natural risk and to catastrophes. The International Disaster Database (EM-DAT) indicates that during a 40 years period (1979-2019), floods accounted for the higher percentage of disaster events (38%), followed by earthquakes (15%). Albania is the first in Europe and 61st in the world (Government of Albania, 2020). The potential economic losses in Albania from a disaster event in a long run perspective is enormous (Government of Albania, 2020).

In July 2019, a few months before the earthquake, the Albanian Government approved the new law "On Civil Protection" (L. 45/2019), which established the National Civil Protection Agency (NCPA), under the Ministry of Defence (MoD). The law represents a valid regulation framework capable to provide and promote disaster risk reduction (Government of Albania, 2020).

Albania is at high risk of forest fires, particularly in the dry summer season. It is assessed that more than 95% of fire events are small (less than 100 ha burned) and account for more than 40% of the total burned area, while big events are relatively rare (5% of the total burned area) (Government of Albania, 2020).

The increasing changing weather triggered frequent extreme events such as floods and droughts.

The conversion process from agricultural land to land used for housing caused habitat degradation and destruction of meadows and pastures (UNDP, 2019). Before 1990s Albania has suffered land pressures and land degradation which were mostly linked to state policy to increase the agricultural surface area; as consequence, the construction boom rapidly increased; this fast growth triggered illegal settlements (UNDP, 2019).

⁵⁰ <http://www.protezionecivile.molise.it/19-joomla/protezione-civile-regione-molise/36-rischio-incendi.html>.

After the 1990s, with the change of regime, the land was privatized and the rate of soil erosion has increased because of dramatic changes in land use, uncontrolled and illegal deforestation, climatic change and overgrazing of pastureland. Natural levels of erosion are high in Albania because of steep slopes (27% average), high rates of rainfall (1,500 mm average yearly), and highly erodible soils (low levels of organic matter and high levels of silt and clay). However, the lack of land administration capacity within the local government has hindered the legalization process (UNDP, 2019).

It is estimated that in Albania, in only one year, erosion washes away 1.2 million tons of organic carbon, 100,000 tons of nitrate salts, 60,000 tons of phosphates, and 16,000 tons of potassium salts (UNDP, 2020).

In **Montenegro** floods represent the most important natural hazard, mainly of riverine origins: the flash floods of rivers waves along with the areas of Skadar Lake, Moraca River and Bojana River, strongly affect both industrial facilities and the agriculture (FLAT project Interreg - IPA CBC 2014-2020). Flooding can be a problem in winter and spring when heavy rains and snowmelt causes rivers to swell.

Also, landslides are of different intensities and they occur both in mountain and canyon valleys; they are due to the groundwater high level and conformation of the rocks that are slippery and steep, for this reason the main consequence is on road and rail infrastructures (FLAT project Interreg - IPA CBC, 2014-2020).

In December 2015, the National Government approved the Management Plan ("Official Gazette of Montenegro" no. 69/15) and adopted the guidelines of the Disaster Risk Management Project implemented by the UNDP Office in Montenegro.

Serious earthquakes are less frequent but do occur. Nevertheless, there is not sufficient control of application of anti-seismic regulation related to building standards.

The steep ground, the yearly precipitation of water between 1,000 to 5,000 mm of water, the waterproof ground due to overexploitation of natural resources have as a direct consequence the erosion of the on forest and agricultural soil (FLAT project Interreg - IPA CBC, 2014-2020).

In addition, the illegal constructions along the shoreline contribute to the degradation and erosion processes of the coast belt (FLAT project Interreg - IPA CBC, 2014-2020).

The uncontrolled urbanization process on the coast is due to private investments in building construction done on cheap agricultural lands located in areas with potential tourism development government (Ministry of Sustainable Development and Tourism of Montenegro, 2015). The seismic surveys for oil and gas exploitation is threatening marine species. Despite coastal erosion was not an issue in the past, recently erosional changes have been noticed on several beaches. These changes started with rapid hinterland urbanization, caused beach width reduction, which in turn reduced the area for wave energy dissipation.

7.3 Waste

Within the frame of the EU environmental acquis, waste is one of the most demanding sectors in terms of resources –both human and financial- needed for the transposition of the EU legislation.

Particularly for the Programme area waste management is the cornerstone of sustainable environmental management and preservation of the natural habitats. Waste management is also connected to the maritime dimension of this Programme, as the marine litter is one of the key issues affecting the common sea, therefore prevention from any form of pollution, including plastic litter, is a cross-border priority as sea pollution does not stop at the border between the three countries.

Despite Puglia and Molise have made significant progress on the side of waste and separate waste collection, Albania and Montenegro still suffer the lack of systemic and synergic governance and regulation systems that makes further difficult the management of the relatively high per capita production levels and the scarce and inefficient presence of waste plants and recycling and thus a high level of waste treated in landfills.

The latter claims for exchange of experience and good practice in this area for the identification of the best environmental solutions, mainly in view of the massive increase of tourism flows and migrations from rural to urban areas.

Table 5. Selected indicators on waste management in the Programme area

Indicator	Puglia	Molise	Albania	Montenegro
Production of urban waste⁵¹ (% change, 2014-2018)	-0.9	-3.8	+7.8	+0.1
Separate collection waste (% change, 2014-2018)⁵²	+19.5	+16.1		
Quantity and weight of artificial polymer on the total marine litter (%)⁵³	Q: 93-97 W: 80-86		Q: 92-97 W: 66	Q: 89-91 W: 36.7-56.4

Source: ARTI'S elaboration on data from various sources and documents.

In 2020, the COVID-19 pandemic had enormous impacts on the waste sector. Public authorities and institutions will have to deal with new actors such as recyclers and different waste management systems. The lockdowns imposed in many countries require for very fast adaptation methods regarding waste management systems and procedures paying attention also to the use of alternative sources of energies. It follows that the provision of waste management and the control of hygienic conditions is crucial for protecting and preventing human health, and this will include all the environments, starting from households until workplace and public life.

In 2018, **Puglia** produced 1,897,397t of urban waste, decreasing by only 0.9% compared to 2014 (ISPRA, 2019b). The per capita production reached 470.9 kg/inhabitant/year in 2018; this figure is higher if compared with southern regions average but lower if compared with the Italian value (448.8 kg/inhabitant and 499.7 kg/inhabitant, respectively) (ISPRA, 2019b).

Puglia produced approximately 8,872,897 tons of special waste in 2018, accounting for 26.5% of the total share of the southern regions, thus resulting as the first contributor among them (ISPRA, 2020b); in the same year, the share of production of hazardous special waste on total special waste was 4.1%, lower than southern regions and Italian averages (5.6% and 7%, respectively) (ISPRA, 2020b).

Concrete progresses have been made in terms of separate collection. In fact, between 2014 and 2018 the share of separate collection of urban waste increased from 25.9% to 45.4% and by 5 percentage points in 2018, compared with the previous year; however, Puglia still remains below the national and southern regions averages (58.1% and 46.1%, respectively) (ISPRA, 2019b).

Data from the WELCOME project of Interreg – IPA CBC, 2014-2020 provide interesting information on marine litter as it focused on the measurement of the quantity of litter every 100m along the shoreline. Results indicate that in the Ionian area the number of litters is between 80-97 per 100m, while in the northern part of the Region (on the Adriatic Sea) is between 39 and 253. The registered marine litter is mainly composed of plastic for number (about 93%-97%) and weight (about 80%-86%), the remaining is composed of rubber, paper, glass, metals, clothes, worked wood.

Lately, Puglia Region updated its legislation on waste management. Following the adoption of the Regional Plan for urban waste management (D.G.R. n. 204 of 08/10/2013) and the Regional Plan for special waste management (D.G.R. n. 1023 of 19/05/2015), which define procedures and rules regarding the waste

management in the region, the Regional Law n. 20 of 04/08/2016 established the Regional Agency for Waste Management of Puglia Region (AGER), that becomes the only competent institution for regional waste management service. Furthermore, in 2018 the new Regional Plan for urban waste management was adopted; it implements measures aiming at improving the share of separate collection of waste, decreasing the production of waste and developing process towards circular economy. For this last purpose, Puglia Region joined the Italian Circular Economy Stakeholder Platform (ICESP), an initiative involving stakeholders committed to the circular economy thematic at national level.

The total production of urban waste in **Molise** decreased by 3.9% between 2014 and 2018. The per capita production reached 380.8 t/inhabitant per year, lower than the average of southern regions (457.4 t/inhabitant per year) and the national one (499 t/inhabitant per year) (ISPRA, 2019b).

In 2018, Molise generated 604,188t of special waste, which represents in proportion to the small population the lowest value among Italian regions, with the exception of Valle d'Aosta. In the same year, the share of hazardous special waste on total special waste was 7.3%, higher than southern regions and Italian percentages (5.6% and 7%, respectively) (ISPRA, 2020b).

Despite Molise is below national and southern regions averages, improvements have been made in terms of separate collection of urban waste during 2014-2018: indeed, the share increased from 22.3% to 38.4% and only in 2018 increased by 7.7 percentage points (ISPRA, 2019b). However, Molise is still far below the national and southern regions averages (58.1% and 46.1%, respectively) (ISPRA, 2019b). After Sicily, Molise has the lowest percentage of separate collection of urban waste (ISPRA, 2019b).

In 2016, Molise Region adopted the Regional Plan for waste management (D.C.R. n. 100 del 01/03/2016) which aims at reducing the production both of urban and "special" waste, improving the share of separate collection of waste and reclaiming polluted areas.

Waste management in **Albania** is generally lagging behind. The total production of urban waste in Albania increased by 7.8% between 2014 and 2018. In the same period, the per capita waste for inhabitant grew, from 425 to 462 t/inhabitant (INSTAT).

The collection of urban solid waste is mostly conducted in residential areas, and scarcely in rural areas; also, there are no significant data available for industrial waste (EEA, 2018a).

A representative scenario about marine litter along the Albanian coastline is given from 2 studies done in the framework of Interreg – IPA CBC Italia – Albania – Montenegro (WELCOME project) and Adriatic IPA (DeFish Gear, 2017). The reported data show that collected items are for 92-97% made of artificial polymer materials (e.g., drink bottles, plastic cups, crisps packets, plastic pieces) for about 66% of the total weight. The remaining litter is composed of glass and ceramics, worked wood, clothes or textile. 47.4% of registered litter is due to poor waste management in leisure activities (e.g., tourism), shipping traffic (4.7%), while about 3% is from fisheries and aquaculture.

The legal framework of Albania partially complies with the EU acquis. Further improvements need to be implemented in order to stop the non-compliant landfills, to establish a mechanism for the separate collection of waste, to increase the share of recycling and reuse (EC, 2019b). Despite the evolution of the legislative framework, there is an imbalance related to the human and financial resources available and goals to be attained (EEA, 2018a).

The amount of total urban waste generated in **Montenegro** in the period 2014-2018 was relatively stable, reporting an increase of 0.1%. In the same period, the per capita production of urban waste was 531.7 t/inhabitant in 2018 (MONSTAT).

The system of separate collection of waste is weak and would need substantial investments to become efficient and operative in the entire national territory. Data indicated that in 2014 waste reception facilities

for separate collection are present only in Podgorica Municipalities of Herceg-Novi and Kotor (Ministry of Sustainable Development and Tourism of Montenegro, 2014b).

Data on marine litter in Montenegro shoreline are the re-elaboration of monitoring activities and related surveys done in the framework of cross-border cooperation projects (WELCOME project Interreg – IPA CBC Italia – Albania – Montenegro, 2014-2020) and Adriatic IPA (DeFish Gear project, 2017). In monitored areas there is a concentration of about 89-91% of artificial polymer materials on the total of registered marine litter for a weight of 36.7%-56.4% on the total; the remaining litter is composed in prevalence by worked wood (18.1%), rubber (10.32%), glass/ceramics (7.8%). 73.7% of registered litter is due to the high percentage of sea tourism; 41.7% of registered smoking-related items have been registered along the Montenegro beaches (WELCOME project) and Adriatic IPA (DeFish Gear project, 2017).

Waste collection is a competence of local authorities and it is mostly managed in local landfills which do not respect the minimum protection of people and environment (Ministry of Sustainable Development and Tourism of Montenegro, 2014b). The waste management system continues to lack financial resources as well as data delivery (EEA, 2018b).

The EU acquis is still partial, the country is implementing its national strategy for waste management in order to improve municipal waste and separate waste collection (EC, 2019c).

7.4 Water

Water resources management is a strategic asset for the Programme area, as qualitative and quantitative characteristics of water management measures are directly and indirectly affected by the impact of human activities such as those related to tourism, housing, migration flows and population growth as well as intensive agriculture.

The cross-border area is rich of fresh water resources, except for Puglia where the karstic nature impedes an efficient collection and preservation. In fact, in Puglia the hot and dry climate and increasing variability of the rainfall patterns create serious problems to the competitive use of water resources.

