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The European Report on Resilient Regions

The European Report on Resilient Regions
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ReFace partners

OBČIANSKE ZDRUŽENIE MAS LEV, o.z.
Slovakia



ASTRA - ZDRUŽENIE PRE INOVACIE A ROZVOJ
Slovakia



ENTRE, s.r.o.
Slovakia



CESIE
Italy



FFE – FONDO FORMACION EUSKADI
Spain



UCA – UNIVERSITÉ CÔTE D'AZUR
France



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Acknowledgments

Author: Sglavo Simona, CESIE, Italy

Co-authors:

Mixelena Zalao, FFE – FONDO FORMACION EUSKADI, Spain

Ndukwe Rosina Ulokamma, CESIE, Italy

Orbánová Iveta, ASTRA - ZDRUŽENIE PRE INOVACIE A ROZVOJ, Slovakia

Redzepagic Srdjan, UCA – UNIVERSITÉ CÔTE D'AZUR, France

Urbančíková Nataša, ENTRE, s.r.o, Slovakia

Reviewers:

Dejan Eric, Belgrade Banking Academy, Beograd, Serbia

Jana Knežov, Office of Košice Self-governing Region, Slovakia

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Summary Report

The European Report on Resilient Regions is based on the guidelines created by ENTRE, Slovakia, for the collection of data and research methodology. It builds on the project proposal and contribution of all project partners. The variety of regions analysed allowed to collect a wider perspective on the issue of Regional Resilience on a European level. Through both a quantitative and qualitative approach, the members of the consortium developed their research, under the supervision of CESIE, as responsible of this task.

The present research provides the basic inputs for development of the Syllabus for MOOC “Regions facing shocks: building resilient community”, as it highlighted the weaknesses and strengths of partner countries’ regional resilience and their common VET needs. The MOOC “Regions facing shocks: building resilient community” will build on these premises.



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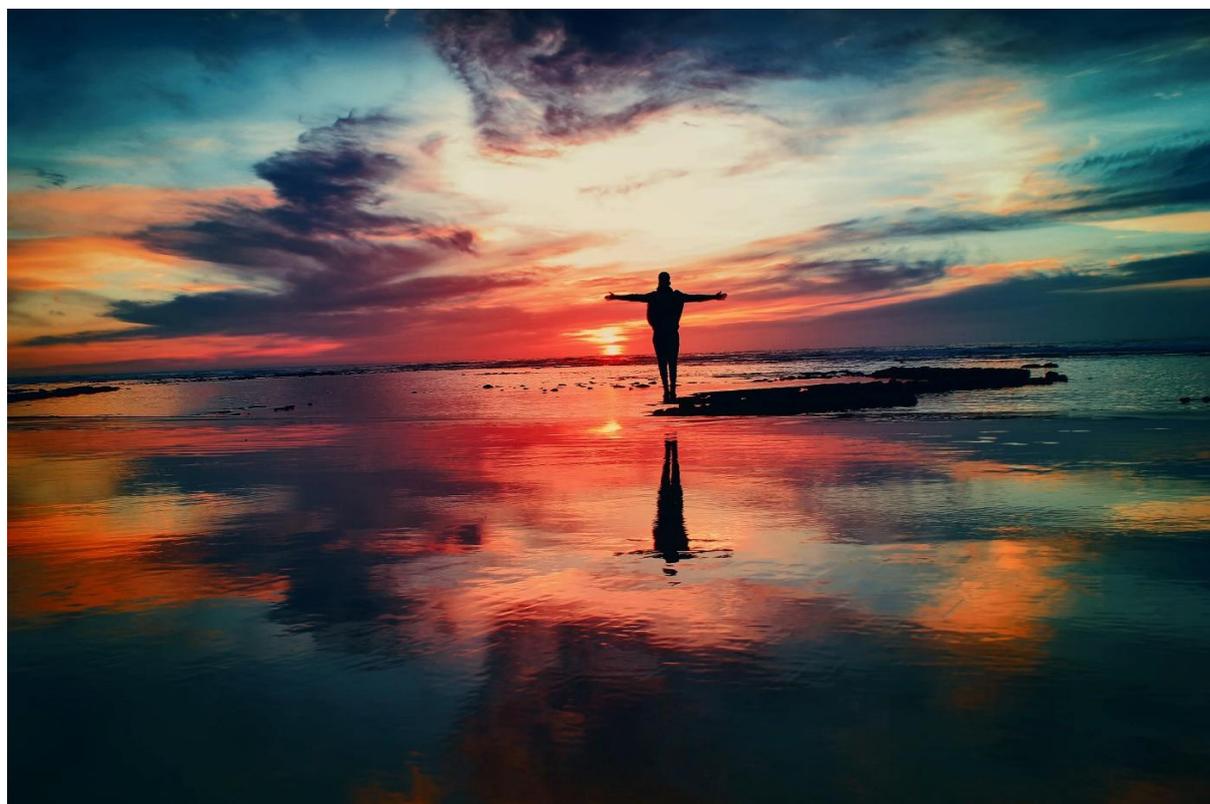


I. ReFace project

The recent occurrence of many contemporary adversities, e.g. financial, social, environmental, migratory, have raised doubts and uncertainties about the availability of efficient instruments and appropriate knowledge for prompt reaction among European institutions and national governments. The unexpected magnitude of the international crisis provoked by the Covid-19 pandemic clearly showed the weaknesses of current decision-making solutions to contemporarily address economic sustainability in the long term and the safety and well-being of people.

Thus, a central question is: how to ensure the adaptability of regions and their resiliency in order to thrive despite adversity and crises?

ReFace – Regions facing shocks: building resilient community is an Erasmus+ project (2020-2022), aimed to support key regional players from various sectors and subject fields in gaining and/or enhancing transversal competencies and the relevant up to date knowledge to build, further develop and maintain resilient regions and communities.



ReFace international partnership (Slovakia, Italy, France, Spain) will conduct researches, workshops and involve relevant stakeholders; more specifically partners will:

- Develop and pilot test a modular blended competency-based course focused on specific fields dealing with a proactive approach to regional resilience - “Regions facing shocks: building resilient community” - offered as MOOC (Massive Open Online Course), delivered online and accessible for all;
- Create the Road map "Supporting a Resilient Region - a tool for the Sustainable Communities";
- Promote initiatives of awareness-raising in the field of resilient region/communities building and organise multiplier events.

Resilience has been analysed along many different dimensions, but there is still no agreed definition among scholars and researchers as regards the regional level. Within the ReFace context, the term “**resilience**” is used to define the ability of regions to cope, adapt and recover from shocks, while reducing their overall vulnerability to similar events in the long term. Resilience also means transforming past occurrences in a lesson to improve their reaction in the future¹. (Further information on the concept of resilience is offered in **Table 1**. in the following page, based on the analysis of existing research and frameworks).

The long-term **target group** of the project is represented by the wider audience of policymakers at various levels of governance (i.e. local, national and European) and the stakeholders involved in the formulation, implementation and evaluation of regional policies and measures. Target groups also include educational service providers, intermediaries, and end-users. In principle, all stakeholders involved in the formulation and implementation of policies and actions related to regional policies at European and local levels can be interested in the results of the Project. Also, the students in study programs dealing with public administration and regional development are included, as they are supposed in a very short time to become employed by the public administration

¹ United Nations University: <https://i.unu.edu/media/cpr.unu.edu/attachment/2232/Assessing-Fragility-Risk-and-Resilience-Frameworks.pdf>

Table 1 Defining Regional resilience

Defining Regional Resilience
<p>Martin (2012) linked the term to resistance, recoverability and reorientation/renewal. Later works added the elements of vulnerability and robustness. Overall, what emerged is that economic resilience inevitably depends on factor intensity, openness (to foreign trade), specialization. Generally, those open and highly specialized economies seem to be the least likely to recover fast to an external shock.</p> <p>Source: EC Europa</p>
<p>Commonly recognisable qualities of resilient people are their inner strength, strong physical constitution, ability to leap back from failure and permanent striving for self-improvement. The same features could almost be assigned to resilient regions through their ability to last, capacity to respond to shocks or crises and their goal of becoming more coordinated and integrated. The best regions of such kind are not only able to adapt to shocks, but also able to discover new opportunities and perform even better in spite of perplexing circumstances. In other words, individuals, cities or regions at a time of disruption should avoid panicked responses and decisions based only on short-term considerations. Rather, long-term planning, coordination and cooperation would be the preferable reaction and in terms of adaptive resilience, the reframing of possible threats as opportunities and a change of routine practice instead.</p> <p>Resilience is generally understood as the ability and capacity of individuals, organizations, and structures (including cities) to cope, adapt, and recover from shocks and stresses, in a way that reduces the overall vulnerability to similar shocks and stresses in the long term. Yet, resilience is more than just the opposite of being vulnerable. Rather, it is often referred to as the capacity to “bounce back better,” which places emphasis on the capacity to learn from past experiences and improve (even transform) institutions and systems. From this perspective, resilience strategies reach beyond mere survival. At the city level, resilience has been defined as “the capacity of cities to function, so that the people living and working in cities – particularly the poor and vulnerable – survive and thrive no matter what stresses or shocks they encounter.” For this reason, resilience is often understood as a process-oriented, proactive (rather than reactive), and reflective method of decision-making. Resilience takes place over a long timeframe, rather than being a short-term outcome, or an end state that can ever be fully achieved.</p> <p>Source: United Nations University</p>
<p>Resilience is the ability of a system and its component parts to anticipate, absorb, accommodate or recover from the effects of a hazardous event in a timely and efficient manner, including through ensuring the preservation, restoration or improvement of its essential basic structures and functions (IPCC 2012).</p> <p>Source: WorldBank</p>
<p>A resilient region (or community) is one that is able to anticipate threats, reduce the impact of these threats by taking pre-emptive action, respond appropriately when these threats materialize, and recover afterwards. Such threats (or shocks) can be natural events, often but not always weather-related; human-made, such as terrorism or industrial accidents; pandemic diseases; or an economic collapse or disruption. A region’s resilience is initially determined by the magnitude and severity of such shocks and the region’s capacity to contend with them based on its inherent vulnerabilities and available resources. If the shock overwhelms capacity then resilience is measured by the region’s ability to recover to a pre-shock level of functioning or to achieve a “new normal” that is at least as favourable. The ultimate outcome represents the region’s capacity to cope with the next shock.</p> <p>Source: NADO (National Association of Development Organisations)</p>

In connection to the ongoing coronavirus crisis and its continuing effects on European economies the debate about crisis resistance and resilience is firmly back onto the EU agenda. For more information see: [Bertelsmann](#)

II. The Methodology

The present research aims to collect insights from different EU countries in relation to their economic, societal, health, environmental developments and related policies for crisis prevention and management. The collection of different experiences from European countries can be an important step to share knowledge and strengthen competences.

The Report is based on the information collected by project partners in their national contexts: Italy, Slovakia, France, Spain. At a first stage, research on regional resiliency and identification and forecasts of future skill and training needs in the area of resilient regions building has been carried out, including:

- Secondary research: study of regional/national policy documents
- Primary research consisted of: quantitative research (questionnaire survey); qualitative research (semi-structured interviews)

Altogether four national reports were prepared (French, Italian, Slovak and Spanish) and the present Research on resilient regions builds on them. This document is a fundamental element in the lifetime of the project as it will provide the main inputs for the MOOC syllabus design and for the Road map "Supporting a Resilient Region - a tool for the Sustainable Communities". Indeed, the main aim of this research is to examine the level of preparedness of project partner countries to prevent crises or eventually overcome them with appropriate measures.

To do so, the Resilience Capacity Index (RCI) has been examined, as it provides useful information for both preliminary and possible future indications on resilience. It is a method of assessment, covering the key dimensions of regional resilience and compounded of specific social and economic variables:

- A. Economic potential,
- B. Socio-demographic potential,
- C. Health and community connectedness,
- D. Accessibility.

The data for these categories were drawn from various sources, as they cannot be found in one place, e.g. Official Statistics, Census of Population, National Banks and Financial Bodies, Centre for Labour, Social Affairs and Family, Ministry of Transport, Ministry of Health, Ministry of Labour, EU-SILC database. Other important sources were the European Commission Website, the World Bank, Eurostat, as well as previous projects by relevant NGOs and other bodies. Thus, European, National and regional documents, as well as special decrees to respond to the Covid-19 pandemic, were consulted too.

Data are the latest possible, but some of the indicators are only available in the census. However, these values are generally quite stable. The dimensions and indicators can be used for comparison and benchmarking to identify the advantages and weaknesses of regional resilience. In order to collect the most accurate information, project partners focused their analysis on the local level (NUTS 3)² wherever reliable information was available. Otherwise regional (NUTS 2) and national (NUTS 1) levels were considered.

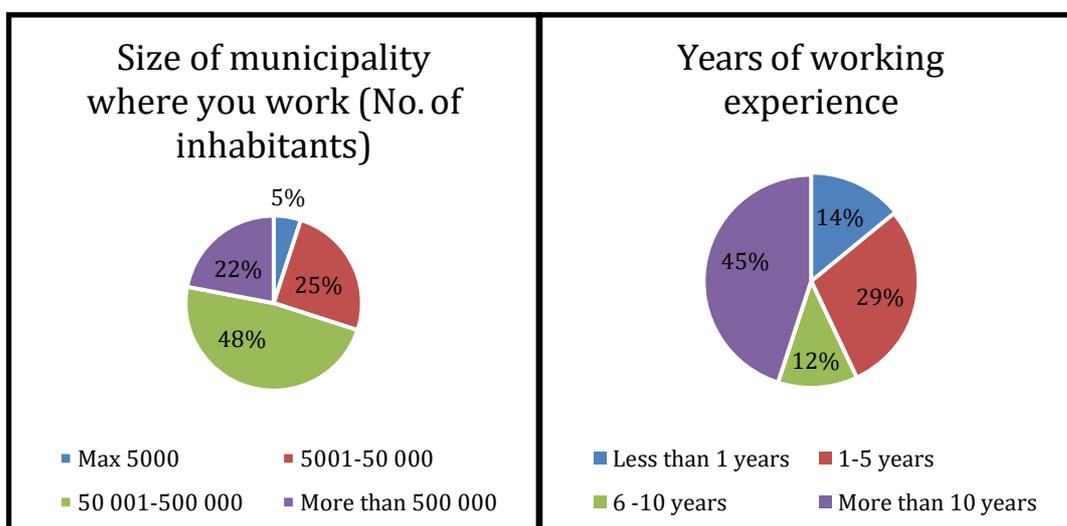
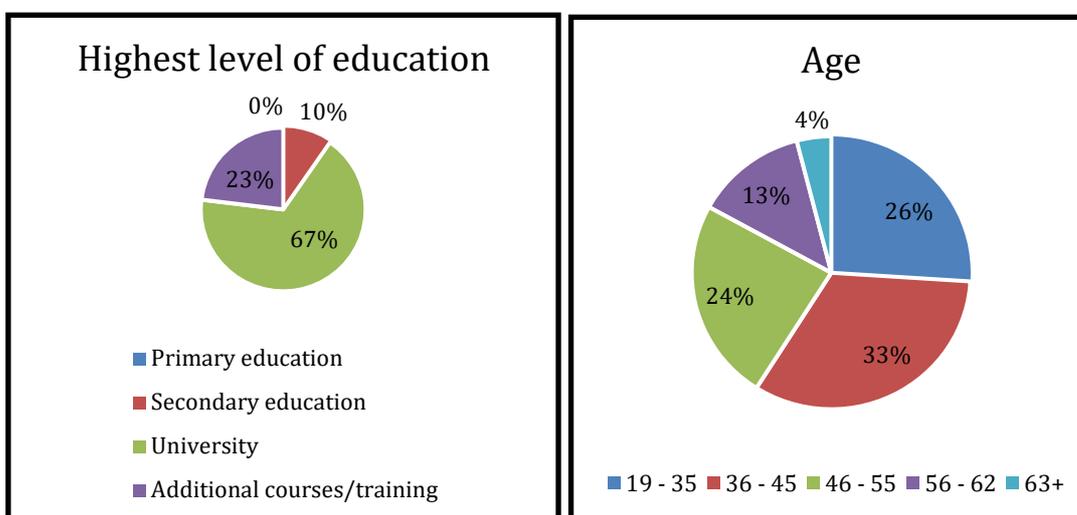
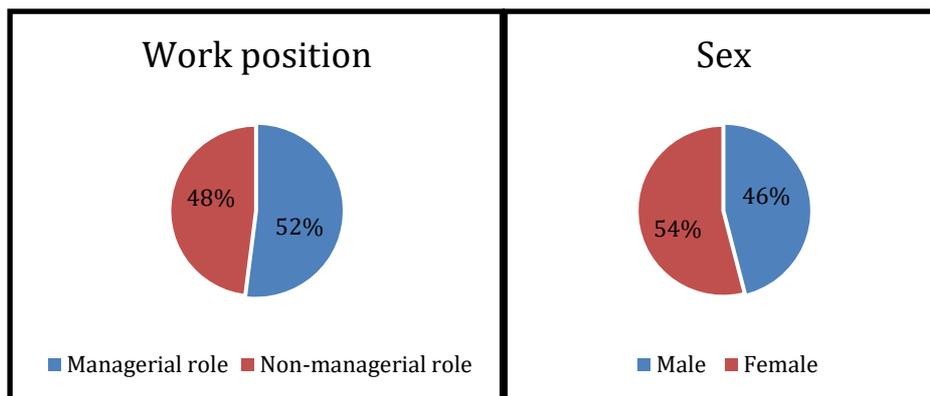
The aim of questionnaire surveys and semi-structured interviews was to gather the opinion of public administrations and NGOs, as well as other actors active in regional development, about their specific training needs in the field of regional resilience building. Questionnaire surveys were submitted by each project partner to, at least, 15 relevant representatives from the target group. Though originally expected to involve a total of 60 respondents, the partnership managed to engage 94 people in the 4 countries.

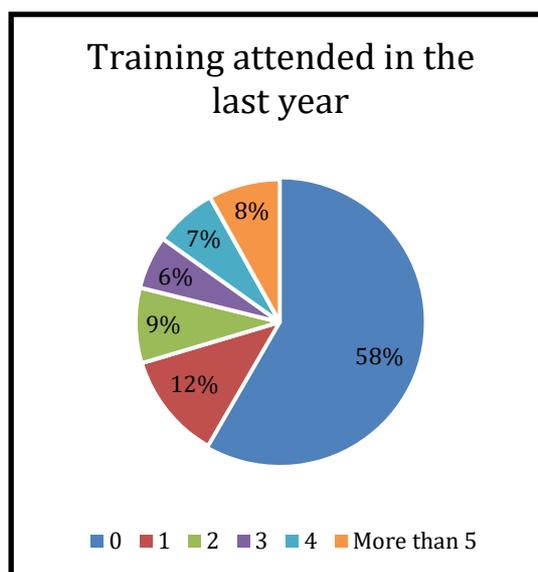
Questionnaire survey	
Number of respondents foreseen	Number of respondents reached
60: 15 respondents from each country involved: Slovakia, Italy, France, Spain	94
Respondents per country	
Country	Number of respondents reached
Slovakia	33
Italy	24
France	20
Spain	17

The engagement of regional policymakers and other stakeholders into research has been done mainly through the personal contacts and previous cooperation with project partners. ReFace partnership contacted key regional players and also other participants from public administration, as well as NGOs, business and academic sectors. Also, people working in the health system were contacted, as their intervention has been fundamental in responding to the Covid-19 sanitary crisis and their contribution is essential to plan appropriate measures for regional resilience building.

The following graphs provide additional information on the sample of respondents:

² <https://ec.europa.eu/eurostat/web/nuts/background>





Results of questionnaires can be found in **Annex V. The Summary of Questionnaire survey.**

Semi-structured interviews were conducted too, with the objective of deepening the knowledge obtained with questionnaires. Consent to conduct the interview was asked at the end of the questionnaires: interested respondents provided their email/phone to be contacted for additional discussion on the topics. Each partner conducted interviews with at least 3 persons each. 15 people were contacted in the four European countries (ES, FR, IT, SK). The summary of interviews was provided by partners to CESIE to analyse them in the final recommendations of this Report. Respondents mainly work in public administration, local NGOs, civil protection, but there were also stakeholders from the business and academy sectors.

Semi-structured interviews	
Number of interviewees foreseen	Number of interviewees reached
12: 3 respondents from each EU country involved: Slovakia, Italy, France, Spain	15
Interviewees per country	
Country	Number of interviewees
Slovakia	6
Italy	3
France	3
Spain	3

Based on this rich methodology, partners could gain an overview of the resilience level of their own country and understand the real training needs and interests of local stakeholders. Thus, the following pages offer an overview of the regions involved and of their policy context in the field of crisis prevention/management. A brief analysis of the broader EU context is also provided as this represents a powerful tool in the event of disasters.

The final chapter outlines a comparative needs analysis of the EU countries involved in the research, which is fundamental for the next steps of the ReFace project. Based on present weaknesses and training interests, project countries could identify some recommendations on MOOC “Regions facing shocks: building resilient community” Syllabus preparation.

III. EU context for the creation of resilient regions

In a constantly changing world, marked by unexpected changes, rapid increases of urbanization and population growth, there is an urgent need to rethink crisis management mechanisms, especially for metropolitan areas. New challenges have appeared on the political agenda, including climate change, the increase of migratory flows, ageing populations, higher touristic pressures, larger social inequalities. It is fundamental to identify all those external factors and possible shocks which may spur transformations. A resilient city is able to activate a series of initiatives and projects to strengthen its ability to face challenges thanks to the contribution of many different actors.

It is important to understand that resilience is not a synonym for static systems, nor it means the capacity to adapt to external factors. It is instead the overall ability to identify weaknesses and opportunities, activate innovative solutions and radical transformations in the management system. A resilient system is able to resist, react and adapt more rapidly to shocks through efficient and immediate actions. It may be defined as reflective (able to learn from past experiences), concrete (based on a solid basis), rich in resources (and able to use them in different combinations), redundant (with opportunities which are not limited to the strict necessary), flexible (ready to adopt alternative strategies following the changes of circumstances), inclusive (based on consulting and sharing), integrated (facilitates the integration and collaboration of different systems and institutions)³.

On an international level, there are different guidelines for the creation of resilient cities, such as the Rockefeller Foundation and the UN Office for Disaster Risk Reduction (UNSDR). Here, we will just mention some of the milestone documents in the field of resilience building:

- UN 2030 Agenda 2030 for Sustainable development: a plan of action for the well-being of people, the perseverance of the planet and overall prosperity. It aims to achieve 17 Sustainable development goals, based on three main dimensions: economy, society, environment.

³ Roma Strategia di Resilienza:

<https://www.comune.roma.it/web-resources/cms/documents/strategiaresilienza180618.pdf>

- Sendai Framework for Disaster Risk Reduction 2015-30: in order to prevent/reduce disaster risks, the framework identifies four priorities, i.e.: understanding disaster risk; strengthen disaster risk governance to manage disaster risk; investing in disaster reduction for resilience; enhancing disaster preparedness for effective response, recovery, rehabilitation, reconstruction⁴.
- Paris Agreement: legally binding international treaty on climate change (2015). It is meant to reduce global warming below 2, preferably 1.5 degrees Celsius, in comparison to pre-industrial levels. It is a landmark document as it represents the first binding agreement in the field⁵.

Municipal disaster risk reduction must actively contribute to achieve the objectives set in the above-mentioned documents. For this reason, several tools and resources have been developed for awareness-raising. Here are some examples:

- The ten essentials for making cities resilient: local operational scheme of the Sendai Framework, similar to a resiliency checklist. Aimed at accelerating the implementation of the Sendai Framework, the ten essentials identify the necessary steps for disaster risk reduction and resilient planning process⁶.
- The New Urban Agenda: adopted at the UN Conference on Housing and Sustainable Urban Development (Habitat III) in Ecuador (2016), represents a shared vision for more sustainable development⁷.
- Urban SDGs Knowledge Platform: established by the UN Economic and Social Commission for Asia and the Pacific (ESCAP), the Seoul Metropolitan Government and CityNet, with the aim to promote better knowledge exchange and cooperation between cities towards urban development. It supports the implementation of 2030 Agenda for Sustainable Development providing a repository of policies, good practices and initiatives, facilitating cooperation, follow-up and review⁸.
- Local2030: Localizing the SDGs: network and platform for the practical reach of SDGs, especially targeted at those most in need. It assists local leaders in the exchange of solutions and implementation of strategies⁹.
- The Roadmap for localizing the SDGs: implementation and monitoring at subnational level: created by the Global Taskforce of Local and Regional Governments, UNDP and UN Habitat to help cities and regions meet the objectives of 2030 Agenda. It suggests some strategies to

⁴ Sendai Framework for Disaster Risk Reduction 2015-30: <https://www.undrr.org/publication/sendai-framework-disaster-risk-reduction-2015-2030>

⁵ The Paris Agreement: <https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement>

⁶ The ten essentials for making the cities resilient: <https://mcr2030.undrr.org/ten-essentials-making-cities-resilient>

⁷ The New Urban Agenda: <https://habitat3.org/the-new-urban-agenda/>

⁸ Urban SDGs: <http://www.urbansdgplatform.org/about/intro.msc>

⁹ Local 2030: <https://www.local2030.org/about-us.php>

be adapted depending on the contexts and needs of different cities and regions. It is part of the Toolbox for Localizing the SDGs¹⁰.

At EU level, it is essential to recognize the interdependencies between systems and cities, making resilience a shared issue due to possible cascading effects. Cities are not isolated in the process of resilience building. EU funds ensured important support in past crises, and the same role has continued during the current pandemic provoked by the Covid-19 virus. Yet, there are still many weaknesses to be addressed in order to ensure preventive measures, rather than crisis-led, and often short-term, solutions¹¹. Before moving to the comparative analysis of national reports, it is worth reflecting on the role of common, international measures, as the outbreak of cross-border challenges poses the need of quick, centrally coordinated responses.

The need to elaborate a system for joint response emerged after a series of negative adversities hit Europe in the late 1990s. The “Civil Protection Community Mechanism” was created by the European Council Decision on 23 October 2001 (Decision 2001/792/EC), managed by the Directorate General for Civil Protection and European Humanitarian Aid Operations (DG-ECHO). After some revisions and through the Lisbon Treaty (2009), a legal basis was added to EU humanitarian aid and civil protection policies¹². The EU Civil Protection Mechanism aims to enhance cooperation between member states and 6 participating states towards better prevention and response to disasters. The figure below gives an overview of how the mechanism works¹³.

¹⁰ The Roadmap for localising the SDGs:
https://sustainabledevelopment.un.org/content/documents/commitments/818_11195_commitment_ROADMAP%20LOCALIZING%20SDGS.pdf

¹¹ https://www.espon.eu/sites/default/files/attachments/OD-ECR2-article_Economic-Crisis-and-the-Structural-Funds_0.pdf

¹² <https://ciprovot-project.eu/output/>

¹³ https://ec.europa.eu/echo/what/civil-protection/mechanism_en



Figure 1. European Union/ECHO. EU Civil Protection Mechanism. [CC BY 4.0¹⁴](#).

The Civil Protection mechanism follows the subsidiarity principle: EU measures do not replace national ones, but works as additional, supportive instruments when the state cannot overcome certain difficulties alone. Yet, recent reports on civil protection, showed widespread worries among member states due to their inability to respond autonomously in the case of major disasters¹⁵.

When a member state asks for assistance, the Emergency Response Coordination Centre (ERCC) can intervene. These forces ensure constant monitoring and immediate intervention, thanks to direct links with national branches. As a response, different types of specialized forces can be mobilized, e.g. firefighting planes, medical teams. Civil protection actions are supported by the Copernicus Emergency Management Service, which provides up to date geospatial information. The Civil Protection Mechanism is not barely focused on the activation of the response but it also puts strong emphasis on the power of prevention and knowledge sharing, including grants for cooperation projects, organization of training, exchange of experts. In addition, in most countries, the actions of the civil protection department are accompanied by EU humanitarian aid and by the involvement of European Maritime Safety Agency (EMSA). All EU Member States and also the 6 participating states can contribute with their own national resources to support the European Civil Protection Pool (ECPP), which ensures appropriate planning and coordination of responses, and represents the real operational basis of the Mechanism.

To sum up, the elements of the Civil Protection Mechanism include:

¹⁴ https://ec.europa.eu/echo/what/civil-protection/mechanism_en#:~:text=What%20is%20it%3F,preparedness%20and%20response%20to%20disasters

¹⁵ EU Civil Protection Mechanism: https://ec.europa.eu/echo/what/civil-protection/mechanism_en

- Emergency Response Coordination Centre (ERCC): operational body, to coordinate and monitor actions, as well as rapid and effective response in case of need. When a country asks its intervention, the ERCC communicates the specific needs to the other countries.
- Common Emergency Communication and Information System (CECIS): computerized system for timely communication and management of demand-offer of assistance.
- European Emergency Response Capacity (EERC): pool of volunteers, teams, experts, equipment, to reduce the time required for disaster response. The European Medical Corps (EMC) are part of this body.

In 2019, the EU strengthened its disaster risk management mechanism with a new element: rescEU. This has been particularly helpful in the management of the Covid-19 pandemic, through its medical reserve.

RescEU was proposed in November 2017 to tackle natural disasters; its capacities relate to four main areas of action: firefighting aircraft, pumping equipment for floods, urban search and rescue measures, field hospital and emergency medical assistance. If the means provided by the EU Civil Protection Mechanism are considered insufficient, then the Commission activates these additional forces¹⁶.

New resources have been added to the system over time, and a specific Network has been created, namely a new platform for knowledge-sharing¹⁷.



¹⁶ <https://ciprovot-project.eu/output/>

¹⁷ https://ec.europa.eu/echo/what/civil-protection/resceu_en

The emergence of cross-border threats to health is under the responsibility of the Health Security Committee (HSC), which offers a forum for exchange and definition of needs among EU states. The Committee is formed by the representatives of national health authorities, with candidates and potential candidates acting as observers. When a pandemic or a serious threat arises, the EU may declare a situation of public health emergency, which immediately activates special provisions in the EU pharmaceutical legislation. The commission is also in continuous contact with other relevant partners, such as the European Centre for Disease Prevention and Control (ECDC), the European Medicines Agency (EMA) and the World Health Organization (WHO). Indeed, communication is another fundamental step of crisis and disaster management: Communicators' Network is a sub-group that reunites experts from EU countries, the Commission and EU bodies¹⁸.

Due to its growing ageing population, the demand for healthcare in Europe will probably increase at a faster rate, with the potential risk of staff shortages. Health systems of EU member states are very different and their financing mostly depends on national measures. EU main objectives within this field relate to the provision of effective, accessible and resilient health systems to all, promotion of health information and education, preventive measures, better safety standards. The EU has also the power to adopt specific legislation if there is a potential threat to public health. After the introduction of the European health insurance card (EHIC), people moving within EU countries can obtain medical assistance in another Member State or EFTA country.

Apart from these bodies, EU cohesion policy funding is a fundamental instrument for countries' capacity to respond to unexpected adversities. EU funds aim to overcome regional economic disparities, promoting sustainable territorial development, job creation, business competitiveness, economic growth, and general improvement of life quality. The EU cohesion policy is based on multi annual financing programs (7 years)¹⁹.

Cohesion policy is ensured through three main funds²⁰:

1. The European regional development fund (ERDF), focused on innovation and research, digital development, support to SMEs and decarbonisation of the economy.
2. The European social fund (ESF), centred upon 4 main themes: better opportunities for employment and labour mobility; promote social inclusion and reduce poverty; invest in education, skills and lifelong learning; improve institutional capacities and efficiency of public administrations.
3. The Cohesion Fund is meant to support those EU member states with a GNI level per inhabitant lower than 90% of the EU average. For the period 2014-20 priorities included the creation of trans-European networks and environmental issues.