The achievement of a sustainable balance between water demand and long-run sustainability use of the resource is related to the planning and implementation of regulations and law both on the side of institutional management and resource governance as well.

Despite the relatively high fragmentation, diversity and sometimes scarce regulation system in the territories of the Programme area (especially in Albania and Montenegro) the Puglia Regional Authority seems to show particular interest in the safeguard of water resources. The belonging to the Distretto Idrografico dell'Appennino Meridionale provides opportunities to Puglia and Molise for a more efficient and joint management of water resources.

Thus, it becomes even more important to develop approaches and methodologies that are cross-sectoral and cross-border and could be integrated into the policymaking process. This aspect could mutually support planners and decision-makers in incorporating adaptation strategies, as part of traditional water management and protection plans by reducing burdens between the needful adaptation of new practices and emerging priorities.

These challenges are in line with the objectives of Water Framework Directive 2000/60 which laid the foundation for breaking the universal principle of having to satisfy growing demand with increasing amounts of water. Common challenges also concern water shortages, especially in the coastal areas and during the summer season, as well as the scarce availability in rural areas. The latter is strictly linked with the lack or scarcity of pre-treatment of wastewater conveyed into sewage systems as well as poor connectivity systems to the sewerage especially in peripheral areas.

Recently, the Tremiti island municipality (Foggia-Italy) approved the preliminary feasibility project for the realization of the desalination plant prepared by the technical structure of the AQP. This might be a potential

good practice to be replicated in other coastal areas to save huge amounts of water considering the great need for sustainable water supplies.

Water security is essential for preventing pandemics in order to make societies, households and communities capable to use adequate quality and quantity water and minimize the related economic and human costs. Supply and storage solutions are needed to ensure minimum quality standard and wastewater production but also to govern competing demands from other economic sectors.

Table 6. Selected indicators on water resources in the Programme area (years in parenthesis)

Indicator	Italy	Puglia	Molise	Albania	Montenegro
Population connected to at least secondary wastewater treatment (%) ⁵⁴	57.5 (2007) 59.6 (2015)			9.9 (2014) 7.3 (2017)	
Water losses in municipal water distribution networks for drinking use (%) ⁵⁵	37.4 (2012) 41.4 (2015)	34.6 (2012) 45.9 (2015)	47.2 (2012) 47.4 (2015)	67.4 (2014)	58.8 (2014) 59.9 (2017)

SOURCE: ARTI's elaboration on data from different database and documents.

In **Puglia**, the karstic nature of the territory impedes the availability of surface water resources. Over the years, the significant water withdrawals exposed the regional hydrogeological system to substantial stresses, with the result of generating both quantitative and qualitative degradation of groundwater. The latter has been further exacerbated by the fact that groundwater quality is impacted by the deposition of air pollutants or chemicals and biologic wastes directly released in soil or water. Also, the increasing human activity throughout the Puglia coastal area caused consequent seawater intrusion into aquifers.

According to ISPRA (2020) in 2019 Puglia shows the highest percentage of underground water classified in the "scarce" class (62%), after Lombardia (67%). In particular, the Salento area is characterized by intensive agricultural activity which requires large amounts of irrigation due to the absence of rivers and springs, whose activity in turn affects salt contamination which reduces the availability of good quality water.

The reuse of wastewater in agriculture, as well as in other sectors such as industrial, recreational, and environment can help to protect surface water bodies and aquatic and terrestrial ecosystems.

The increasing importance of water scarcity laid the foundation for the emergence of new control mechanism and governance systems based upon a stronger relationship between local authorities and intermediate levels in terms of the conveyance of water from and over different areas. Thus, Puglia signed in 1999 an important agreement with Basilicata and Central State for the mutual exchange of water resource. This agreement expired on 31 December 2015; it has so far allowed a useful, effective and shared management of water resources, giving the possibility to mutually overcome water crisis and emergency events. On 30 June 2016, the evolution of the 1999 Program Agreement was signed.

In this frame, the Water Framework Directive (WFD) 2000/60 is of great importance as it put the emphasis not only on the over-exploitation of water resource for agriculture, industry and civil use but also on the side of the role of operations of conveyance, towards a more appropriate governance for traditional regional institutions.

In Puglia a very important water supplier and wastewater services provider exists: the Apulian Aqueduct (AQP) is one of the most important water network operators worldwide, the first in Europe in terms of

⁵⁴ Eurostat, Statistics Explained - 23/11/2020 <https://ec.europa.eu/eurostat/statistics-explained/pdfscache/1182.pdf>.

⁵⁵ For Italian data see "ISTAT (2019) Utilizzo e qualità della risorsa idrica in Italia <https://www.istat.it/it/files//2019/10/Utilizzo-e-qualit%C3%A0-della-risorsa-idrica-in-Italia.pdf>; Water Regulatory Authority - ERU (Albania) <https://www.wareg.org/members.php?q=view&id=2>; MONSTAT (These percentages have been calculated as the ratio between the water losses (thous. m3) and the volume of water abstracted (thous. m3).

network length. AQP carries water for around 4 million people in Puglia but also in Basilicata and in some municipalities in Campania.

Water loss from pipelines is one of the biggest challenges that water industry has dealing with in the overall Programme area. This criticality also encompasses water contamination, and this regards equally urban, small and rural systems. This means continuous maintenance of very old underground water distribution network, levees, reservoirs and flood channels but also the need for new diagnostics tools and methods for intercepting and assessing water loss.

According to ISTAT (2019c) in 2015 the exploitation of surface waters was particularly consistent in Italy: in particular, Puglia, together with Basilicata, Sardinia, Liguria and Emilia-Romagna are the regions where the share exceeds 30% of the regional water abstraction.

Furthermore, Puglia is one the regions with the largest share of water depuration (58.8%) and highest water dependency index (79% in 2015); this value includes the share from Basilicata, Campania and Molise (ISTAT, 2019c).

The highest percentages of plants that perform advanced treatment -or at least secondary- (including all biological treatments) are in Puglia and Basilicata (ISTAT, 2019c). In 2018 Puglia displayed the highest share of excellent coast quality monitored (99.7%), followed by Tuscany and Sardinia (98.9%) (ISTAT, 2020b).

The index of the chemical state of surface waters in the period 2010-2015 shows that **Molise** is among the five regions that reached 100% of the quality objective (ISPRA, 2020a); after Trentino Alto Adige, Molise is also the region with the highest quality index of the chemical status of underground water bodies (78%) (ISPRA, 2020a). In 2018 in Molise there was a significant increase in terms of water drawn (27.4% compared to 2015) to meet the drinking water needs of the neighbouring regions (ISTAT, 2020b).

The Region approved the reform of the water service with regional law of 22 April 2017 n.4. In particular, the new law recognizes "water as an inalienable public good" and the protection of hydrogeological cycles to ensure its renewability and quality. The new law therefore establishes EGAM, a government body in the field of water resources management including the planning of water infrastructures and territorial organization of the integrated water service.

Albania is considered a relatively rich country in water resources. The most important water resource is surface water, due to the presence of various rivers, lakes, lagoons and reservoirs (WB, 2019). The water supply for drinking purposes comes mainly from natural springs and underground water sources; unique exception is Tirana metropolitan area which is served partially by surface water and the touristic area of Kavaje which is served in summer season partially by the artificial reservoir linked to Maskuri artificial lake (WB, 2019).

Despite groundwater in Albania represents the most important source of drinking water supply (Eftimi, 2010) but clear and precise information about real availability and extraction are still scarce. The overexploitation in the areas located near Laç and Durres makes the intrusion of saline water increasingly greater. In fact, phenomena such as an increase in salinity and reduction in groundwater, increasing population and water demand are likely to lead to a strong reduction in quality and quantity of drinking water (WB, 2019). Although water supply is currently higher than demand for drinking uses, Albania still suffers high heterogeneity in water availability across municipalities and water losses are often high or very high (WB, 2019)

Nevertheless, the assessment of the current use of water resources is difficult due to some criticalities such as the lack of an appropriate monitoring system, frequent changes in economic activities, and high dynamics of demographic movement towards urban centers (Baraj et al., 2017).

According to WB (2019) Albania shows significant results above the average of other candidate countries in wastewater treatment, thanks to investments made in the infrastructures. The discharges of untreated wastewater have been also the main source of pollution for coastal bathing waters, which have advantaged

from the recent investments made in the wastewater system (EEA, 2015). However, much more has to be done.

Data show very strong heterogeneity in terms of coverage rates for piped water supply and sewerage between urban and rural areas (92% vs 59% for water supply and 76% vs 13% for sewerage) (WB, 2019). In rural areas the coverage of various services is still lagging far behind (WB, 2019).

Despite it is still low, the trend of coastal bathing water quality in Albania shows important progress. In fact, the percentage of coastal bathing water classified as excellent increased from 25% to 67 % during 2015-2018 (EEA, 2019).

After the Law No. 111/2012 on the integrated management of water resources, aimed at protecting and improving the water environment and water resources, Albania launched in 2018 the National Strategy of Integrated Management of Water Resources for 2018-2027 which has five strategic objectives including the sustainable use of water resources and the attainment of good water quality in all water resources by the year 2027, and application of inclusive and sustainable water management practices. The Agency of Water Resources Management represents the main institutional body, capable to set up synergies with other institutions of this strategy and building synergies with other line ministries⁵⁶.

Montenegro has good quality groundwater and surface water, despite unevenly distributed across the entire country (Danube Water Program, 2015). Most of the karst areas are located in the central and western parts (mostly arid), whereas the northern mountainous area is richer in raw water. Overall, Montenegro is divided into two main basins (Danube and Adriatic catchment); in 2012, 90% of water abstracted for public water supply came from groundwater (Danube Water Program, 2015).

In terms of water supply for settlements, between 2014 and 2017 the percentage of water losses increased by 10% (MONSTAT).

Research pointed out that 80% of the investigated sites have bathing water quality according to Montenegrin legislation (Kolarević, et al., 2020).

In Montenegro, water resources issues are strongly linked to pollution. Particularly in urban areas, rivers are often used as sewage recipients, with the consequence of reducing water quality and its capacity for self-purification (Pešić et al., 2020).

Surface Water Monitoring in Montenegro is today regulated by the Law on Environment, the Water Law, the Decree on Classification and Categorization of surface and Groundwater of Montenegro and the Decree on the National List of Environmental Indicators. Particularly, the Water Law, which follows the EU requirements, defines the overall goals for water protection and management, including the conditions for surface, groundwater and coastal water quality classes (Vukašinović-Pešić et al., 2020).

7.5 Sustainable energy and green economy

In the Programme Area, but especially in Puglia and Molise, due to consolidated national policy on electricity management, several incentives fostered investments of renewable energy both in public and private sector. Albania Government, in the framework of the alignment to the *acquis*, is working on policy incentives and diversification of renewable energy sources; currently, the most important source of renewable energy is hydropower, which is not able to ensure a decrease of dependency on energy import.

Montenegro is updating its regulatory framework as regards the overall energy sector whereas the production of energy from renewable sources is pretty relevant. The energy efficiency of public buildings of the cross-border area needs still to be improved also on the basis of good practices developed in recent years. Many public buildings are still built-in times, when poor thermal insulation was used and thus are still very inefficient and highly energy-dependent.

⁵⁶ <http://www.fao.org/datalab>.

Consequently, the importance of a green strategy is now perceived as essential for the cross-border cooperation area. All the territories are called upon to play a crucial and more active role to develop green technologies characterized by a lower impact on the environment.

Despite intentions, the green strategy in Albania is still quite weak. During the transition period, traditional sectors have almost disappeared and new products have to be developed. Therefore, the development of green products and technologies such as solar, biomass and energy efficiency in the building and transport sector represent an interesting potentiality for the future development of the country.

Conversely, Montenegro, albeit slowly, is increasing the use of economic and institutional instruments for promoting environmental protection.

In 2015, the EC adopted an Action plan to foster the transition of Europe to the circular economy but also the strengthening of competitiveness and the promotion of sustainable growth and new green jobs. To achieve the goals of the EU, the governance of the life cycle of natural resources is needed for the green growth paradigm.

Through the National Decree 15th March 2012 by the Ministry of Economic Development, each region has to achieve within 2020 specific consumption rates in terms of percentage of renewable energy consumption per year. The specific objective for **Puglia** region was 14.2% (GSE, 2020a). Since 2013 Puglia exceeded the expected objectives: in 2018 the consumption rate of renewable energy was 16.5% of regional energy consumption (GSE, 2020b).

In 2019 the total gross production of renewable energy has been generated by wind farms (50.9%), photovoltaic plants (35.2%), bioenergy (13.7%), and hydropower plants (0.08%). This figure contributed for 8.9% of the national production of renewable energy (TERNA, 2019). In the same year, Puglia shows the highest value among the Italian regions in terms of installed power by photovoltaic plants (13.5% of the national total) (GSE, 2020b).

In the framework of structural funds of Community Programme 2014-2020, Puglia Region spent € 157.891.208 for energy efficiency to implement in public buildings, it's about 41% of total ERDF funds of Southern Italy Regions in the framework of energy efficiency in public buildings (ENEA, 2019). In 2019, in Puglia region the energy saved thanks to energy requalification interventions on the building was about 52GW/year (RAEE- 2020)⁵⁷.

Accordingly, the green economy represents a very strategic asset as it involves many aspects of the regional economic system. Green Italy Report by Fondazione Symbola-Unioncamere (2019a) shows that for the period 2015-2018 the share of businesses that invested in eco-innovation accounted for 31.5% in Puglia, thus it is considered among the seven best-performing regions. Progress have been made also in terms of "green jobs" in private businesses on the total regional economy (11.6%): however, Puglia is still below compared with other southern regions such as Molise and Basilicata (13.5% and 11.8%, respectively) but slightly above compared with the southern regions average (11.1%) (Fondazione Symbola-Unioncamere, 2019a).

Molise is one of the most performing regions in Italy in the area of renewable energy: in 2016 the share of consumption covered by renewable energies exceeded the regional threshold defined by the law and in 2018 this figure achieved 39.1% (+3.1% over the target) (GSE, 2020a). In 2019 the total gross production of renewable energy has been generated by wind farms (54.6%), photovoltaic plants (16.9%), hydropower plants (16.8%) and bioenergy (11.6%) (TERNA, 2019).

In April 2015, Molise Region adopted the "Energy and Environmental Plan" which aims both at a more efficient use and exploitation of natural resources and to reduce the environmental impacts.

Furthermore, up to December 2018, the Region has funded calls in the field of energy efficiency with more than €8mln arising from European structural funds 2014-2020 (ENEA, 2019). In 2019, in Molise region the

⁵⁷ <https://www.efficientaenergetica.enea.it/pubblicazioni/raee-rapporto-annuale-sull-efficienza-energetica.html>.

energy saved thanks to energy requalification interventions on the building was about 4,296GW/year (RAEE-2020)⁵⁸.

The presence of interesting natural landscapes, parks, and other natural amenities makes Molise among the regions with the highest potential in terms of green economy. According to Fondazione Symbola-Unioncamere (2019a) for the period 2015-2018 among the Italian regions Molise shows the highest share of businesses that invested in eco-innovation on total businesses in the region (37.6%). During the same period, Molise accounted for the highest share of businesses with green jobs (13.5%), the best performing among the southern regions.

In **Albania**, the renewable energy is a challenging issue and a considerable potential. The renewable energy consumption increased by 22.8% during 2012-2017 and 130% between 2017 and 2017 (IRENA, 2020a). The production of renewable energy was covered by hydro/marine energy for 74%, bioenergy for 24%, solar for 1% and the remaining one by wind and geothermal (IRENA, 2020a).

Since the hydropower depends on weather conditions, this source is not able to achieve alone the NREP final objective for 2020 (National Agency of Natural Resources, 2019). In order to diversify the sources of renewable energy (mainly hydropower, photovoltaic and wind) incentives have been introduced to foster investments in renewable energy production (National Agency of Natural Resources, 2019).

In 2017 the Albanian Government has partially transposed EU Directive 2009/28/EC through the Law 7/2017 on Promotion of the Use of Energy from Renewable Resource, in order to align its energy policy to the acquis and to decrease its dependency to energy import through the use of renewable energies (National Agency of Natural Resources, 2019). In 2015, according to the energy balance published by EUROSTAT, Albania achieved a 34.9% share of energy from renewable sources, above the third indicative trajectory of 34.3% (National Agency of Natural Resources, 2019).

In Albania, most of the public buildings owned and managed by the central or local government. According to REEHUB project, the most typical energy sources and heating systems were electricity in the urban area of Tirana, including wood (mostly wood stoves), depending on the climate zone. In many public buildings of Albania, there is no automatic regulation of the system as most of the public buildings are at least 20-30 years old (SLED, 2016).

However, approaches to green economy are still weak in Albania. The implementation of the National Strategy for Integration and Development for the period 2015–2030 and several other documents in line with the 2030 Agenda for Sustainable Development requires investment in environmental infrastructure and services.

In **Montenegro**, the production of renewable energy is particularly relevant. Between 2016 and 2017 the consumption of renewable energy increased by 54.4%, although in the 2012-2017 period the figure decreased by 6.4%. In Montenegro there are three sources of renewable energy: bioenergy (49%), hydro/marine (48%) and wind energy (3%) (IRENA, 2020b).

Montenegro is implementing an energy development strategy regarding energy supply based on the 2016-2020 action plan. Furthermore, the regulatory framework is being updated to be aligned with the EU acquis. Both the wholesale and retail electricity markets are open and since January 2015 the market is also open to individual customers (EC, 2019c).

The household energy consumption and data on existing buildings show that, also thanks to the introduction of MEPR (Minimum Energy Performance Requirements), the average energy consumption of residential buildings in Montenegro decreased from 178 kWh/m²/year in 2011 to 161 kWh/m²/year in 2016 (PEEREA, 2018).

⁵⁸<https://www.efficienzaenergetica.enea.it/pubblicazioni/raee-rapporto-annuale-sull-efficienza-energetica.html>.

Montenegro is paying increasing attention to the valorization of green growth and circular economy on the side of tourism development, by integrating a set of issues including demographic, social, natural and economic aspects, as stated in the National Development Strategy of Montenegro by 2030, which took over the universal UN objectives of sustainable development in the national context (EC, 2019c).

However, one of the main challenges in sustainable energy includes the improvement of the legal framework and the strengthening of the policy framework and institutional capacity for climate change adaptation initiatives implementation.

7.6 Blue economy

The EC with “The EU Blue Economy Report 2020” emphasizes the performance of the EU economic sectors related to oceans and the coastal environment. The EU blue economy sector shows in 2018 a turnover of €750 billion and about 5 million people working, increased by more than 11% compared to 2017.

The blue economy remains a new concept for the Programme area. Indeed, whereas the ‘green economy’ aims at preventing the environmental degradation and imbalances, the blue economy mostly highlights the productive use of marine resources for sustainable development.

The main feature of a maritime cooperation programme is the sea, where the state border is located, and which separates and unites the participating countries. As such, the Sea is a key environmental, economic and cultural resource for all territories of the Programme area on the one hand, but one of the main obstacles of cooperation on the other.

In the case of cross-border territories, sectors such as the maritime economy seem to be highly relevant, as considered one of the main domains with the best innovation potential which requires interactions from public and private to be actively engaged in a growth process.

The above-mentioned networking mechanism may also provide the identification of skilled works in the various sectors forming the blue economy aggregate. Indeed, the territories of the Programme area are historically devoted to agriculture, traditional manufacturing, tourism and fishery and the lack of competencies emerges in the manufacturing part of the value chain as well as the supply of specialized services sector.

This aspect also focuses on the problem of public policies connected to the sea, historically sectorialized and not oriented towards approaches aimed at intercepting the synergies between the different sectors such as coastal tourism and fishing, coastal protection and boating or between algae cultivation, fishing, tourism and aquaculture.

It is essential that investments in the blue economy may generate long-term social and economic benefits. Although many of these activities are of national competence, Interreg cooperation projects can be one of the tools through which important cooperation opportunities for the cross-border area may be provided.

Being a relatively new frontier, approaches to the blue economy and blue growth are still substantially uneven across the territories of the cooperation area.

Blue economy development and recovery measures taken by the EU due to the COVID-19 crisis, such as dedicated support from the European Maritime and Fisheries Fund can further boost the awareness on the issue, due to the huge potential of the blue economy and its contribution to a green recovery.

Due to its strategic positioning, **Puglia** region shares with other European regions the use of marine resources, especially with territories of the cross-border cooperation area.

The presence of a wide natural heritage that includes important marine protected areas, landscapes and coasts, makes the blue growth strategy even more important for the future development of the region.

Puglia Region identified the Blue Regional Growth as a strategic regional sector. The Resolution No. 2018/209 "Blue Economy and Strategy for Intelligent Specialization" of the Regional Council indicates priorities for intervention in regional planning in line with the EU guidelines.

In the strategic document SmartPuglia 2020 the blue economy is also indicated among the priorities; the intervention aims to provide a common strategy to develop all the innovative actions related to the sea together with more traditional and historical activities such as fishing, oil and gas extraction off-shore, maritime transport and shipbuilding, including new sectors such as the energies of the oceans, seabed mining, blue biotechnology, coastal and maritime tourism and aquaculture.

During 2014-2020 programming period Puglia Region has improved initiatives promoting the blue growth thanks to the participation in IPA Adriatic projects such as Blue Boost, Smart Adria BG and Triton.

According to ARTI (2020) Puglia displays a historical heritage of companies in fishing and ranks second after Sicily in terms of production of fish, revenues and employees. Puglia shows the presence of companies in fish retail trade and aquaculture; this last makes Puglia among the best performing regions together with Veneto, Emilia-Romagna, Friuli Venezia-Giulia and Sardinia (ARTI, 2020).

4% of the total companies operates in the blue economy sector. The southern part of the region is one the most specialized area with an added value of 916 million euros and 18,000 employees.

According to the regional Chambre of Commerce, in Puglia there were 7,123 companies operating in all sectors of the blue economy. If we focus on the core businesses the amount is more than 2,358 local units. Employees of the blue economy are approximately 34 thousands. If we exclude no-core sectors, the total amount is 10,200. Among core businesses, fisheries cover an important share in terms of employment (19.3% of the total in 2018).

Most of employees (about 47.2% of the total) belong to tourism. According to Unioncamere Puglia (2020d), the region is the second-best fish producer after Sicily (25,276 tons), with around 600 firms and 3,653 units of crew that represents 12% of the national share.

Puglia has an ancient tradition of shipbuilding and boat rental or ships. Based upon Unioncamere Puglia data (2020d) in 2018 there were 230 companies in ships and boats building, floating structures and pleasure boats, with 1,000 employees. Also, ships repair is of great relevance; one of the four national ship breaking yards is located in Puglia.

Puglia exports sea products mainly to Malta, Tunisia, the Netherlands and Albania. Instead, the selling of ships and boats in 2019 regarded to a lesser extent, Montenegro, Croatia, Switzerland and Germany (ARTI, 2020).

Other important sectors are sustainable and innovative shipbuilding industry, offshore wind power but also the reuse of plastics and aquaponics. Among the most innovative activities there are those related to coastal and marine archeology, underwater and maritime tourism.

The involvement in the blue strategy of other actors such as incubators, districts, associations, etc. may further stimulate opportunities for knowledge transfer, fostering innovation processes and the creation of inter-sectoral synergies at transnational level, under the lens of quadruple helix model that focuses on the interaction between public, private, research and civil society.

Despite criticalities and structural constraints **Molise** have started an implementation process aimed at fostering interventions on the blue economy in line with the EU principles and goals. Through the Regional Council Resolution no. 438 of 10 September 2018 containing: ROP ERDF ESF MOLISE 2014-2020 - Axis 8 Education and Training - Action 8.1.1 - Interventions such as training courses strictly connected to the needs to job reintegration and training initiatives particularly devoted to blue economy have started to be implemented. The participation in projects on blue growth and BIG cluster is providing awareness about the role of the region as a strategic territory for putting in place concrete measures for the new Interreg Programme 2021-2027.

Albania is strengthening its own strategy in terms of blue growth. The need for complementary measures also emerges in Albania which suffers the increasing impact of climate change on the coastal areas that are creating erosion, flooding and the increase of water salinity; also, the increase of coastal tourism is generating more waste and plastic litter.

There are new and growing opportunities in Albania that focus on sectors emerging around the sea such as sustainable fisheries and aquaculture. Thanks to the adoption of the National Fisheries Strategy, the participation in projects and new initiatives to reduce pollution, national governments and policy makers are starting to implement more concrete actions concerning the protection of coastal areas including starting planning actions for making more sustainable the overall marine chain.

Sectors such as marine-based economic activities as well as fisheries and tourism can boost Albania to achieve its national development goals. By improving fisheries and aquaculture management and fostering unique tourism products, but also the reduction of marine litter are important starting points for defining the priority actions (WB, 2020a).

Due to the participation in important projects of the Interreg IPA Programme, **Montenegro** also started a more in-depth consultation process between stakeholders and institutions aimed at better focusing strategies for strengthening the blue economy sectors in the perspective of a long-term blue growth Strategy. Smart Adria BG project (2020) provided useful information on the blue economy chain in Montenegro. In 2018 in Montenegro there were 35,381 employees in all sectors of the blue economy. Most of employees belong to tourism (including those individuals employed in museums, historical monuments management, car rental, etc).

Montenegro has also a strong tradition of shipbuilding and boat/ships rental. At the moment there are 55 Shipbuilding & Repairing companies registered.

The "Adriatic Shipyard Bijela" is recognized to be the biggest ship repairing yard in the Southern Adriatic. Nowadays, Montenegro has 2,000 berths for boats, yachts and mega-yacht and is predicted to double in the near future due to the increased demand for permanent and visitor berths.