Cohesion Policy is strongly integrated into broader policy goals, including the Europe 2020 strategy, the EU's investment plan for Europe, UN 2030 sustainable development agenda²¹. The most relevant

¹⁸ https://ec.europa.eu/health/security/crisis-management_en

¹⁹ <https://ec.europa.eu/eurostat/web/products-statistical-books/-/KS-HA-18-001>

²⁰ Ibid.

²¹ Ibid.

sectors of analysis in relation to resilience in EU are those of regional cohesion, environment, public health, transport and tourism, energy, trans-European networks, industrial production, social development, employment²². In the regional financial program 2014-20 the concept of disaster resilience was only mentioned once in relation to the Energy Union and Climate Priority area. To this aim, the ERDF and the Cohesion Fund are considered means to prevent all the dangers connected to climate changes and other related challenges.

EU action in the field of climate change was firstly spurred by the IPCC report in 1990 and also by UNFCCC negotiation for the stabilization of greenhouse gas emissions by 2000. Starting from 1993, the SAVE Directive forced Member States to reduce their GHG emissions through new measures. Another important step was the adoption of the Kyoto I and II. In 2009, the EU adaptation strategy started which implied the creation of the European Commission's 2009 White Paper, in order to make the EU more climate-resilient. In 2013, the European Commission approved a strategy for adaptation to climate change, focusing on three main objectives: promote action by Member States; climate proofing action; better informed decision-making. The creation of resilient cities is only one of the strategies identified for a stronger Europe against climate change. EU projects in this field look at the theme of resilience building in relation to different threats, e.g. floods, extreme weather, droughts, earthquakes, the rise of the sea level²³.



The concept of urban resilience is not directly addressed in any EU urban policy, but has been dealt with in different programs, initiatives and policies²⁴. In 2014, the European Commission held a CITIES forum to discuss an urban agenda, which was later established in 2016 by the Amsterdam pact. The Urban agenda is a new working method, meant to strengthen the development of cities, while tackling

²² https://smr-project.eu/fileadmin/user_upload/Documents/Resources/WP_1/SMR_D1_2_EU-SECTORAL-APPROACH_Revisedv01.pdf

²³ Ibid.

²⁴ Ibid.

the main social challenges, towards the final objective of greater cooperation, economic growth, quality of life and innovation²⁵.

The concept of resilience in relation to critical infrastructure especially emerged after international concerns provoked by the two terrorist attacks in Madrid (2004) and London (2005), as explained in the Green Paper on EPCIP (European Programme for critical infrastructure protection), established in 2008. Yet, resilience was only mentioned in 2012. Between 2008 and 2012 two relevant documents were adopted²⁶:

1. Stockholm programme (2009): linked resilience to cyberthreats
2. EU Internal Security Strategy (2010): referred to cross-sectorial challenges and the need to increase European resilience to crisis and disasters.

Despite the numerous measures developed over time, recent happenings and the current pandemic have posed new doubts on how strong the EU is. Concerns about EU resilience levels do not only refer to the creation of sustainable economies, but also to the security and protection of its inhabitants. Effective mechanisms must consider all these possible weaknesses in a comprehensive way. Moreover, they must take into careful consideration regional differences and peculiarities.

Finally, the priorities set by the EC 2019-2024 includes "Overcoming the Crisis: New Ideas, Strategies and Governance Structures for Europe", with a strong emphasis on regional resilience. The latter is at the centre of the Recovery Plan elaborated by the European Commission, the European Parliament and EU leaders to assist member states in the recovery from the economic and social effects of the coronavirus pandemic. This long-term measure will be the biggest financial package ever financed in the EU, with €1.8 trillion aimed at rebuilding Europe from the damages caused by the COVID-19. More than half of these funds are meant to support modernization through research, fair climate and digital transition, recovery and resilience, biodiversity protection and gender equality. To the aim of the present research, it is interesting to spend few words on the NextGenerationEU, as well as on the new health programme, EU4Health²⁷.

NextGenerationEU is a short-term recovery instrument, which through its centrepiece, the Recovery and Resilience Facility, will assist EU members recovery through loans and grants. The funds are aimed at National reforms and public investment projects, on the basis of Member States' recovery and resilience plans, in line with the four dimensions outlined in the 2021 Annual Sustainable Growth Strategy. The Recovery and Resilience Facility is a unique opportunity to foster recovery²⁸. NextGenerationEU also includes the Recovery Assistance for Cohesion and the Territories of Europe (REACT-EU), with additional funds destined to 2021-22.

²⁵ <https://ec.europa.eu/eurostat/web/products-statistical-books/-/KS-HA-18-001>

²⁶ https://smr-project.eu/fileadmin/user_upload/Documents/Resources/WP_1/SMR_D1_2_EU-SECTORAL-APPROACH_Revisedv01.pdf

²⁷ https://ec.europa.eu/info/strategy/recovery-plan-europe_en

²⁸ https://ec.europa.eu/info/business-economy-euro/recovery-coronavirus/recovery-and-resilience-facility_en

EU4Health 2021-2027 is the biggest health programme ever in monetary terms, and will provide EU member states, health organisations and NGOs with funding for the overall improvement of health systems. The areas of action include: improve EU preparedness for cross-border threats; enhance health systems to make them able to react to epidemics and other long-term challenges; increase the availability and affordability of medicines and medical devices²⁹.

Based on these premises, the following pages will offer an overview of ReFace partner countries main trends in the field of: Economic potential, Socio-demographic potential, Health and community connectedness, Accessibility.

IV. Profiles of the regions and their resilience capacity

The resilience capacity of partners' countries was analysed along four dimensions:

- A. Economic potential
- B. Socio-demographic potential
- C. Health and community connectedness
- D. Accessibility.

These categories provide useful information about current developments and to predict future trends of regional resilience levels. Together, they form the Resilience Capacity Index (RCI), a method of assessment that offers the opportunity to compare national trends and identify strengths and weaknesses.

FM Global is an American mutual insurance company, specialised in loss prevention services all over the world. The FM Global Resilience Index is the first tool ranking 130 territories according to their level of enterprise resilience to disruptive events. The tool collects data according to 12 drivers of resilience, derived from three categories – economic, risk quality and supply chain, e.g. GDP, political risk, exposure to natural hazards, control of corruption, quality of infrastructure. Sources include the World Bank, the International Monetary Fund, United Nations, World Economic Forum. The indicators offer relevant information for decision-makers, both for improving overall economic attractiveness but also to strengthen infrastructure in order to limit damages in case of natural hazards³⁰.

Table 2 in the following page compares 2020 ranking position of partner countries.

²⁹ https://ec.europa.eu/health/funding/eu4health_en

³⁰ <https://fmglobalpublic.hartehanks.com/AssetDisplay?acc=11FM&itemCode=P17095>

	Slovakia	Italy	France	Spain
Global Resilience Index 2020 Rank	30	32	14	21

Table 2 FM Global Resilience Index 2020³¹

This comparison offers a first overview of the level of resilience of the countries analysed. Norway ranked number 1 on a global level. Yet, the overall national picture inevitably covers certain specific local differences which can only emerge from a careful examination of policies, data and needs. For this reason, project partners conducted their research with a special focus on NUTS 3 level (local) wherever possible. When relevant information was not available, NUTS 2 and NUTS 1 levels were considered (regional and national). The following areas were analysed in each partner country:

- Slovakia: Prešov Region and Košice Region (NUTS 3), which form together Eastern Slovakia (Východné Slovensko) (NUTS 2);
- Italy: Palermo (NUTS 3), locate in the region Sicily (NUTS 2);
- France: Provence Alpes Côte d'Azur (NUTS 2)
- Spain: País Vasco (NUTS 2)

Based on the analysis conducted by each partner country, the following pages are aimed to provide a brief overview of national/regional trends in relation to the 4 macro-areas identified (economic potential, socio-demographic potential, health and community connectedness, accessibility).

Slovakia

Slovakia is a smaller country (5.5 million inhabitants) in Central and Eastern Europe. The Bratislava region has a favourable location, given its border with Austria, the Czech Republic and Hungary, making it open to the European economic core. Unlike urban western areas, eastern Slovakia borders Ukraine, Poland and Hungary and is dominated by agriculture and heavier industry, except for the metropolis of Košice. The difference between the Bratislava Region (BSK) and other regions of Slovakia is evident. However, it is necessary to explain that only BSK is formed as a predominantly urbanized region and with a smaller area.

The territorial-administrative division of Slovakia is shown in the following map:

³¹ FM Global is an American mutual insurance company, specialised in loss prevention services all over the world. Data related to the 2020 Global Resilience Index can be consulted at: <https://www.fmglobal.com/research-and-resources/tools-and-resources/resilienceindex/explore-the-data/?&cr=NOR&sn=ex>

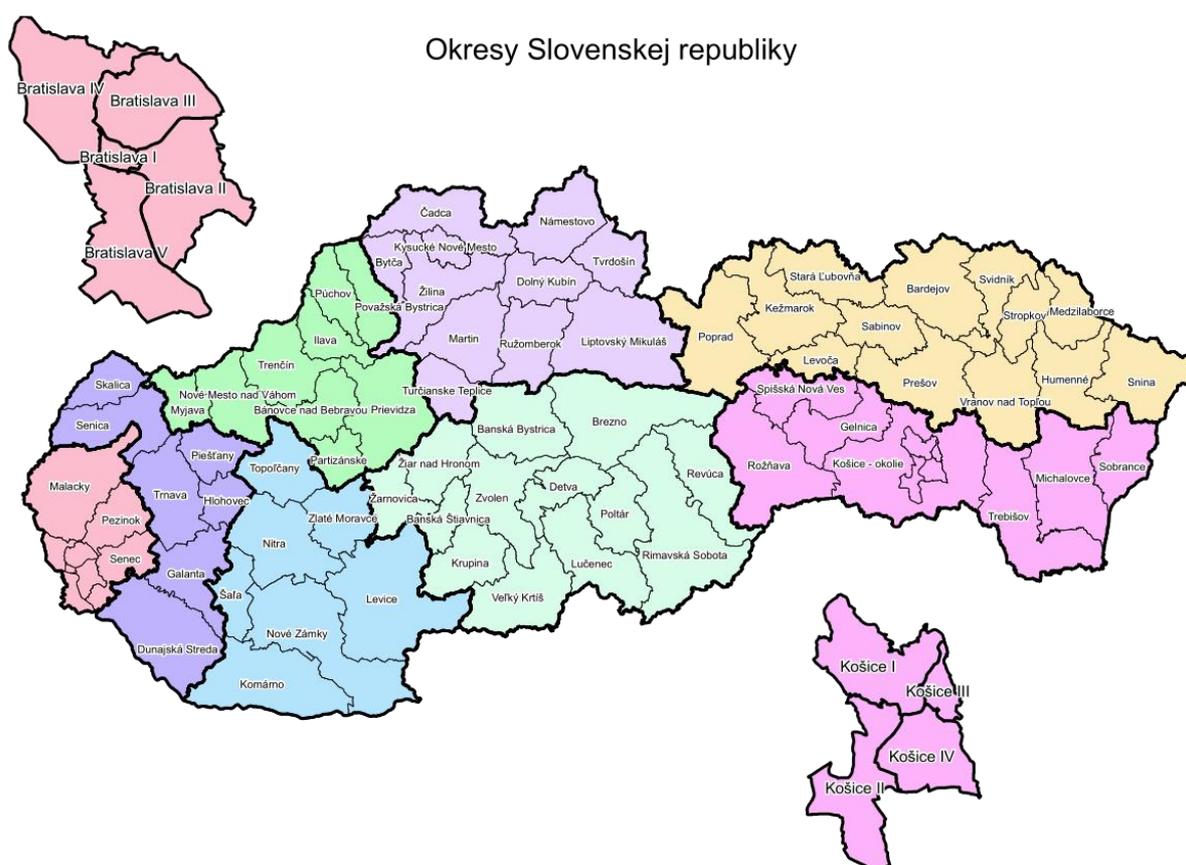


Figure 2 The territorial-administrative division of Slovakia: NUTS 2 and NUTS 3 level. Wikipedia, [CC BY-SA 3.0](https://en.wikipedia.org/wiki/Districts_of_Slovakia#/media/File:Okresy97_Slovakia.svg)³²

Territorial division and economic maturity justify the selection of two NUTS 3 regions to examine their resilience capacity: **Prešov Region and Košice Region**. These two NUTS 3 regions together form a statistical NUTS 2 region called **Eastern Slovakia (Východné Slovensko)** and will be the object of interest of the project.

Based on the level of economic development, the ability of economic adaptation to change, Slovakia can be divided into three types of districts, which point to the least developed parts of Slovakia (open, partially adaptive and lagging regions). Košice is classified as an open region but the overall status of East Slovakia is of a lagging area.

The issue of urbanity versus rurality is really essential in explaining regional disparities in Slovakia, and this is amplified by the west-east gradient of the country. Overall, the country can be considered predominantly rural, and the same applies to Eastern Slovakia.

³² Source: https://en.wikipedia.org/wiki/Districts_of_Slovakia#/media/File:Okresy97_Slovakia.svg

Slovakia	
Economic potential	<p>Slovakia is an open export-based economy, with its main sector being the car industry, located almost exclusively in the western part of the country. The stable growth of the economy in the last decade has been largely supported by the development of the automotive industry, which accounts for 40% of industrial production. The Bratislava region has a favourable location, given its location open to the European economic core. The western part also benefits from a high level of foreign investment. However, the eccentric western position of the capital is also a source of strengthening regional disparities, polarised economic growth and significant differences between West and East.</p> <p>Due to the predominant rural character, the south-eastern and north-eastern parts of the country have a relatively high unemployment rate (up to 30%) and a spatial concentration of marginalized communities. In terms of resilience, urbanized areas have a higher resistance to external shocks than less developed rural or semi-rural regions.</p> <p>Eastern Slovakia is one of the EU regions with the lowest GDP per capita. Slovakia as a country converges to the average of EU countries, but within the country the differences are slightly increasing. This is a disadvantageous position, which causes less interest in investment and at the same time out-migration (to western Slovakia, to the Czech Republic, etc), due to the lack of jobs. In the northeast of Slovakia, the depopulation and aging of the population is already evident. This weakens the ability to react and adapt to external shocks.</p> <p>The offer of higher education is plentiful in the region, the problem is the brain drain, which is massive even after graduating from high school.</p>
Socio-demographic potential	<p>Educational attainment, percentage of population with higher education, is only slightly lower in the context of the country. Also, life expectancy at birth is gradually increasing. The demographic situation is characterized by the outflow of human capital, especially from rural areas, and thus aging of the population. Relatively high equality in society is a positive element, but this relates to lower levels of income. The lack of financial resources for development, combined with territorial fragmentation and isolation, is reflected in low institutional density, and therefore in the risk of a sufficient capacity of the community to respond to the impacts of crisis situations.</p>
Health and community connectedness	<p>In both regions, the poverty rate is relatively high, often localized in larger vulnerable groups, which is also associated with lower access to health care. Manifestations of poverty in some areas are also associated with a higher rate of alcohol-related illnesses and a greater spread of infectious diseases. Voter participation is similar to other parts of the country. Nevertheless, serious violent crime is declining.</p>
Accessibility	<p>Mobile signal coverage in peripheral areas is slowly improving, which is key for mutual communication in the case of a disaster. The equipment of the household with the Internet is also increasing. Housing quality is at the average level of the country in terms of supply by water from the public water-supply system or the percentage of houses connected up to the public sewage system. The problems are in less accessible municipalities or in settlements inhabited by vulnerable groups; they are then multiple - transport connections, mobile signal coverage and sewage system equipment.</p>

Italy

Sicily is an island (and also the largest region in Italy), located in the South of the country, at the heart of the Mediterranean Sea, at the crossroad of many different civilisations, and separated from the rest of the peninsula by the narrow Strait of Messina.

In line with EU-SILC classification, the figures below give an idea of Italy's division in NUTS II and NUTS III region level.



Figure 3 Overview Map Italy - NUTS level 2 and 3³³.

Recent data (2018-2019) depicts Italian economy as a reality still affected by different uncertainties and structural problems, which hinder the country's opportunities for growth. Regional differences clearly emerge from the analysis of different data, with a significant division North-South in relation to such areas as GDP, the distribution of workers per sector, the level of urbanisation, the overall resilience index. Due to these significant differences, research was conducted with a special focus on Sicily at NUTS 2 level, and on its capital city, Palermo (NUTS 3), when possible.

Sicily is among those areas with the highest need to improve their preparedness to crises. It is the biggest region in Italy, covering an area of 25,714 square km and hosting almost 5 million inhabitants. Palermo is the capital city of Sicily, as well as its largest town (676,118 inhabitants). Palermo is a predominantly urban region (rural population is less than 20% of the total), and based on Eurostat classification for the urbanisation level of municipalities (DEGURBA), it can be considered a densely populated city.

³³ Nomenclatura delle unità territoriali per le statistiche dell'Italia [Public domain; last accessed on 02.03.2021]: https://it.wikipedia.org/wiki/Nomenclatura_delle_unit%C3%A0_territoriali_per_le_statistiche_dell%27Italia

Italy	
Economic potential	<p>Recent data (2018-2019) depicts Italian economy as affected by some uncertainties and structural problems, which hinder the country's opportunities for growth. A certain deceleration in the economic development marked 2018, due both to a moderate internal and external demand. Despite the general slowdown of economic growth, the levels of occupation continued to increase, but unemployment rates remain largely higher than the EU average.</p> <p>Despite a slight growth in the first trimester of 2019, the overall increase has been almost equivalent to zero. Investments especially increased in the construction field, while scarce offer marked services, and a certain expansion was revealed in manufacture and agriculture. Yet, higher investments and trust levels generate new hopes for positive growth. Looking at regional results, we can distinguish considerable differences. For instance, the level of GDP per capita and of families' consumption in Sicily reflect long-term difficulties and structural problems: North-West is first in the National rank, almost double than the South. The traditional opposition North-South is confirmed by the growth in occupational levels, with a regional average much higher in the North than in the rest of the country.</p> <p>Thus, the country's resilience is divided between a stronger North and more weakened South. Sicily is among those areas with the highest need to improve their preparedness to crises. In recent years, the regional economy has been largely based on services, and there have been many attempts to improve the level of digitalisation in public offices and the share of e-commerce companies. Yet, the regional economy can still be considered traditional, largely dependent on non-market services (28.42%), provided by the public administration, financial intermediation, real estate and business (20.65%) and commerce (12.34%). The weight of industry is very low, especially when compared to the National average³⁴.</p>
Socio-demographic potential	<p>The ageing population is still growing. Istat data foresees a general reduction in the number of inhabitants until 2050, which may pose potential challenges to the productivity of the country and the need to rethink welfare policies³⁵. The number of people holding a University degree in Sicily is very low (only second to last in the country), strong income inequalities exist and the poverty rate has continued to rise. In many families there is only one source of income and the percentage of household with unemployed people is much higher than National trends (32.5% against 18.4%).</p>

³⁴[https://ec.europa.eu/growth/tools-databases/regional-innovation-monitor/base-profile/sicily#:~:text=Economy-,Sicily%20lags%20behind%20the%20national%20and%20European%20economy%20iSn%20terms,\)%20\(Eurostat%2C%202020\)](https://ec.europa.eu/growth/tools-databases/regional-innovation-monitor/base-profile/sicily#:~:text=Economy-,Sicily%20lags%20behind%20the%20national%20and%20European%20economy%20iSn%20terms,)%20(Eurostat%2C%202020))

³⁵ <https://www.istat.it/storage/rapporto-annuale/2019/Rapportoannuale2019.pdf>

Health and community connectedness	<p>Free access to basic health is ensured by the State, with health insurance covering the whole population. Yet, some people complained about their exclusion from some services, mainly due to additional expenses required. Recently, a growing number of NGOs has emerged to assist in these services and also tax exemptions have been introduced by the State in order to meet the necessities of families more in need. Important improvements have been made in the prevention of infant mortality caused by infectious diseases.</p> <p>Many people prefer to ask for medical assistance outside Sicily. Due to attempts to reduce Regional debts, expenditures in the healthcare system were reduced between 2016-18, causing a cut in the number of beds. As a response to the current pandemic, new funds were allocated to the medical system, including the enlargement of personnel.</p>
Accessibility	<p>Being an island at the very South of the peninsula, the region can be considered in a remote location though at the heart of the Mediterranean Sea. Over time there have been many challenges in connecting the region to the rest of the peninsula, due to the status of roads and scarce availability of public transport. Also, Internet coverage is lower than National averages.</p>

France

At the heart of an economically highly developed area, with 68 million inhabitants, France represents one of the founding countries of the European Union and the eurozone, whose economy benefited from the establishment of the European common market. In 2020, France represents the 6th economic power in the world, according to the World Bank and the International Monetary Fund analysis, and the 2nd economic power in Europe behind Germany but ahead of the United Kingdom.

In the NUTS (Nomenclature of Territorial Units for Statistics) codes of France (FR), the three levels are:

- NUTS 1: Regions+ DOM³⁶ (collectively), #14
- NUTS 2: Former Regions (1982-2015) + DOM, #27
- NUTS 3: Departments + DOM, #101

³⁶ DOM: Départements d'outre mer: French departments located outside the metropolitan, European part of France.

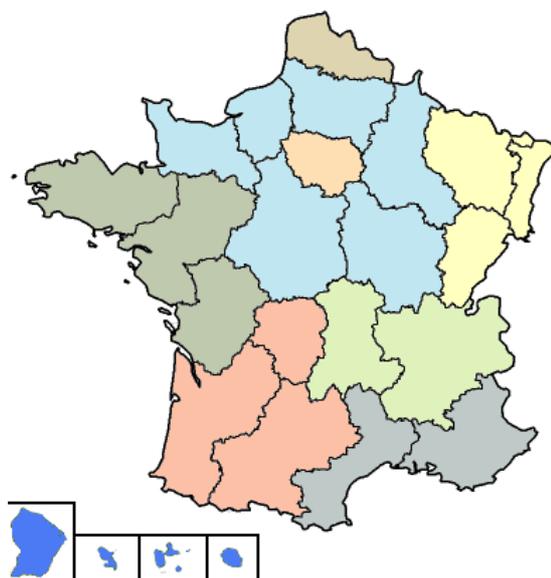


Figure 4 France, NUTS 1 level. CC BY-SA 3.0_ Retrieved from: https://en.wikipedia.org/wiki/NUTS_statistical_regions_of_France#/media/File:France_NUTS_1.png

The analysis from France is based on the region Provence Alpes Côte d'Azur (NUTS 2).

France	
Economic potential	<p>At the heart of an economically highly developed area, France's economy benefited from the establishment of the European common market. From 1986, the state privatized a large number of public enterprises but its influence on the economy remains strong. French economy is mainly a service-oriented economy, increasingly open, occupying an important place in international trade, mainly within the European Union. Yet, its unemployment rate is higher than the average for other developed countries.</p> <p>The country's exit from the economic crisis came later than in other European countries and its economy remains fragile due to structural imbalances. According to the updated IMF forecast of April 14, 2020, after the onset of COVID-19, GDP growth is expected to fall to -7.2% in 2020.</p> <p>If we compare the two regions Ile de France and Provence Alpes Côte d'Azur, significant differences emerge from the years 2015-2018. The region Ile de France GDP (PPP) (mil. of US\$ PPP) was more than four times superior to the region of Provence Alpes Côte d'Azur. During the same period, nominal GDP per capita (in US\$ PPP) was almost double in the region Ile de France compared to the region of Provence Alpes Cote d'Azur. These differences are just an element of comparison showing overall imbalances and disparities between regions.</p>
Socio-demographic potential	<p>On January 1, 2020, France had just over 67 million inhabitants, of which 14.4 million were under the age of 18. The number of births continues to decline and the number of deaths increases. The influx of foreigners from third countries is increasing. Life expectancy is still improving, but at a slower pace. Mortality before age 15 is very low and these deaths are concentrated in the first year of life. Infant mortality has not decreased in France for almost 10 years, unlike many other European countries</p>

<p>Health and community connectedness</p>	<p>In both analysed regions, the poverty rate is relatively high, often localized in larger vulnerable groups, which is also associated with lower access to health care. Manifestations of poverty in some areas are also associated with a higher rate of alcohol-related illnesses and a greater spread of infectious diseases. Voter participation is higher than in other parts of the country.</p>
<p>Accessibility</p>	<p>The constitutional revision of March 28, 2003 enshrined in Article 1 of the Constitution the fact that the organization of the Republic is decentralized. This new stage in the decentralization process follows on from numerous reforms, which have given greater freedom of administration to the various territorial levels. The law of 2 March 1982 on the rights and freedoms of municipalities, departments and regions marked, in this regard, an essential step. Since the 1990s, the emphasis has been on inter-municipal cooperation. This decentralization process has also been accompanied by an increasing de-concentration of state services in the regions and departments. From 2009 and 2010, the decentralized services were the subject of a profound reorganization, as part of an overall reform of the territorial administration of the State.</p>

Spain

Spain is divided in autonomous communities, first-level political and administrative divisions, created in line with the 1978 Constitution to limit the autonomy of the different nationalities and regions existing in the country. The country is a decentralised unitary state. Each community can exercise its own right to self-government according to certain limits. There are in total 17 autonomous communities and two autonomous cities (collectively defined “autonomies”). Since devolution was intended to be asymmetrical in nature, the scope of competences vary for each community, but all have the same parliamentary structure.



Figure 5 Autonomous communities of Spain (Source: Wikimedia Commons, [CC BY-SA 3.0](https://commons.wikimedia.org/wiki/File:Autonomous-communities-of-spain-01.png)). Retrieved from: <https://commons.wikimedia.org/wiki/File:Autonomous-communities-of-spain-01.png>.

The present research is based on the Basque Country (País Vasco) (NUTS 2). This autonomous community is located in the Eastern end of the Cantabrian Sea coast, at the border with France. Bilbao is its most populous city, and together with Vitoria and San Sebastián, form a metropolitan area of almost one million inhabitants. The autonomy has its own local Parliament and Government, based in the city of Vitoria. Moreover, similar to Navarra, it owns its particular tax regime protected by the Spanish Constitution.

Spain	
Economic potential	<p>Today, the Basque Country has one of the most dynamic economies in the country, being one of the regions with the largest industrial fabric. In 2015, the average salary in the Basque Country was the highest in Spain. The region has followed a model of industrial hyper-specialization and has many SMEs that have become global leaders in their specific business area.</p> <p>Considerable regional differences exist in the levels of GDP per capita of the Autonomous Communities. Back to 2019, the highest GDP per capita was registered in Madrid, which was 35.9% higher than the national average. The level of GDP per capita in the Basque Country and in the Autonomous Community of Navarra are also higher than national averages. The lowest levels instead can be found in Melilla.</p> <p>Due to the strong links between European and Spanish economies, the effects of the current Covid-19 pandemic are expected to be particularly detrimental for the Basque Country. The crisis is hitting the key sectors of the regional economy, such as the automotive and aeronautics industry, energy, services, commerce and tourism. Moreover, Spain has been one of those EU countries most badly hit by the economic crisis. This was shown by the fall in real GDP in the second quarter of 2020: 18.5% compared to 11.8% in the eurozone as a whole. Not only does it depend on stricter containment measures, but also on a series of structural problems of Spanish economy. The IMF has predicted that the national unemployment rate will reach 20.8% in 2021 as a result.</p> <p>The Basque Country specialises in four industrial branches: Motor vehicles, Metallurgy and metal products, Machinery and equipment, and Petroleum Refining. Also, exports are concentrated in these sectors. This productive specialisation, the interconnections between these branches and the frequent energy price volatility pose major risks for the economy.</p>
Socio-demographic potential	<p>Before the age of 25, most youngsters (78.5%) in the Basque Country are studying. The remaining part is either working (15.8%), unemployed or in another situation (2.2%).</p> <p>The percentage of the elderly population (people over 65 years old) is slightly higher than National average, i.e. 19.2% and 16.9% respectively. The Gini coefficient is lower than EU average and the Eurozone level. Poverty rate seems to move towards stabilisation, still below the European average. Meanwhile, between 2016-18, the level of income has gradually increased.</p>

<p>Health and community connectedness</p>	<p>The National health system in Spain is decentralised. It is financed by taxes and mainly depends on its public network of providers. Back to 2002, greater power was attributed to regions, which resulted in 17 Regional health ministries with primary jurisdiction in the management of health services in their own territory. The overall monitoring of the national health system performance depends on the Ministry of Health, Social Services and Equality. The highest coordinating body is represented by the NHS Interterritorial Council, which gathers national and regional Ministers of Health. These bodies are responsible for overall coordination, planning national strategies, analyse the impact of new legislation at the regional level.</p> <p>Public funds cover 71% of health expenditures, below EU level of 79%. In 2014, 99.9% was covered by public health insurance provided by the NHS (0.8% of these are civil servants who can opt to choose fully private insurance). Access to health insurance could be limited in the case of nonregistered immigrants.</p>
<p>Accessibility</p>	<p>In the first quarter of 2019, the number of Internet users aged 15 and over in the Basque Country accounted for 80.2% of the overall population from this age group. This corresponded to almost the entire student population (99.6%), followed by working people (97.3%). Only half of those who are not active in employment or who are unemployed are Internet users (55.8%). The number of people aged 65 and over and 64 has also increased.</p>

A comparative analysis

The table below compares some of the trends emerged from the analysis of partner countries. Data refer to NUTS 2 level. Otherwise, national trends are considered. The most significant information comes from regional specific trends which are again a proof of high disparities in each of the partner countries.

	Slovakia	Italy	France	Spain
GDP per capita (PPP) ³⁷ – NUTS 1 (2019)	32,730	42,492	46,184	40,903
Regional GDP (PPS per inhabitant) – (2018) ³⁸	16,300	18,100	29,500	36,300
Sector specialization in old industries ³⁹	27.34% (2017)	29.2% (2020)	23.3% (2015)	24.18% (2020) ⁴⁰
Long-term unemployment rate (2019) ⁴¹	5.6	13.7	3.7	3.7
Population aged 30-34 by educational attainment level (%) ⁴²	36.7	20.3	44.1	59.0
People at risk of poverty or social exclusion (2019) ⁴³	21.2	48.7	17.1 (NUTS 1, 2017) ⁴⁴	14.4
Life expectancy at birth ⁴⁵	77.2	82.3	83.3	84.1
Gini index % – NUTS 1 (2019) ⁴⁶	22.8	32.8	29.2	33
Voter participation (2019) ⁴⁷ – NUTS 1	22.74	54.50	50.12	60.73
Robbery – police-recorded offences per 100,000 inhabitants,	9	51	153	133

³⁷ [World Bank](#): Constant 2017 international \$

³⁸ Eurostat. [Regional gross domestic product \(PPS per inhabitant\) by NUTS 2 regions](#)

³⁹ % of employment in primary and secondary sectors

⁴⁰ Statista. [Distribution of the workforce across economic sectors in Spain](#)

⁴¹ [Eurostat](#)

⁴² Ibid.

⁴³ Ibid.