Porto Montenegro harbor is suitable for hosting the most luxuries yachts in the next future. Finally, the Montenegrin merchant fleet is currently developing close to the international standard.

The aquaculture sector in Montenegro consists of both freshwater and marine aquaculture. Montenegrin aquaculture is managed by the Ministry of Agriculture and Rural Development, Directorate for Agriculture and Fisheries, Department for Fisheries. The contribution of the aquaculture in the Montenegrin national economy is insignificant, but there is significant potential for its development. Modernization of the sector, increase and diversification in production, as well as training and education could provide this potential.

Montenegro is a full member of the regional organization of the General Commission for Fisheries of the Mediterranean since 2018, and is recognized by the GFCM as a member that is properly and fully fulfills its obligations. Montenegro is not a member of the International Commission for the Conservation of Atlantic Tunas (ICCAT) but has begun membership activities. Montenegro is a signatory to the Ministerial MEDFISH4EVER Declaration adopted at the Ministerial Conference on 30 March 2017 in Valletta, Malta.

The regional quadruple blue economy helix system is mostly formed by the university system and other public and private research centers and institutes such as Institute for Marine Biology - Kotor, Maritime faculty - Kotor, centres of excellence.

Despite Montenegrin tourism is commonly seen as one of the key factors for economic development, geographical constraints and its scarce accessibility claim for a faster intervention on the institutional and programming point of view that cannot be overlooked, by experiencing new actions on the blue economy.

Measures and sub-measures defined within the framework of the NSSD 2030 strategic goal "Enable sustainable management of resources of the coastal area and foster blue economy" create the assumption for the implementation of the sustainable development targets in the framework of cross-border cooperation and blue strategy.

8. Transport network

8.1 Ports network

The ports of Bari and Brindisi are positioned in an intermodal network, able to intercept the Adriatic motorway traffic and the railway network that is well connected to Central and Northern Italy, as well as with Bari Airport. At Costa Morena terminal, in Brindisi Port, a rail has been constructed and it will soon become operative in order to ensure sea-rail intermodal.

The port of Durres, the biggest one of Albania, is well connected both to the city centre and to the railway network. As regards to the port of Bar in Montenegro, it is linked to the railway system which ensures connections with Podgorica and Belgrade (Serbia).

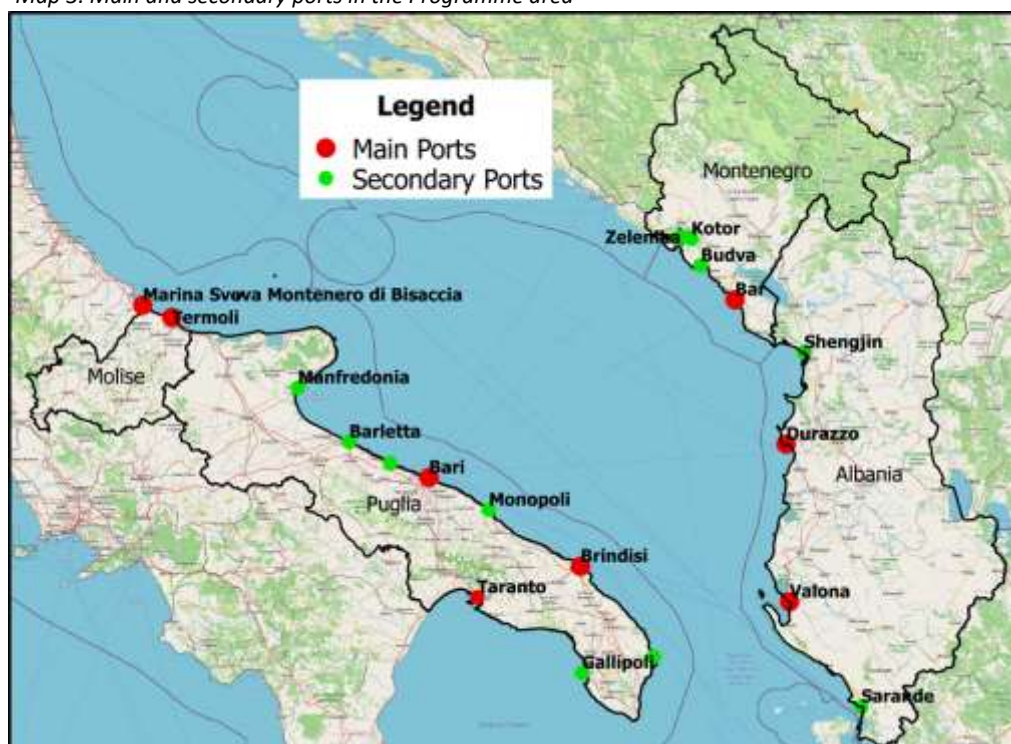
Over the last few years the port network in the Programme area showed significant progress mostly in terms of passenger traffic. In particular, the port of Bari and Albanian ports displayed a solid increase in cruise tourism flow and passenger flow.

Durres-Bari and Valona-Brindisi represent the main connections between Italy and Albania thanks to ro-ro (roll on – roll off) pax and ro-ro cargo connections among these ports as well as with Greek and Croatian areas (among Bari, Brindisi and Patras, Igoumenitsa, Dubrovnik)⁵⁹.

The port of Bar, which is the most important in Montenegro, is well connected to Italy (Bari – even though seasonal - and Ancona). However, while the traffic of goods increased in Montenegrin port, passenger flows from and to Montenegrin ports decreased consistently.

Before the COVID-19 and its tremendous impact on global trade, the ports of the Programme area were experiencing a substantial expansion. In fact, most of the strategic traffic through ports in this region was with Chinese partners and this aspect has stimulated the interest of the Chinese government in developing at least one new port.

Map 3. Main and secondary ports in the Programme area



⁵⁹ https://issuu.com/studiopg/docs/brochure_completa.

Source: ARTI's elaboration on "portiditalia.it" and "greece-ferries.com/it/porti.

In **Puglia** region there is a harbor system formed by 3 main ports of national interest such as Bari, Brindisi and Taranto, and six smaller ones of regional interest: Manfredonia, Barletta, Molfetta, Monopoli, Otranto, Gallipoli. The latter are for freight traffic or yachting and tourism⁶⁰.

The Port of Bari, with its 27 berths, is an important connection with the Black sea. Corridor VIII is the Adriatic Sea-Black Sea axis which mostly develops along the Durres-Tirana-Skopje-Sofia-Burgas and Varna route with the maritime interconnection to the Italian ports of Bari and Brindisi and the Adriatic Corridor. Corridor VIII is therefore a strategic axis between the Adriatic Sea and the Black Sea, which connects the Italian Adriatic-Ionian southern regions with Albania (Durres, Tirana) through the ports of Bari and Brindisi (ASSET, 2019). There are connections with Croatia, Montenegro, Albania and Greece throughout the year.

The Brindisi port, a multipurpose building site with many commercial, industrial and tourist activities, plays a central role for all connections and links passengers and goods with Turkey, Greece, Balkans and Eastern basin of Mediterranean (Autorità del Sistema Portuale del Mar Adriatico Meridionale, 2020a). Developed on three basins, it is one of the safest in the lower Italian Adriatic.

Taranto is the third Italian port for freight traffic and its infrastructure has continuously increased⁶¹.

The distance from population centres has allowed the use of extensive surrounding areas to support all port activities. It is in continuous expansion and aims to increase its strategic role for traffic throughout the Mediterranean. Manfredonia port, also known as "Porto Vecchio" or "Porto Commerciale", is an ancient and important port structure in the Gargano area located near the town. It is one of the most appreciated in the Adriatic Sea for its basin size and safety. It hosts industrial traffic and, as provided for the Three-Year Operational Plan of the Port Authority of Levante, on 21 July 2009 was activated the first ferry line for passenger service between Barletta and Durazzo port. It is the cargo-fishing type and It can accommodate around 200 small to medium-sized boats. It covers an area of 364,000 m² and is divided into an external basin of 229,000 m² and an internal square. Otranto port is particular because consists of a wide bay with three quayed arms and many piers stick out from the shore. Before entering the port, it is recommended to contact the Otranto Maritime District Office; a cylindrical lateral boa with green flashes and a red light at the head of the pier are used to enter. Today it is an important commercial hub and during the summer it becomes an important tourist port of call for the Salento.

Among them, the two most functional ports for tourists are undoubtedly the Bari port (distance from the nearest railway station 2.6 km, distance from the nearest airport 13.8 km and distance from nearest motorway exit 11,7 km) and Molfetta port (distance from the nearest railway station 3 km, distance from the nearest airport 20 km and distance from nearest motorway exit 5 km).

Between 2018 and 2019 there was a steady growth in a number of passengers and freight whereas cruise tourism flow increased by 18.7% (Bari is the main gate for cruises) (Autorità del Sistema Portuale del Mar Adriatico Meridionale, 2020b).

Recent data (December 2020) total general cargo in the Port of Taranto show a slow-down of -14%, compared with the same period of 2019 (Autorità del Sistema Portuale del Mar Ionio, 2020).

The **Molise** region port system is made up of two ports: Marina Sveva Montenero di Bisaccia and Termoli port. Termoli Port is a passenger, fishing and tourist port in the Adriatic Sea, located in the municipality of Termoli in Campobasso province. It links passengers and goods with Tremiti Islands. During the year, given the size of the area close to the city centre, it is also used for popular festivals or concerts. Since 2003, the depth of the external port has increased from 4.5 m to 5 m and boats up to 30 m in length can enter it (tourist pier). The port hosts approximately 120 fishing boats, of which only 10 are small-scale fishing boats. The

⁶⁰ <http://internazionalizzazione.regione.puglia.it/logistica>.

⁶¹ <http://internazionalizzazione.regione.puglia.it/logistica>.

Marina Sveva Tourist Port is located about half a mile north of the mouth of the River Trigno, in Costa Verde near the Marina of Montenero di Bisaccia and in the gulf that joins the beautiful towns of Vasto and Termoli. The Marina Sveva Tourist Port is a recently built harbour facility equipped with numerous active green systems: an excellent water purification system for recycling and sustainability that starts with the collection of rainwater, an intake column for black water and bilge water with subsequent treatment before disposal, self-sufficient hot water systems based on solar panels, anti-pollution treatments for the bunkering area and water collection from natural aquifers for washing boats with savings in drinking water. The port consists of 7 floating docks that can accommodate up to 446 pleasure boats of up to 30 metres in length. In 2019, passengers traffic accounted for 209,000 units, 6.2% more than the previous year; also, traffic freights increased (ISTAT).

Albania consists of two main ports, located in Durres and Vlore, classified as national interest ports and two secondary ports located in Saranda and Shëngjin. Durres is the biggest one and it is considered the main gateway for Central and Western Europe (UNECE, 2014); it consists of passengers and freights terminals and is well connected to the city Centre and to the railway network. The main destinations are 3 Italian ports on the Adriatic Sea: Bari, Ancona and Trieste, Koper and Otranto (UNECE 2014).

The second port in terms of passengers and freights traffic is Vlore, consisting of 2 terminals and 7 berths (UNECE, 2014); It is located about 5 km from the center of Valona city, about 120 km from Sarande and links Albania region with Brindisi city (Puglia region). The main town is a commercial port of entry, busy with ferries and other traffic. Valona remains an important seaport and commercial center, with a significant fishing and industrial sector. The best beaches are located between Valona and Saranda, often surrounded by pine forests and olive groves, and are characterized by very fine golden sand. Shëngjin Port is the northernmost seaport in Albania and is frequently accessed by cargo and fishing boats. It provides the area with a strong industrial foundation. The Harbor's access point is located in the northwest part of the city. The port is protected by lengthy rock walls that extend into the sea and is surrounded by popular holiday beaches. Shëngjin has approximately 3 km of beachfront. Also, in Saranda there is a touristic port. It is the southern port of entry into Albania. It has been recently renovated and extended making it possible for cruise ships docking. It's very close to Corfu' (only 6 miles) and makes it a favorable and frequented port by sailors not only to enter into Albania but also to visit the surrounding area which has indeed a lot to offer to its visitors. Between 2012 and 2019, a gradual growth of passengers and freight traffic was registered (43% vs 12%, respectively) (INSTAT).

In the eleven months of 2020, the volume of freight loading/unloading in ports is 3,919 thousand/tonnes, decreasing by 4.4 % compared to the eleven months of 2019. In the eleven months of the year 2020, 344,660 passengers travelled by sea, decreased by 77.0% compared to the same period of 2019 (INSTAT, 2020n).

The Montenegro port system consists of one main port of Bar classified as national interest port, and three secondary ports – Kotor, Zelenika and Budva port.

Bar port connects the railway network with Podgorica and Belgrade (Serbia) (Ministry of Transport and Maritime Affairs of Montenegro, 2019). Bar port is part of the Adriatic Sea. The town is a major port and recreation centre and has been greatly enlarged since the late 1970s to facilitate increased oil imports and exports. To the southeast is the port of Ulcinj, a tourist and health resort, while inland is Lake Scutari, the largest Balkans lake. It links tourists with Bari and Ancona in Italy.

On the northern side, close to Croatian borders, there is the touristic port of Kotor that represents the main gate for touristic cruises and yachting. Actually, the Port of Kotor is the 3rd cruise port of Adriatic in terms of number of berths, after Venice and Dubrovnik (PORTS project - INTERREG IPA CBC Italy – Albania – Montenegro). It is situated in the Boka Kotorska bay, a beautifully scenic bay in Montenegro in the foothills Pestingrad and Vrmac. Kotor bay, the southernmost and only fjord in the Mediterranean area, has a wealth of cultural and historical heritage. Lovcen, a mountain and national park in southwestern Montenegro rises

from the borders of the Adriatic basin closing the long and twisting Kotor bay and offers fabulous views over the town of Kotor. Passengers are docked directly on the harbour. From here, it is possible to walk into the old town of Kotor, situated 100 meters away. New modern terminal facilities opened in July. A pilot project has been designed and proposed for berthing of new generation of cruise ships over 300 meters. No doubt, one of the best ways for cruise passengers to spend their time at Kotor Port is to explore the medieval walled city of Kotor, a UNESCO World Heritage Site. The old town has some of the most well preserved monuments of medieval architecture in the Mediterranean sea. Zelenika is the first port for a yacht entering Montenegro from North direction while Marina Budva (known as Dukley Marina) is situated at the foot of old town Budva. It provides good shelter, it is very well protected from wind, especially North -West wind, and wide space so it is suitable for maneuvering inside it. It is situated near Tivat Airport, which is only 25 minutes far away, and about one hour far away from Podgorica Airport. Also Airport Dubrovnik is 2 hours far away from Budva. In the framework of the Transport Development Strategy of Montenegro 2019-2035, the next strategies will be oriented to enlarge the passengers' terminal in Bar port and to extend the area for vessels reception in the Bay of Kotor (Ministry of Transport and Maritime Affairs of Montenegro, 2019).

Between 2017 and 2018, the passengers carried to/from Montenegrin ports decreased approximately by 10%, while the goods transport increased by 4.5%. (MONSTAT, 2019a).

The main routes for traffic goods from Montenegro ports are in the South-East Mediterranean area (mainly Italy and Croatia), besides China and Singapore (MONSTAT, 2019a).

8.2 Airports Network

In the last decade, the whole Programme area (except for Molise) experienced a significant growth of air passenger traffic as well as the opening of new air routes within Europe and beyond. This positive dynamic can be associated with the concurrent development of the tourism sector. Moreover, investments in infrastructures are foreseen on existing airports and in the constructions of new ones (especially in Albania and Montenegro).

However, cross-border connections remain poor, considering that the only available air-connections are Bari-Tirana and Brindisi-Tirana.

The subsequent socio-economic crisis caused by COVID-19 is hardly hitting the transport and tourism sectors (which are strictly connected) and it will have severe consequences in the forthcoming months and years.

Puglia has 4 civil airports in Bari, Brindisi, Taranto-Grottaglie and Foggia. Through the DGR n. 1590 of 3/10/2017, Puglia Region established the upgrading of the Foggia Airport, also making it a strategic center of civil protection as well as hub for all public interest functions related to civil protection activities (Aeroporti di Puglia, 2020). The airport of Taranto-Grottaglie has been indicated as an airport of national interest by the National Plan for Airports; it operates as a logistic platform for research and development of technological solutions for the aeronautics and aerospace industry. The existing regional planning aims at including the airport of Grottaglie into a wider territorial logistic system which involves the port of Taranto as its main hub. Accordingly, it will be crucial to enhance the sea-air synergies within the frame of intermodality (Aeroporti di Puglia, 2020).

In the Airport of Bari between 2009-2019 passenger traffic increased by 97.5 % by 12.4% only in 2019⁶².

In 2019, Bari was connected with 17 domestic destinations and 64 international ones (increased if compared with those of 2017 and 2018). In the same year, the top domestic destinations in terms of passengers' volume were Rome, Milan and Bologna and top international destinations were London, Budapest and Beauvais (Paris) (Aeroporti di Puglia, 2020).

⁶² <http://www.aeroportidipuglia.it/traffico-passeggeri>.

The Brindisi Airport registered the highest increase in passenger traffic (148.8% in the period 2009-2019 and 8.8% in 2019)⁶³ and in 2019 the airport offered connections with 11 domestic destinations and 25 international ones. In the same year, the three top domestic destinations in terms of passengers' volume were Rome, Milan and Bologna, whereas London, Zurich and Basel represented the three top international destinations (Aeroporti di Puglia, 2020).

As regards to the Taranto-Grottaglie Airport, in 2019 a total of 7,587 tons of goods through freight-cargo have been handled (+10.9% compared to 2018) (Aeroporti di Puglia, 2020).

In 2019, 32% of the passenger traffic was concentrated in July, August and September, confirming the trend of the previous years and indicates that a significant part of the traffic is due to summer tourism⁶⁴.

With the limited programme budget, no big infrastructural or air links may be financed, but certainly an improvement of the framework conditions enabling or supporting further investments on the air transport systems.

The Apulian airports, therefore, represent a strategic asset for the implementation of actions aimed at the tourism, industrial and social development of the Programme area.

Because of the COVID-19 pandemic and the related restrictions of free movements, in the first four months of 2020 the passenger traffic volume in Puglia decreased by 49.8% compared to the same period of 2018 (Aeroporti di Puglia, 2020).

Molise does not have airports in its territory. The land connections to Bari, Naples and Rome are used to reach the nearest airports.

Albania has only one international airport in Tirana. However, following the priorities of the 2016-2020 National Strategy for the transport sector, in 2017 the Albanian authorities identified Vlora as the most feasible site to build a new international airport which will serve the southern part of the country (Ministry of Infrastructure and Energy, 2018). Furthermore, the National Strategy launched a process to harmonise the national legislation with the EU acquis. That is why the National Government shall implement measures for a more competitive market and to adopt the international standards for air safety (EC, 2019).

Passenger traffic considerably increased between 2012 and 2019 (100.4%) and by 13.2% in 2019 (INSTAT). The positive trend is also confirmed by the rise of international connections, increased from 26 in 2015 to 37 in 2020. These air routes are operated by 16 airline companies⁶⁵. In 2019, top international destination in terms of passengers' volume were Rome, Milan and Istanbul (Tirana International Airport).

In the first seven months of 2020, measures taken to fight the COVID-19 pandemic had a tremendous impact on air traffic; in fact, passenger traffic decreased by 60.7% whereas volume of freights decreased by 25.2% (compared to the same period of 2019) (INSTAT, 2020).

In **Montenegro** there are two international airports in Podgorica and Tivat. In recent years, these infrastructures were modernised. According to the "Transport Development Strategy – Montenegro 2019-2035" upgrades and expansions of facilities will be fund (€ 95 mln for Podgorica airport and € 55 mln for Tivat airport) in order to implement a better management system to serve the increasing passenger traffic, especially during the summer peak (Ministry of Transport and Maritime Affairs of Montenegro, 2019).

Passenger traffic had considerably grown over the last years (+120% in the 2010-2019 period and only in 2019 this figure increased by 8%. Most of the traffic is concentrated in the third trimester of the year (MONSTAT).

⁶³ <http://www.aeroportidipuglia.it/traffico-passeggeri>.

⁶⁴ <http://www.aeroportidipuglia.it/traffico-passeggeri>.

⁶⁵ <https://www.tirana-airport.com/c/63/airlines>.

The country is connected to 31 international destinations and 46 air routes (+3 compared to 2018), operated by 13 airline companies⁶⁶. In 2019, traffic passengers' volume in Podgorica airport was mainly directed towards Serbia, Germany and Turkey, whereas in Tivat airport main destinations were Russia, Serbia and Ukraine (MONSTAT, 2020d).

In the first 3 months of 2020, the passenger traffic decreased by 10.9% compared to the same period in 2019 (MONSTAT, 2020d). This was only the first sign of the COVID-19 crisis which will have serious implications for the aviation sector but also for the economy of the country which is strongly related to the tourism sector.

8.3 Railway Network

Railway networks are not well developed in Albania and Montenegro, especially in terms of capillarity on the territory. The whole Programme Area lacks high-speed railways and most of the system consists of non-electrified one-track lines. However, investments in infrastructures are foreseen in all territories.

In Albania, the main challenges regard the reform of the rail system such as the adoption of a railway code which would allow to open-up the market and to attract public and private investors.

The Transport Development Strategy 2019-2035 of Montenegro defines a wide amount of infrastructural investments (such as the modernisation of existing lines and the constructions of new ones) as well as improvements concerning the regulatory framework in order to conform to the EU standards.

Rail connections between the Italian part of the Programme Area are ensured through the "Adriatic railway" that connects Lecce, Brindisi, Bari, Barletta and Foggia in Puglia with Termoli in Molise. Concerning the Balkan part, currently there is a rail connection between Tirana and Podgorica but it is devoted only to freight traffic. However, a project for reconstructing this rail connection to allow passenger traffic connection is under evaluation by both countries.

With the limited programme budget, no big infrastructural rail investments are possible, but certainly an improvement of the framework conditions enabling or supporting further investments on the railway system.

In **Puglia** the railway network consists of 1,568.1 km managed by 5 operators: Trenitalia, Ferrovie del Sud-Est, Ferrovie del Gargano, Ferrovie Appulo Lucane, Ferrotramviaria (Legambiente, 2019a).

Trenitalia is the first company in terms of network extension in Puglia and manages 840 km of the railway system, 72% of which is electrified, that is a figure in line with the national average (71.6%) and well over the southern Italian macro-region (58.2%); this confirms the good development of the system. 183.8 km are served by a single-track railway (ANCE, 2018).

Ferrovie del Sud-Est is the second company in terms of network extension and responsible for the management of 474 km of railway network (only 4.7 km of them have a double-track railway) and connects the main cities of Bari, Taranto and Lecce, but also 85 neighbouring municipalities (Ministero delle Infrastrutture e dei Trasporti, 2018).

More than 40% of trains operating in Puglia have more than 15 years old and the average is 20 years old (ReOPEN SPL, 2019).

The regional rail network has a density of less than 4.5 km every 100 sqm and it is mainly located on coastlines; about 10% of the population require more than 30 minutes for reaching main rail stations (ISTAT, 2020c). Compared with 2011, in 2018 the daily traveler's passenger traffic increased by 29.4% (Legambiente, 2019a).

There are not high-speed railways, although investments are planned. Indeed, through the "Sblocca Italia" law, 6.2 billion euros have been allocated for the construction of the high-speed railway line between Bari

⁶⁶ <https://montenegroairports.com/it/aeroporto-di-podgorica/compagnie-aeree-di-podgorica/>.

and Napoli which will become part of the Scandinavian-Mediterranean corridor of the Trans European Network (TEN-T)⁶⁷.

67.5 million euros from the European Regional Development Fund (ERDF) have been invested to modernise the railway system connecting the port of Bari and Taranto⁶⁸. Furthermore, € 96 million euros (67.5 million euros co-financed by ERDF) were allocated to create the double-track railway between Bari – Sant’Andrea and Bitetto (about 10.5 km)⁶⁹.

Most of the railway network in **Molise** is located on the coastline and has a length of 265 km. Only 22.6% of the network is electrified and about 36.8 Km of the network is served by a single-track railway (ANCE, 2018). 72.7% of the total trains available are more than 15 years old (Legambiente, 2019a).

In the 2011-2018 period, the passenger traffic decreased by 11% and in 2018 the average of per day passengers was 4,000 units which represents the lowest figure at the national level. Part of this loss is due to the interruption of the Termoli-Campobasso connection (Legambiente, 2019a).

In 2017, Molise Region adopted the Strategic Plan for the electrification and speeding-up of the Roccaravindola-Isernia-Campobasso railway line. Thanks to €80 mln investments (funded by the Cohesion Fund), the new connection will allow travelling from Campobasso to Roma and to Naples in less than 3 hours (Regione Molise, 2017).

In **Albania**, the railway system connects the southern part of the country (starting from Vlora station) to the northern part, until the Montenegro border (Shkoder station is the terminus). Tirana station is located at the centre of this route and it serves as a junction station for the railway line which runs eastwards until Pogradec, a municipality located next to the Macedonia border. There is currently one international connection with Montenegro that is dedicated only to freight traffic⁷⁰.

There were no improvements of the rail network in the last years, considering that in 2018 the total length was 334 km, whereas a decade before it reached 400 km (EUROSTAT).

Freight traffic by rail substantially grew between 2012 and 2019; in the same period, passenger traffic fell by 86.6% (INSTAT). In the first months of 2020 it dropped by 52.6% (compared to the same period of 2019) as a consequence of COVID 19 pandemic (INSTAT, 2020o).

Montenegro rail network’s length was 250.5 km in 2019, consisting of one-track line. More than 89% of the system is electrified as a result of remarkable investments over the last years (Ministry of Transport and Maritime Affairs of Montenegro, 2019; MONSTAT, 2020d).