⁴⁴ Eurostat. [People at risk of poverty or social exclusion](#)

⁴⁵ Eurostat. [Life expectancy at birth by sex and NUTS 2 region](#) 2018

⁴⁶ Eurostat. [Gini coefficient of equivalised disposable income - EU-SILC survey](#)

⁴⁷ European Parliament in collaboration with Kantar: [Turnout by country \(%\)](#). Results as published by the Member State's official election authority after all of the votes have been counted.

average 2016-2018 ⁴⁸ - NUTS 1				
DESI 2020 – Score ⁴⁹ - NUTS 1	47.5	43.6	52.2	57.5
Households with broadband access ⁵⁰	81	76	83	91
Individuals regularly using the internet ⁵¹ - 2019	82	69	89	88
Rail Networks ⁵²	72	53	42	77
Motorway Networks ⁵³	7	26	24	69

From these data, it is clear that talking about resilience, many different indicators should be considered, from which there is a strong need of diversified, integrated, collaborative actions. Moreover, they show the diversity of regions included, which is fundamental for the exchange of experiences and knowledge towards the creation of appropriate resources.

⁴⁸ Eurostat. [Crime statistics robbery 2018](#)

⁴⁹ European Commission. [Countries' performance in digitisation](#)

⁵⁰ Eurostat. Households that have broadband access in 2019. % of households with at least one member aged 16 to 74. The availability of broadband is measured by percentage of households that can be connected to an exchange that has been converted to support xDSL-technology, to a cable network upgraded for internet traffic, or to other broadband technologies. [Source](#)

⁵¹ Eurostat. [Individuals regularly using the internet by NUTS 2 regions](#), % of individuals aged 16 to 74.

⁵² Eurostat. [Rail network by NUTS 2 regions](#) 2018, expressed in kilometres per 1 000 km².

⁵³ Eurostat. [Motorway networks 2018](#), expressed in kilometres per 1 000 km².

V. Policy context for preparing and responding to any kind of disaster

Though the concept of regional resilience has recently received greater attention, especially in light of the Covid-19 pandemic and of its devastating effects on entire societies, it is still scarcely addressed in political documents. More often, the concept appears in other related contexts. Here, we mention some of these national measures and suggested trajectories towards the creation of resilient regions.



Slovakia

So far, the importance of resilience measures is a lesser-known and less popular policy area in Eastern Slovakia. There are isolated activities in health, transport or social policy. Some of the strategic priorities of health policy for the period 2013-2020 reinforce resilience, such as raising public awareness, using online tools, and improving communication between healthcare organizations. There are measures to improve access to better public services, to help people in material need, to adapt the urban environment to climate change. The region has created a guide for residents on how to act in the event of an emergency, such as floods, snow disasters, earthquakes, landslides, fires, terrorist attacks. The region also implemented a flood protection project, which also served to support employment.

Though interconnection, information and coordination are essential to promote resilience, the different sectors are still unable to ensure appropriate coordination between their activities. Indeed, the health of the population is linked to the availability of settlements, economic development and social inclusion, which form one organic system and require holistic strategic solutions.

It is fundamental to evaluate the resilience potential and the vulnerability of a region before a possible external shock. There are several principles to include for strengthening resilience capacity:

1. Promotion of structural diversity: the more diverse the regional system, the higher the resilience. If one part of the system is affected there should be other segments able to compensate for losses. Similarly, it is important to promote the diversity of energy sources, transport links, water sources, food.

2. Redundancy is an important feature of a resilient system, when it uses more backup sources than necessary, increasing stability and fault tolerance. If one source/system is at risk, redundancy in the overall system will allow another source to be used until the damaged source/system is repaired.

3. The modularity and independence of system components also increase resilience. Damage or failure of one part has a minimum probability of causing failure of other related segments of the whole system.

4. Anticipation and monitoring of probable threats and external shocks that may lead to fluctuations. The regional government, larger municipalities and cities should have an integrated centre with means and resources for obtaining and disseminating objective information on the possible consequences and solutions.

5. Use a methodology of comprehensive risk management. Adapt existing prevention tools, the development program and the spatial plan to improve the preparedness of municipalities to effectively manage the impacts of external shocks.

6. Build a knowledge base and digital platform to provide and share information on external threats to effective decision-making processes in the region and municipalities.

Italy

The current sanitary crisis and related socio-economic difficulties provoked by the spread of the Covid-19 virus have been a testing field of EU countries resilience levels. The overall approach (Recovery and Resilience facility) has been based on the adoption of common guidelines, readapted to National trends. The programme has to be implemented in line with National recommendations (which in turn consider local suggestions), and with the specific targets of green and digital transition. Member states are called to elaborate their own National Plans for Recovery and Resilience.

Due to the economic losses and challenges experienced in 2020, Italy and Spain, will be among the principal beneficiaries of the funds. The Italian National plan for recovery and resilience is meant to achieve six main objectives, linked to the following investments⁵⁴:

- Green and ecological transition: €74.3bn;
- Digitalization and innovation: €48.7bn;
- Sustainable mobility and infrastructure: €27.7bn;
- Education and research: €19.2bn;
- Gender equality: €17.1bn;
- Health care; €9bn.

As regards regional programs, the proposal advanced by Sicily is made of 13 macro interventions, with a special attention to digital transition, competitiveness of the economic-productive system, renewable energies, transport, education and training, social inclusion, health system.

In the case of major adversities, political measures are supported by the intervention of third-sector associations, which are fundamental for the overall societal development, economic assistance and preparation of communities. The Red Cross, the WWF, the Civil Protection all represent fundamental actors in this field. Below, are some of the measures and policies implemented towards the construction of resilient communities.

Economy

The EU regulation UE/2014/806 (started in 2016) introduced a Single Resolutions Mechanism (SRM) for banks and Stock Broking societies, with the aim to preserve financial stability within the Eurozone and avoid fragmented solutions in case of major financial crises. This was enriched by the creation of a Single Resolutions Fund (SRF), nurtured by the contributions of intermediaries from the different member states. Banca d'Italia (Bank of Italy) was identified as the National Resolution Authority in Italy, which was followed by the creation of the Unity of crises resolution and management⁵⁵.

In the last few years, new decrees were introduced to improve the offer, better conditions and stability in the labour market. Also, special ministerial decrees were elaborated to support families during the current financial crisis. Other governmental initiatives addressed more specifically liquidity and corporate credit.

Sicily Regional Operational Program 2014-2020 plans to use the European Regional Development Funds to meet the priorities set in the Europe 2020 strategy for smart, sustainable, inclusive growth.⁵⁶

⁵⁴ <https://www.iisd.org/sustainable-recovery/news/recovery-plan-italy-intends-investments-in-green-transition-and-sustainable-mobility/>

⁵⁵ <https://www.bancaditalia.it/compiti/risoluzione-gestione-crisi/index.html>

⁵⁶ https://ec.europa.eu/regional_policy/en/atlas/programmes/2000-2006/italy/regional-operational-programme-for-sicily

Health

The financing of the regional health system depends on the National sanitary fund (FSN). In order to overcome the expenses deriving from the Covid-19 pandemic, the national decree DL 18/2020 destined additional funds to the field. For Sicily this meant an increase of resources by 1.2%. The first months of the epidemics saw the engagement of additional sanitary staff personnel and a general increase in the number of beds in intensive care.⁵⁷

Another support comes from the non-profit service, which contributes to the welfare and health systems, in line with National trends. For instance, the Italian Civil protection system is fundamental for its activity aimed at the protection of life, property, environments, as well as rescue of affected people, risk prevention. The Civil protection is based on a centralized guide, but is meant to ensure an effective presence of human resources, means and operational capabilities for timely and efficient prevention and response⁵⁸. Another emblematic third-sector association for social and sanitary assistance is the Red Cross, part of the international movement.

Social and demographic

Among the recent measures introduced to face poverty, there have been initiatives for income integration. The pandemic aggravated the already difficult situation of many Sicilian families. One of the first solidarity measures introduced by the Government was a fund for Sicilian municipalities to buy grocery coupons and primary goods for those families which were more badly hit by the epidemiologic emergency. In addition, governmental decrees introduced an “emergency income” for all those disadvantaged households not having access to other forms of assistance. A general intervention for future transformations was the promotion of liquidity and diversified economical activities throughout last year⁵⁹.

Ecological

The EU Covenant of Mayors for Climate & Energy reunites many different local governments, wishing to contribute to EU climate and energy objectives on a voluntary basis. Launched in 2008, the initiative was the first bottom-up approach to energy and climate action in the local field. The shared vision endorsed by signatories of the Covenant for 2050 includes the acceleration of decarbonised economies, stronger ability to adapt to the consequences of climate change, accessibility to secure, sustainable and affordable energy, reduce greenhouse emission by 40%, by 2030. In order to translate their intentions into practical actions, the signatories are responsible to present a Sustainable Energy and Climate Action Plan (SECAP) within two years, to reach 2020 and 2030 objectives⁶⁰.

⁵⁷ <https://www.bancaditalia.it/pubblicazioni/economie-regionali/2020/2020-0019/2019-sicilia.pdf>

⁵⁸ <https://ciprovot-project.eu/output/>

⁵⁹ <https://www.bancaditalia.it/pubblicazioni/economie-regionali/2020/2020-0019/2019-sicilia.pdf>

⁶⁰ <https://www.eumayors.eu/about/covenant-initiative/objectives-and-scope.html>

All Sicilian provinces signed the Covenant. Palermo is a member since 2011 and has currently reached 30% of the global objective of reducing CO2 emissions by 20%. Its approval of the Covenant follows other relevant documents, such as the Municipal Energy Plan, Agenda 21 Process, the Report on Environmental Conditions, and its participation to other projects, e.g. MedClima (Climate Alliance for Mediterranean Cities) and ZEN – Zero Emission Neighborhoods.

Third sector associations are also active in environmental preservation, such as Legambiente Sicilia and the local entities of WWF.

France

Since the beginning of 2010, policies for the prevention and management of natural risks have been based on the concept of "resilience". Research underlines the importance of networks (energy, water, transport, waste, telecommunications, etc.) and the consequences of their interdependencies in terms of the vulnerability of territories. How to anticipate the consequences that would have, at the metropolitan level, a major crisis and a failure of the networks that link the territories? How to overcome their technical and organizational vulnerability? These questions were approached through the prism of the flood risk, the consequences of which on the scale of the Ile-de-France metropolitan area were recalled by the OECD. The approach touches upon three main key-concepts: network, risk, town. Networks can refer to water and waste, energies, telecoms, travel. The concept of urban resilience provides responses adapted to the management of the city-networks-risks. Urban resilience is the capacity of a city to absorb a disturbance and recover its functions as a result.

The current crisis can be an opportunity to review the development model implemented by the communities and thus respond to the new challenges of post-containment. While the conditions for exiting from lock-down still remain imprecise at this stage, it is important to use this time to collectively question the conditions for relaunching the territories. Local authorities, through their major role within territories, can, under certain conditions, prove to be the keystone of a renewed approach to local development dynamics. Indeed, and paradoxically, this crisis can facilitate the emergence of a new paradigm in terms of the design of territorial development and, consequently, of the role that local communities can play.

This actual pandemic can allow elected officials, particularly within the local bloc or municipalities, to revisit the outdated vision of territories. These are not inert objects. Territories are political, social, societal, systemic and organic constructions. They live and develop in constant interaction with other nearby environments, and, for some, with territories thousands of kilometres away. And their trajectories are not always predictable or understandable at first glance. Therefore, this crisis may be the possibility of reviewing the relationship between governance, populations and activities.

In France, urban resilience is a versatile concept, which helps frame the arduous process of tackling

the environmental, social, and economic challenges of modern cities in a positive way. However, similar to other broad concepts such as sustainability, resilience is inherently vague. Therefore, it can be challenging to pinpoint what it means for local options and plans. Resilience principles are specific mechanisms and behaviours that make a city resilient or that help policies and practices improve that resilience. They can focus on the system, or its governance. Resilience principles can provide a solution to the conceptual vagueness around resilience per se. Such principles can be applied in a wider process of assessment, reflecting on the situation, urban systems and components, and envisioned past, present, and future. Such assessments might include vulnerability analysis, scenario planning and integrated urban planning. Inherently, these assessments involve choices and trade-offs that should be openly explored and discussed. Resilience principles provide a powerful tool to make explicit how cities can improve their resilience: to help cities brainstorm on and evaluate options and plans for urban resilience in a meaningful and comprehensive way.

Spain

"Berpiztu": Reactivate, Reborn. The plan is the answer of Basque institutions to overcome the economic and employment crisis generated by the Covid-19 pandemic. The joint objective, included in the commitment presented by the Government and the three Provincial Councils is to recover all the lost jobs and reduce the unemployment rate below 10%. The Berpiztu Program focuses on job creation, economic reactivation and transformation. It represents an open program that will adapt to the evolution of the policies proposed throughout the legislature. Thus, it works as a lever to face the three global transitions in which Europe and the world are immersed: the technological-digital transition; the energy-climate transition; the health and social transition.

Overall, the strategy adopted by the Basque Country to respond to the pandemic has been divided into 2 phases:

- **PHASE 1- SHOCK PLAN:** This was the immediate response to the crisis, with the objective of facing the health crisis and its economic and social effects. The plan was mainly based on maintaining all the possible economic activities and jobs. For this, a series of complementary measures to national ones were adopted.
- **PHASE 2- RESISTANCE:** The second wave led to the need to prolong some of the initial measures to combat the pandemic. The health system will continue to be strengthened, to identify infected people as soon as possible, trace their contacts and prevent the spread of the disease. Moreover, support to the most vulnerable families and people will be prolonged, as well as to companies and freelancers most affected by the effects of the pandemic.

The crisis caused by Covid-19 occurs in an international context marked by a series of megatrends that, far from disappearing, are accentuated and pose a challenge both globally and locally. These megatrends can be synthesized in a triple technological-digital, energy-climate and health-social transition, which has the capacity to transform the future of countries, businesses, industries, societies and people, but which can also be an opportunity of job creation for which we must train people.

1- Technological-digital transition: will affect all industrial sectors, some of them key factors in the economic reality of the Basque Country, such as those related to transport, capital goods and Machinery-Tool, iron and steel industry. These sectors are in a process of transition from methods of traditional organization to a digitalized model, advancing in the automation, incorporating flexible solutions and robotization technologies, additive manufacturing or connectivity between machines and equipment, the basis for the application of technologies of Artificial Intelligence and Big Data. In order to address the technological-digital transition, there should be appropriate commitment to research, which at the level of Euskadi is materializing in the “Basque Industry 4.0” strategy.

Another challenge associated with this megatrend is technological-digital talent, understood as the existence of digital specialists. In this way, the Basque Country summarizes the technological-digital transition in the following keys: investing in greater and better connectivity; strengthen the industrial and technological presence at strategic points in the supply chain; channel investment towards strategic digital capabilities; build a real data economy as an engine for innovation and job creation; and ensure a fairer and simpler business environment.

2. Energy-climate transition: The energy-climate transition revolves around the existing concern about climate change and the environmental and social problems caused by the generalization of a model of production and transport based on fossil fuels. There is the intention to advance in environmental sustainability and in the transition towards a low-carbon economy by incorporating energy efficiency, the circular economy, the efficient use of materials and co-innovation in an integral way in its plans and Sector strategies, as well as the commitment of the territory to assume the challenge of aligning efforts with the Sustainable Development Goals (SDG). The energy-climate transition in the Basque Country is also aligned with the European Green Pact.

3. Health-social transition: The population of the Basque Country reached its historical maximum in 2019 with 2,188,017 inhabitants. It implies a demographic structure with more people aged 65 or over (22.2%) than those under 21 (18.4%), a trend that has been accentuating over time. The aging of the population is a great challenge and at the same time a great opportunity. Healthy aging, understood as the process of optimizing physical, mental and social health opportunities that allow older people to actively participate in society, translates into areas such as Personalized Health, Healthy Eating or Sustainable Cities. The “Basque Strategy for Research and Innovation in Health” will promote collaboration between the health system, the business system and the scientific-technological system in order to respond to this challenge.

The Basque Country is characterized by a Health System with the capacity to incorporate the latest technological and medical advances. Looking ahead, the large amount of clinical data available is expected to offer highly personalized diagnoses and treatments that improve many of the current diseases, advance in the prevention and comprehensive improvement of health. The Basque health transition represents an important reinforcement and transformation to prevent and be prepared to give a rapid and effective response against new health crises or pandemics.

VI. Comparative needs analysis

a) Comparison of partner countries regional resiliency

The desk and field research conducted by project partners offered an overview of the significance that the concept of regional resilience plays nowadays. Yet, they also underlined the need to strengthen awareness of regional resilience and of related preventive measures and long-term strategies. Almost all respondents to online questionnaires consider the building of the regional resiliency as very important, but too many of these pointed to the scarce knowledge by local administration. The participants expressed worries that persons dealing with regional resiliency do not possess the knowledge and skills needed to successfully manage the region and its organization in relation to crisis-management. In some cases, they underlined the tendency to prefer short-term responses rather than paying appropriate attention to preventive measures and planning methods. The vast majority expressed their intention to take part in a training on this topic, recognizing its great importance in our society.

Interviews confirmed this reality: participants agreed that the knowledge on regional resiliency is still low and many associated it to environmental issues. That is why the complexity of resiliency (all areas influenced by resiliency) should be covered within training courses. As the specialized knowledge on regional resiliency is missing, basic information, definitions and explanation of terminology should be provided too.

Resilience-building processes also need better integrated, holistic responses. The current measures are defined in separate public policies. Teams implementing one public policy do not have sufficient knowledge of the agenda of other public policies. Sometimes, where a crisis may arise, the competencies of state and local government bodies are not clear, weakening the ability to react immediately. An important step should be the provision of clear guidelines and stronger knowledge for intervention and establishment of a central body both to improve information and to manage coordinated actions.

Here are some of the terms associated to the concept of regional resiliency by respondents to online questionnaires: Civil protection, emergency, municipality, politics, prevention, training, organization, challenges, collaboration, future, system, adaptation, crisis, solution, long-term strategies, occupation, immigrants, safety, forestry surveillance, firefighting forces, administration, flexibility, culture, knowledge, economy, ecology, well-being, local, connections, network, innovation, investment, green, growth, trust, creativity, planning, resistance.

It is interesting to notice the recurrence of some themes, which, if related to the other answers given by the respondents give us an idea of the interests and necessities in the field. Firstly, the concept of regional resilience is generally connected to public administration and politics, but such a responsibility is also automatically connected to the need of investments and innovation, as well as to the creation of network, local intervention and general connection. The concept is also associated with different fields,

ranging from economy to ecology, culture. Challenges, crisis and adversities are also attributed to this concept, together with the need for adaptability, flexibility, creativity and preventive measures as well as long-term strategies. Much attention is given to the environment and climate change. Finally, there is a clear interest in greater knowledge, considering the recurrence of terms associated with learning and training.

b) The common VET needs for all project countries

Respondents from four different EU countries expressed similar opinions and concerns in relation to competences and knowledge about regional resilience. Indeed, there are only small variations in the level of knowledge on regional resilience: in Slovakia and France basic knowledge is missing; in Italy this has been rated on a low-intermediate level; in Spain there seems to be greater knowledge of the term by both public institutions and NGOs, but insufficient work has been done over time and only after the health crisis is the Basque government starting to introduce the term in the economic field. Thus, notwithstanding its indisputable primary importance in current societies and political actions, regional resilience is still scarcely known, even in its terminology and basic concept. Therefore, as mentioned, **it is necessary to strengthen awareness of regional resilience and of its complexity.**

Secondly, there should be greater attention to the possibility of **integrated, holistic measures**. This especially emerged from Slovakia and Italy. Interviewees from Italy underlined the great potential that may derive from better collaboration between NGOs and public administrations, and highlighted the need to increase **knowledge of responsibilities and tasks of each actor involved**, in order to respond immediately in the case of future crises. Moreover, there is the intention to be informed on **how to assist other bodies** in their intervention against emergencies, towards **stronger teamwork**.

Another fundamental aspect emerged from all the partner countries is the tendency to prefer short-term measures to temporarily respond to the effects of adversities. Rather, there should be better **planning, prevention and working on long-term strategies**.

Respondents in Slovakia and France also pointed to the need to focus on **security issues** of all types (including those coming from migration). The concrete examples of how to use **project management** approach to increase regional resiliency and how to manage such projects is a necessity for further resiliency support.

A shared concern for VET education is to cover not only regional resilience but also personal resilience, as this represents the basis on which community resilience lies. At the same time, individual resilience is not used if the community is unconnected. More specifically, considering the different fields touched upon by the concept of regional resilience, there should be a diversified intervention to improve personal, social and learning skills, cultural awareness, civic skills. Together with these, the ability to work in a team, interact with others, communicate, motivate people, and problem-solving are seen as other essential qualities.

On the basis of the results from online questionnaires, the following areas emerged as those needing greater attention in the four countries involved:

- specialized knowledge in the field of regional resiliency
- language skills
- vulnerability assessment
- building trust and engagement of stakeholders
- better understanding of threats and external shocks
- the process of adaptive resilience
- the regional resilience potential and how to measure it
- the integrated approach to regional and community planning
- risk management approach
- the connections between migration, resilience and security
- methods and techniques of effective public decision-making
- knowledge on public participation within the resiliency' issues
- design public policy in resiliency
- project management for resilience support
- the difference between regional, personal and community resilience

Other aspects underlined by project partners included: administrative capacity, ability to evaluate problems and conflict-solving, data literacy.



c) Recommendations on MOOC “Regions facing shocks: building resilient community” Syllabus preparation

Desk and field research provided essential insights on the level of development of regional resiliency in each region analysed and at the same time offered fundamental knowledge for the design of appropriate training material. The present European Report is a milestone in the lifetime of the project as it represents the basis for the creation of a MOOC on “Regions facing shocks: building resilient communities”.

The choice of MOOC as the best training mode to meet expectations derives from the variety of educational opportunities it offers to different kinds of learners. Indeed, MOOC stands for Massive Open Online Course: it is freely provided on the Web and only requires basic web browsing skills to be used. Online learning can help overcome the problem of geographic and time barriers in gaining access to education. Self-paced learning allows greater flexibility as participants can access it whenever they prefer.

However, differently from other online learning environments, MOOCs can be potentially accessed by an unlimited number of people, greatly increasing the impact they can produce. Thus, a xMOOC (eXtended Massive Open Online Course) is suggested: massive, open, and with multiple enrollment periods and subjects focused on scalability.

Based on the information gathered through desk research, online questionnaires and interviews, the following aspects should be taken into account while working on the MOOC and its syllabus:

- clarification of the terminology connected to regional resilience, as well as more specialised knowledge on the concept;
- explanation of the importance of integrated measures, teamwork, collaboration between public bodies and the third-sector;
- Focus on preventive strategies and better project-management, planning skills rather than opting for short-term, emergency measures;
- awareness-raising and stronger knowledge-sharing between bodies involved in the resolution and prevention of crises, in order to ensure adequate intervention and support to each other in case of emergencies;
- Vulnerability assessment and better understanding of threats and external shocks, as well as adaptive capacities;
- Regional resilience potential, how to measure it, how to foster an integrated approach to regional and community planning;
- Connections between migration, resilience and security;
- The role and tasks of public administration: effective public decision-making processes-methods and techniques; design public policy in resilience; project management skills.

An important suggestion for the design of the online course is not to limit it to theoretical aspect but include **opportunities for interaction, exchange**. Simulations of emergencies, chances for teamwork

and interaction with others, quizzes to test participants' understanding should be offered.

VII. Conclusions

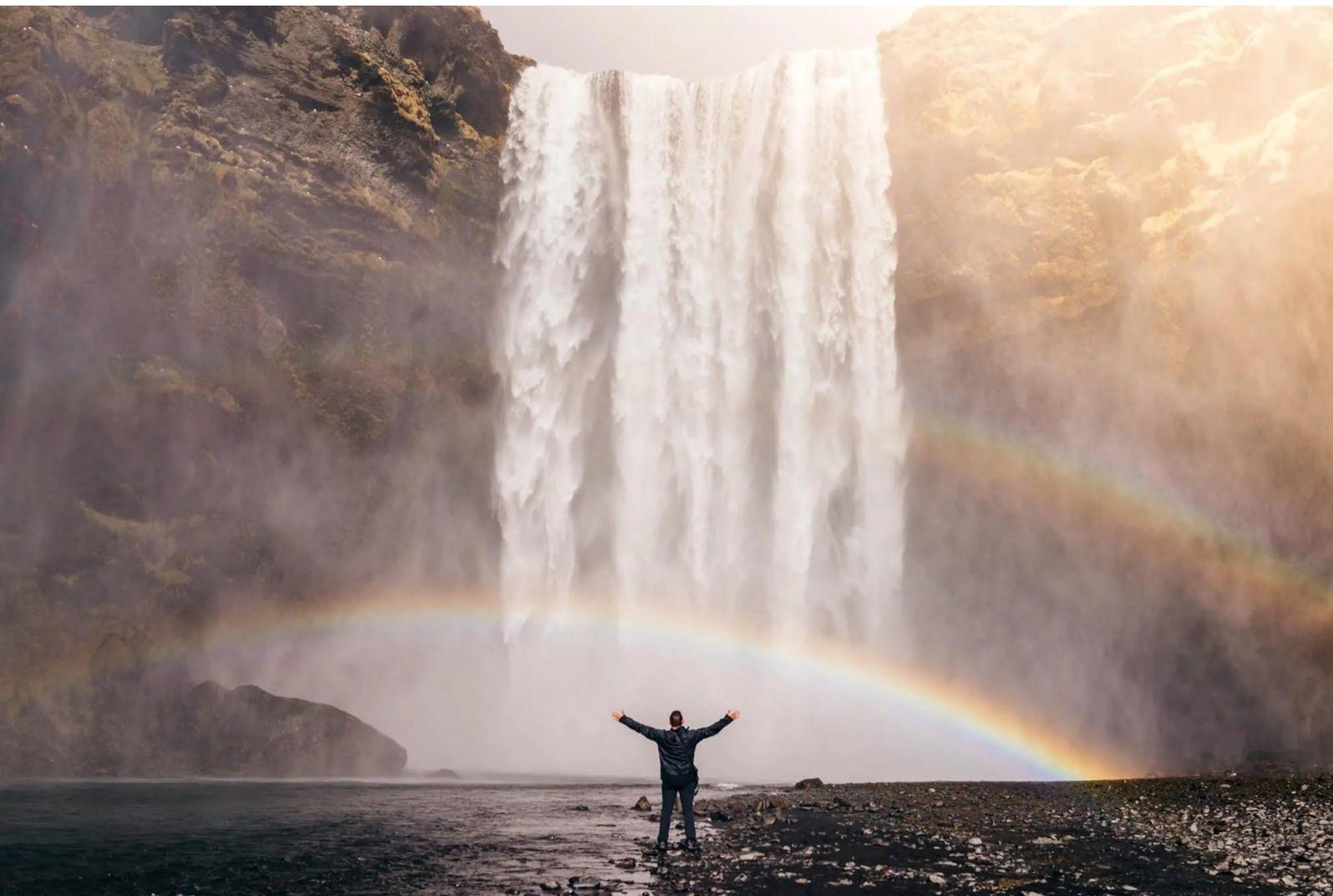
The present European Report represents a first and essential step in the lifetime of the ReFace project. It lays the basis for the construction of next activities, firstly the design of a syllabus for the MOOC on “Regions facing shocks: building resilient communities”. For this reason, project partners did not limit their analysis to desk research, but deemed it necessary to include a direct contact with relevant stakeholders in the field, with a special focus on public administration and NGOs active in regional development. This allowed them to evaluate the level of competencies and knowledge in the field, their interest to take part in a training course and the specific aspects on which to concentrate.

The concept of resilience has recently received greater attention in national and regional policies, but there is still no agreed definition of the term regional resilience among scholars and researchers nor appropriate knowledge and competencies of the actors involved in the process of regional resiliency building. Clearly, resilience implies paying attention to many different sectors and their strong interconnections. For this reason, the analysis of partner countries' resilience level was conducted through the Resilience Capacity Index (RCI), a method of assessment based on specific social and economic variables, linked to 4 macro-areas: economic potential; socio-demographic potential; health and community connectedness; accessibility.

Despite regional differences, common trends and needs emerged. Though many international policies have been developed over time, there is an urgent need to rethink crisis management mechanisms, especially for metropolitan areas, which show serious weaknesses in prevention and planning of long-term strategies. Indeed, the concept is often not directly addressed in specialised documents but partially mentioned in relation to specific areas.

However, online questionnaires and interviews confirmed the essential role that the concept of resilience plays nowadays and the great interest to strengthen related knowledge and skills. Too many respondents pointed to inappropriate measures to prevent and tackle crises, such as short-term strategies, sectorial responses, scarce coordination and collaboration. As a result, the vast majority expressed their intention to take part to a training on this topic, recognising its great importance in our society.

As proved by the current pandemic, it is essential to recognise the interdependencies between systems and cities, approaching resilience as a shared concern considering the possible cascading effects of a crisis. Cities and regions are not isolated in the process of resilience building. Each of us plays a fundamental role in society and has the potential to contribute to the creation of resilient regions. Public administration and NGOs have to learn from past crises in constructive ways and be able to react and improve from them.



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- UNDRR. Sendai Framework for Disaster Risk Reduction 2015-30: <https://www.undrr.org/publication/sendai-framework-disaster-risk-reduction-2015-2030>
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IX. Annexes.

Annex I. National Report: Slovakia

1. Introduction

Slovakia is a smaller country (5.5 million inhabitants) in Central and Eastern Europe. At present, the country is an open export-based economy and the main sector is the car industry, located almost exclusively in the western part of the country. The stable growth of the economy in the last decade has been largely supported by the development of the automotive industry, which accounts for 40% of industrial production. The Bratislava region has a favourable location, given its border with Austria, the Czech Republic and Hungary, making it open to the European economic core. The western part also benefits from a high level of foreign investment. However, the eccentric western position of the capital is also a source of strengthening regional disparities, polarised economic growth and significant differences between West and East. Unlike urban western areas, eastern Slovakia borders Ukraine, Poland and Hungary and is dominated by agriculture and heavier industry, except for the metropolis of Košice.

The regional gross domestic product per capita (at current prices) and its development in the years 1995-2015 is in the following chart. The difference between the Bratislava Region (BSK) and other regions of Slovakia is evident. However, it is necessary to explain that only BSK is formed as a predominantly urbanized region and with a smaller area.

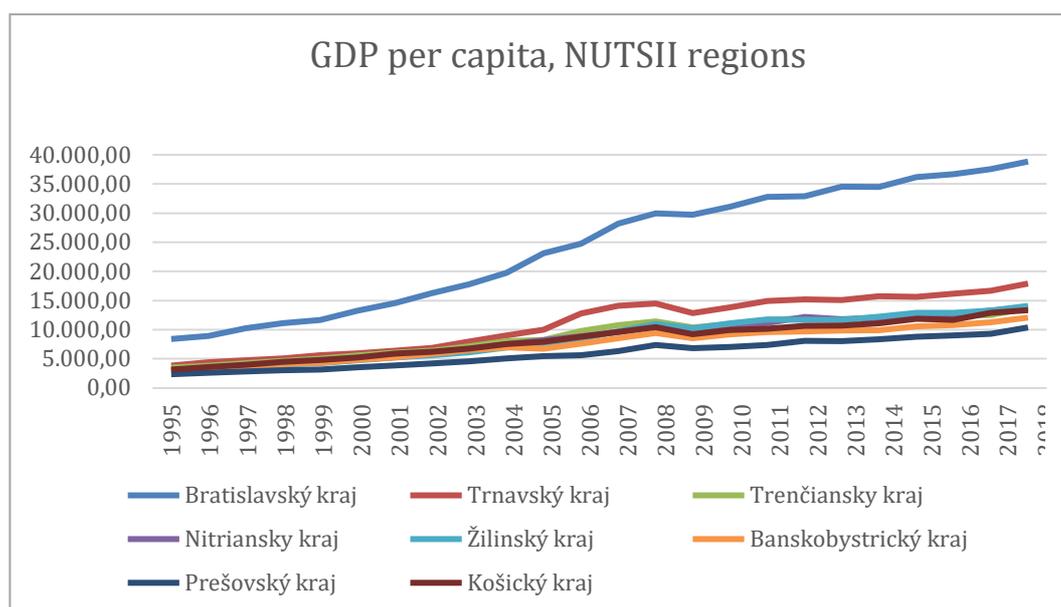


Fig. 1. The regional gross domestic product per capita (at current prices), 1995-2015

Due to the predominant rural character, the south-eastern and north-eastern parts of the country have a relatively high unemployment rate (up to 30%) and a spatial concentration of marginalized communities. In terms of resilience, urbanized areas have a higher resistance to external shocks less

developed rural or semi-rural regions. Of course, the periphery and the border districts with Ukraine, Hungary and Poland also play an important role. These districts could be less dependent on global changes; however, they suffer from the outflow of young educated people, who do not find adequate job opportunities and living conditions in their place of residence resulting in depopulation of some areas.