There are three lines converging in Podgorica and connecting the capital city to Bar (the line is fully electrified), Niksic (the line has been reconstructed between 2006 and 2012) and Shkoder. The railway line to Albania offers exclusively freight service (Ministry of Transport and Maritime Affairs of Montenegro, 2019). The density is 0.40 km of railway lines per 1,000 inhabitants. However, there are plans to build a rail line dedicated to passenger traffic between Albania and Montenegro (Ministry of Transport and Maritime Affairs of Montenegro, 2019).

Passenger traffic in Montenegro increased by 30.5% in the last decade (2010-2019), even if in absolute terms the figure is not very relevant considering that the highest inflow recorded was 1,284 passengers in 2016. With respect to the freight traffic, it is slightly decreased (6.6%) in the 2010-2019 period (MONSTAT).

⁶⁷ <http://www.napolibari.it/content/fsinapolibari/it/il-progetto.html>.

⁶⁸ https://ec.europa.eu/regional_policy/it/newsroom/news/2018/01/26-01-2018-cohesion-policy-enables-better-rail-connections-in-the-italian-region-of-puglia.

⁶⁹ https://ec.europa.eu/regional_policy/it/projects/Italy/double-railway-track-improves-connections-and-service-quality-in-bari-italy.

⁷⁰ <https://hsh.com.al/index.php/linja-hekurudhore/>.

8.4 Road Network

Road network in the Programme area has still a potential development aiming firstly to foster the mobility through the increasing of accessibility to highway and main roads from isolated areas. In the Italian area, the local governments are working in this direction through investing EU funds.

The road system on the Italian side is mostly composed of provincial and rural roads, whereas national roads and motorways are mainly located along the coastline. Most relevant connections are Taranto-Bari-Termoli, Bari-Naples and Campobasso-Rome. In particular, Puglia working to improve the road network using EU funds: in 2014-2020 EU Programming period, the allocated funds consist of 4.313,8 billion euros (ANCE, 2018).

In Montenegro and Albania national strategies are currently being implemented, in accordance with European standards; the two countries are connected through the route Vlore-Tirana-Durres-Skoder-Podgorica, while Podgorica is directly connected to Belgrade (Serbia) and Dubrovnik (Croatia). Very important is the development of the Adriatic – Ionian expressway. Montenegro Government has planned to develop a highway network along the coastline, to be implemented in the framework of the Adriatic-Ionian corridor which will connect Croatia and Albania (Ministry of Transport and Maritime Affairs of Montenegro, 2019).

With the limited programme budget, no big road infrastructures may be financed, but certainly an improvement of the framework conditions enabling or supporting further investments and improvement of the efficiency of the road transport systems.

In **Puglia** region, the road network has an extension of 11.250 km: around 81% are provincial roads, 14.3% national roads and almost 2.8% are highways, including 2 national highway nodes: Bologna-Taranto and Napoli-Canosa di Puglia⁷¹ (ACI, 2011).

The ratio of infrastructural equipping on the regional surface is 0.58 km², above the national data (0.51 km²)⁷². Consequently, the accessibility to the highway network is limited: approximately 30% of local population need over 45 minutes to reach a highway entrance (ISTAT, 2016). The national road Adriatica SS16 connecting the main Apulian cities is a very important road connection, allowing for efficient road transports.

The number of vehicles increased by 29%; also, in 2018 the ratio of vehicle per inhabitant is 0.75%, lower than the national rate (0.85%) and the lowest in Southern Italy (Ministero delle Infrastrutture e dei Trasporti, 2018).

In **Molise**, provincial roads are almost 46% of total road network whereas highway accounts for 1.3% of the total, the remaining ones are national roads or uncategorized roads (e.g., rural, field and forest roads) (ACI, 2011).

The isolation and inaccessibility to high roads is an issue for nearly 40% of the population (45 minutes to the nearest highway entrance) (ISTAT, 2016); in the framework of EU Programme 2014-2020 103.7 million euros have been allocated to improve the accessibility and the intermodality of road network as well as foster the mobility of people⁷³ (Ministero delle Infrastrutture e dei Trasporti, 2018). From 2013 to 2019 the traffic freight on road increased (ISTAT).

Albania has a road network of 18.300 km including private access, urban and local roads (Ministry of Infrastructure and Energy, Albanian Roads Authority); the Albanian Road Authority (ARA) is the national body

⁷¹ <http://internazionalizzazione.regione.puglia.it/logistica>.

⁷² http://www.aci.it/fileadmin/documenti/studi_e_ricerche/dati_statistiche/Infrastrutture_stradali_in_Italia/Dotazione_di_infrastrutture_stradali_in_Italia.pdf.

⁷³ <http://pattosviluppo.regione.molise.it/node/17>.

responsible for the construction and maintenance of Albanian road network, in accordance with European International Standards. Actually, ARA manages 3.945 km of roads, of which 1.184 km are Primary Roads and 2.058 km are Secondary Roads, connecting the major urban and touristic centres of the country (Ministry of Infrastructure and Energy, Albanian Roads Authority).

Albania is going to develop the Adriatic – Ionian Highway to connect Italy with Western Balkans and Central Europe through Corridor VIII; the infrastructure will be financed by Western Balkans Investments Framework (Ministry of Infrastructure and Energy, Albanian Roads Authority).

In 2019, the number of vehicles transporting goods in the country increased by 5.4% compared with 2015, whereas vehicles dedicated to passenger traffic increased by 22.8% in the same period (INSTAT, 2020h).

In November 2019, goods exported by road decreased by 7.3% compared with a same period of previous year (INSTAT, 2019f) whereas goods exported by road in November 2020 increased by 13.5 % compared with the same period of 2019 (INSTAT, 2020c).

Due to COVID – 19 Pandemic, from January to July 2020, the freight traffic decreased by 10.8% compared with the same period in 2019. However, in November this percentage slowed to 2.5% (INSTAT, 2020b).

The road network in **Montenegro** has a total length of 9.249 km of which 68.4% is paved road, 19.8% is gravel road and the remaining 11.8% is unclassified (e.g., rural or forest road). From 2014 to 2018, the total road length is increased by 7.4% (MONSTAT, 2020d).

Paved road is divided in main and regional road: the first category connects the most important cities and the cross-border area, whereas the regional roads connect the minor centres and provide connections with main roads. The road network has been improved in order to connect Podgorica with cities located on the coast: Budva, Bar and Cetinje (Ministry of Transport and Maritime Affairs of Montenegro, 2019).

In 2019, the number of registered vehicles were +5.9% compared with the previous year whereas total goods carried (in thousand tones) increased by 9.3% (MONSTAT, 2020d).

9. Health and social inclusion

9.1 Health system

Even if the health system of the Programme area improved in management, much needs to be done in quality and services. The increasing and complex governance of health systems claim for more efficiency, organization and effectiveness but also a new and more workforce in order to reduce the high hospital migration rates. Thanks to the increased digitalisation and use of technologies (such as with the telemedicine and e-health), even in a maritime cross-border area, there is wide room for cooperation among health systems.

In the last years, both Albania and Montenegro are starting to align their health policy with the EU acquis trying to improve the management of dedicated public funds and guarantee skilled personnel.

In the Italian part of the Programme area the hospital migration is still quite high, especially in Molise.

COVID-19 pandemic has also severely affected the healthcare of the areas of interest, providing the need for new awareness about the demand for modernization and new dynamism of the whole health system.

In the pre-accession context, it is clear that citizens of non-EU countries have still not the same rights to access EU health systems, but in view of the adoption of the acquis, bi- and trilateral actions may improve this. For highly specialised health services, not available in the countries and regions of the area, instead of reaching the nearby hospitals across the border, citizens of this area have to move to far away regions (e.g., in Northern Italy) or even in other countries (e.g., Turkey for Albanian citizens, Serbia for Montenegrin citizens, etc.).

For other health services (e.g., dental health, cosmetic surgery, etc.), instead, there is an important cross-border market, which is growing because of the competitive advantage of certain private health services across the border.

In 2017 **Puglia** accounted for 34 public care hospitalization centres, of which 25 are hospitals directly managed by the Local Health Department (Ministero della Salute, 2017). Overall, public healthcare accredited structures were 1024 in 2017 whereas the private ones accounted for 513. In the same year, public semi-residential and residential facilities were 38 whereas 499 were the private ones (Ministero della Salute, 2017).

The medical staff in 2017 was 6,651 units, with an increase of 4.3% from 2014, whereas the nursing staff decreased by 4.9% in the same period (Osservatorio Nazionale della Salute nelle Regioni Italiane, 2019).

The number of treated cases for home care assistance in 2017 was 47,888, of which 71.4% are elders (over 65) and 15.3% terminal patients (Ministero della Salute, 2017).

In 2018, life expectancy for males is of 81 years old whereas for females is 85.1, in line with the national value (Osservatorio Nazionale della Salute nelle Regioni Italiane, 2020).

The per capita public health expenditure increased from 2011 to 2018 (Osservatorio Nazionale della Salute nelle Regioni Italiane, 2020). According to CENSIS (2018) the per capita private health expenditure accounted for 20.9% of the total.

COVID-19 pandemic exacerbated and made more complex the management of the overall health system including the recruitment of new medical specialists and health staff.

In 2017 **Molise** accounted for 5 public care centres, of which 3 are directly managed by the local health department (Ministero della Salute, 2017). Overall, public healthcare accredited structures were 73 in 2017 whereas the private ones accounted for 30. In the same year, public residential facilities were 2 whereas private residential and semi-residential ones were 29 (Ministero della Salute, 2017).

Among Italian regions, Molise registered between 2014 and 2017 the highest decrease - in percentage terms - as regard medical (16.8%) and nursery staff (8.5%) (Osservatorio Nazionale della Salute nelle Regioni Italiane, 2019).

In 2019, life expectancy for males is of 80.3 years old whereas for females is 85.8, somewhat in line with the national value (Osservatorio Nazionale della Salute nelle Regioni Italiane, 2020).

In 2018, the percentage of hospital migration is high (about 24% on average), the highest in Italy (ISTAT, 2019b).

In terms of per capita public health expenditure, Molise in the period 2014-2018 registered a decrease of 10.5%. (Osservatorio Nazionale della Salute nelle Regioni Italiane, 2020). Concerning private health expenditure, it accounted for 19.3% of the total according to CENSIS (2018).

The **Albanian** health system is mainly public. The state provides the majority of services in the promotion, prevention, diagnosis, and treatment. The private sector covers mostly pharmaceutical and dental services, and some specialized diagnostic services (DHS Program, 2018).

Life expectancy in Albania increased in the last years. In 2018 it was expected 77 years for males and 80 for females; this difference is mainly due to different lifestyles, specifically to smoke, alcohol consumption and road accident (DHS Program, 2018).

In 2018 the total number of public hospitals was 42 whereas private hospitals were 13. In the period from 2014 to 2018 the number of hospitalized persons has slightly increased (INSTAT, 2018).

Each of 61 Albanian Municipalities has Primary Health Care that offers services to 8.000-20.000 persons registering a doctor/patient ratio of 1:2500 and nurse/patient ratio of 1:400 (WHO, 2018).

The Compulsory Health Care Insurance Fund, managed by Ministry of Health and Social protection, guarantees a "health package service" for each citizen, among them, healthcare for eldest and health service for women during the reproductive age, health service for children. About the children, the Albanian health system guarantees a constant control of the children growth until 6 years old, specifically about nutrition and immunization (WHO, 2018).

In 2018, domestic private health expenditure accounted for 44.6% of the total, a figure considerably than the EU average (25.5%) (WB).

Albania national government has adopted the National Health Strategy 2016-2020 aiming to align its health policy with EU *acquis*, the implementation strategy goals aim at improving the quality of healthcare system in public hospitals through an appropriate staff and more funds (EC, 2019a).

In **Montenegro**, the health system records positive trends but shows various criticalities, firstly the costs of the healthcare system that is relatively large. In fact, the total annual expenditure is over EUR 200 million, that is about 9% of the total expenditures of the state budget (China-CEE Institute, 2019).

The Ministry of Health is working on a new budget plan dedicated to health institution. In 2018 an “Integral Health Information System and e-Health” has been adopted to manage information system of Montenegrin health units (EC, 2019b).

Life expectancy for male at birth is of 74 years and for female is of 79, with a slight increase of 0.7% in the last decade⁷⁴.

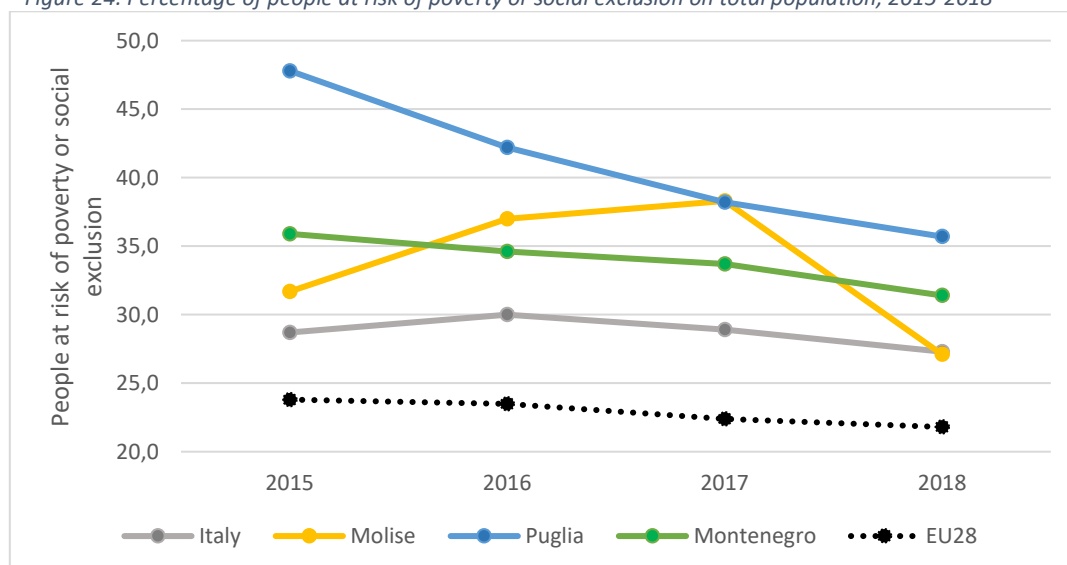
The number of general hospitals is equal to 8 units and the number of beds is basically the same during 2014-2018. There are some specialized hospital centres such as 1 paediatric hospital, 1 orthopaedic hospital and 1 hospital for pulmonary diseases (MONSTAT, 2019c).

Private health expenditure in Montenegro in 2018 accounted for 39.9% on the total. This data is higher than the EU average (25.5%) (WB).

9.2 Social Care

Data on social care and protection show some progresses have been done to answer to the local needs of people at risk of poverty and social exclusion. However, the share of people at risk poverty and social exclusion is still comparatively high if compared with the EU28 percentage. This claims for faster and more consistent interventions by the institutions of the Programme area, considering the impact of COVID-19 pandemic which have further exacerbated the social conditions and enlarged the gap of specific population groups.

Figure 24. Percentage of people at risk of poverty or social exclusion on total population, 2015-2018⁷⁵



SOURCE: ARTI's elaboration on EUROSTAT data.

⁷⁴ <https://data.worldbank.org/indicator/SP.DYN.LE00.IN?locations=ME>.

⁷⁵ Data from EUROSTAT. Data for Albania are not available.

There is room for cooperation also within the social care: e.g. the growing elderly population of certain regions may need more services from social care workers, who may also be present in another region and country of the Programme area.

The territory of **Puglia** is divided into 45 social territorial areas. The region is currently implementing the 2018-2020 Plan for Social Policy which aims at establishing specific thematic goals such as the network of house services for not-self-sufficiency individuals, social inclusion, quality of life and reconciliation of work, private and family life.

According to ISTAT, in 2017 a significant percentage of municipalities on total (92,2% on the total) offered home-care assistance concerning elder care 65+ as well as home-care social assistance and health services for disabled persons (62.8%), home-care assistance for families and minors (28.7%), whereas assistance to needy people should be strengthened. Social services' users on the target population are relatively low, considering that none of the fields above mentioned reaching 3%.

In 2017, the expenditure for social services was mostly devoted to family and childhood protection services (43.3%), then services to disabled persons (20.1%) eldercare (16.4%) and assistance to needy people (8.7%). The expenditure for drug addiction services and immigration management is relatively modest (0.5% and 4.9%, respectively), although the share of budget dedicated to immigration management almost doubled during 2012-2017. Overall, the total expenditure for social services increased by 6% in the 2012-2017 period (ISTAT).

Of more concern, despite in 2018 the percentage of people at risk of poverty or social exclusion on total population was 35.7%, decreased by 4.9% compared with 2014, this share is still far above the Italian value (27.3%) (EUROSTAT) and, even further, EU28 one (21.8%).

In **Molise** there are 7 social territorial areas that bring together neighbouring municipalities aiming to have a shared-management of local social policies through a three-year strategic plan aiming at organising social services and related public fund for each municipality, in the framework of the implementation of a social policy based on social care and social inclusion (Regione Molise, 2015).

According to ISTAT, in Molise in 2017 a significant percentage of municipalities (89% on the total) offered home-care assistance concerning elder care 65+, whereas the share of municipalities that offered home-care social assistance and health services for disabled persons and home-care assistance for families and minors is much lower (12.5% and 2.2%, respectively) (ISTAT).

In 2017, the expenditure for social services was mainly devoted to family and childhood protection services (30.1% of the total), services to disabled persons (20.1%) and eldercare (17.3%) (ISTAT).

In 2018 the percentage of people at risk of poverty or social exclusion on total population was 27.1%, decreased consistently compared with 2014 (13.1%), this share is almost the same as the national one (27.3%) but is higher compared to the EU28 one (21.8%) (EUROSTAT).

The social care system in **Albania** is funded through the state budget and it is provided by public and non-public entities which provide support for people living in poverty, with disabilities, elderly, orphans, victims of trafficking, with mental issues and drug abuse. Local authorities are responsible for the management of these services in order to shape them on the basis of each specific territorial needs (CSP, 2017).

In November 2016, the new law on social care services has been adopted and it introduces relevant elements such as local social plans, basket of services at local level and community-based services. The Social Protection Strategy outlined a set of new priorities for the 2015-2020 period in order to empower support CSP, 2017).

Although in Albania most of the expenditure for social protection in 2017 was dedicated to elderly (68.4%) followed by people with illness and disabilities (18.5%), whereas the expenditure in the other sector remains modest; also, the budget for pensions has risen from 394 million euros (in 2005) to 888 million euros (in 2017), accounting for 7.7% on the national GDP (European Social Policy Network, 2019).

In 2018, the percentage of people at risk of poverty or social exclusion is 49.0%, decreased by 2.8% compared to 2017 (INSTAT, 2019a). This figure is dramatically high if compared to the EU average (21.8%).

Montenegro Government has already taken important measures related to social inclusion and protection. In 2018, the Action Plan 2017-2021 for the protection of children against violence and related Law have been adopted as well as the Strategy plan 2018–2022 for elderly protection (EC, 2019).

Some measures on no discrimination of minorities, such as Roma and Egyptian communities have been taken. However, there are still many steps to do related to non-discrimination of women and mothers in the labour market and social policies (EC, 2019).

In 2018, the people at risk of poverty and social exclusion were 31.4% of the total population, less than the previous year (33.7%) but more than 10% compared to the EU28 value (21.8%) (EUROSTAT).

Between 2017 and 2018 both institutions for children and youth care and institution for adults increased, particularly those services devoted to children with mental and physical disease (MONSTAT, 2019).

Families social care increased between 2016 and 2018: the number of beneficiary families in 2018 was +4% compared to 2016 whereas the number of children receiving allowance decreased by 22% between 2014 and 2018 (MONSTAT, 2019).

10. SWOT Analysis

1.1 Enhancing growth and competitiveness of SMEs through joint cross-border actions

Strengths	Weaknesses	Opportunities	Threats
1.1 Strategic Geographical position	1.1 Low GDP per capita levels compared to the EU average	1.1 Ports suitable for maritime transports are useful for industries to import/export	1.1 Differences in terms of innovation and technological capabilities and among urban centres and rural areas
1.1 Diversified natural heritage and coastline	1.1 GDP per capita gap among the territories	1.1 High potential of traditional sectors through industry 4.0 paradigm (for instance, precision farming, textile, mechanics, etc.)	1.1 Rapidly changing situation in innovation and information technology
1.1 Inclusion into the strategic framework of EUSAIR	Negative internal migration balance	1.1 Availability of young labour force especially in Albania and Montenegro	1.1 Risk of mass tourism run by foreign investors, which may exploit rather than provide for a sustainable development of the territories
1.1 Strong economic sectors (tourism, agri-food, aerospace)	1.1 Demographic decline and increasing amount of old population	1.1 Low cost of living suitable for foreign investments	1.1 Covid 19 pandemic badly affecting all sectors, where public events have been forbidden for long periods
1.1 Relatively young population in Albania and Montenegro	1.1 Net importers	1.1 Increasing specialization in sectors with a very strong innovation potential such as mechatronics, biotechnology, biomedical and pharmaceutical	1.1 SMEs in blue and green economy may go out of business because less competitive than bigger companies
1.1 Strong regional innovation system in Puglia region formed by various business incubators, start-ups and other actors	1.1 Low investment in R&D	1.1 Cooperation will contribute to a favorable economic and social	
1.1 Puglia region started to implement cross-cutting policies in R&D and innovation thanks to the interrelation between the Smart Specialization Strategy (S3) and the Digital Agenda strategy	1.1 Low employment level in technology and knowledge-intensive sectors		
	1.1 Low percentage of persons with tertiary education employed in science and technology		
	1.1 Low percentage of households with broadband		

<p>1.1 S3 Strategies are implemented both in Molise and Montenegro, while Albania has started to process to develop and adopt its own S3 strategy.</p> <p>1.1 Most of the area is a competitive tourism destination, officially recognized in the tourism market</p> <p>1.1 Increasing offer of touristic accommodations</p> <p>1.1 Growth in the quality of wine and vegetable production in Puglia</p> <p>1.1 Cross-cutting dimension of tourism with other sectors such as creative industry and management of protected areas</p> <p>1.1 High quality of cultural heritage officially recognized</p> <p>1.1 Presence of a large diversity of cultural destinations</p> <p>1.1 Historical tradition in agriculture (oil, wine, vegetables), mechanics and textile especially in Puglia High prevalence of SMEs</p> <p>1.1 Relevance of fashion industry Industrial districts and specializations in Puglia</p> <p>1.1 Important social and economic role of agriculture, food and fishing for the Programme area Climate suitable for tourism</p> <p>1.1 Quality of sea water may still be suitable for many blue economy initiatives</p> <p>1.1 Cross-border private health services market</p> <p>1.1 E-health services may be developed</p> <p>1.1 Private health services are growing</p>	<p>access and scarcely efficient networks</p> <p>1.1 Low percentage of individuals who used the internet</p> <p>1.1 Lack of data and statistics, especially for some territories</p> <p>1.1 There is not enough balance among the 4 areas about accommodation capacities</p> <p>1.1 Low level of promotion through marketing</p> <p>1.1 Strong decrease of public interest in movie and theater sector in Molise (Molise has not any film commission)</p> <p>1.1 Lower budget for creative industry in Albania</p> <p>1.1 Lack of innovation and productivity</p> <p>1.1 Low controls of quality and safety of food and traceability in Albania and Montenegro</p> <p>1.1 Except for some areas, aquaculture is still under-developed</p> <p>1.1 Tourism is concentrated in some seasons</p> <p>1.1 Weak approach to green economy in Albania Blue economy sectors still under-developed</p> <p>1.1 Weak management, quality and services in the health system</p> <p>1.1 High hospital migration rate</p>	<p>environment for the Programme Area</p> <p>1.1 The Innovation Agenda for the Western Balkans will boost the technology transfer and facilitate access digital technologies in IPA countries</p> <p>1.1 New labour markets linked to cybersecurity and the ethical use of technologies</p> <p>1.1 Enhancement of public-private partnership due to the first Centre of Excellence in BIO-ICT in Montenegro</p> <p>1.1 The pandemic may strengthen the strategic re-positioning of the whole agri-food supply chain</p> <p>1.1 Aquaculture is a promising activity for food production</p> <p>1.1 New technological trajectories for mechanics and mechatronics</p> <p>1.1 Mechanical engineering production in Albania</p>	
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2.1 Promoting climate change adaptation, risk prevention and disaster resilience with joint cross-border actions

2.2 Enhancing biodiversity, green infrastructure in the urban environment, and reducing pollution with joint cross border actions