The territorial-administrative division of Slovakia is shown on the following map:

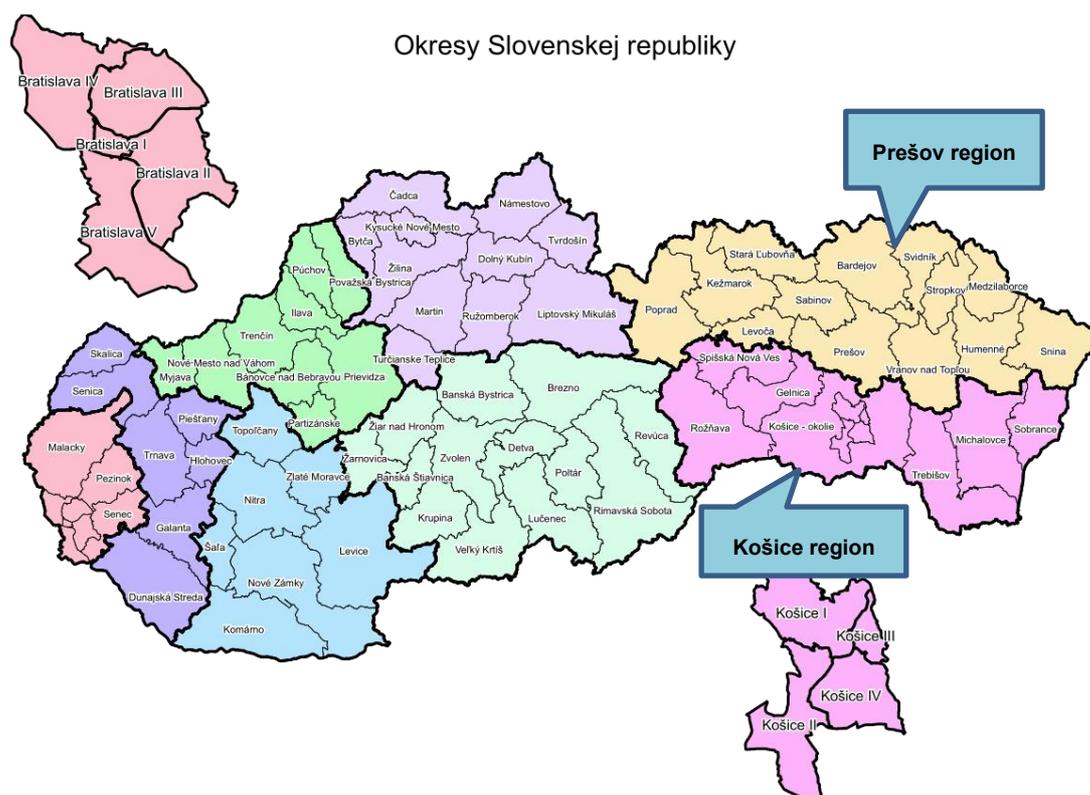


Fig. 2: The territorial-administrative division of Slovakia: NUTS 2 and NUTS 3 level. Wikipedia, [CC BY-SA 3.0 : https://en.wikipedia.org/wiki/Districts_of_Slovakia#/media/File:Okresy97_Slovakia.svg](https://en.wikipedia.org/wiki/Districts_of_Slovakia#/media/File:Okresy97_Slovakia.svg)

Based on the level of economic development, the ability of economic adaptation to change, Slovakia can be divided into three types of districts, which point to the least developed parts of Slovakia (open, partially adaptive and lagging regions): <https://www.minv.sk/?uzemne-a-spravne-usporiadanie-slovenskej-republiky>

The issue of urbanity versus rurality is really essential in explaining regional disparities in Slovakia, and this is amplified by the west-east gradient of the country: <https://www.minv.sk/?uzemne-a-spravne-usporiadanie-slovenskej-republiky>

Territorial division and economic maturity justify the selection of two NUTS III regions to examine their resilience capacity: **Prešov Region and Košice Region**. These two NUTS III regions together form a

statistical NUTS II region called **Eastern Slovakia (Východné Slovensko)** and will be the object of interest of the project. It must be said that statistics do not always exist at the NUTSIII level, so we will exceptionally use data that are only available at the NUTSII level. Eastern Slovakia is a predominantly rural, slowly converging, industrial, rather stagnant region of the Slovak Republic, with the exception of the metropolis of Košice, resp. conurbation Košice-Prešov.

The draft Vision and Development Strategy of Slovakia until 2030 states the key problems of regional and territorial development (December 2020), shortened:

- the absence of continuity of long-term development goals of municipalities, regions and the state,
- sectoralism – prevalence of central decision making, insufficient horizontal coordination in the creation of concepts and implementation of measures,
- inefficient, fragmented structure of public administration - insufficient vertical and horizontal coordination and the absence of integrated planning and management in connection with monitoring the needs of strategic planning regions,
- public administration does not respond to current challenges (for example, support for resilience and adaptability of regions and municipalities for climate change),

All the problems mentioned are closely related to regional resilience - fragmentation, low interconnectedness of institutions belonging to different sectors of the economy and public administration. In the event of a natural disaster, pandemic or economic crisis, the necessary initiative to mitigate and overcome the impact is hampered by a low level of coordination, unclear responsibilities between central power and regional institutions.

The engagement of regional policymakers and other stakeholders into research has been done mainly through the personal contacts and previous cooperation on the projects and policy documents preparation. All three Slovakian partners contacted key regional players and also other participants from public administration, NGO, business and academic sector.

The 14 different types of documents have been studied and reviewed mainly national and regional policies and also analyses and studies on national and regional levels connected to resiliency. The statistical data collected mainly by the Statistical Office of the Slovak Republic has been used as well. The Programs of economic and social development of both self-governing regions contributed to creation of overall picture on resilient regions in Slovakia.

We contacted altogether 50 people in the Prešov and Košice regions. From them 33 persons took part in questionnaire survey -mostly in managerial positions (60%). 68.8% of respondents were women and 59,4% of respondents have the managerial position. The majority has university education (mostly in economy and management fields) and also several courses of further education. The age group of 36-45 years created 40,6% of respondents. Almost 47% comes from large cities with more than 50.000 inhabitants. The 40,6 % of respondents are experienced in regional development and they work more than 10 years in this area. As far as continuing education is concerned more than 53% respondents did

not take part in any educational course in the last year. Three persons took part in personal interview. Two of them are the employees of Košice self-governing region. The first one is working at regional development department and second one at the environmental department. The third respondent is working for the non-governmental organization LAG LEV. The focus group consisted of six persons and has been organised in December 2020 (2 public administration on regional level, 2 representatives of regional NGO, 1 representative of business sector and 1 academic).

In general, the knowledge about the topic of vulnerability and resilience is relatively low. Rather, the term civil protection is known, which is a system of tasks and measures aimed at protecting life, health and property, consisting mainly in analysing potential threats and taking measures to reduce the risks of threats, as well as identifying procedures and actions to deal with the consequences of emergencies. However, the mission of civil protection, existing in the structure of the Ministry of the Interior, is to protect life, health and property and to create conditions for survival during a declared emergency situation.

In other words, the institutions and people living and operating in the region have, to a minimum extent, the competence and responsibility to build the resilience of their region. In addition, the natural NUTS II region of Eastern Slovakia does not have its own administration, although it is a natural catchment area and multi-level governance is insufficiently supported.

2. Profiles of the region and its resilience capacity

The Resilience Capacity Index (RCI) helps to predict the response to the economic crisis. RCI is important background information useful for providing both preliminary and possible future indications of resilience.

The Resilience Capacity is a method of assessment, covering the key dimensions of regional resilience and compounded of specific social and economic variables:

- A. Economic potential,
- B. Socio-demographic potential,
- C. Health and community connectedness,
- D. Accessibility.

The data are drawn from various sources, they cannot be found in one place: from the database of the Statistical Office of the Slovak Republic, Business Alliance of Slovakia, Census of Population, Houses and Dwellings 2011, Centre for Labour, Social Affairs and Family, Ministry of Transport, Ministry of Health, Ministry of Labour, Social Affairs and the Family, Ministry of the Interior, EU-SILC database. Data are the latest possible, but some of the indicators are only available in the census, which is published every 10 years (2011). However, the collected values are quite stable and the overall composite RCI then reflects the possible flexible state of the system over time. The variables have very

different units, and different methods, such as z-scores, can be used to transform to the same scale:

$$z = \frac{X - \mu}{\sigma}$$

The dimensions and indicators can be used for comparison and benchmarking to identify the advantages and weaknesses of regional resilience.

Indicators assigned to dimensions are as follows:

A. Economic potential	<ol style="list-style-type: none"> 1. Regional GDP per capita in purchasing power parity 2. Sector specialization in old industries (% of employment in primary and secondary sectors) 3. Long-term unemployment (average of long-term unemployment rate values for the last 5 available years) 4. Response to the 2007 crisis during its greatest impact (change in the unemployment rate between 2007 - 2011) 5. Income of private households (PPS per inhabitant)
B. Socio-demographic potential	<ol style="list-style-type: none"> 1. Educational attainment (% of people over 25 with at least a bachelor's degree in the total population) 2. Life expectancy at birth 3. Demographically vulnerable groups (Share of seniors over 75 in the total population) 4. Equality of income (Gini index of household income inequality by region) 5. Poverty rate (people at risk of poverty or social exclusion - % of total population)
C. Health and community connectedness	<ol style="list-style-type: none"> 1. Demographic stability (The share of population that remains resident in the municipality over a five-year period.) 2. Voter participation (The share of the voter-eligible population that voted in the last local election) 3. Access to healthcare (% of population that has health insurance coverage) 4. Infectious diseases (Standardised death rate rates for less than 65 years old due to certain infectious and parasitic diseases by 100 000 inhabitants) 5. Crime (% of people who declared having faced the problem of crime, violence or vandalism in the local area (EU-SILC))
D. Environment and accessibility	<ol style="list-style-type: none"> 1. Availability technological percentage of households connected to the Internet and mobile networks) 2. Housing quality (Percentage of people declaring of suffering of housing deficiencies: lack of basic sanitary facilities in the dwelling) 3. Percentage of mobile phone users 4. People using the internet (% of people aged 16-74) 5. Networks (km per 1 000 square km),

The values of the indicators of both regions are given in the tables below.

A: Economic potential

Eastern Slovakia is one of the EU regions with the lower GDP per capita. Slovakia as a country converges to the average of EU countries, but within the country the differences are slightly increasing. This is a disadvantageous position, which causes less interest in investment and at the same time due to the lack of jobs out-migration to western Slovakia, to the Czech Republic, etc. In the northeast of Slovakia, the depopulation and aging of the population is already evident. This weakens the ability to react and adapt to external shocks. The offer of higher education is plentiful in the region, the problem is the brain drain, which is massive even after graduating from high school.

B. Socio-demographic potential

Educational attainment, percentage of population with higher education and is only slightly lower in the context of the country. Also, life expectancy at birth is gradually increasing. The demographic situation is characterized by the outflow of human capital, especially from rural areas, and thus aging of the population. Relatively high equality in society is a positive element, but it is equality at a low level of income. The lack of financial resources for development, combined with territorial fragmentation and isolation, is reflected in low institutional density, and therefore in the risk of a sufficient capacity of the community to respond to the impacts of crisis situations.

C. Health and community connectedness

In both regions, the poverty rate is relatively high, often localized in larger vulnerable groups, which is also associated with lower access to health care. Manifestations of poverty in some areas are also associated with a higher rate of alcohol-related illnesses and a greater spread of infectious diseases. Voter participation is similar to other parts of the country. Nevertheless, serious violent crime is declining.

D. Accessibility

Mobile signal coverage in peripheral areas is slowly improving, which is key for mutual communication in the case of a disaster. The equipment of the household with the Internet is also increasing. Housing quality is at the average level of the country in terms of supply by water from the public water-supply system or the percentage of houses connected up to the public sewage system. The problems are in less accessible municipalities or in settlements inhabited by vulnerable groups; they are then multiple - transport connections, mobile signal coverage and sewage system equipment.

To calculate the RCI values, we used values at a finer level in 79 districts of Slovakia.

Darker colours indicate districts with higher resilience capacity to the four RCI dimensions. The highest values are found in five districts of the capital Bratislava (lower left corner). The more developed north-western parts of Slovakia also see a comparatively good situation, which is in contrast to the lower resilience in the north-eastern and south-eastern Slovak districts of eastern and central Slovakia (mostly Prešovský and Košický regions).

Resilience capacity in the 79 Slovak districts. Hudec, O., Reggiani, A., Šiserová, M.: Resilience Capacity and Vulnerability: The Case of Slovakia, p.17:

http://www-sre.wu.ac.at/ersa/ersaconfs/ersa16/Paper86_MonikaSiseroVa.pdf

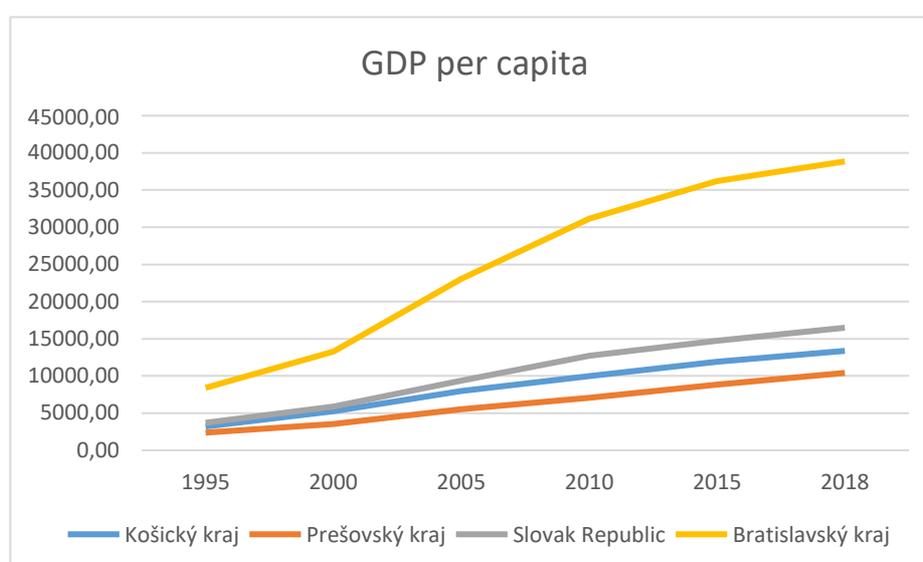
Note: Darker colours correspond to a higher RCI value and indicate a better resilience.

The Resilience Capacity Index dimensions and indicators

A: Economic potential

A1: Regional GDP per capita in purchasing power parity

Territory/Year	1995	2000	2005	2010	2015	2018
Košický kraj	3174,35	5257,03	7943,66	9969,20	11890,90	13352,95
Prešovský kraj	2357,16	3536,48	5486,46	7057,73	8807,11	10388,55
Slovakia	3 685,70	5 862,40	9 371,59	12 688,18	14 709,18	16 474,62
Bratislavský kraj	8 380,26	13 252,20	23064,48	31095,78	36157,86	38836,00

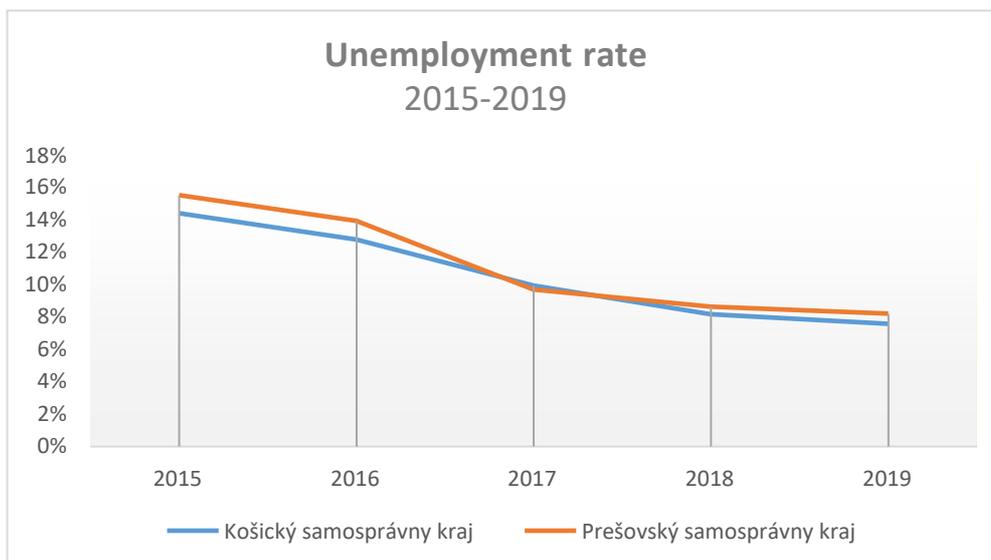


A2: Sector specialization in old industries (percentage of employment in the primary and secondary sectors)

SR / region	Year	Employment in total	Of which: by economic activities of SK NACE Rev.2												perc ABCDE	perc BCDE
			Agriculture, forestry, fishing	v tom / *Of which:		Construction	Trade, transport, accom., food serv.	Information, communication	Financial, insurance and real estate activities	Real estate activities	Profession., techn. activ., administr.	Public admin., education, health	Arts, recreation, other activities			
				Industry in total	Manufacturing											
			A	B, C, D, E	C	F	G, H, I	J	K	L	M, N	O, P, Q	R, S, T, U			
SR in total	2013	2 192 251	73 946	518 054	469 496	166 547	588 573	57 013	42 383	22 909	210 032	448 720	64 074	27,00	23,63	
SR in total	2014	2 223 149	72 415	527 157	479 094	164 145	599 520	59 262	43 936	22 369	210 418	457 617	66 310	26,97	23,71	
SR in total	2015	2 267 097	73 353	537 912	490 670	163 150	603 993	60 917	45 697	22 593	228 499	463 756	67 227	26,96	23,73	
SR in total	2016	2 321 049	72 513	556 129	508 899	165 833	610 744	64 219	46 394	25 353	239 236	469 082	71 546	27,08	23,96	
SR in total	2017	2 372 256	72 300	576 299	528 786	169 705	621 575	67 073	45 929	27 310	241 908	474 577	75 580	27,34	24,29	
Preš.kraj	2013	250 065	11 521	59 035	54 677	27 501	61 579	4 241	3 787	1 260	15 770	58 144	7 227	28,22	23,61	
Preš.kraj	2014	254 419	11 368	60 946	56 632	28 033	63 531	4 585	3 999	1 211	15 049	58 300	7 397	28,42	23,95	
Preš.kraj	2015	259 070	11 394	62 440	58 194	27 689	62 887	4 891	4 263	1 192	16 563	60 233	7 518	28,50	24,10	
Preš.kraj	2016	265 270	11 241	66 901	62 572	27 816	62 371	5 215	4 447	1 182	16 818	61 100	8 179	29,46	25,22	
Preš.kraj	2017	273 890	11 415	69 197	64 755	29 565	64 758	5 608	4 345	1 328	16 413	62 431	8 830	29,43	25,26	
Preš.kraj	2013	271 726	8 895	59 598	52 823	15 568	75 025	8 663	4 774	2 530	22 269	66 661	7 743	25,21	21,93	
Koš.kraj	2014	272 588	8 808	59 741	53 533	15 646	73 884	8 550	5 131	2 287	22 491	67 770	8 280	25,15	21,92	
Koš.kraj	2015	275 352	8 745	60 101	53 907	15 390	73 533	8 610	5 153	2 500	23 545	69 569	8 206	25,00	21,83	
Koš.kraj	2016	280 972	8 743	61 082	54 808	15 664	75 751	9 664	5 060	2 350	23 422	70 423	8 813	24,85	21,74	
Koš.kraj	2017	288 966	8 768	63 167	56 862	15 952	78 941	9 927	5 115	2 600	23 423	71 527	9 546	24,89	21,86	

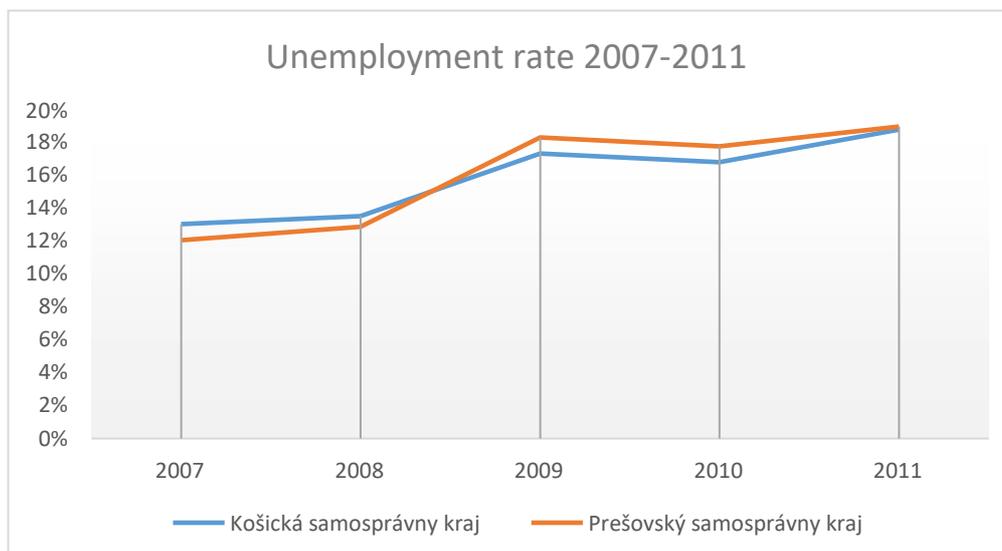
A3: Long-term unemployment (average of long-term unemployment rate values for the last 5 available years)

Unemployment rate		
Region	Košický kraj (KSK)	Prešovský kraj (PSK)
2019	7,57%	8,19%
2018	8,17%	8,61%
2017	9,94%	9,68%
2016	12,76%	13,91%
2015	14,39%	15,50%



A4: Response to the 2007 crisis during its greatest impact (change in the unemployment rate between 2007 and 2011)

Unemployment rate		
Region	Košický kraj (KSK)	Prešovský kraj
2011	18,76%	18,95%
2010	16,78%	17,75%
2009	17,30%	18,29%
2008	13,50%	12,86%
2007	13,02%	12,05%
2011-2007 response to crisis 2007	5,74%	6,90%



A5: Income of private households (PPS per inhabitant)

Net money income monthly		
Region	Košický kraj (KSK)	Prešovský kraj (PSK)
2019	466,06 €	425,18 €
2018	437,52 €	404,70 €
2017	421,27 €	390,30 €
2016	406,85 €	375,80 €
2015	393,01 €	359,36 €

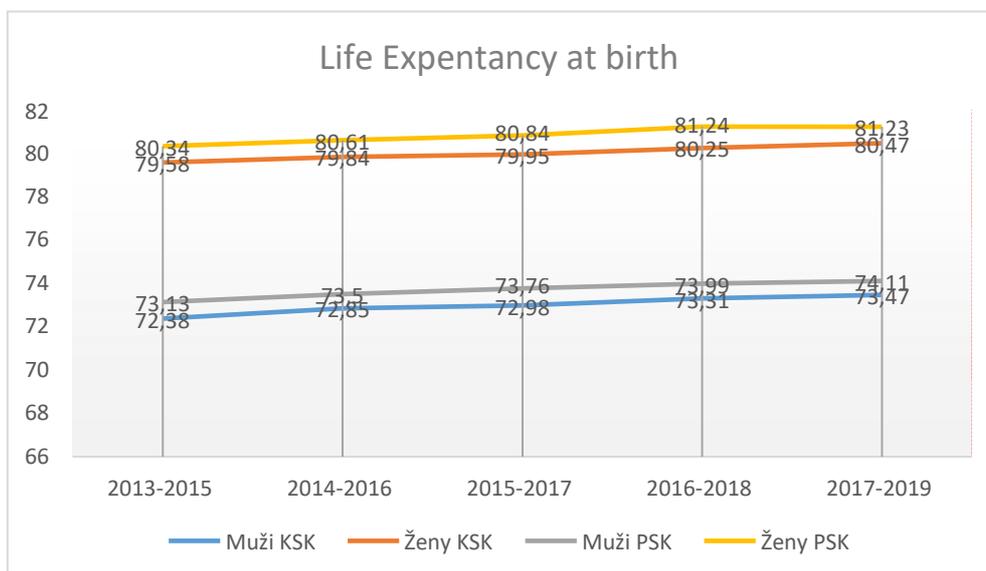
B: Socio-demographic potential

B1: Educational attainment (percentage of people over 25 with at least a bachelor's degree in the total population)

(Census 2011)

Educational attainment		
Region	Košický kraj (KSK)	Prešovský kraj (PSK)
Percentage	17,9	16,9

B2: Life expectancy at birth



B3: Demographically vulnerable groups (Share of seniors over 75 in the total population)

Košícký kraj			
	Over 75	Total	%
2015	37 038	795 638	4,66%
2016	38 237	797 115	4,80%
2017	39 465	798402	4,94%
2018	40 496	799 460	5,07%
2019	41 513	800 556	5,19%

Prešovský kraj			
	Over 75	Total	%
2015	37 586	820 257	4,58%
2016	38 595	821 431	4,70%
2017	39 400	822 946	4,79%
2018	40 164	824 090	4,87%
2019	41 017	825 328	4,97%

B4: Equality of income (Gini index of household income inequality by region)

	Prešovský kraj	Košický kraj
Gini coef. EU-SILC 2018	22,0	22,0

B5: Poverty rate

(people at risk of poverty or social exclusion - % of total population)

Poverty rate (% population)		
Year	2008	2018
Košický kraj	26,6%	20,3%
Prešovský kraj	27,0%	23,1%
Slovakia	20,6%	16,3%

C: Health and community connectedness

C1: Demographic stability (The share of population that remains resident in the municipality over a five-year period.)

	Prešovský kraj	Košický kraj
Demographic stability	87,8	82,5

C2: Voter participation

(The share of the voter-eligible population that voted in the last local election.)

	Prešovský kraj	Košický kraj
Voter participation 2018	53,18	46,51

C3: Access to healthcare

(Percentage of population that has health insurance coverage)

% of the average number of sickness insured from the productive and post - productive population (nemocenské poistenie)

% of the average number of sickness ins	Prešovský kraj	Košický kraj
Voter participation 2018	45,22	38,03

C4: Infectious diseases:

replaced by death which are the direct consequence of excessive use of alcohol: diagnoses: F10 – Acute alcohol intoxication, G31 – Degeneration of nervous system due to alcohol, G62 – Alcoholic polyneuropathy, I42 – Cardiomyopathy, K29 – Alcoholic gastritis, K70 – Alcoholic liver disease, K73 – Chronic hepatitis, not elsewhere classified, K74 – Fibrosis and cirrhosis of liver and K86 – Alcohol-induced chronic pancreatitis.

	Initial death diagnosis									Total
	F10	G31	G62	I42	K29	K70	K73	K74	K86	
Bratislava region	6	39	7	273	33	1,576	61	2,063	112	4,170
Trnava region	77	49	3	276	30	1,733	69	1,364	89	3,690
Trenčín region	28	50	5	353	62	1,417	76	1,417	79	3,487
Nitra region	13	71	16	425	42	2,425	91	2,227	122	5,432
Žilina region	31	85	12	598	56	1,657	97	1,717	123	4,376
Banská Bystrica region	11	75	8	642	44	1,949	64	1,955	145	4,893
Prešov region	8	62	5	680	54	1,399	63	1,360	106	3,737
Košice region	28	80	8	616	47	1,651	113	2,187	131	4,861
Total	202	511	64	3,863	368	13,807	634	14,290	907	34,646

Source: Kubák, M., Gavurová, B., & Kulhánek, A. (2019). Spatial analysis of alcohol-related mortality in Slovakia. *Cent Eur J Public Health*, 27(Supplement), S48-54. doi: 10.21101/cejph.a5766.

Retrieved from: <https://cejph.szu.cz/pdfs/cjp/2019/88/06.pdf> (CC BY-NC-ND 3.0 CZ)

C5: Crime (Percentage of people who declared having faced the problem of crime, violence or vandalism in the local area (EU-SILC))

Violent crimes together	Violent crimes						
	2013	2014	2015	2016	2017	2018	2019
Bratislavský kraj	846	819	706	801	712	692	614
Trnavský kraj	535	490	487	661	669	625	555
Trenčiansky kraj	467	507	532	780	720	622	549
Nitriansky kraj	679	668	735	868	892	739	642
Žilinský kraj	809	742	807	778	721	714	761
Banskobystrický kraj	825	724	783	834	880	815	857
Prešovský kraj	770	702	663	723	682	699	643
Košický kraj	1 064	972	968	927	836	856	904

D: Environment and accessibility

D1: Availability technological percentage of households connected to the Internet and mobile networks

Used types of Internet connection in household by regions: share of households having Internet access in %

SR	v tom kraj/of which region								Type of Internet connection
	BL	TA	TC	NI	ZI	BC	PV	KI	
90,5	93,5	86,9	92,0	92,1	86,9	88,0	92,5	91,3	Fixed broadband connection

63,4	60,0	69,9	75,8	61,4	64,1	44,0	61,2	74,3	Mobile broadband connection
1,3	1,8	1,1	0,9	0,3	2,2	2,4	1,1	0,6	Dial-up access over normal telephone line or ISDN
8,1	1,1	14,9	4,1	6,7	8,7	19,6	9,0	2,8	Mobile narrowband connection (less than 3G)

D2: Housing quality (Percentage of people declaring of suffering of housing deficiencies: lack of basic sanitary facilities in the dwelling)

SR / Area / Region	Year	Water-supply system (km)	Sewage system (km)	Waste water treatment plants	Population supplied by water from public water-supply system (%)	Population in houses connected up to public sewage system (%)
SR in total	2014	29 438	12 564	692	87,7	64,7
SR in total	2015	29 674	12 834	686	88,3	65,2
SR in total	2016	30 079	13 731	690	88,7	66,4
SR in total	2017	30 307	14 067	697	88,9	67,7
SR in total	2018	30 528	14 414	706	89,3	68,4
Prešovský kraj	2014	4 232	2 152	155	79,9	64,9
Prešovský kraj	2015	4 260	2 212	153	80,5	66,1
Prešovský kraj	2016	4 292	2 268	157	80,9	67,5

Prešovský kraj	2017	4 329	2 308	159	81,0	68,0
Prešovský kraj	2018	4 366	2 335	162	81,5	68,6
Košický kraj	2014	4 165	1 497	84	81,7	61,9
Košický kraj	2015	4 250	1 567	87	83,7	62,6
Košický kraj	2016	4 334	1 679	92	84,2	63,4
Košický kraj	2017	4 357	1 783	93	84,6	65,4
Košický kraj	2018	4 406	1 802	95	84,9	65,1

Source: ŠÚ SR, DATAcube. (vh3001rr, vh3002rr, vh3003rr), [CC BY 4.0](#)

D3: Percentage of mobile phone users

Equipping households with selected durables by region (EU SILC 2019)

Selected durable goods	Households together	Region							
		Bratislavský	Trnavský	Trenčiansky	Nitriansky	Žilinský	Banskobystrický	Prešovský	Košický
Telephone (including mobile phone)	99,3	99,4	99,7	99,4	99,7	98,6	99,3	98,7	99,3
color TV	98,9	98,2	99,3	99,6	99,2	99,6	99,1	99,5	97,3
Computer	78,6	81,4	79,8	81,5	76,9	79,1	70,9	82,5	77,4
Washing machine	98,5	99,0	98,6	99,3	98,3	99,3	97,1	99,3	97,6
Automobile	69,5	70,5	76,0	70,4	70,9	70,5	58,6	73,7	67,3

D4: People using the internet (% of people aged 16-74)

Household members access to the Internet at home by regions share in total households in %									
SR	of which region								
	BL	TA	TC	NI	ZI	BC	PV	KI	Categories answer
85,8	90,1	82,1	84,5	87,7	84,4	87,3	85,7	83,3	Yes
14,2	9,9	17,9	15,2	12,3	15,6	12,7	14,3	16,7	No

D5: Networks (km per 1 000 square km)

Road network density

Region	Bratislavský	Trnavský	Trenčiansky	Nitriansky	Žilinský	Bansko-bystrický	Prešovský	Košický
Km per 1000 population	1,23	3,45	3,22	3,83	2,97	4,93	3,86	2,99

3. Policy actions in the area of resilient region

So far, the importance of resilience measures is a lesser-known and less popular policy area in Eastern Slovakia. There are isolated activities in health, transport or social policy (sectoralism is a chronic problem in Slovakia from the time of the centrally managed economy). Regional governments coordinate the implementation of health care and have set strategic priorities of health policy for the period 2013-2020. Some of them reinforce resilience, such as raising public awareness, using online tools, and improving communication between healthcare organizations.