2.3 Promoting energy efficiency with joint cross border actions

Strengths	Weaknesses	Opportunities	Threats
<p>2.2 Presence of an important natural heritage</p> <p>2.2 Rich biodiversity and protected areas throughout the Programme Area (Albania is one of the richest biodiversity in Europe)</p> <p>2.2 The presence of a large diversity of natural heritage destinations</p> <p>2.2 Existing air quality policies/ initiatives</p> <p>2.1 Firefight reduction successfully implemented in Puglia</p> <p>2.1 2014-20 projects partnerships in risk management</p> <p>2.1 Lessons learnt and systems in place from the COVID-19 pandemics</p> <p>2.2 Increased separate waste collection in Puglia and Molise</p> <p>2.2 Actions to adopt the EU legislation in view of accession, in relation to waste management</p> <p>2.2 Hydrographic district preserved</p> <p>2.2 High quality bathing water</p> <p>2.2 High share of excellent coasts monitored</p> <p>2.3 Great potential for the development of renewable energy sources</p> <p>2.3 Puglia is one of the most virtuous regions in renewable energy in terms of businesses that invested in eco-innovation</p>	<p>2.2 Degradation of landscapes, coastal and maritime areas</p> <p>2.2 Anthropogenic pressure exerted on natural ecosystems</p> <p>2.2 Weak interrelation of green tourism with other types of tourism</p> <p>2.2 A complete inventory of this rich biodiversity and marine habitat maps are still missing</p> <p>2.2 Weak management of maritime litter</p> <p>2.2 Weak management of waste and water systems</p> <p>2.2 Missing air quality monitoring systems in Albania</p> <p>2.2 Air pollution during winter season due to heating in Montenegro</p> <p>2.2 Poor air quality in some areas such as Taranto/Brindisi</p> <p>2.1 Lack of joint plans to address climate change consequences</p> <p>2.2 Lack of plans to address air quality issues</p> <p>2.1 High exposure to natural risk in Albania and Montenegro</p> <p>2.1 Lack of urban planning linked to natural risks</p> <p>2.1 High landslide, seismic and fire risk in Molise, northern Puglia and Albania</p> <p>2.1 Lack of collaboration experience among the territories</p>	<p>2.2 Development of environmentally and friendly tourism within the areas of naturalistic interest</p> <p>2.3 Potential to develop renewable energy sources</p> <p>2.2 Increased awareness on the importance of natural heritage</p> <p>2.2 Improved and coordinated management of protected areas and NATURA 2000 sites of the Programme area</p> <p>2.1 Committing reduction of 30% of GHG emissions by 2030 in Montenegro</p> <p>2.1 Pre-accession exercise, assisting IPA countries in adoption measures for climate change</p> <p>2.2 Pre-accession exercise to adopt air quality policies</p> <p>2.2 Existing policies/initiatives to address climate change and emissions may be capitalized on</p> <p>2.2 Restoration of natural habitats and its systems to preserve the functioning of the biosphere</p> <p>2.1 Natural risk and disaster science may be very attractive for recruiting new students and researchers</p> <p>2.1 Earthquakes, floods but also landslides and fires stresses even more the need for the alignment and adaptation to the EU safety standards</p> <p>2.1 Networks of actors may be used to better coordinate risk management and urban planning among the territories</p>	<p>2.2 Risk of increasing environmental pollution due to increase in tourism</p> <p>2.2 Overload of tourism activities along the coasts</p> <p>2.2 Uncontrolled fishing, ghost fishing and illegal hunting especially in some parts of the Programme area</p> <p>2.2 Alien fish species are destroying maritime ecosystems</p> <p>2.2 Abandonment of agro-forestry-pastoral economic activities, with consequent reduction of the supervision and increase in the degradation of the agro-forestry territory, woodland habitats, pastures, agro-ecosystems</p> <p>2.2 Loss and fragmentation of habitats due to anthropogenic causes</p> <p>2.2 Overall reduction of biodiversity worldwide</p> <p>2.1 Vegetable and animal pandemics such as Xylella for olive grows and bird flues may endanger the rich biodiversity of the area</p> <p>2.2 Impact of pollution and climate change on agricultural, food and fishery sector</p> <p>2.1 Climate change and increasing temperature, increase environmental risks and degraded habitats</p> <p>2.2 High concentration of emissions in high industrial areas of Taranto and Brindisi</p> <p>2.2 Increasing CO2 emissions in Albania</p> <p>2.1 Increasing coastal erosion and soil degradation</p>

<p>2.3 Existing Energy transnational networks (e.g. pipelines, underwater energy grids, etc.)</p>	<p>2.1 Lack of joint plans for mitigating risks of pandemics (for human beings, animals, livestock, plants)</p> <p>2.2 Low or lack of separate waste collection</p> <p>2.2 Karstic nature of the territory and highest water dependency index in Puglia</p> <p>2.2 High levels of water loss in the pipelines</p> <p>2.2 Groundwater prone to soil pollution due to industries and agriculture</p> <p>2.3 Industrial steel plants of Taranto still dependent on coal for energy</p>	<p>2.1 Joint plans for mitigating risks of pandemics (for human beings, animals, livestock, plants)</p> <p>2.2 Modernized waste management legislation in Puglia</p> <p>2.2 Relevant measures have been devoted to the renewal of waste management infrastructures in Montenegro</p> <p>2.2 Actions in circular economy to preserve the natural habitats</p> <p>2.2 Improving skills in management of waste</p> <p>2.2 Promoting investments and research for increasing efficient use of water in agriculture and water reuse</p> <p>2.2 Improvements of water supply in urban areas in Albania</p> <p>2.2 Strengthening water management will be a good way to get available water when it is needed also to face and prevent future pandemics</p> <p>2.2 Preservation of water habitats with coordinated cross-border models and plans</p> <p>2.3 Development of integrated Energy and Climate Plan and perspectives of alignment of energy policy to the EU acquis in Albania</p> <p>2.2 Significant reforms on Green economy (cross-cutting) in Montenegro</p> <p>2.2 Growing environmental awareness and interest on Blue growth</p> <p>2.3 Cooperation between public institutions, industry, academia and civil society will mitigate the lack of coordination and efficiency in implementing the use of energy efficiency and renewable energy</p> <p>2.3 TAP pipeline running through the programme area,</p>	<p>2.1 Illegal deforestation in Albania</p> <p>2.1 Increased risk of pandemics (for human beings, animals, livestock, plants)</p> <p>2.2 High levels of marine litter</p> <p>2.2 Increasing amount of waste production and hazardous waste</p> <p>2.2 The common sea is prone to oil spill or gas leaking risks</p> <p>2.2 Increasing degradation of groundwater and salt contamination</p> <p>2.2 Water quality is deteriorating due to discharges from agriculture, industry, human waste, and wastewater</p> <p>2.2 Climate change will also negatively affect water quality</p> <p>2.2 Increasing water demand for domestic and health uses (COVID-19 and post COVID-19 era)</p>
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		<p>may enhance use of fuels less damaging than coal</p> <p>2.3 Making Energy transnational networks more efficient (e.g. pipelines, underwater energy grids, etc.)</p>	
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3.1. Developing sustainable, climate resilient, intelligent and intermodal national, regional and local mobility, including improved access to TEN-T and cross-border mobility, through joint cross border actions

Strengths	Weaknesses	Opportunities	Threats
<p>3.1 Connection system among the main ports of the Programme area</p> <p>3.1 Significant growth of air passenger traffic as well as the opening of new air routes within Europe and beyond</p> <p>3.1 Corridor VIII connecting South Italy with Balkans</p>	<p>3.1 Unbalanced intermodality system in the Programme area</p> <p>3.1 Undeveloped railway and road network in Balkans area</p> <p>3.1 Railway network more concentrated in the coastline</p> <p>3.1 Limited accessibility to highway and main roads from isolated areas</p> <p>3.1 Public transport is under-developed, compared to private transport system</p> <p>3.1 Green urban mobility under-developed</p> <p>3.1 Limited train and air connections for tourists from main world cities and to the hubs in the programme area, especially for some of the territories</p>	<p>3.1 Strategic freight traffic among the main ports of the Programme area and foreign countries such as China and Turkey</p> <p>3.1 Foreseen investments in infrastructures on both existing and new airports</p> <p>3.1 Network of touristic routes in implementation phase</p> <p>3.1 Public funds to be spent in implementing road network and intermodality system</p> <p>3.1 Adriatic – Ionian Highway will be developed, to connect Italy with Western Balkans and Central Europe through Corridor VIII</p> <p>3.1 Development of green and e-solutions in public and urban transport</p>	<p>3.1 COVID-19 has an immediate negative effect on tourism arrivals, on the transport links and therefore on the overall chain</p> <p>3.1 Due to COVID-19 pandemic in 2020 ports and airports passengers traffic dropped significantly, specific lines are not economically sustainable anymore and need to be re-launched at the end of the pandemic</p>

S.O. 4.1 Improving access to inclusive and quality services in education, training and life long learning through developing infrastructure, and cross-border actions

S.O. 4.2 Enhancing the role of culture and tourism in economic development, social inclusion and social innovation, through cross-border actions

Strengths	Weaknesses	Opportunities	Threats
<p>4.1 In 2019 Molise showed a population in 30-34 age class who attained tertiary education higher than the Italian one; this represents the highest value among the Southern Italian regions</p> <p>4.1 During 2012-2018 in Albania the percentage of individuals aged 30-34 years</p>	<p>4.1 High share of long-term unemployment</p> <p>4.1 High share of NEETs</p> <p>4.1 Gender gap</p> <p>51 Lack of homogeneity in educational policy</p>	<p>4.1 Increased need to improve the University system and its link to the labour market</p> <p>4.1 Education and training actions aimed at improving long-term entrepreneurship and employment</p> <p>4.1 Vocational training and life-long training may provide</p>	<p>4.1 Increased economic pressure to sustain older generations</p> <p>4.1 COVID-19 pandemic risks to enlarge the wealth gap among territories, among rural and urban areas and inside each territory</p>

<p>old who have completed tertiary or equivalent education increased by more than 10 percentage points</p> <p>4.1 In Montenegro the percentage of early leavers from education and training is lower than the EU28 one</p> <p>4.1 Increasing share of the individuals aged 30-34 who attained tertiary education in Montenegro</p> <p>4.1 Vocational Education and Training system in Puglia has constantly improved</p> <p>4.2 Increasing tourism flows (both tourists and number of overnight stays)</p> <p>4.2 Rich culinary, winery, handicraft tradition of the entire area</p> <p>4.2 Cultural heritage rooted in local communities and linkages with creative industry</p> <p>4.1 Social inclusion services and social innovation have grown especially in the Italian territories</p> <p>4.1 High rate of people at risk of poverty and social exclusion</p>	<p>4.1 Lack of creative tools suitable for educational policy addressed to young generations</p> <p>4.1 Puglia, Molise and Montenegro (although increased) accounted for a participation rate in education and training lower than the EU28 and the national one (age class 25-64)</p> <p>4.1 High shares of early leavers from education and training in Puglia, Molise and Albania</p> <p>4.1 Low share of people who attained tertiary education</p> <p>4.1 The two IPA countries, and partially Molise, are suffering in the field of vocational training</p> <p>4.1 Weak links between education and labour and general mis-match between demand and supply of labour force</p> <p>4.2 Low resources for current maintenance of tourism infrastructure</p> <p>4.2 Tourism and cultural heritage strategies are often limited to a local or state level</p> <p>4.1 No enough skilled human resources to manage cultural sector</p> <p>4.1 No sufficient professional qualifications for specialized functions (such as e.g. in theatres)</p>	<p>new perspectives to long-term unemployed persons or to those who became unemployed because of the COVID-19 crisis</p> <p>4.1 Creative tools in educational programmes for young generations increasing skills of teachers</p> <p>4.2 Many untapped potentials as sustainable and slow tourism as common policy strategy in the face of a long-term tourism</p> <p>4.2 The presence of transboundary and common cultural assets provides potentialities for networking and creation of joint cultural route</p>	<p>4.1 Migration and Covid-19 will set new and upgraded security standards</p> <p>4.1 COVID-19 pandemic increases progressively the loss of some jobs especially among older people</p> <p>4.1 Intraregional and interregional disparities</p> <p>4.1 The high unemployment levels for youth increases the risk of exclusion and increasing precarious work</p> <p>4.1 Covid 19 pandemic risks to exacerbate the technological gap and digital divide among families and territories</p> <p>4.1 Skilled young people moving to more competitive R&D regions outside the programme area, because of the lack of opportunities in the sector</p> <p>4.1 Covid-19 increasingly threatens the consolidation of the educational convergence process and increases the number of unemployed persons, without an appropriate education or professional qualification</p> <p>4.2 Poor upgrading on expertise about tourism management</p> <p>4.1 Low propensity of young people to be employed in agriculture and fisheries</p> <p>4.1 Illegal exploitation of migrants as low cost labour force in agriculture</p> <p>4.1 Covid 19 pandemic can severely affect people social conditions in the Programme Area</p>
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S.O. 5.1 Enhance efficient public administration by promoting legal and administrative cooperation and cooperation between citizens and institutions, in particular, with a view to solving legal and other obstacles in border regions

Strengths	Weaknesses	Opportunities	Threats
	5.1 Lack of an institutional cross-border body capable to set up a joint tourism strategy	5.1 Intensified process for pre-accession countries	5.1 Lack of structural data on mechanics, textile in Montenegro

	<p>5.1 Lack of homogeneity in statistics and indicators in tourism and culture</p> <p>5.1 Non-homogeneous, updated and consistent dataset on natural heritage</p>	<p>5.1 Montenegro started a set of initiatives aimed at establishing a new institutional framework mostly based on the implementation of several actions on innovation</p> <p>5.1 Puglia and Montenegro are implementing long-term cultural development strategies</p> <p>5.1 Strong European support to Albania cultural policy</p>	
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