There are measures to improve access to better public services, to help people in material need, to build public water mains, public sewers and wastewater treatment plants, to adapt the urban environment to climate change and also to reduce air and noise pollution. The region has created a guide for residents on how to act in the event of an emergency, such as floods, snow disasters, earthquakes, landslides, fires, terrorist attacks. The region also implemented a flood protection project, which also served to support employment.

Interconnection, information and coordination are essential to promote resilience. However, what is still very lacking is coordination between sectors - because the health of the population is linked to the

availability of settlements, economic development and social inclusion. They form one organic system and strategic solutions need to be holistic.

Several basic measures can be recommended for a region or municipality:

First of all, the priority is to find out what is its resilience potential, and to evaluate the resilience capacity before a possible external shock. On this basis, the region can estimate its expected vulnerability, respectively resistance to such shock.

Similarly, if a region has a high resistance potential in one of the four types of resistance, this does not guarantee a high potential in the other types of resistance. Based on the concepts of resilience, there are several principles to increase resilience capacity:

1. Promotion of structural diversity - economic, ecological or cultural. The more diverse the regional system, standing on more pillars, the higher the resilience. If one part of the system is affected (industry, crops, tourism, water or energy), there should be other segments that can compensate for losses and take over activities and an alternative source. If dominantly agricultural production is developed in the region, its impact by a devastating external shock results in minimal possibilities of overcoming the situation if there are no other sectors that would support the economy of the municipality. A diversified sectoral structure is advantageous in the event of a natural disaster or economic downturn. It makes it possible to offset economic losses in the event of intervention by one sector by temporarily strengthening other sectors which have not been directly affected until measures are taken to rehabilitate the affected agriculture. Similarly, it is important to promote the diversity of energy sources, transport links, water sources and food.

2. Redundancy is an important feature of resilient systems when it uses more different backup sources than necessary, which in a positive sense increases stability and increases fault tolerance. Increasing the redundancy of key infrastructure systems - electricity, fuel supply, wastewater treatment, food and drinking water - means that if one source or system is at risk, redundancy in the overall system will allow another source to be used until the damaged source or system can be repaired.

3. The modularity and independence of system components also increases resilience. Damage or failure of one part - energy or water resources, key employers, economic activities should be set so that a failure in one part has a minimum probability of causing failure of other related segments of the whole system.

4. Anticipation and monitoring of probable threats and external shocks that may lead to fluctuations, comprehensive approach, continuous monitoring of crisis factors, up-to-date information on risks located on site and in the vicinity, including cross-border territory, and may cause an emergency. The regional government, larger municipalities and cities should have an integrated centre with means and resources for obtaining and disseminating objective information on the possible consequences and solutions. There is a need for an overall increase in the awareness of public officials and the general public in order to minimize the consequences of existing threats. The strategic goal is to establish an integrated risk assessment system for all aspects of human life

5. Use a methodology of comprehensive risk management. Adapt existing prevention tools, the development program and the spatial plan to improve the preparedness of municipalities to effectively manage the impacts of external shocks.

6. Build a knowledge base and digital platform to provide and share information on external threats to effective decision-making processes in the region and municipalities. Interconnect cross-border, national, district and local crisis management systems.

4. VET needs to support regions' resilience

The main outputs and recommendations from questionnaire survey and identified the main fields of educational needs.

Almost all respondents consider the building of the regional resiliency as very important. The institutional readiness to build regional resiliency shows the following weak areas:

- Intercultural competencies
- Language competencies
- Conflict solving

The personal assessment of the resilient resiliency knowledge shows that the areas which mostly need interventions are as follows:

- the specialized knowledge in the field of regional resiliency
- language skills
- vulnerability assessment
- identification and prioritization of the strategies for resilient support
- building trust and engagement of stakeholders
- better understanding of threats and external shocks
- the process of adaptive resilience
- the regional resilience potential and how to measure it
- the integrated approach to regional and community planning
- how to prevent societal, economic and environmental risks at regional level – risk management approach
- the connections between migration, resilience and security
- critical thinking and analysis skills to evaluate problems in an organisational context
- methods and techniques of effective public decision-making
- knowledge on public participation within the resiliency' issues
- design public policy in resiliency
- project management for resilience support
- the difference between regional, personal and community resilience

78% of respondents would like to take part in the regional resiliency training using the blended learning (combination of face to face and e-learning). The MOOC were also indicated among preferable ways of delivery in Slovakia.

The main outputs and recommendations from interviews

The participants agreed that the knowledge on regional resiliency is very low and most of them thought that regional resiliency covers only environmental issues. That is why the complexity of resiliency (all areas influenced by resiliency) should be covered within training courses. As the specialised knowledge on regional resiliency is missing, the courses should include also the basic information, definitions and explanation of terminology. As resiliency should be fully implemented already during the regional development planning phase, the integrated approach to planning is very important as a prerequisite to evidence-based planning. The security issues of all types (including those coming from migration) are very relevant as well. The participants express worries that persons dealing with regional resiliency do not possess the knowledge and skills needed to successfully manage region and its organisations, especially crises management. The concrete examples how to use project management approach to increase regional resiliency and how to manage such projects is necessity for further resiliency support.

Summary on VET needs to support resiliency.

The following main conclusions can be drawn:

- The topic of resilience is still mostly new for local governments and non-profit organizations.
- The measures that exist are defined within separate public policies, sectoralism prevails, and a holistic view is usually missing. Teams implementing one public policy do not have sufficient knowledge of the agenda of other public policies.
- In places where a crisis may arise, the competencies of state and local government bodies are not clear (vertical versus horizontal governance and responsibility). This, of course, significantly weakens the ability to react to external shock or local disaster.
- VET education should cover not only regional resilience but also personal resilience. Because, collective community resilience relies on individual resilience. At the same time, individual resilience is not used if the community is unconnected.

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Annex II. National Report: Italy

1. Introduction

The present research was conducted by CESIE on the specific conditions of Italy (NUTS I⁶¹) with special attention on the regional level of Sicily (NUTS II), where the project partner organisation is located. The city of Palermo (NUTS III) has been the local focus wherever reliable information were available. If not possible, National data were considered. Sicily is an island (and also the largest region in Italy), located in the South of the country, at the heart of the Mediterranean Sea, at the crossroad of many different civilisations, and separated from the rest of the peninsula by the narrow Strait of Messina.

In line with EU-SILC classification, the following link shows Italy's division in NUTS II region level:

<https://ec.europa.eu/eurostat/documents/345175/7451602/2021-NUTS-2-map-IT.pdf>

Recent data (2018-2019) depicts Italian economy as a reality, still affected by different uncertainties and structural problems, which hinder the country's opportunities for growth. A certain deceleration in the economic development marked 2018, due both to a moderate internal and external demand. This reflects an overall change in families' attitudes, both in terms of the quality of products and in the distribution channels chosen. Italian families' financial conditions have improved after different years of negative results. In 2018, led by the transport sector, the most dynamic element of internal demand was represented by gross fixed capital formation, facilitated by more favourable credit conditions and fiscal policies to support enterprises. Despite the general slowdown of economic growth, the levels of occupation continued to increase, though unemployment rates remain largely higher than EU average. As regards social trends, the ageing population is still growing. Istat data foresees a general reduction in the number of inhabitants until 2050, which may pose potential challenges to the productivity of the country and the need to rethink welfare policies⁶².

The graph below summarises the main growth trends of Italy GDP.



Figure 1 National GDP growth 2010-2018. Source: [Istat, 2019 \(CC BY 3.0 IT\)](https://www.istat.it/it/2019/01/rapporto-annuale-2019)

⁶¹ <https://ec.europa.eu/eurostat/web/nuts/background>

⁶² <https://www.istat.it/storage/rapporto-annuale/2019/Rapportoannuale2019.pdf>

Despite a slight growth in the first trimester of 2019, the overall increase has been almost equivalent to zero. Investments especially increased in the construction field, while scarce offer marked services, and a certain expansion regards manufacture and agriculture. Despite this difficult economic framework, positive signs of greater productivity and occupation derive from investments and trust levels⁶³. Looking at regional results, we can distinguish considerable differences, firstly in GDP levels per inhabitant.

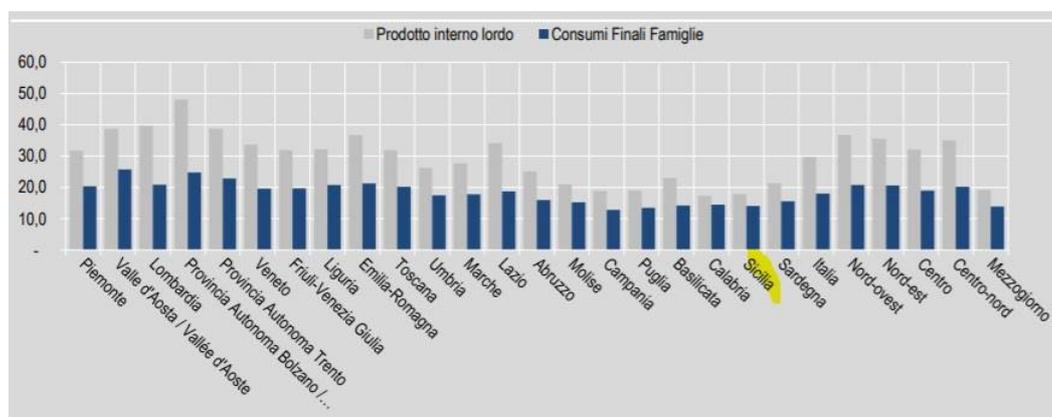


Figure 2 Regional gross domestic product per capita (2019). Source: [Istat. Conti Economici Territoriali, anni 2017-19 \(CC BY 3.0 IT\)](#)

The level of GDP per capita (in grey) in Sicily as well as families' consumption (in blue) reflect long-term difficulties and structural problems. The National trend has not changed much from previous years, as shown in the following figure.

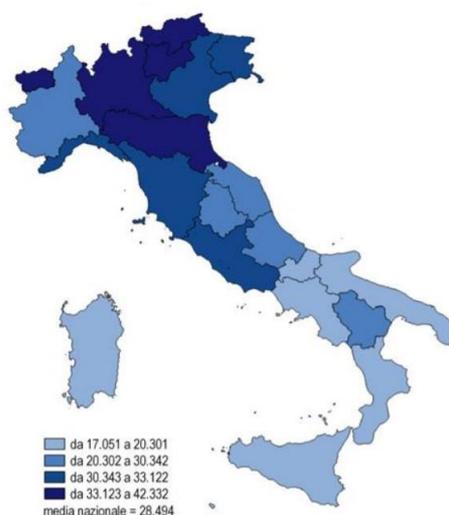


Figure 3 Regional gross domestic product per capita (2017). Source: [Istat. Conti regionali 2017, Report. \(CC BY 3.0 IT\)](#)

⁶³ <https://www.istat.it/storage/rapporto-annuale/2019/Rapportoannuale2019.pdf>

Focusing on 2019 results, retrieved from the Istat 2019 Report, the following regional economic trends emerge⁶⁴:

- Based on the levels of GDP per capita, the North-West is first in the National rank, with an average of 37,000€, almost double than the South;
- Income levels per capita are very different comparing people living in the North-Western area of the country with people from the South: 22,600€ and 14,200€, respectively;
- The traditional opposition North-South is again confirmed by the growth in occupational levels. Northern regions average is much higher than the national average, especially thanks to the results of North-East. Low levels are registered instead in the Centre and South of the country;
- Also, the distribution of workers per sector appears very different:

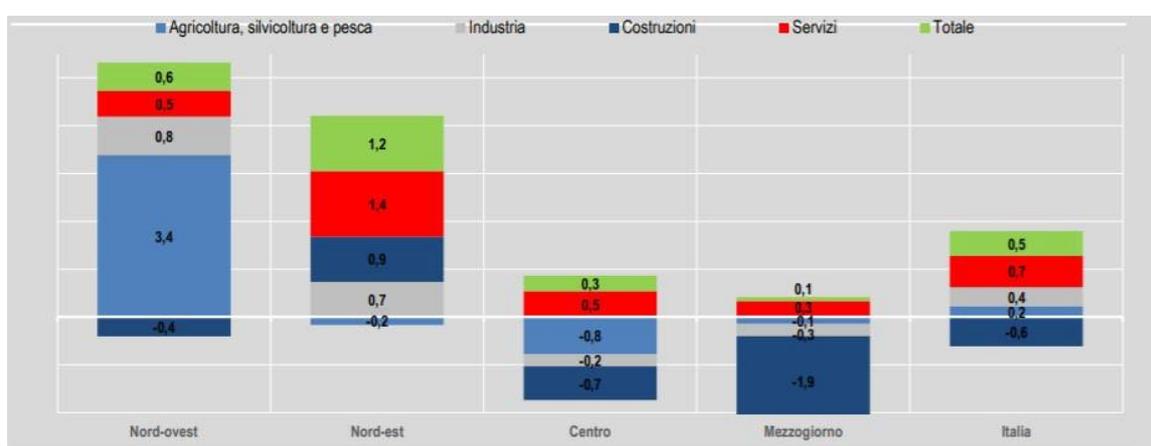


Figure 4 Employees per sector and geographic area (2019). Source: *Istat. Conti Territoriali. Report 2019*.⁶⁵ (CC BY 3.0 IT)

Regional variety is also reflected in the distinction between urban and rural NUTS region in the country:

https://ec.europa.eu/eurostat/statistics-explained/images/a/ae/Urban_rural_typology_for_NUTS3_new.png

Resilience indexes at municipal level demonstrate again an opposition North-South: based on the social vulnerability index (SVI), elaborated by ISTAT, North and Centre perform better than the South. According to 2019 European Commission Report on Italy progress on the achievement of structural reforms and future needs, the following aspects were highlighted for the following funding period⁶⁶:

- National expenditure for research and innovation was lower than EU averages;
- Need to enhance digital competences of citizens, enterprises and public administrations;
- Improve the growth and competitiveness of SMEs;

⁶⁴ https://www.istat.it/it/files//2020/12/REPORT-CONTI-TERRITORIALI_2019.pdf

⁶⁵ Agricoltura, silvicoltura e pesca: Agriculture, forestry, fishing; Industria: industry; costruzioni: construction; servizi: services; totale: total

⁶⁶ https://ec.europa.eu/info/sites/info/files/file_import/2019-european-semester-country-report-italy_it.pdf

- Enhance the share of renewable energies and overall levels of energy efficiency;
- Special attention must be placed on the adaptation to climate change, risk prevention and resilience to catastrophes, considering the particular geography of the country and its vulnerability to climate change, hydrogeologic events, seismic activities;
- Promote a sustainable management of waters, wastes and circular economy;
- As national results are still far from EU average in terms of Internet connections, it is necessary to improve digital connectivity;
- Invest in the creation of trans-European networks for sustainable, smart, safe, intermodal, transports. Investments must also target the railway system and urban mobility;
- Serious challenges still affect the labour market, which makes it essential to enhance access to employment and facilitate women's participation to the labour market;
- Improve quality, accessibility, efficiency of education and training systems within a perspective of lifelong learning, to overcome large regional inequalities;
- Strengthen inclusive processes, to support people at risk of poverty or social exclusion, enhance efficiency and long-term assistance of the health system;
- Support the development of weaker territories and of cultural and entertainment sectors;
- Improve the management and employment of European structural and investment funds.

Due to regional differences, NUTS II and NUTS III levels were preferred for a more precise analysis of data. Sicily (NUTS II) and Palermo (NUTS III), are the focus of the research conducted in Italy.

The engagement of regional policymakers and NGOs active in regional development has been done primarily through the personal contacts and previous cooperation with the project partner CESIE. All the respondents are active on a local/regional level, but we also involved representatives of organisations operating not only in Sicily but in the rest of the country. Moreover, in light of the strong impact of the Covid-19 pandemic on the sanitary field, we also submitted the questionnaires to people working in the health system, either in the emergency or as regular nurses/doctors or as additional forces temporarily employed to respond to the crisis. Due to the current limits imposed by the Covid-19 pandemic, answers were collected online, through Google forms, and deepened with additional semi-structured interviews. Among those who gave their consent to be contacted, three people were interviewed by phone in January 2021. One of the interviewees is working as volunteer for the Civil protection. One instead has supported the work of the Civil protection in the past. The third interviewee has worked in the Public Administration, in the Environment and Civil protection sector, and has recently retired; now she is working with the Civil protection as volunteer.

Mass mailing was used to ensure the highest involvement possible of relevant stakeholders, thanks to CESIE personal contacts. Invitations to online questionnaire surveys were sent to more than 900 recipients. In total 24 people responded and 13 people among them gave their consent to be contacted for semi-structured interviews, providing their email address and phone number.

Respondents were balanced between managerial (54.2%) and non-managerial roles (45.8%), and the majority are men (66.7%). Most of respondents hold a University degree, but there is also a high percentage, whose highest educational level derives from other training/ courses.

The field of specialisation of respondents was quite varied, considering the wide range of audience involved by CESIE. However, most of participants (20.8%) are from the political science field or public administration. Others are specialised either in Law or in technical sciences. There were also several respondents working in environmental supervision or civic protection, and in the health system. The biggest age group involved was people between 46-55 (37.5%), and most live in municipalities with 5001-50000 inhabitants. Around 50% respondents are working in their field for more than 10 years. Yet, almost half of them (45.8%) had not received any training course in the previous year. The courses undertaken by some respondents which can be relevant to the field of regional resilience included: HACCP (Hazard Analysis and Critical Control Points), social economy role in the inclusion of disadvantaged groups; assistance to Covid-19 patients; climate change; control of forest biodiversity; basic competences for civil protection; BLSD (Basic Life Support Defibrillation).

Overall, on a scale of 5, the level of preparation in the creation of regional resilience was rated around 3. More specific information is offered in **Chapter 4. VET needs to support regions' resilience**.

2. Profiles of the region and its resilience capacity

The research was conducted on the basis of official European, National and regional documents and decrees. Special national decrees adopted to respond to Covid-19 pandemic were consulted too. Moreover, previous researches by NGOs, reports by national economic bodies, as well as more specific analyses of the economic framework of both Italy and Sicily were examined.

An important source was the European Commission website offering up to date databases and relevant information on National trends. Data were also collected from other sources, firstly Istat, but also Eurostat, the World Bank, Banca d'Italia, Agenzia Nazionale Politiche Attive Lavoro (ANPAL), EU-SILC database. The Website of NGOs and regional, national agencies were consulted too, both to retrieve information on local developments and on policies, initiatives adopted in this field. The use of various sources responds to the impossibility to find necessary data from one place only. They are also needed to develop an appropriate overview of the level of resilience reached in Italy and more specifically in Sicily. The following indicators were considered:

- A. Economic potential
- B. Socio-demographic potential
- C. Health and community connectedness
- D. Accessibility

Understanding the Regional levels of resilience is fundamental for policy-makers to improve adaptation and disaster risk management measures and allocate the funds provided within the Sendai Framework.

An image of the level of resilience of our country is offered by the study “Constructing a comprehensive disaster resilience index: The case of Italy”, conducted by the CMCC Foundation – Euro-Mediterranean Center on Climate Change (CMCC) on 8092 Italian municipalities. (Available at: <https://www.cmcc.it/article/the-map-of-resilient-italy>).

The study shows a clear division between North and South, with the former being higher resilient against disasters. Yet, there are also intra-regional differences. Sicily is among those areas with the highest need to improve their preparedness to crises. It is the biggest region in Italy, covering an area of 25,714 square km and hosting almost 5 million inhabitants. Palermo is the capital city of Sicily, as well as its largest town (676,118 inhabitants)⁶⁷.

Being an island at the very south of the peninsula, the region can be considered as in a remote location though at the heart of the Mediterranean Sea, at the crossroad of many different civilisations, separated from the rest of the country by the narrow Strait of Messina. However, over time there have been many challenges in connecting the region to the rest of the peninsula, due to the status of roads and scarce development of means of transport, firstly railway.

Yet, Palermo can be considered a predominantly urban region (rural population is less than 20% of the total). According to Eurostat classification for the urbanisation level of municipalities (DEGURBA), Palermo can be considered a city, thus densely populated.

In terms of economic developments, Sicily is still lagging behind national averages. In recent years, the regional economy has been largely based on services, and there have been many attempts to improve the level of digitalisation in public offices and the share of e-commerce companies. Yet, the regional economy can still be considered as traditional, largely dependent on non-market services (28.42%), provided by the public administration, financial intermediation, real estate and business (20.65%) and commerce (12.34%). The weight of industry is very low, especially when compared to the National average: 7.9% and 18% respectively⁶⁸.

In 2007, after the approval of the ERDF regional operational programme for Sicily 2007-2013, the region was considered eligible for the convergence objective, considering it was among those with a level of GDP per capita lower than 75% of the average GDP per capita of the EU-27. The concept of convergence-competitiveness was introduced by the EU Cohesion Policy funds 2007-2013. With the structural funds 2014-2020, these two elements were replaced by attention to investment for growth

⁶⁷ <https://ec.europa.eu/growth/tools-databases/regional-innovation-monitor/base-profile/sicily>

⁶⁸ [https://ec.europa.eu/growth/tools-databases/regional-innovation-monitor/base-profile/sicily#:~:text=Economy-,Sicily%20lags%20behind%20the%20national%20and%20European%20economy%20in%20terms,\)%20\(Eurostat%2C%202020\)](https://ec.europa.eu/growth/tools-databases/regional-innovation-monitor/base-profile/sicily#:~:text=Economy-,Sicily%20lags%20behind%20the%20national%20and%20European%20economy%20in%20terms,)%20(Eurostat%2C%202020))

and jobs and were now linked to the category of less developed regions, i.e. those with GDP levels per capita lower than 75% of the average GDP of the EU-27⁶⁹.

The Resilience Capacity Index dimensions and indicators

A. Economic potential

A1: Regional GDP per capita in purchasing power parity

2019: Italy (n.163): 40,470 PPP (Int. \$)⁷⁰

Similar results are shown at the following link:

<https://data.worldbank.org/indicator/NY.GDP.PCAP.PP.KD?end=2019&locations=IT&start=2008>

A2: Sector specialization in old industries

(percentage of employment in the primary and secondary sectors)

National Level, Italy:

- Percentage of employment in the primary sector: agriculture: 3.6% (World Bank: based on data from International Labour Organization, ILOSTAT database. Data retrieved in September 20, 2020⁷¹).
- Percentage of employment in the secondary sector: industry: 25.6% (World Bank: based on data from International Labour Organization, ILOSTAT database. Data retrieved in September 20, 2020⁷²).

⁶⁹ https://ec.europa.eu/regional_policy/en/information/publications/legislation/2015/european-structural-and-investment-funds-2014-2020-official-texts-and-commentaries

⁷⁰ <http://statisticstimes.com/economy/gdp-nominal-vs-gdp-ppp.php>

⁷¹ <https://databank.worldbank.org/reports.aspx?source=2&series=SL.AGR.EMPL.ZS&country=>

⁷² Ibid.

MACROSETTORE/ CLASSE DI ADDETTI	2011		2014		2016		2011/2016	2014/2016
	Numero	%	Numero	%	Numero	%	Var. %	Var. %
IMPRESA								
Industria in senso stretto	442.590	10,0	418.284	9,8	410.791	9,6	-7,2	-1,8
Costruzioni	589.108	13,3	529.103	12,4	508.696	11,8	-13,6	-9,9
Servizi di mercato	2.866.816	64,5	2.742.759	64,3	2.775.481	64,7	-3,2	1,2
Servizi alla persona	543.709	12,2	573.732	13,5	597.997	13,9	10,0	4,2
<10 addetti	4.226.674	95,1	4.065.829	95,4	4.085.324	95,2	-3,3	0,5
10-49 addetti	190.690	4,3	174.032	4,1	182.324	4,2	-4,4	4,8
50-249 addetti	21.453	0,5	20.639	0,5	21.716	0,5	1,2	5,2
250+ addetti	3.406	0,1	3.378	0,1	3.601	0,1	5,7	6,6
Totale economia	4.442.223	100,0	4.263.878	100,0	4.292.965	100,0	-3,4	0,7
ADDETTI								
Industria in senso stretto	4.221.528	25,7	3.957.515	25,3	3.975.383	24,7	-5,8	0,5
Costruzioni	1.657.168	10,1	1.356.547	8,7	1.324.165	8,2	-20,1	-2,4
Servizi di mercato	9.099.036	55,5	8.799.752	56,4	9.202.710	57,1	1,1	4,6
Servizi alla persona	1.429.365	8,7	1.501.369	9,6	1.610.376	10,0	12,7	7,3
<10 addetti	7.815.161	47,6	7.358.815	47,1	7.424.143	46,1	-5,0	0,9
10-49 addetti	3.391.195	20,7	3.104.845	19,9	3.252.183	20,2	-4,1	4,7
50-249 addetti	2.058.360	12,5	2.007.790	12,9	2.102.155	13,0	2,1	4,7
250+ addetti	3.142.381	19,2	3.143.734	20,1	3.334.152	20,7	6,1	6,1
Totale economia	16.407.097	100,0	15.615.184	100,0	16.112.633	100,0	-1,8	3,2

Figure 5 Percentage of employment per economic sector. Source: Istat. Rapporto annuale 2019 [CC BY 3.0 IT](https://www.istat.it/storage/rapporto-annuale/2019/Rapportoannuale2019.pdf). Retrieved from: <https://www.istat.it/storage/rapporto-annuale/2019/Rapportoannuale2019.pdf>

A3: Long-term unemployment

(average of long-term unemployment rate values for the last 5 available years)

In 2019, Sicily had an unemployment rate of 20%, the second highest in Italy. Unemployment decreased by 2% over the period 2015-19 (Eurostat, 2020)⁷³.

Analysing data from the municipality of Palermo, the unemployment rate in 2016 was equivalent to 21.9%, with an increase rate of 2.9% since 2006.

A4: Response to the 2007 crisis during its greatest impact (change in the unemployment rate between 2007 and 2011)

Unemployment rate Sicily	
Years	%
2007	12.9
2008	13.7
2009	13.8

⁷³[https://ec.europa.eu/growth/tools-databases/regional-innovation-monitor/base-profile/sicily#:~:text=Eurostat%2C%202020\).](https://ec.europa.eu/growth/tools-databases/regional-innovation-monitor/base-profile/sicily#:~:text=Eurostat%2C%202020).)

,In%202018%2C%20the%20regional%20nominal%20GDP%20amounted%20to%20%E2%82%AC89%2C189.48,%25)%20(Eurostat%2C%202020

2010	14.6
2011	14.3

Source: <http://dati.istat.it/index.aspx?queryid=20744#>

A5: Income of private households (PPS per inhabitant)

Sicily lags behind the national and European economy: GDP PPS per capita was just €18,100 in 2018, both below the Italian average (€29,700) and the European average (€31,000) (Eurostat, 2020)⁷⁴.

According to the classification introduced by the funding period 2014-20, on the basis of GDP per inhabitant (in PPS) Sicily can be considered part of the less developed regions (GDP per inhabitant was less than 75% of the EU-27 average).

B. Socio-demographic potential

B1: Educational attainment - % of people over 25 with at least a bachelor's degree in the total population	The number of people (20-34 years old) holding a University degree only reaches 13.7% in Sicily (just higher than Sardinia), considerably worse than the National average of 19.6% ⁷⁵ .
B2: Life expectancy at birth	Based on 2019 data, retrieved from Istat ⁷⁶ , the estimated life expectancy in 2019 was 79.9 for Sicily, compared to the National Average of 81.0
B3: Demographically vulnerable groups - Share of seniors over 75 in the total population	In 2019, the share of people aged 75years old and more was considerably lower than National trends: 10.3% and 11.7% respectively. ⁷⁷
B4: Equality of income - Gini index of household income inequality by region	There are strong income inequalities in the region: in 2019, the Gini index was equivalent to 0.46, quite higher than the National level of 0.35 ⁷⁸ .
B5: Poverty rate- people at risk of poverty or social exclusion - % of total population	In 2015, the poverty rate in Sicily was very high: in 2015 it reached 41.8%, almost double than the National average: 20.6% ⁷⁹ . Unfortunately, this negative trend has continued until 2019, when the relative poverty level was still almost double than National values: 22.5% and 11.8%

⁷⁴ [https://ec.europa.eu/growth/tools-databases/regional-innovation-monitor/base-profile/sicily#:~:text=Eurostat%2C%202020\).-,In%202018%2C%20the%20regional%20nominal%20GDP%20amounted%20to%20%E2%82%AC89%2C189.48,%25\)%20\(Eurostat%2C%202020](https://ec.europa.eu/growth/tools-databases/regional-innovation-monitor/base-profile/sicily#:~:text=Eurostat%2C%202020).-,In%202018%2C%20the%20regional%20nominal%20GDP%20amounted%20to%20%E2%82%AC89%2C189.48,%25)%20(Eurostat%2C%202020)

⁷⁵ <http://bancadati.anpalservizi.it/bdds/download?fileName=d708359c-3232-4e24-8a7c-1edd0fc183ea.pdf&uid=d708359c-3232-4e24-8a7c-1edd0fc183ea>

⁷⁶ https://www.istat.it/it/files//2020/02/Indicatori-demografici_2019.pdf

⁷⁷ https://www.istat.it/it/files//2020/05/19_Sicilia_Scheda.pdf

⁷⁸ <https://www.bancaditalia.it/pubblicazioni/economie-regionali/2020/2020-0019/2019-sicilia.pdf>

⁷⁹ <https://www.istat.it/it/files/2017/12/cap04.pdf>

	respectively. In most families with at least one member aged between 15 and 64 years old, there is only one source of income, but the number of families with unemployed people is decisively bigger than the National average (32.5% against 18.4%) ⁸⁰ .
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C. Health and community connectedness

C1: Demographic stability (The share of population that remains resident in the municipality over a five-year period.)

Population in Sicily (as of 1 st January 2020) ⁸¹	
Years	Population
2015	5,092,080
2016	5,074,261
2017	5,056,641
2018	5,026,989
2019	4,908,548
2020	4,968,410

There has been a decreasing trend in the population growth in the last 6 years.

C2: Voter participation

(The share of the voter-eligible population that voted in the last local election)

Sicily regional election 2017: 2.085.075 votes (total of people able to vote: 4.459.099)

C3: access to healthcare

(Percentage of population that has health insurance coverage)

In Italy, the State provides free access to basic health care services; health insurance covers the total of population (100% in 2011)⁸². Thus, the National Health Services ensures basic assistance to the entire population (including foreigners without residency permit). In addition, there is a growing number of NGOs providing similar services to non-residents, but these are often to be paid. Additional

⁸⁰ https://www.istat.it/it/files//2020/05/19_Sicilia_Scheda.pdf

⁸¹ <http://dati.istat.it/Index.aspx?QueryId=18976#>

⁸² <https://ourworldindata.org/grapher/health-protection-coverage?time=2011®ion=Europe>

insurances are not so much required in Italy (in 2012, these amounted to 0.9% of the entire health expenditure). These optional insurances are provided as supplementary policies to cover the costs of services, or for all the others which are not included within those provided by the State (e.g. dental care).

In the last few years, the Italian government has introduced some tax exemptions in order to favor supplementary assistance policies. Indeed, though health insurance covers the whole population, back to 2015, 7% of Italians affirmed that not all their health needs were satisfied, due to financial, geographic or logistic reasons (long waiting periods). This percentage is higher than the European average (lower than 4%). In 2016, the Italian government introduced additional health services to all those living in the country, depending on demographic and epidemiologic conditions. These measures include additional vaccines, newborn screening, specialist services, new applications of innovative technologies. Another important step was the enlargement of the list of chronic diseases entirely paid by the national health system⁸³.

C4. Infectious diseases (Standardised death rate rates for less than 65 years old due to certain infectious and parasitic diseases by 100 000 inhabitants)

Italy: 7.58 in 2015 ⁸⁴

During the last century, important steps forward have been made in the prevention of infant mortality caused by infectious diseases. Certainly, a great contribution was given by the use of antibiotics, vaccines and generally by the improvement of urban sanitation and water quality. Unfortunately, a resurgence of infectious diseases has hit the entire world, provoked by such agents as HIV/AIDS, tuberculosis and overall antimicrobial resistance. There are many causes for this return, including travels, higher demographic density, urbanization, the overall climatic change. Many infectious diseases are now caused by the worsening of other difficult health conditions, especially among the elderly. Yet, the percentage of deaths caused by infectious diseases has considerably lowered in Europe, reaching 1.2%, and 0.8 % for the age-group age below 10 years. Male mortality is higher than for women: on average men die 80% more often than women due to these diseases⁸⁵.

C5: Crime (Percentage of people who declared having faced the problem of crime, violence or vandalism in the local area (EU-SILC))

Italy: 9.4% 2019⁸⁶

⁸³ https://ec.europa.eu/health/sites/health/files/state/docs/chp_it_italy.pdf

⁸⁴ <https://gateway.euro.who.int/en/hfa-explorer/>

⁸⁵ http://www.eurosfair.euro.who.int/fr/7pc/doc/1252488295_atlas_mortalite_ue_2009.pdf

⁸⁶ source: https://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=ilc_mddw03&lang=en

D. Environment and accessibility

D1: Availability technological percentage of households connected to the Internet and mobile networks

Internet connection is lower than National averages in Italy: almost one out of three people does not have access to Internet connection. The percentage of families without access to Internet is higher than National averages, with 30.6% and 23.9% respectively. For 58.7% of Sicilian families, the main reason is lack of Computer skills. Back to 2019, 69.4% of Sicilian families had access to Internet (in Italy, this reached 76.1%)⁸⁷.

D2: Housing quality Percentage of people declaring of suffering of housing deficiencies: lack of basic sanitary facilities in the dwelling)

8.4 % people in Sicily were living in low-quality houses in 2016. In Italy this percentage was equivalent to 7.6%⁸⁸.

Low-quality houses were classified as crowded spaces, with one of the following issues:

- Structural problems, e.g. ceiling
- Absence of shower/ bath tub with running water
- Scarce light

D3. Percentage of mobile phone users

In 2016, almost the entire population had a mobile phone: 93.1% of people aged more than 18⁸⁹.

In December 2019, smartphone users reached 73.8%, compared to 15% only in 2009. This strong increase especially derives from young people's (under 30y old) habits. This age group experienced an increase in the number of users from 26.5% in 2009 to 86.3% in 2019. Since 2016, there has been a gradual growth in the number of users from the age group 30-44 years, which has currently reached 90.3%⁹⁰.

⁸⁷ https://www.istat.it/it/files//2020/05/19_Sicilia_Scheda.pdf

⁸⁸ [Istat, Indagine EU-SILC](#)

⁸⁹ <http://www.rainews.it/dl/rainews/articoli/Eurispes-il-93-degli-italiani-ha-un-telefonino-3c611ddf-99f5-4f5f-a328-db9064f9f831.html>

⁹⁰ <http://www.rainews.it/dl/rainews/articoli/Censis-italiani-ansiosi-e-dipendenti-dallo-smartphone-il-73-virgola-8-per-cento-ne-ha-uno-df8ea1c7-b1e8-458e-be69-faad27df4cf5.html>

D4. People using the internet (% of people aged 16-74)

In Sicily, the percentage of Internet users (from 6 years old) reached 67.2% in 2020, slightly lower than the National average of 70.4%. This trend is also reflected in the percentage of regular users (daily users): 53.4% in Sicily compared to 54.7% in Italy. Almost one out of three people from this age group does not use the Internet (31.6% against 28.3% in Italy)⁹¹.

Internet Users (2020)		
	Sicily	Italy
Internet Users (from 6 years old)	67.2%	70.4%
Regular Users (daily)	53.4%	54.7%
People not using Internet	31.6%	28.3%

D5. Networks (km per 1 000 square km)

A; Road Density: 161.8 in 2005 <https://knoema.com/atlas/Italy/Road-density>

B: Motorway Density 6,943km Italy, in 2018. ⁹²

3. Policy actions in the area of resilient region

The current sanitary crisis and related socio-economic difficulties provoked by the spread of the Covid-19 virus have been a testing field of EU countries resilience levels. The overall approach (Recovery and Resilience facility) has been based on the adoption of common European guidelines, readapted to National trends through specific funds and regulations. The current crisis is presenting unprecedented difficulties on Sicilian economy, even worse than 2008 crisis. The sanitary and socio-economic crises represent a serious burden on a context already seriously afflicted by structural delays and socio-economic vulnerability. Indeed, notwithstanding the initial slow recovery following the 2008 crisis, the growth of regional GDP has been slow. The current crisis is expected to cause a loss of 7.8% of GDP, with the worst consequences on tourism, transport and retail trade⁹³.

The new EU plan, Next Generation EU, proposed by the European Commission in May 2020, was approved by the Council in July 2020. The programme has to be implemented in line with National recommendations (which in turn consider local suggestions), and with the specific targets of green and digital transition. Member states are called to elaborate their own National Plans for Recovery and

⁹¹ https://www.istat.it/it/files//2020/05/19_Sicilia_Scheda.pdf

⁹² Source: https://ec.europa.eu/eurostat/databrowser/view/tran_r_net/default/bar?lang=en

⁹³ http://www.regione.sicilia.it/deliberegiunta/file/giunta/allegati/N.550_19.11.2020.pdf

Resilience. EU Resources will be distributed in two phases: at first 70% of them will be given through the approval of relevant project; the remaining 30% will be distributed depending on National levels of GDP.

The Italian guidelines for the definition of the National Plan for recovery and resilience have been elaborated with the involvement of local administrations and potential co-investors. Due to the economic losses and challenges experienced in 2020, Italy and Spain, will be among the principal beneficiaries of the funds. The financial resources amount to almost 200€ billion, divided in more than €85bn grants and €120bn loans⁹⁴. The Italian National plan for recovery and resilience is meant to achieve six main objectives, linked to the following investments⁹⁵:

- Green and ecologic transition: €74.3bn;
- Digitalization and innovation: €48.7bn;
- Sustainable mobility and infrastructure: €27.7bn;
- Education and research: €19.2bn;
- Gender equality: €17.1bn;
- Health care; €9bn.

The plan pays considerable attention to the “green” revolution and to boost digital development. After critical observations posed by confrontation between political parties, the plan underlines the need for a National change towards better planning and implementation of European investment funds⁹⁶.

On a regional level, the Department of Economy inaugurated new measures to identify the main priorities of local administrative structures. Regional plans represent important contributions to the definition of the National Plan for recovery and resilience. In the case of Sicily, the program is made of 13 macro interventions:

1. Plan for digital transition: with a special focus on the digital transition of public administrations, greater valorisation of the “made in Sicily”, technological developments of the productive sectors;
2. Plan for the competitiveness of the economic-productive system: more favourable incentives and tax credits for the introduction of new enterprises; valorisation of manufacturing and historical shops; better research and innovation systems;
3. Regional strategy against desertification: new interventions for the improvement of water supply and support to the restoration of forests; preservation of coasts;
4. Plan Clean Sicily: intervening for the regional management of wastes; monitoring systems of air quality;
5. Siciliaenergia (energy): special attention is paid to renewable energies;
6. Bridge on the Strait of Messina;
7. Mediterranean airport hub: aimed to the creation of an intercontinental airport;

⁹⁴ <https://www.ispionline.it/en/publicazione/why-italy-and-spain-will-struggle-spend-key-eu-funds-28489>

⁹⁵ <https://www.iisd.org/sustainable-recovery/news/recovery-plan-italy-intends-investments-in-green-transition-and-sustainable-mobility/>

⁹⁶ <https://www.quotidiano.net/economia/recovery-plan-bozza-pdf-1.5902805>

8. Mediterranean port hub: aimed to transform Sicily into a logistic platform in the Mediterranean;
9. Fastening of train trail Palermo-Messina-Catania;
10. Network connections;
11. Integral development of education and training system: primary importance is given to overcoming the digital divide, introduction of digital teaching methods;
12. Plan for inclusive Sicily: this is based on two main trajectories for families' support (Family Act) and the urban requalification of marginal and rural areas. The final aim is to reduce poverty and inequalities;
13. Regional Health system Sicily 2.0: strengthen resilience and the speed to respond of the health system, especially in the case of epidemics or other sanitary emergencies. This macro area will include a series of different actions for the general improvement of health services towards their digitalization, integration with social systems and ability to respond to local needs.

These macro-interventions give us an idea of both the future objectives and current weaknesses of Sicily⁹⁷.

Voluntary associations have a primary role in providing assistance in case of major adversities or more generally for societal development, economic assistance and preparation of communities. The Red Cross, the WWF, the Civil Protection all represent fundamental actors in this field. Among others, Voluntary Firefighters provide assistance during natural disasters and crises⁹⁸.

The following pages offer an overview of the principal bodies and political documents defining local responses to crises.

Economical

The EU regulation UE/2014/806 (started in 2016) introduced a Single Resolutions Mechanism (SRM) for banks and Stock Broking societies, with the aim to preserve financial stability within the Eurozone. This was enriched by the creation of a Single Resolutions Fund (SRF), nurtured by the contributions of intermediaries from the different member states, in line with a distributed plan of 8 years, which can prevent the use of public money. The system is formed by the National Resolution Authority (NRA) and the Single Resolution Board (SRB), a European agency with resolution functions. This centralized system is meant to avoid fragmented solutions in case of major financial crises. The Board identifies the best actions to meet the objectives set by the EU. National authorities are responsible for their implementation. Both these common bodies and national ones can exploit the crisis management instruments introduced by the Directive 2014/59/UE, Banking Recovery and Resolution Directive –

⁹⁷ http://www.regione.sicilia.it/deliberegiunta/file/giunta/allegati/N.550_19.11.2020.pdf

⁹⁸ <https://www.forzeitaliane.it/vigili-del-fuoco-volontari>

BRRD. Banca d'Italia was identified as the National Resolution Authority in Italy, which was followed by the creation of the Unity of crises resolution and management⁹⁹.

In the last few years some changes have characterized the labour market with the spread of more stable contracts. This trend has also been enhanced by the new norms of the Decreto Dignità (DL 87/2018), aimed to overcome prolonged uncertainties of workers.

In order to support families to face the current crisis, new special ministerial decrees were elaborated. In May 2020, the Government approved the ministerial decree “Decreto Rilancio”, which provided 55 billion € to assist workers, families and enterprises, through unrequited transfers. The funds, which can be accessed depending on specific conditions, include special bonuses, deferrals of taxes¹⁰⁰.

Another Ministerial decree followed, which inaugurated the Fund for the management of companies' crises, aimed at the preservation of occupational levels and the prosecution of entrepreneurial activity. This allows the State to intervene in favour of those companies in crisis through Invitalia (The National Agency for the attraction of investments). The fund is accessible to holders of historic trademarks and companies with more than 250 employees, or which independently form the number of employees manage goods with a strategic role to promote the well-being of the whole country¹⁰¹.

Other governmental initiatives addressed more specifically liquidity and corporate credit. Special measures as the use of the redundancy fund, the extension of the unemployment benefit in specific contexts and the temporary lock of redundancies were activated, following the suspension of “non-essential” activities. A serious problem for Sicily has been the large portion of irregular workers who cannot be covered by these social assistance measures. This situation especially regards agriculture and the construction sector¹⁰².

Sicily Regional Operational Program 2014-2020, in relation to European Regional Development Funds, have shared the priorities set by the Europe 2020 strategy for a smart, sustainable and inclusive growth. The program is meant to support growth and jobs through better innovation, competitiveness and efficiency of resources¹⁰³.

Health

The financing of the regional health system depends on the National sanitary fund (FSN). Each region then finances their own needs with the assistance of national transfers. In Sicily the number of patients

⁹⁹ <https://www.bancaditalia.it/compiti/risoluzione-gestione-crisi/index.html>

¹⁰⁰ <https://www.ilpost.it/2020/05/14/decreto-rilancio-coronavirus-spiegato/#:~:text=Mercoled%C3%AC%20sera%20il%20governo%20ha,alle%20famiglie%20e%20alle%20imprese.>

¹⁰¹ <https://www.mise.gov.it/index.php/it/198-notizie-stampa/2041811-al-vi-ail-fondo-per-la-gestione-delle-crisi-d-impresa>

¹⁰² <https://www.bancaditalia.it/pubblicazioni/economie-regionali/2020/2020-0019/2019-sicilia.pdf>

¹⁰³ https://ec.europa.eu/regional_policy/en/atlas/programmes/2000-2006/italy/regional-operational-programme-for-sicily

moving to other regions for medical assistance is higher than the amount of incoming people¹⁰⁴. Back to 2018, financial expenditure for Sicily health system reached 8% of the total National expenditure. Actually, between 2016-18 there has been a diminution in health expenditures due to attempts to reduce Regional debts. For the same reason, the number of beds was reduced by 109 units between 2010 and 2018. The majority of beds (43%) was reserved to intensive care. Medical staff is 17 points inferior to the National average, especially negative for nursing staff¹⁰⁵.

Since March 2020, the EU has adopted a series of measures to exploit unused cohesion policy funds to respond to the emergency COVID-19 (Coronavirus Response Investment Initiative, CRII). The conditions for their use were modified in order to speed up their execution and overcome certain limitations. Those funds which are not allocated to specific project yet, will be destined to the health system and as a support for the liquidity of enterprises and families¹⁰⁶.

In order to overcome the major expenses deriving from the sanitary emergency boosted by the Covid-19 pandemic, the national decree DL 18/2020 destined additional financial resources to the field. For Sicily this meant an increase of resources by 1.2%. More funds were allocated with the decree DL 34/2020. Notwithstanding the high number of general doctors and paediatrics, home care was uncommon in the island. The first months of the epidemics saw the engagement of almost additional 1800 sanitary staff personnel, especially with temporary contracts, and a general increase in the number of beds in intensive care.¹⁰⁷

Another support comes from non-profit services contributing to the welfare and health systems, in line with National trends. A primary role is certainly played by the Italian Civil protection system which contributes to a series of different activities aimed at the protection of life, property, environments, as well as rescue of affected people, risk prevention. Civil protection does not depend on local authorities but is based on a centralized guide. Launched by the law n.225 (1992), the National Service is formed by the central bodies of State, Regions, Autonomous Provinces, Provinces, Municipalities, Mountain Community. Its operative structures are constituted by: the national corps of the Fire Brigade, the Armed Forces, the Police forces, the scientific community, the Italian Red Cross, the structures of the National Health Service, the voluntary organizations, the National Mountain and Speleological Rescue Corps. Sicily regional office of Civil protection was created in 2001 and was later followed by the opening of municipal sectors¹⁰⁸.

In line with the principle of subsidiarity and aware of the many local differences existing throughout the whole country, the civil protection system is meant to ensure an effective presence of human resources, means and operational capabilities for timely and efficient prevention and response. If the Municipality cannot react to the emergency alone, then an integrated and coordinated action is activated through

¹⁰⁴ <https://www.bancaditalia.it/pubblicazioni/economie-regionali/2020/2020-0019/2019-sicilia.pdf>

¹⁰⁵ https://www.istat.it/it/files/2020/05/19_Sicilia_Scheda.pdf

¹⁰⁶ <https://www.bancaditalia.it/pubblicazioni/economie-regionali/2020/2020-0019/2019-sicilia.pdf>

¹⁰⁷ Ibid.

¹⁰⁸ <https://ciprovot-project.eu/output/>

the mobilization of the upper levels. The president of the Council of Ministers is the thread of this complex system, through the Department of Civil Protection¹⁰⁹.

The national system is formed by more than 800,000 volunteers and 4,000 organizations in the entire country. Training courses are organized for volunteers by Municipalities, provinces, regions and the department of civil protection. Risk situations are often simulated to test the real competency of local administrations and voluntary organizations. Finally, specific Civil Protection Schools were created in the regions, with the aim to organize training events, primarily for volunteers¹¹⁰.

Another emblematic voluntary association for social and sanitary assistance is the Red Cross, part of the international movement. Originally created to assist injured or sick soldiers, the National branches of the movement conduct many different operations side by side with political authorities. The Red Cross activities are aimed to protect health and life, promote social inclusion and assistance, prepare communities to prevent emergencies and disasters and react appropriately¹¹¹.

Social & Demographic

Among the recent measures introduced to face poverty, it is worth mentioning the “Reddito di cittadinanza” (basic income) and the “Pensione di cittadinanza” (pension of citizenship), i.e., measures of income integration which have enlarged the pool of possible beneficiaries and the amount of funds provided. The pandemic aggravated the already difficult situation of many Sicilian families. One of the first solidarity measures introduced by the Government included 43.5 mill € to be destined to Sicily. The amount was shared between municipalities to buy grocery coupons and primary goods for those families which were hit more badly by the epidemiologic emergency. The Region also destined 100 million € to ensure social assistance interventions for the families with the most urgent needs. In addition, the governmental decree DL34/2020 introduced an “emergency income” (Reddito di Emergenza), for all those disadvantaged households not having access to other forms of assistance. A general intervention for future transformations was the promotion of liquidity and diversified economical activities throughout last year¹¹².

Ecological

The EU Covenant of Mayors for Climate & Energy reunites many different local governments, wishing to contribute to EU climate and energy objectives on a voluntary basis. Launched in 2008, the initiative

¹⁰⁹ <https://ciprovot-project.eu/output/>

¹¹⁰ Ibid.

¹¹¹ <https://www.cri.it/sicilia>

¹¹² <https://www.bancaditalia.it/pubblicazioni/economie-regionali/2020/2020-0019/2019-sicilia.pdf>

was the first bottom-up approach to energy and climate action in the field and managed to achieve a great success: it now gathers more than 9,000 local adhesions in 57 countries and has inspired the Global Covenant of Mayors. The shared vision endorsed by signatories of the Covenant for 2050 includes the acceleration of decarbonised economies, stronger ability to adapt to the consequences of climate change, accessibility to secure, sustainable and affordable energy, reduce greenhouse emission by 40%, by 2030. In order to translate their intentions into practical actions, the signatories are responsible to present a Sustainable Energy and Climate Action Plan (SECAP) within two years, to reach 2020 and 2030 objectives. The program also defines a Baseline Emission Inventory and a Climate Risks and Vulnerability Assessment and represents cities' engagement in long-term commitments. The SECAP is a key-document, as it summarizes the most important fields of intervention and opportunities to reach the aim of CO₂ reduction, towards the final objective of energy consumption reduction, greater energy efficiency, and higher percentage of use of renewable¹¹³.

All Sicilian provinces signed the Covenant. Focusing on Palermo, it adhered in 2011 and has currently reached 30% of the global objective of reducing CO₂ emissions by 20%. Its approval of the Covenant follows other relevant documents, such as the Municipal Energy Plan, Agenda 21 Process, the Report on Environmental Conditions, and other projects, e.g. MedClima (Climate Alliance for Mediterranean Cities) and ZEN – Zero Emission Neighbourhoods. The PAES was developed by a specific interdisciplinary structure, under the technical coordination of the Environment Sector. The actions foreseen will intervene in the fields of construction, transport and renewable resources. In addition, the PAES foresees some specific intervention aimed at better information, training and citizens' participation¹¹⁴.

Due to the highest concentration of CO₂ production by construction and transport activities, the PAES primarily aims to improve the management of these sectors, as well as of the structures and mobility of public administration. Back to 2007, the city already defined the Strategy Plan for Sustainable Mobility and in 2010 the Urban Plan of Traffic, with the general aim to improve traffic and road safety conditions, reduce atmosphere pollution and CO₂ emissions¹¹⁵.

Legambiente Sicilia is another third sector association worth mentioning here, as it represents the principal one on a regional level, promoting many different actions and initiatives for environmental preservation. In addition, the Voluntary Forest Service is a non-profit organisation aimed to ensure the preservation and sustainable development of the environment, including ecosystem, cultural, historical, artistic and monumental fields¹¹⁶.

¹¹³ <https://www.eumayors.eu/about/covenant-initiative/objectives-and-scope.html>

¹¹⁴ https://mycovenant.eumayors.eu/docs/seap/18173_1441009669.pdf

¹¹⁵ Ibid.

¹¹⁶ <https://corpoforestalevolontario.it/>

Finally, the local entities of WWF operate for the conservation of natural systems, contributing to sustainable development processes and innovative methods to improve the conservation of cultural, social and economic resources¹¹⁷.

Several basic measures can be recommended for a region or municipality:

Based on the desk and field researches conducted, there is a clear need to strengthen awareness of regional resilience and of related preventive measures and long-term strategies. More specifically, considering the different fields touched upon by this concept, there should be a diversified intervention to improve personal, social and learning skills, cultural awareness, civic skills. Together with these, the ability to work in a team, interact with others, communicate, motivate people, problem-solving are seen as other essential qualities¹¹⁸.

4. VET needs to support regions' resilience

The main outputs and recommendations from questionnaire survey and identified the main fields of educational needs:

Overall, competences in regional resilience were rated on an average of 3 on a scale of 5. The majority of respondents considered regional resilience relevant in the work of local administration and NGOs active in regional development (more than 70% answers rated it 3 and 5). Though, the average level of competences in the different areas of regional resilience was rated 3, the lower results registered give an idea of the training needs of the relevant stakeholders working in the field. The lowest oscillations regarded the following aspects:

- Administrative preparation
- Specialisation in the field of regional resilience
- Linguistic competence
- Understanding of the regional resilience potential and how to measure it
- Knowledge of public management of migration
- Knowledge on public participation within the resiliency issues
- Ability to design public policy in resiliency
- Use of project management for resilience support
- Understanding the difference between regional, personal and community resilience

The following skills were considered necessary to be able to ensure regional resiliency:

- Social media communication management
- Communication skills
- Assistance to minors and older people

¹¹⁷ https://www.wwf.it/chi_siamo/organizzazione/

¹¹⁸ <https://ciprovot-project.eu/output/>

- Greater awareness of the effects of climate change
- Adequate behaviours and social norms for local development and response to external impacts
- Knowledge of the territory
- Security
- Data literacy
- Adaptability
- Ability to recognise problems

The vast majority (87.5%) would like to take part to further training with a special focus on strengthening skills to build regional resiliency. 50% would prefer it in blended learning (combination of face to face and e-learning), but another high percentage (29.2%) would like to be involved in e-learning courses with synchronous learning networks (e.g. Google Hangout or Skype). Only three respondents would prefer a MOOC.

Here are some of the terms associated to the concept of regional resiliency:

Civil protection, emergency, municipality, politics, prevention, training, organisation, challenges, collaboration, future, system, adaptation, crisis, solution, long-term strategies, occupation, immigrants, safety, forestry surveillance, firefighting forces, administration, flexibility, culture, knowledge, economy, ecology, well-being, local, connections, network, innovation, investment, green, growth, trust, creativity, planning, resistance.

It is interesting to notice the recurrence of some themes, which if related to the other answers given by the respondents give us an idea of the interests and necessities in the field. Firstly, the concept of regional resilience is generally connected to public administration and politics, but such a responsibility is also automatically connected to the need of investments and innovation, as well as to the creation of network, local intervention and general connection. The concept is also associated to different fields, ranging from economy to ecology, culture. Challenges, crisis and adversities are also attributed to this concept, together with the need for adaptability, flexibility, creativity and preventive measures as well as long-term strategies. Much attention is given to the environment and climate change. Finally, there is a clear interest in greater knowledge, considering the recurrence of terms associated to learning and training.

The main outputs and recommendations from interviews

People interviewed affirmed to have scarce knowledge on the concept of regional resilience, as they are mainly informed only about the specific field in which they operate. They also underlined the low level of competences of local administration dealing with risks and disasters, as they tend to prefer short-term responses rather than paying appropriate attention to preventive measures and planning methods. Better understanding on the concept may come from the support provided by NGOs and specialists in urban development, working with local administrative bodies.

Indeed, all respondents underlined the importance of greater cooperation between NGOs active in regional development and local administration. This is fundamental to plan integrated responses together, improve preventive strategies and offer greater opportunities to involve younger entrepreneurs.

All respondents expressed their willingness to participate to a training course, which should also include practical activities, opportunities for interaction, exchange, and confirmed their willingness to participate to the creation of resilient regions.

Summary on VET needs to support resiliency.

The following main conclusions can be drawn:

- The concept of regional resilience is still scarcely known, as there are only sectorial interventions limiting the opportunity of greater collaboration between interested bodies.
- An important step should be the provision of clear guidelines and stronger knowledge for intervention and establishment of a central body both to improve information and to manage coordinated actions.
- There is need to improve preventive measures and planning strategies, as too much often short-term responses are implemented. Political moves should be reviewed in some cases as many actions have been left uncompleted.
- Training was deemed necessary. Specific areas of interest for the respondents would include organising simulations of emergencies, better awareness about risk-reduction and how to intervene in cooperation with other bodies.
- The MOOC should include both theoretical aspects, but also being interactive, with quizzes to test participants' understanding, and, if possible, simulations and opportunities for team-work and interaction with others.

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Annex III. National Report: France

1. Introduction

France, with 68 million inhabitants, is one of the founding countries of the European Union and the euro zone. At the heart of an economically highly developed area, its economy benefited from the establishment of the European common market. From 1986, the state privatized a large number of public enterprises but its influence on the economy remains strong.

The French economy deals with the cyclical and structural economic situation of France today. In 2020, France represents the 6th economic power in the world, according to the World Bank and the International Monetary Fund analysis, and the 2nd economic power in Europe behind Germany but ahead of the United Kingdom. With a nominal GDP of \$ 2,771,622 billion, France is the sixth largest economy in the world and ranks behind the United States, China, Japan, Germany and India but ahead of the United Kingdom. In 2020, it ranks 45th for GDP per capita in purchasing power parity (PPP), above the European Union average which is 28th. In classification by GDP in PPP, France is the 10th economic power.

The French economy is mainly a service-oriented economy: in 2015, the tertiary sector employed 76.7% of the working population, while the primary sector (agriculture, fishing, etc.) represented only 2.8%, and the secondary sector (mainly industry) 20.5%. The French economy is an increasingly open economy, occupying an important place in international trade, mainly within the European Union. France is placed as 6th for its exports and 5th for its imports. In 2006, exports represented 26% of GDP and imports 27%. The trade balance (goods and services) became in deficit in 2004, and this deficit increased until 2011 before decreasing slightly but remaining significant in 2015. The unemployment rate is higher than the average for other developed countries, at 7.9% (8.1% including overseas) in the fourth quarter of 2019. The employment rate (63.8% in 2006), close to the European average (64.8%), is lower than that of the EU-15 (66.2%) and the average for developed countries.

In the NUTS (Nomenclature of Territorial Units for Statistics) codes of France (FR), the three levels are:

Level	Subdivisions	#
NUTS 1	Regions + DOM (collectively)	14
NUTS 2	Former regions (1982 - 2015) + DOM	27
NUTS 3	Departments + DOM	101

Up until 2016, the first level NUTS regions of France consisted of Ile de France, Bassin Parisien, Nord-Pas-de-Calais, Est, Ouest, Sud-Ouest, Centre-Est, Mediterranee and the Departement d'Outre Mer. The Departement d'Outre Mer consisted of all the overseas departments of France, while the remaining eight statistical regions were made up of the 22 regions of France.

FR2	Bassin parisien	Champagne-Ardenne, Picardy, Upper Normandy, Centre, Lower Normandy, Burgundy
FR3	Nord	Nord-Pas-de-Calais
FR4	Est	Lorraine, Alsace, Franche-Comté
FR5	Ouest	Pays de la Loire, Brittany, Poitou-Charentes
FR6	Sud-Ouest	Aquitaine, Midi-Pyrénées, Limousin
FR7	Centre-Est	Rhône-Alpes, Auvergne
FR8	Méditerranée	Languedoc-Roussillon, Provence-Alpes-Côte d'Azur, Corsica
FRA	Départements d'Outre-Mer	Guadeloupe and the Collectivity of Saint Martin, Martinique, French Guiana, La Réunion, Mayotte

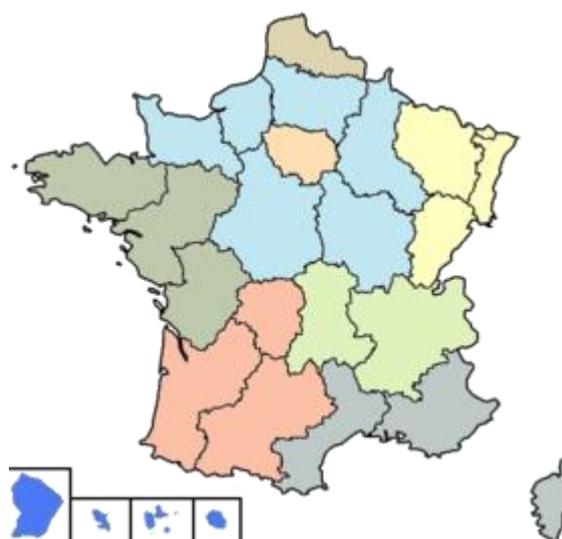


Fig. 1: France and its 22 regions. [CC BY-SA 3.0](https://creativecommons.org/licenses/by-sa/3.0/)¹¹⁹

The administrative divisions of France are concerned with the institutional and territorial organization of French territory. These territories are located in many parts of the world. There are many administrative divisions, which may have political (local government), electoral (districts), or administrative (decentralized services of the state) objectives. We can see here that France is divided into 18 regions: 12 in mainland France and 6 elsewhere (1 in Europe: Corsica; 2 in the Caribbean (the Lesser Antilles): Guadeloupe and Martinique; 1 in South America: French Guiana; and 2 in the Indian Ocean near East Africa: Mayotte and Réunion).

¹¹⁹ https://fr.wikipedia.org/wiki/R%C3%A9gion_fran%C3%A7aise#/media/Fichier:France_ZEAT.png



Fig. 2: The territorial-administrative division of France. [CC BY-SA 3.0](https://creativecommons.org/licenses/by-sa/3.0/) ¹²⁰

In our analysis we will base our presentation on the region Provence Alpes Cote d'Azur. As of 1 January 2016, metropolitan France is divided into the 13 regions, including Corsica. The regions are subdivided into 96 departments (local authority). The departments are subdivided into 322 arrondissements (not a public or legal entity). The arrondissements are subdivided into 1,995 cantons (not a public or legal entity). The cantons are subdivided into 36,529 communes (local authority). There are three urban communes (Paris, Marseille, and Lyon) that are further divided into municipal arrondissements. There are 20 arrondissements of Paris, 16 arrondissements of Marseille, and 9 arrondissements of Lyon. The city of Marseille is also divided into 8 municipal sectors. Each sector is composed of two arrondissements. There are also 710 associated communes (as of January 2009), formerly independent communes which were merged with larger communes but have retained some limited degree of autonomy (e.g. the commune of Lomme which was absorbed by Lille in 2000 and transformed into an "associated commune" inside the commune of Lille).

There are also 5 overseas regions and they have the same status as metropolitan regions:

- French Guiana
- Guadeloupe
- Martinique
- Mayotte
- Réunion

¹²⁰ https://en.wikipedia.org/wiki/Regions_of_France

France includes five overseas collectivities (collectivités d'outre-mer, or COM) with a semi-autonomous status:

- French Polynesia: (designated as an "overseas country", French: pays d'outre-mer) is divided into 5 administrative subdivisions (subdivisions administratives). For elections, it is divided into 6 electoral districts (circonscriptions électorales), which differ slightly from the 5 administrative subdivisions. The 5 administrative subdivisions are divided into 48 communes. There also exist some associated communes as in metropolitan France.
- Saint Barthélemy: (designated as a "collectivity", French: collectivité) is a new overseas collectivity created on 22 February 2007. It was previously a commune inside the Guadeloupe department. The commune structure was abolished and Saint Barthélemy is now one of only three permanently inhabited territories of the French Republic with no commune structure. There are no cantons and arrondissements either.
- Saint Martin: (designated as a "collectivity", French: collectivité) is also a new overseas collectivity created on 22 February 2007. It was also previously a commune inside the Guadeloupe department. The commune structure was abolished and Saint Martin is now one of only three permanently inhabited territories of the French Republic with no commune structure. There are also no cantons or arrondissements.
- Saint Pierre and Miquelon: (designated as a "territorial collectivity", French: collectivité territoriale, the same designation as Corsica which is a region and not an overseas collectivity) is divided into 2 communes with no arrondissements or cantons.
- Wallis and Futuna: (designated as a "territory", French: territoire) is divided into 3 districts (circonscriptions territoriales), which exactly match the three traditional chiefdoms (royaumes coutumiers) with their traditional kings still at their head, the only kings currently recognized in the French Republic. These 3 districts are Uvea, Sigave, and Alo. Uvea is the most populous and is further divided into 3 wards (districts in French): Hahake, Mua, and Hihifo. Wallis and Futuna are one of only three permanently inhabited territories of the French Republic with no communes (the others being Saint Barthélemy and Saint Martin). It also has no arrondissements or cantons.

France includes also one autonomous collectivity, named New Caledonia. Her status is unique France: it is the only French local government which is not a territorial collectivity (although its subdivisions are territorial collectivities). It is regarded as a sui generis collectivity, which means that local government and parliament have the power to pass and enforce specific laws without seeking consent of the French Government; unless such laws are declared illegitimate by the Constitutional Council in specific proceeding brought to the Constitutional Council. As agreed in the 1998 Nouméa Accord, a New Caledonian citizenship was established (in addition to the French citizenship which is kept in parallel, along with the consequent European citizenship) and a self-determination referendum was held in 2018. It is divided into 3 provinces and the provinces are subdivided into 33 communes.

French subdivisions that have a (limited) freedom of administration are called territorial collectivities. Among them are regions, departments, communes, overseas collectivities, provinces (only present in New Caledonia) and the territorial collectivity of Corsica which belongs to no category (but is usually grouped with the regions). New Caledonia is unique as it is not a territorial collectivity.

France's development policy follows the framework established by the international community, particularly the 2030 Agenda for Sustainable Development. This agenda was adopted in September 2015 by the United Nations General Assembly, the Paris Climate Agreement and the Addis Ababa Action Agenda on Financing for Development. It is also part of the 2017 European Consensus on Development.

The main objectives of France's development policy are defined in a law passed in 2014 (in French, Act no. 2014-773 on guidelines and programming regarding development policy and international solidarity (LOP-DSI) of 7 July 2014). They are reviewed and redefined by the Committee on International Cooperation and Development (CICID), chaired by the Prime Minister and that brings together the Ministers across the different Ministries who deal with international solidarity. New guidelines were set out by the CICID in 2018, reaffirming the main objectives of the French development policy:

- poverty eradication
- implementation of the Sustainable Development Goals (SDGs)
- enactment of the Paris Climate Agreement
- protection of global common goods.

It set out five priorities that contribute to inequality in the world:

- international stability
- climate
- education
- gender equality
- health.

It also stated that 0.55% of gross national income (GNI) would be allocated to official development assistance (ODA) by 2022. This would be achieved through an increase in donations and bilateral assistance, as well as benefitting more civil society and humanitarian organizations.

GDP (gross domestic product) is an indicator of the output of a country or a region. It reflects the total value of all goods and services produced less the value of goods and services used for intermediate consumption in their production. Expressing GDP in PPS (purchasing power standards) eliminates differences in price levels between countries. Calculations on a per inhabitant basis allow for the comparison of economies and regions significantly different in absolute size. GDP per inhabitant in PPS is the key variable for determining the eligibility of NUTS 2 regions in the framework of the European Union's structural policy.

2. Profiles of the region and its resilience capacity

The Resilience Capacity Index (RCI) is a single statistic summarizing a region's status on twelve factors hypothesized to influence the ability of a region to bounce back from a future unknown stress. The index permits comparisons across metropolitan regions and identification of strong and weak conditions relative to other metropolitan regions.

Ranking a country using RCI provides a reliable indicator of how its economic fabric could evolve and how quickly companies operating there could recover from the economic shock caused by the coronavirus. This data is invaluable in making strategic decisions such as establishing new sites, extending supply chains or retaining new markets. It also highlights traditional risks (hurricanes, floods, droughts, fires, earthquakes, cyber-attacks, oil shocks, political unrest), which continue to pose a threat to business activity and valuation.

France ranks 14th and maintains its good results in terms of the quality of infrastructure (9th) and the quality of natural disaster risk (13th). The country also gained 7 places on the Inherent Cyber-risk vector (82nd), after an increase of 12 places in 2019. Three factors and 12 drivers combine to form the composite resilience index, or overall score. Scores are bound on a scale of 0 to 100 with 0 representing the lowest resilience and 100 being the highest. This result takes in consideration supply chain, economic and risk quality. At the following link, we can see result for France: <https://www.fmglobal.com/research-and-resources/tools-and-resources/resilienceindex/explore-the-data/?&cr=FRA&sn=ex&cd=FRA>

This ranking of France in resilience index is calculated from an equal combination of 12 resilience analysis vectors grouped into three categories:

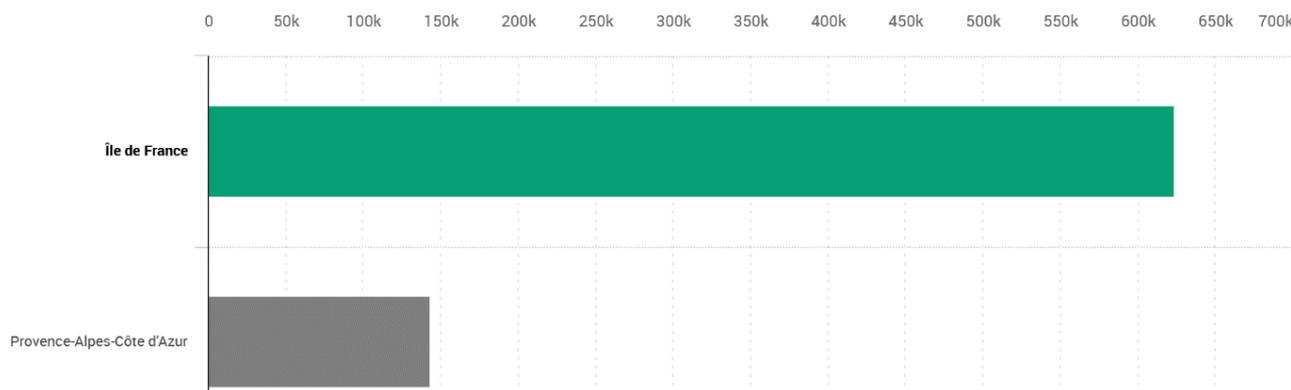
ECONOMY	QUALITY OF RISK	SUPPLY CHAIN
Productivity	Exposure to natural risks	Fight against corruption
Political risk	Quality of natural disaster risk	Quality of infrastructure
Oil intensity	Quality of fire risk	Corporate governance
Urbanization rate	Inherent cyber risk	Transparency of supply chains

A. Economic potential

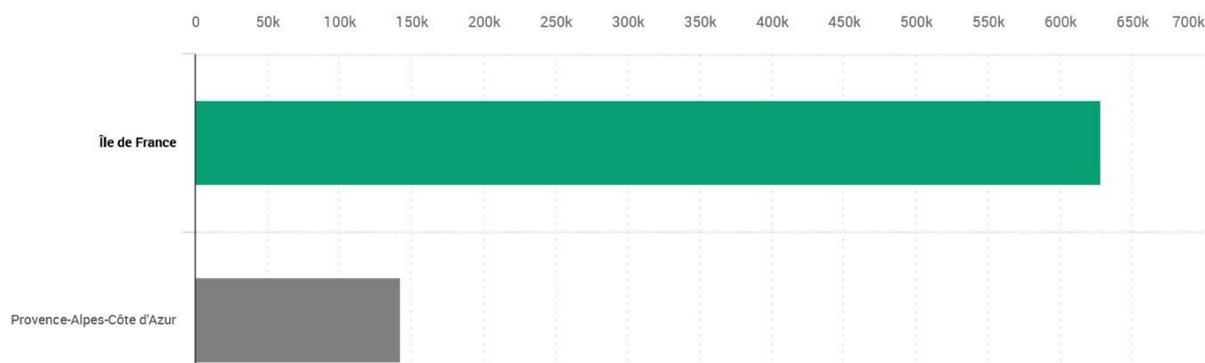
In 2019, France was still the world's seventh economic power, just behind the United Kingdom and India. The country's exit from the economic crisis came later than in other European countries and its economy remains fragile due to structural imbalances. After growth estimated at 1.7% in 2018, GDP grew by only 1.3% in 2019, supported by domestic demand stimulated by social and fiscal measures. According to the updated IMF forecast of April 14, 2020, due to the onset of COVID-19, GDP growth is expected to fall to -7.2% in 2020 and recover to 4.5% in 2021, subject to the post-pandemic global economic recovery.

Now we can compare 2 regions in France: Ile de France and Provence Alpes Cote d'Azur.

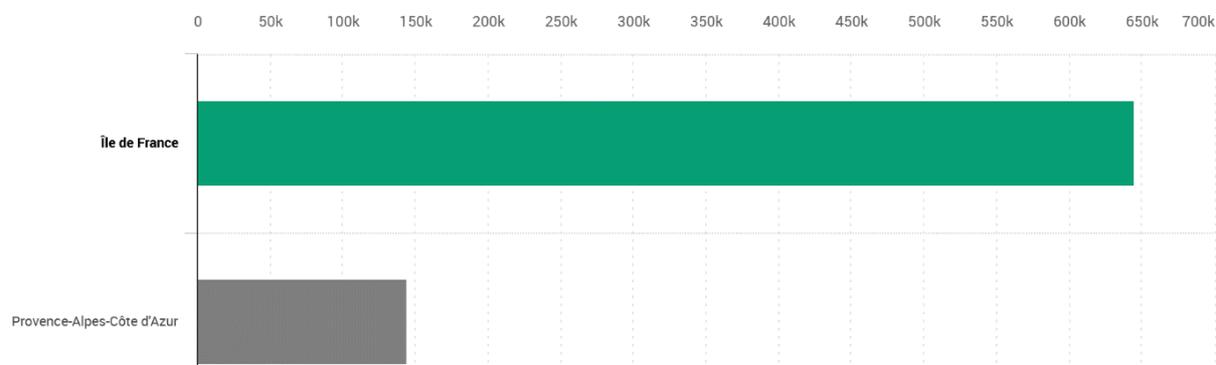
TIME	2015	2016	2017	2018
Île de France	623,900.12	628,137.39	645,316.97	672,779.63
Provence-Alpes-Côte d'Azur	143,255.24	142,699.95	143,892.2	149,294.75



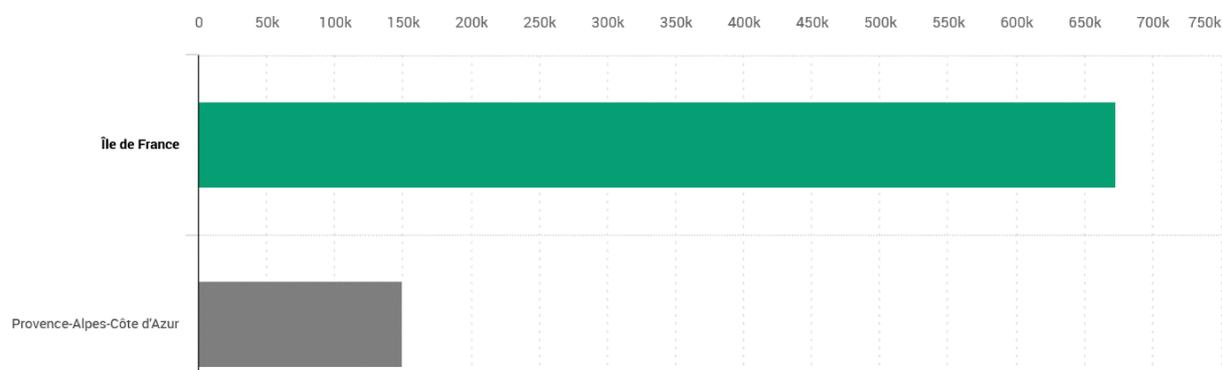
Comparison between 2 regions in France in 2015



Comparison between 2 regions in France in 2016



Comparison between 2 regions in France in 2017



Comparison between 2 regions in France in 2018

From the previous for graph, for 4 years, we can see that there haven't been significant changes and differences between these 2 regions during the analysed period (2015-2018)¹²¹.

2016 Rank	Regions & collectivités	2016	2015	2014	2013
	France	2,765,540	2,696,180	2,659,360	2,606,140
1	Ile de France	844,627	820,365	807,038	792,104
2	Auvergne Rhone Alpes	316,512	308,867	304,050	295,610
3	Nouvelle Aquitaine	208,422	204,496	202,360	194,094
4	Occitanie	200,056	194,005	191,087	186,741
5	Hauts de France	194,795	190,217	187,984	187,223
6	Provence Alpes Cote d'Azur	192,522	188,175	186,312	184,584
7	Grand Est	190,273	187,878	187,326	183,381
8	Pays de la Loire	137,888	133,128	130,615	129,155
9	Brittany	116,969	113,287	110,973	107,805
10	Normandy	114,479	112,195	111,013	110,562
11	Bourgogne Franche Comté	92,986	91,956	91,559	88,403
12	Centre Val de Loire	88,019	86,026	85,253	84,609
13	Reunion	23,858	22,865	22,319	21,523
14	Corsica	11,288	10,788	10,557	10,423
15	Guadeloupe	11,556	11,291	10,987	10,734

¹²¹ https://en.wikipedia.org/wiki/List_of_French_regions_and_overseas_collectivities_by_GDP

16	Martinique	11,314	11,200	10,991	10,673
17	French Guiana	5,447	5,203	5,047	4,838
18	Mayotte	3,216	3,216	2,630	2,383

List of French regions and overseas collectivities by GDP (PPP) (mil. of US\$ PPP)

2016 Rank	Regions & collectivities	2016	2015	2014	2013
	France	41,363	40,487	40,172	39,624
1	Île de France	69,423	67,740	66,947	66,043
2	Auvergne Rhône Alpes	39,763	39,070	38,736	37,951
3	Provence Alpes Cote d'Azur	38,213	37,499	37,294	37,150
4	Pays de la Loire	36,729	35,686	35,257	35,136
5	Brittany	35,272	34,313	33,780	32,992
6	Nouvelle-Aquitaine	35,000	34,508	34,326	33,112
7	Normandy	34,254	33,588	33,263	33,182
8	Occitanie	34,252	33,468	33,218	32,720
9	Grand Est	34,249	33,803	33,711	33,021
10	Centre-Val de Loire	34,097	33,349	33,069	32,871
11	Corsica	33,945	32,790	32,410	32,349
12	Bourgogne Franche Comté	32,992	32,605	32,459	31,347
13	Hauts de France	32,363	31,632	31,289	31,219
14	Martinique	30,056	29,516	28,840	27,855
15	Reunion	27,793	26,794	26,324	25,552
16	Guadeloupe	26,855	26,098	25,192	24,462
17	French Guiana	20,139	19,756	19,784	19,531
18	Mayotte	13,163	12,475	—	—

List of French regions and overseas collectivities by nominal GDP per capita (in US\$ PPP)

Source: https://en.wikipedia.org/wiki/List_of_French_regions_and_overseas_collectivities_by_GDP

We can remark that during the analysed period, that is significant period, the GDP (PPP) (mil. of US\$ PPP) of the region Ile de France was more than four times superior to the region of Provence Alpes Cote d'Azur. During the same period, nominal GDP per capita (in US\$ PPP) was almost doubled in the region Ile de France compared to the region of Provence Alpes Cote d'Azur.

In 2014, the French parliament passed a law reducing the number of metropolitan regions from 22 to 13 effective 1 January 2016. The law gave interim names for most of the new regions by combining the names of the former regions, e.g. the region composed of Aquitaine, Poitou-Charentes and Limousin was temporarily called Aquitaine-Limousin-Poitou-Charentes. However, the combined region of Upper and Lower Normandy is simply called "Normandy" (Normandie). Permanent names were proposed by the new regional councils by 1 July 2016 and new names confirmed by the Conseil d'État by the end of September 2016 the legislation defining the new regions also allowed the Centre region to officially change its name to "Centre-Val de Loire" with effect from January 2015. Two regions, Auvergne-Rhône-Alpes and Bourgogne-Franche-Comté, opted to retain their interim names. Regions that merged:

Former region	New region (interim name)	New region (final name)
Burgundy Franche-Comté	Bourgogne-Franche-Comté	Bourgogne-Franche-Comté
Aquitaine Limousin Poitou-Charentes	Aquitaine-Limousin-Poitou-Charentes	Nouvelle-Aquitaine
Lower Normandy Upper Normandy	Normandy	Normandy
Alsace Champagne-Ardenne Lorraine	Alsace-Champagne-Ardenne-Lorraine	Grand Est
Languedoc-Roussillon Midi-Pyrénées	Languedoc-Roussillon-Midi-Pyrénées	Occitanie
Nord-Pas-de-Calais Picardy	Nord-Pas-de-Calais-Picardie	Hauts-de-France
Auvergne Rhône-Alpes	Auvergne-Rhône-Alpes	Auvergne-Rhône-Alpes

Table. French regions that merged. Source: https://en.wikipedia.org/wiki/Regions_of_France

Regions that remained unchanged:

-  Brittany
-  Centre-Val de Loire
-  Corsica
- French Guiana
- Guadeloupe
-  Île-de-France
- Martinique
- Mayotte
-  Pays de la Loire
-  Provence-Alpes-Côte d'Azur
- Réunion

Table Regions that remained unchanged. Source: https://en.wikipedia.org/wiki/Regions_of_France

Regions lack separate legislative authority and therefore cannot write their own statutory law. They levy their own taxes and, in return, receive a decreasing part of their budget from the central government, which gives them a portion of the taxes it levies. They also have considerable budgets managed by a regional council (conseil régional) made up of representatives voted into office in regional elections.

B. Socio-demographic potential

On January 1, 2020, France had just over 67 million inhabitants, of which 14.4 million were under the age of 18. The number of births (754,000) continues to decline and the number of deaths (612,000) to increase. The natural balance remains the main driver of population growth. The influx of foreigners from third countries is increasing (+ 4.9% compared to 2017, to 249,474 people in 2018). One in ten entrants is a minor. The total fertility rate is almost stable (1.87 children per woman in 2019) and the average age at childbearing continues to increase. Among births, 0.5% are to underage mothers. The number of abortions (230,000) and the conjunctural abortion index (0.58) rose slightly in 2019. The number of abortions of underage women, however, continued to decline and now represents 3.5% of Abortions in 2019. The number of marriages (235,000) and the number of PACS that is living in community in unofficial way (209,000) increased in 2018, however the gap between them narrowed further. Marriage is always later in France (35.4 years for women and 37.9 years for men). In 2018, 2.6% of marriages were celebrated between people of the same sex and 4.1% of PACS. Remarriages are increasingly rare after divorce or widowhood and, on average, divorces involve fewer than one minor child (0.91). Finally, life expectancy is still improving, but at a slower pace. It reaches 79.7 years for men and 85.6 years for women. Mortality before age 15 is very low and these deaths are concentrated in the first year of life. Infant mortality has not decreased in France for almost 10 years, unlike many other European countries.

Change in the population by region

	Census 1990	Census 1999	January 1st 2008	January 1st 2020
Auvergne-Rhône-Alpes	6,668,168	6,949,608	7,459,092	8,032,377
Bourgogne- Franche-Comté	2,705,826	2,728,086	2,802,519	2,783,039
Bretagne	2,794,317	2,904,075	3,149,701	3,340,379
Centre - Val de Loire	2,369,808	2,440,295	2,531,588	2,559,073
Corse	249,645	260,152	302,966	344,679
Grand Est	5,274,064	5,387,509	5,521,452	5,511,747
Hauts-de-France	5,770,671	5,855,448	5,931,091	5,962,662
Île-de-France	10,644,665	10,946,012	11,659,260	12,278,210
Normandie	3,126,859	3,202,449	3,293,092	3,303,500
Nouvelle Aquitaine	5,114,287	5,257,954	5,671,076	5,999,982
Occitanie	4,546,249	4,842,680	5,419,946	5,924,858
Pays de la Loire	3,055,197	3,219,960	3,510,170	3,801,797
Provence-Alpes-Côte d'Azur	4,257,244	4,502,385	4,882,913	5,055,651
France métropolitaine	56,577,000	58,496,613	62,134,866	64,897,954

Metropolitan France

Population estimated (provisional results established at end 2019)

Source: INSEE, www.insee.fr, Population census

C. Health and community connectedness

In both analysed regions, the poverty rate is relatively high, often localized in larger vulnerable groups, which is also associated with lower access to health care. Manifestations of poverty in some areas are also associated with a higher rate of alcohol-related illnesses and a greater spread of infectious diseases. Voter participation is higher than in other parts of the country.

D. Environment and Accessibility

The constitutional revision of March 28, 2003 enshrined in Article 1 of the Constitution the fact that the organization of the Republic is decentralized. This new stage in the decentralization process follows on from numerous reforms, which have given greater freedom of administration to the various territorial levels. The law of 2 March 1982 on the rights and freedoms of municipalities, departments and regions marked, in this regard, an essential step. Since the 1990s, the emphasis has been on inter-municipal cooperation. This decentralization process has also been accompanied by an increasing deconcentration of state services in the regions and departments. From 2009 and 2010, the decentralized services were the subject of a profound reorganization, as part of an overall reform of the territorial administration of the State.

In France, there are some funds that are a support scheme for small and medium-sized enterprises launched by some regions and to which departments, large towns and inter-municipal authorities contribute, in order to mobilized to save small businesses. This is in agreement with all the contributing

communities, decided to change the fund on several points. Mainly to extend access to companies whose turnover reaches 10 million euros and which employ up to 50 employees (instead of 1 million euros and 10 employees, and 2 million euros and 20 employees for the specific sectors of tourism, catering, hotels, events, sport or culture).

3. Policy actions in the area of resilient region

Since the beginning of the 2010, policies for the prevention and management of natural risks have been based on the concept of "resilience". Research underlines the importance of networks (energy, water, transport, waste, telecommunications, etc.) and the consequences of their interdependencies in terms of the vulnerability of territories. How to anticipate the consequences that would have, at the metropolitan level, a major crisis and a failure of the networks that link the territories? How to overcome their technical and organizational vulnerability? How can the concept of resilience help territories and operators to face these challenges? These questions were approached through the prism of the flood risk, the consequences of which on the scale of the Ile-de-France metropolitan area were recalled by the OECD.

Network

Risk

Town

Network: Water and waste: drinking water, wastewater, rainwater, waste collection and treatment; Energies: electricity, gas, district heating, cooling network; Telecoms: fixed, mobile, broadband telephony; Travel: roads, lighting, SLT, public transport.

The concept of urban resilience provides responses adapted to the management of the city-networks-risks. Urban resilience is the capacity of a city to absorb a disturbance and recover its functions as a result. Resilience is an integrative concept in which are included many ex-ante processes aimed at improving the capacity of a system to rebound / restart / reborn after a traumatic shock. Resilience makes it possible to move from a concept centred on damage to a concept centred on business continuity and the participation of all.

- Sectoral portraits of urban services
- Identification of interdependencies
- Characterization of interdependencies
- Possible solutions

- Design of a tool
- Identification of interdependencies
- Cartographic synthesis
- Identification of shifts

The current crisis can be an opportunity to review the development model implemented by the communities and thus respond to the new challenges of post-containment.

While the conditions for exiting from lock-down still remain imprecise at this stage, it is important to use this time to collectively question the conditions for relaunching the territories. Local authorities, through their major role within territories, can, under certain conditions, prove to be the keystone of a renewed approach to local development dynamics. Indeed, and paradoxically, this crisis can facilitate the emergence of a new paradigm in terms of the design of territorial development and, consequently, of the role that local communities can play.

This actual pandemic can allow elected officials, particularly within the local bloc or municipalities, to revisit the outdated vision of territories sometimes perceived as "transformation factories" with inputs and outputs, in a static and functional approach to the territories. These are not inert objects whose functionalities should be imagined. Territories are political, social, societal, systemic and organic constructions. They live and develop in constant interaction with other nearby environments, but for some connected with territories thousands of kilometres away. And their trajectories are not always predictable or understandable at first glance.

Therefore, this crisis may be the possibility of reviewing the relationship between governance, populations and activities, in a triptych that goes beyond the sustainable development approach, some of which now even point to an oxymoron trend. Can we still speak of development and continuous growth in a world where resources are scarce and under constant strain?

In France, the urban resilience is a versatile concept, which helps frames the arduous process of tackling the environmental, social, and economic challenges of modern cities in a positive way. However, similar to other broad concepts such as sustainability, resilience is inherently vague. Therefore, it can be challenging to pinpoint what it means for local options and plans. Resilience principles are specific mechanisms and behaviours, also in France, that make a city resilient or that help policies and practices improve that resilience. They can focus on the system, or its governance.

Resilience principles can provide a solution to the conceptual vagueness around resilience per se. They help make the concept of 'urban resilience' more specific and translate it to practice. They can be used to design new solutions, evaluate proposed options and plans, and explore the positions of stakeholders.

Such principles can be applied in a wider process of resilience assessment, reflecting on the situation, urban systems and components, and envisioned past, present, and future. Such assessments might include vulnerability analysis, scenario planning and integrated urban planning. Inherently, these assessments involve choices and trade-offs that should be openly explored and discussed. Resilience principles provide a powerful tool to make explicit how cities can improve their resilience: to help cities brainstorm on and evaluate options and plans for urban resilience in a meaningful and comprehensive way.

4. VET needs to support regions' resilience

The main outputs and recommendations from questionnaire survey and identified the main fields of educational needs:

The biggest part of respondents consider that the building of the regional resiliency represents very important issue.

The institutional readiness, obtained by these answers, shows that regional resiliency has weak areas:

- Intercultural competencies
- Language competencies
- Conflict solving
- Distances

From results it is clearly visible that the areas which mostly need interventions are as follows:

- Knowledge and the specialized information in the field of regional resiliency
- Language skills and issues
- Vulnerability assessment
- Building trust and engagement of stakeholders
- Understanding of threats and external shocks
- Process of adaptive resilience
- Measurement of the regional resilience
- Integrated approach to regional and community planning
- Risk management approach
- Relationship between migration, resilience and security
- Effective public decision-making processes - methods and techniques

- Experience in public participation within the resiliency' issues
- Creation and management of public policy in resiliency
- Issues related to non-similarity between regional, personal and community resilience.

Approximately half of respondents would like to take part in the regional resiliency training using the blended learning (combination of face to face and e-learning). The MOOC were also indicated among preferable ways of delivery in France.

The main outputs and recommendations from interviews

Through the interviews, it is visible that the participants stated that the knowledge on regional resiliency is on very low level and most of them thought that regional resiliency covers only environmental and other issues related to. It is necessary that the complexity of resiliency (all areas influenced by resiliency) should be covered within training courses, that will permit to them to better understand these issues. As the specialised knowledge on regional resiliency is missing, the courses should include also the basic information, definitions and explanation of terminology. As resiliency should be fully implemented already during the regional development planning phase, the integrated approach to planning is very important as a prerequisite to evidence-based planning. The security issues of all types (including those coming from migration) are very relevant as well. Some participants expressed worries that persons dealing with regional resiliency do not possess the knowledge and skills needed to successfully manage region and its organisations, especially crises management in France. The concrete examples how to use project management approach to increase regional resiliency and how to manage such projects is necessity for further resiliency support.

Summary on VET needs to support resiliency.

The following main conclusions can be drawn:

- Resilience represents the new issue for local governments and some institutions too.
- The measures that exist are defined within separate public policies and a holistic view is usually missing. From their point of view, there are teams who implement public policy and they don't have enough knowledge and experience of the agenda of other public policies should be leaded.
- Respecting issues to the policies, the competencies of national and local government bodies are not clear for them. It represents significantly weakens the ability to react to external shock or local disaster related to the issue.
- VET education is essential and should be done to the regional resilience and personal resilience, as collective community resilience relies on individual resilience too.

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Annex IV. National Report: Spain

1. Introduction

Spain is divided into autonomous communities (Spanish: *comunidad autónoma*) as a first-level political and administrative division, created in accordance with the Spanish constitution of 1978, with the aim of guaranteeing limited autonomy of the nationalities and regions that make up Spain.

Spain is not a federation, but a decentralized unitary state. While sovereignty is vested in the nation as a whole, represented in the central institutions of government, the nation has, in variable degrees, devolved power to the communities, which, in turn, exercise their right to self-government within the limits set forth in the constitution and their autonomous statutes. Each community has its own set of devolved powers; typically, those communities with stronger local nationalism have more powers, and this type of devolution has been called asymmetrical. Some scholars have referred to the resulting system as a federal system in all but name, or a "federation without federalism". There are 17 autonomous communities and two autonomous cities that are collectively known as "autonomies". The two autonomous cities have the right to become autonomous communities, but neither has yet exercised it. This unique framework of territorial administration is known as the "State of Autonomies".

The autonomous communities are governed according to the constitution and their own organic laws known as Statutes of Autonomy, which define the competences that they assume. Since devolution was intended to be asymmetrical in nature, the scope of competences vary for each community, but all have the same parliamentary structure.

The following research was led by FFE and the Spanish region selected for the research is Basque Country, where the project partner organization is located.

The Basque Country (in Euskera, *Euskal Herria* or *Euskadi*) is an autonomous Spanish community, considered a historical nationality, located at the eastern end of the Cantabrian Sea coast, bordering France. The most populous city in the Basque Country is Bilbao, followed by Vitoria and San Sebastián, which make up a metropolitan area of approximately one million inhabitants, where about half of the 2.16 million inhabitants of the community reside.⁷ The Basque Country has a millenary history of uncertain origins, and its own language, Euskera, is the oldest language in Europe still spoken today, which is why the Basque Country has raised the interest of linguists, anthropologists and historians around the world. According to data from the VI Sociolinguistic Survey of 2016, 33.9% of the population aged or over living in the BAC is Basque-speaking, 19.1% are passive Basque speakers and 47% are monolingual Spanish speakers.¹⁰ The Statute of Autonomy recognizes two official languages, Euskera and Spanish. Its basic institutions are the Basque Parliament and the Basque Government, based in the city of Vitoria. The Basque Country also has, for historical reasons, like Navarra, a particular tax regime protected by the Spanish Constitution, which allows it to collect its own taxes. Today, the Basque Country has one of the most dynamic economies in all of Spain, being one of the regions with the largest industrial fabric. In 2015, the average salary in the Basque Country was € 1950, the highest in Spain.¹¹ The Basque Country has followed a model of industrial hyper-specialization, inspired by the

German mittelstand model, and has dozens of SMEs that they are global leaders in their specific business area.¹² It has a human development index of 0.922 in 2018 compared to the national average of 0.893, and similar to countries such as Finland.



Figure 1. Spain. País Vasco. [CC BY-SA 3.0](https://creativecommons.org/licenses/by-sa/3.0/) ¹²²

The gross domestic product of Spain in the third quarter of 2020 has grown by 16.4% compared to the previous quarter. This rate is 343 tenths higher than that of the second quarter of 2020, which was -17.9%. The interannual variation of the GDP was -9%, 126 tenths higher than that of the second quarter of 2020, which was -21.6%. The GDP figure in the third quarter of 2020 was 287,511 million euros, placing Spain as the 13th economy in the quarterly GDP ranking of the 50 countries that we publish. Spain has a quarterly GDP per capita of € 6,074 euros, -543 euros lower than in the same quarter of the previous year, when it was 6,617 euros. If we order the countries, we publish based on their quarterly GDP per capita, Spain is ranked 23 out of the 50 countries from which we publish this data.

The Spanish economy grew 2% in 2019, four tenths less than in 2018 and its smallest rise since 2014, after advancing 0.5% in the last quarter of last year, one tenth above what it progressed in the two previous quarters, according to the advance data of the Quarterly National Accounts published this Friday by the National Institute of Statistics (INE).

With the 2% growth achieved in 2019, the Spanish economy adds six years of progress, although last year it was the lowest since 2014, when GDP grew by 1.4%. The peak of this six-year period was reached in 2015, with a growth of 3.8%. According to the INE, the 2% growth achieved in the whole of last year is due to a contribution of the national demand of 1.5 points, compared to the 2.6 points of 2018, while the external demand contributed with four tenths to the advance of GDP, after subtracting a few tenths in 2018. For the year as a whole, the GDP of agriculture fell by 2.6% compared to the

¹²²[https://es.wikipedia.org/wiki/Pa%C3%ADs_Vasco#/media/Archivo:Pais_Vasco_in_Spain_\(including_Canarias\).svg](https://es.wikipedia.org/wiki/Pa%C3%ADs_Vasco#/media/Archivo:Pais_Vasco_in_Spain_(including_Canarias).svg)

increase of 5.9 the previous year. From leading the increases, it went on to register the greatest decline of all sectors, coinciding with the approval of the Minimum Interprofessional Salary.

In Spain, there is a notable difference between the GDP per capita of some Autonomous Communities and others. Thus, although the GDP per capita of Spain in 2019 (published in December 2020) was 26,426 euros, according to the National Institute of Statistics (INE). The highest GDP per capita corresponded to Madrid, with 345,913 euros, 35.9% more than the national average. The GDP per capita of the Basque Country (34,142 euros) and the Autonomous Community of Navarra (31,141 euros) are also above this national average. Communities with the lowest GDP per capita in Spain The Gross Domestic Product per capita of Melilla is the lowest in Spain, with 19,211 euros. Among the most disadvantaged areas we find Extremadura (19,454 euros), Andalusia (19,633 euros) and the autonomous city of Ceuta (20,903 €).

The crisis caused by Covid-19 occurs in an international context marked by a series of megatrends that, far from disappearing, are accentuated and pose a challenge both globally and for our reality. In this sense, Euskadi (Basque Country) summarizes these megatrends in a triple technological-digital, energy-climate and health-social transition, which has the capacity to transform the future of countries, businesses, industries, societies and people, but which can also be an opportunity of job creation.

1. DIGITAL BASQUE COUNTRY:

- Digitization
- Artificial Intelligence and Big Data
- Technology at the Service
- of the Citizen
- Automation
- Cybersecurity
- Promotion of a fair and competitive digital economy.

2. ENERGY-CLIMATE TRANSITION

- Climate neutrality
- Decarbonization of the energy system
- Efficient use of resources and energy -circular economy
- Sustainable and smart mobility
- Just energy transition
- From farm to fork

3. SOCIAL AND HEALTH TRANSITION

- Health System and Risks
- Pandemics
- Demographics and Aging
- Healthy.
- Migration.
- Gender equality.

- New models of care.
- Social and territorial cohesion.

According to 2019 European Commission Report on Spain progress, key structural issues analysed in this country report, which point to particular challenges for Spain's economy, are the following:

- The widespread use of temporary contracts holds back Spain's growth potential and social cohesion
- The proportion of people at risk of poverty or social exclusion decreased slightly in 2017 but remains high, particularly among children
- Skills mismatches and shortages weigh on productivity growth, especially in some regions.
- Innovation is hampered by a number of factors and this also affects productivity.
- Spain is making progress on digitisation, but still does not fully exploit the growth potential offered by it.
- The restrictiveness and fragmentation of regulation within Spain prevents companies from benefiting from economies of scale.
- Incomplete connections for goods transport by rail and limited integration with the EU electricity and gas markets also prevent Spain from fully benefitting from the EU single market.
- Increasing the share of energy from renewables and energy efficiency for buildings would be conducive to more sustainable growth.
- Spain faces specific territorial cohesion challenges, such as depopulation and ageing in rural areas.
- Stronger and sustained coordination between national and regional authorities could make policies more effective.

2. Profiles of the region and its resilience capacity

Resilience is a relatively new term in economics. Although the concept has been used for a long time in other fields such as ecology, it has lately attracted the attention of regional analysts and space economists and geographers, especially since the last international economic crisis. In general terms, the main idea what it tells us is that different degrees of resilience explain the different trends of economic growth in the regions of a country.

Although there is no universally accepted definition of regional economic resilience, there are three ways to interpret the concept. The most frequent is "engineering resilience" which focuses on the resistance that a region has, in this case, to an economic shock and the speed of recovery. To measure regional resilience, the two most common indicators used are the GDP and employment of a region. Specifically, the rate of change in GDP or employment in a region in relation to the rate of change in the country for a specific period of time.

The strong interconnectedness of the European economy and Spain, implies that the Basque economy will also be strongly affected by the Covid-19 crisis, both in terms of economic activity, with a forecast

drop in GDP of 10.1% in 2020, and affecting employment, with a forecast of an increase in the unemployment rate to 11.2%. The crisis is hitting hard key sectors of the Basque economy, such as the automotive and aeronautics industry, energy, services and, especially, commerce and tourism.

According to OECD predictions, the world economy will suffer a sharp contraction of 4.5% in 2020, much worse than that recorded during the financial crisis of 2008–09 (-1.7% of world GDP).

Although GDP will remain at levels lower than those reached prior to the pandemic, a partial recovery is expected by 2021, with growth of 5.0% worldwide in a scenario of recession of the pandemic during the second semester 2020 and permanence of containment measures

At the European level, the real GDP of the euro zone registered a historic drop of 11.8% in the second quarter of 2020, which has led the European Commission to announce considerable economic support materialized through monetary policies, taxes and employment that should contribute to maintaining the income levels of families and prevent adverse amplifications from occurring through financial channels. Based on these assumptions, the OECD predicts a fall in real GDP in the euro area of 7.9% in 2020 and a rebound of 5.1% in 2021.

Landing at the state level, the fall in real GDP in the second quarter of 2020 was 18.5% (compared to the aforementioned 11.8% for the euro zone as a whole), placing Spain as one of the most affected in the whole of the eurozone as a result of both the stricter containment measures deployed as well as a consequence of some structural characteristics of its economy. The crisis that occurred has had a high impact on the supply side, with activity levels suffering the greatest drop in the historical series recorded, which have been partially mitigated by the public guarantee programs and the Regulatory Files Temporary Employment. The crisis also hit the demand side, since the restrictions that have been imposed on mobility to curb the rate of infections have led to a drastic decrease in consumption, both domestic and from abroad, to which is added the fall in investment in the short term (projects in progress are paralyzed) and in the medium term (due to the deterioration of economic expectations in a context of high uncertainty and loss of value of assets).

The Bank of Spain, in order to feed into the macroeconomic projections for the euro area made by the OECD, has carried out a projection exercise with two possible scenarios, one of early recovery and one of gradual recovery. The Spanish GDP would fall in the early recovery scenario by 10.5% in 2020 before rebounding by 7.3% in 2021, while, in the scenario of gradual recovery, the rebound of the economy would take longer to occur, so that the fall of the product in 2020 would reach 12.6% and would rebound by 4.1% in 2021.

One of the economic dimensions in which the crisis also has social repercussions is the destruction of employment. For the IMF the unemployment rate in Spain will climb to 20.8%; for the European Commission to 18.9%; for the Bank of Spain it could increase in the worst-case scenario to 19.6%.

SITUATION IN THE REGION OF BASQUE COUNTRY

The strong interconnection with the European economy and Spain, implies that the Basque economy will also be strongly affected by the Covid-19 crisis, both in terms of economic activity and employment, since the crisis derived from the pandemic is hitting key sectors of the Basque economy such as advanced manufacturing and industry, energy, services and, especially, commerce and tourism.

In this context of slowing down activity and confining people to prevent a further spread of the disease, the Basque economy has experienced a very complicated situation that has made it necessary to review the initial forecasts after knowing the definitive duration of the state of alarm, the restrictions linked to it and the limitations of the effective de-escalation process until reaching the “new normal”, at which time there will still be activities that have to maintain measures that limit their potential.

A. Economic potential

A1: Regional GDP per capita in purchasing power parity

GDP per capita updated to 22.03.2019

Unit: PPP-€.: 36,300 (2018)

| Source: Eurostat. Prepared by Orkestra: <https://www.orkestra.deusto.es/competitiveness-observatory/en/ES21/indicator-detail/1>

A2: Sector specialization in old industries (percentage of employment in the primary and secondary sectors)

The economic specialisation of the Basque Country based on foreign trade data. The data have been divided into 19 industries, which have in turn been grouped based on their technological level, economic use of the goods, level of growth, and technical and economic characteristics.

The Basque Country specialises mainly in four branches: Motor vehicles, Metallurgy and metal products, Machinery and equipment, and Petroleum Refining.

Basque exports have a significant degree of concentration in just four industries: motor vehicles (26%), metalworking and metal products (23%), machinery and equipment (15%), and petroleum refining (8%). The specialisation indexes for these four industries are also high. The resulting risks are significant, given the considerable link between the first three, which largely form part of the same value chains, and the fact that the fourth is highly subject to energy price volatility and the foreign oil supply. Be that as it may, it should be noted that between 2008 and 2017, the degree of export concentration dropped markedly, primarily due to the declining share of metalworking and metal products exports. Additionally, the severity of this concentration is less because in these four sectors with the largest share of exports, the Basque Country has strongly positive comparative advantage rates.

A3-Long-term unemployment

(average of long-term unemployment rate values for the last 5 available years)

The data from the labour market in the Basque Country from the third quarter of 2020 showed a figure

of 916,300 individuals in work, which is an increase of 3,100 compared with the previous quarter (+0.3%), according to Eustat data. There were an estimated 101,800 people out of work in the Basque Country in the third quarter of the year, 8,600 fewer than in the previous quarter.

On the other hand, the unemployment rate of the Basque Country stood at 10%, 0.8 percentage points down on the second quarter of 2020. As a result of the evolution in the employed and unemployed population, the activity rate stood at 54.5% in the third quarter of 2020, falling 0.4 points in respect of the previous quarter.

In terms of gender, the rise in employment affected men the most, with 4,000 more in work than the previous quarter, whilst the number of women in work fell by 900. With regards to nationality, the number of Spanish nationals in work was up by 1,900, whilst the number of foreign nationals in work increased by 1,100. Employment increased above all in the services sector

The employed population in the Basque Country increased by 3,700 in the services sector, rose by 100 in industry and remained stable in the construction sector; in contrast, the number of people employed in the primary sector fell by 900. The employment rate, calculated as the percentage of people in work aged 16 to 64 over the total for these ages, rose by one percentage points compared to the previous quarter, standing at 65.7%.

With regards to the level of education completed, the employment rate increased by 0.5 percentage points among people who had completed secondary and intermediate education; however it was down 0.3 percentage points among those who had completed higher education, standing at 81.8%; and fell 0.4 points among people educated to primary school level or lower, standing at 56.8%. As regards nationality, the highest employment rate was recorded amongst Spanish nationals, with 67.3%, whereas for foreign nationals it stood at 50%.

By province, Gipuzkoa had the highest employment rate, at 67.9%, an increase of 0.3 percentage points compared to the previous quarter. Álava came second with 65.3% and a decrease of 0.2 points; and in Bizkaia, the employment rate rose by 0.1 percentage points to stand at 64.4%.

The number of households with all active individuals out of work fell by 1,200. In the third quarter of 2020 it was estimated that there were 899,300 households in the Basque Country, of which a third did not have any active individuals. In almost six out of every ten households, all of the active individuals were in work, 4,300 families more than the previous quarter; furthermore, households where all active individuals were unemployed stood at 31,700, 1,200 fewer households than in the previous quarter.

As regards the level of education, the greatest decrease in the unemployment rate was among people whose highest level of education completed was primary school and lower, with a decrease of one percentage point, the unemployment rate standing at 12.8%. For people who had completed secondary or intermediate education and higher education, the unemployment rate fell by 0.7 percentage points, standing at 12.2% and 6.5% respectively. With regards to nationality, the unemployed population figure decreased among Spanish nationals by 4,600, standing at 76,200. Among foreigners, unemployment decreased by 4,100 to stand at 25,500 people out of work.

B. Socio-demographic potential

B1: Educational attainment - % of people over 25 with at least a bachelor's degree in the total population	<p>Before the age of 25, eight out of ten young people in the Basque Country are studying (78.5%). Specifically, 14.8% are completing ESO (Compulsory Secondary Education) or equivalent studies (Basic Professional Training or Initial Professional Qualification Programs). Another 14.1% are studying high school. 8.8% are completing a medium-level training cycle and another 10.7% a higher-level training cycle. A quarter, 25.1%, are studying at university and the remaining 5.0% are doing other types of courses, languages, etc.</p> <p>The 21.5% who are not studying is divided between 15.8% who are working, 3.5% unemployed and the remaining 2.2% in another situation.</p>
B2: Life expectancy at birth	<p>In 2019 the life expectancy in the Basque Country increased to 83.97 years. The life expectancy of women was 86.77 years, greater than that of men, which was 81.02 years.</p>
B3: Demographically vulnerable groups - Share of seniors over 75 in the total population	<p>People 65 years of age and older. - People who live in nursing homes or long-term care facilities. - Other high-risk conditions that could include: - People with chronic lung disease or moderate or severe asthma. Thus, the group of people over 65 years of age represents 19.2% of the current total population in the Basque Country, exceeding the relative figure of the elderly population in Spain by more than 2 percentage points (16.9%).</p>
B4: Equality of income - Gini index of household income inequality by region	<p>The Basque Autonomous Community Gini coefficient stands in 2018 four points beneath that of the European Union (26.7 compared to 30.7) and 3.7 with respect to countries in the Eurozone (26.7 compared to 30.4).</p>
B5: Poverty rate - people at risk of poverty or social exclusion - % of total population	<p>The poverty survey held last year in the Basque Autonomous Community shows, in fundamental and purely statistical terms, a tendency towards stabilisation, and the Basque Country, with 5.1%, remains below the European average, which stands at 6%. The real human poverty index, EPDS (Survey on Poverty and Social Inequalities), measured by the Basque Government Ministry of Employment and Social Policies, reflects the expectations of an increasingly more prosperous and advanced society in Europe. Society as a whole demand higher levels of goods and services and the level of needs increases.</p> <p>Evolution in the Basque Country in the period 2016-2018 is characterised by a strong increase in the level of income. Thus, the median of equivalent income per capita, which establishes the level of the different Eurostat levels of income poverty, rises by 4.4% between 2016 and 2018. The relative results of measuring the different kinds of poverty and absence of well-being are conditioned by the rising trend of incomes, and of the associated life expectancies.</p>

C. Health and community connectedness

C1: Demographic stability (The share of population that remains resident in the municipality over a five-year period.)

The population in the Basque Country grows by 7,219 people

The Basque Country closed December 2019 with a population of 2,189,138 people, which represents an increase of 11,258 inhabitants in the last year, in which the population was 2,177,880 people.

C2: Voter participation

(The share of the voter-eligible population that voted in the last local election)

Basque Country election 2019: 1.183.727 people went to give them votes in the last elections that means the 68,9% of the total people able to vote.

C3: access to healthcare

(Percentage of population that has health insurance coverage)

Spain has a decentralised health system under national coordination. The Spanish National Health System (known as the Sistema Nacional de Salud, NHS) is funded from taxes and predominantly operates through its public network of providers. In 2002, health competences were devolved to the regional level, resulting in 17 regional health ministries with primary jurisdiction over the organisation and delivery of health services within their territory. The Ministry of Health, Social Services and Equality is responsible for certain strategic areas and for national monitoring of health system performance. The highest body for coordination is the NHS Interterritorial Council, which gathers national and regional Ministers of Health. The main purposes of this Council are: to act as a coordinator, more than a regulatory agency; to plan the national response to disease outbreaks; and to discuss the impact of new laws at the regional level. Health spending in Spain is below the EU average in 2015, health expenditure per capita in Spain was EUR 2 374, below the EU average of EUR 2 797. Health spending in Spain accounted for 9.2% of GDP in 2015, also below the EU average of 9.9% (Figure 6). Around 71% of health spending in Spain is publicly funded, below the EU average of 79% (see Section 5.2). The 2014–2020 European Structural and Investment Funds provided approximately EUR 500 million to Spain to invest in its health system, including in medical research and development and eHealth. Substantial variations arise in health spending per capita across regions. The regions of Basque Country, Principality of Asturias and Navarre spend over 30% more on health per capita than the region of Andalusia.

Nearly all the population is covered by health insurance in 2014, the NHS covered 99.1% of the resident population, to which should be added civil servants who can opt out to choose fully private insurance

(accounting for 0.8% of the population in 2014). Total population coverage was thus 99.9%. In 2012, health service coverage was restricted for some nonregistered immigrant.

C4. Infectious diseases (Standardised death rate rates for less than 65 years old due to certain infectious and parasitic diseases by 100 000 inhabitants)

Data can be consulted at:

<https://www.ine.es/jaxi/Datos.htm?path=/t15/p417/prov/I0/&file=01001.px#!tabs-grafico>

Source: INE

D. Environment and accessibility

D1: 1. Availability technological percentage of households connected to the Internet and mobile networks

0.2% of the population of the Basque Country are internet users in 2019

The gender gap in internet and computer use has narrowed but it remains unchanged in online services and purchases.

The number of internet users aged 15 and over in the Basque Country stood at 1,499,100 in the first quarter of 2019, accounting for 80.2% of the overall Basque population in this age group, according to Eustat data. This percentage was up 1.5 percentage points compared to the same period last year.

By occupation, practically the entire student population (99.6%) are internet users, followed by people in work (97.3%), while just over half of the population who are not in active employment or are unemployed (55.8%) are users, although it is this group, which shows room for improvement, that displays the greatest increase (1.3 points) compared to 2018.

In terms of age, the increases in internet users aged 65 and over (3.9 percentage points) and those between 55 and 64 (3 points) are worthy of note. Despite the increase, these are the only age groups with user figures below 95%. The biggest difference between age brackets is between people aged 25 to 34, who are almost all users (99.5%), and those aged 65 and over, who stand at 37.3%.

The preferred language for web browsing is Spanish (98.4%), followed by Basque (24.9%) and English (20.3%).

3. Policy actions in the area of resilient region

"Berpiztu": Reactivate, Reborn. Is the answer of Basque institutions to overcome the economic and employment crisis generated by the Covid 19 health pandemic. The joint objective, included in the commitment presented by the Government and the three Provincial Councils on September 29, is to recover all the lost jobs and put the unemployment rate below 10%.

The characteristics that best define the Berpiztu Program are those summarized below:

- A Program that proposes a budget horizon of certainty and certainty for the economic and social agents of the Basque Country.
- A realistic program focused on job creation and economic reactivation and transformation.
- An open program that will adapt to the evolution of the policies proposed throughout the legislature.
- A Program that connects the joint work of the Basque institutions reflected in the decalogue of commitments reached between the Government and the three Provincial Councils.
- A proactive Program that serves as a lever to face the three global transitions in which Europe and the world are immersed as three great opportunities:
 - The technological-digital transition
 - The energy-climate transition
 - The health and social transition
- A Program for the Reconstruction, Transformation and Economic Renaissance of the Basque Country with a clear and defined objective: Recover the job lost due to the health pandemic and bring the unemployment rate back to below 10%.

Solid and realistic starting bases

The budgetary and investment horizon of the Berpiztu Program has been prepared from prudent, solid and realistic starting hypotheses, as well as the employment estimates.

Budget horizon

The investments collected contemplate as a starting point the budget executed in 2020, only since the start of this legislature. For this, 50% of the total budget approved for 2020 has been estimated. The subsequent annual growth of the different programs and items has been budgeted with an initial estimate of progressive growth similar to the general budgetary forecasts. A growth of 0.5%, 1%, 2% and 3%, in the years 2021, 2022, 2023 and 2024 respectively. These estimates will be updated based on the budgets approved annually.

Employment horizon

The results, in terms of the number of jobs induced, have been estimated based on the experience of previous legislatures. Corrective adjustment factors have been applied to these results, to consider the negative effects of the health pandemic on job creation in a standard year. Thus, in 2020 and 2021, adjustment factors of 30% and 70% respectively have been used, on the values of a "normalized" year. As of the year 2022, a complete recovery of the results in terms of employment from a normalized year prior to the coronavirus crisis.

Criteria for the correct interpretation of the number of dynamized jobs.

Based on the previous working hypotheses, it is estimated that the Berpiztu Program will encourage 130,000 jobs. Obviously, it is not about net employment (= 'total employment created' - 'employment destroyed'), but rather the positive effect of these programs on employment (*). All jobs likely to be

incorporated as new contributors to social security are considered, regardless of their duration. In addition, in the chapter on public employment, the data includes an estimate of the public job offers planned for the legislature. These are not new jobs in all cases, but a consolidation that responds to the stability of jobs in the public sector.

In the Basque Country, the pandemic has been faced with a common strategy and a coordinated response between the different institutions, which has been divided into 2 phases:

PHASE 1- SHOCK PLAN

It constituted the immediate response to the crisis, with the objective of facing the health pandemic and the economic and social pandemic. It was about resisting the first attack of the crisis and maintaining all the possible economic activity and jobs. For this, a series of complementary measures were adopted to those adopted by the State Government, to deal with the alarm situation that occurred due to Covid-19.

PHASE 2- RESISTANCE

The initial outbreaks have grown to constitute a second pandemic wave in the Basque Country, which implies the need to continue living with the virus until a safe vaccine is discovered and effective. This has led to the need to prolong some of the initial measures to combat the pandemic, which must be maintained as long as necessary. The health system will continue to be strengthened, to identify infected people as soon as possible and trace their contacts, and prevent the spread of the disease (BIZIBERRI 2). To be continued supporting the most vulnerable families and people, to prevent them from succumbing to the crisis. And it will support the companies and freelancers most affected by the effects of the pandemic, which is affecting unequally to the different economic sectors, with special incidence in the hotel industry, commerce and tourism, in the industry related to mobility, in metallurgy and the rubber and plastics industry, in construction, in cultural and recreational activities and in services related to education.

A horizon with 3 major global transitions to face.

The crisis caused by Covid-19 occurs in an international context marked by a series of megatrends that, far from disappearing, are accentuated and pose a challenge both globally and for our reality. In this sense, Euskadi summarizes these megatrends in a triple technological-digital, energy-climate and health-social transition, which has the capacity to transform the future of countries, businesses, industries, societies and people, but which can also be an opportunity of job creation for which we must have people trained and prepared for it.

1. Technological- digital transition

The technological-digital revolution will affect all industrial sectors, some of them key sectors in the economic reality of the Basque Country, such as those related to transport (specifically automotive, aeronautics, railways and naval), capital goods and Machinery- Tool or iron and steel industry. These sectors are in a process of transition between the methods of traditional organization and organization based on digitization, advancing in the automation and improvement of its processes, incorporating flexible solutions and robotization technologies, additive manufacturing or connectivity between machines and equipment, the basis for the application of technologies of Artificial Intelligence and Big Data.

In order to address the technological-digital transition, a commitment to research aimed at incorporating intelligence in means and production systems, the use of capacities and emerging technologies in new products and processes, the integration of advanced materials in solutions with greater added value or improved processes, the efficiency and sustainability of the resources used and the integration of high added value services, a commitment that at the level of Euskadi is materializing in the “Basque Industry 4.0” strategy. Another challenge associated with this megatrend is technological-digital talent, understood as the existence of digital specialists who nurture both the business fabric and the scientific-technological agents.

In this way, the Basque Country summarizes the technological-digital transition in the following keys: investing in greater and better connectivity; strengthen the industrial and technological presence at strategic points in the supply chain; channel investment towards strategic digital capabilities (artificial intelligence, cybersecurity, secure communication, cloud data infrastructure, 5G and 6G networks, supercomputers, quantum computing, blockchain,...); build a real data economy as an engine for innovation and job creation; and ensure a fairer and simpler business environment. All these elements are also aligned with the European vision.

2. Energy-climate transition

The energy-climate transition revolves around the existing concern about climate change and the environmental and social problems caused by the generalization of a model of production and transport based on fossil fuels. The drawbacks of this model, such as air pollution, excessive energy consumption, the effects on health or the saturation of traffic routes, have led to a collective will to find alternatives that help to alleviate these effects and have a future carbon neutral Basque economy.

Euskadi is internationally positioned as a pole of knowledge and industrial development in the field of energy and clean mobility and has the presence of important companies leading tractor units in international markets, as well as a large group of high-profile innovative SMEs.

In addition, the institutional commitment to advance in environmental sustainability and in the transition towards a low-carbon Basque economy by incorporating energy efficiency, the circular economy, the efficient use of materials and co-innovation in an integral way in its plans and Sector strategies, as well as the commitment of the territory to assume the challenge of aligning efforts with the Sustainable Development Goals (SDG), are contributing to solutions to the global challenge of sustainable human development.

The energy-climate transition in the Basque Country is also aligned with the European Green Pact, which proposes a new growth and transition strategy aimed at achieving an equitable and prosperous society, with a modern, resource efficient and competitive economy, in which there will be no net greenhouse gas emissions in 2050 and in which economic growth will be decoupled from the use of resources. In this sense, the Basque Country foresees the development of various concrete initiatives that are in line with some of the main initiatives contemplated in the roadmap of the European Green Pact (Biodiversity Strategy 2030, the Farm-to-Table Strategy, the Industrial Strategy for an Ecological, Digital and Competitive Europe, the new proposal for a European Climate Law, a “Wave of Renovation” of public and private buildings and the Sustainable and Smart Mobility Strategy).

3. Health-social transition

The population of the Basque Country reached its historical maximum in 2019 with 2,188,017 inhabitants, being one of the societies with the highest life expectancy (86.3 years for women and 80.4 for men). It implies a demographic structure with more people aged 65 or over (22.2%) than those under 21 (18.4%), a trend that has been accentuating year after year.

The aging of the population is a great challenge and at the same time a great opportunity. Healthy aging, understood as the process of optimizing physical, mental and social health opportunities that allow older people to actively participate in society, translates into areas such as Personalized Health, Healthy Eating or Sustainable Cities. The “Basque Strategy for Research and Innovation in Health” will promote collaboration between the health system, the business system and the scientific-technological system in order to respond to this challenge.

This process, especially intense in the Basque Country, highlights the crisis in the current care model; crisis accelerated by the situation caused by COVID-19. Rethinking this model from the social and health fields, establishing synergies between these systems and incorporating the gender perspective and innovation, can generate an important field for job creation, both in the direct care and in the development of technological instruments that complement personal care.

The Basque Country is characterized by a Health System with the capacity to incorporate the latest technological and medical advances as a result of research and innovation, making it possible to improve patient care and the management of health and care services, as has been demonstrated in

the crisis of Covid-19. Our healthcare system has contributed to lengthening life expectancy. Looking ahead, the large amount of clinical data available through open interoperable platforms, together with new advances in artificial intelligence, gene editing or Big Data, is expected to offer highly personalized diagnoses and treatments that improve many of the current diseases, advance in the prevention and comprehensive improvement of health through new connected devices and delay aging.

Along the same lines, and trying to make the most of the potential of the aforementioned technological and medical advances, the Basque health transition represents an important reinforcement and transformation of the Basque Health System, in order to prevent and be prepared to give a rapid response and effective against possible new health crises or pandemics.

4. VET needs to support regions' resilience

The main outputs and recommendations from questionnaire survey and identified the main fields of educational needs:

Most of the people that participates in the questionnaire are people working in NGOs and Foundations. All of them (100%) consider that the resilient is a really important competence to work in. Regarding the level of competences in the different areas of regional resilience was rated 3. The weaknesses in the question related with the personal readiness for the regional resiliency areas are the following:

- Intercultural competencies
- Language competencies
- Conflict solving
- Knowledge and the specialized information in the field of regional resiliency
- Language competencies
- Distances
- Knowledge of public management of migration
- Knowledge on public participation within the resiliency issues
- Ability to design public policy in resiliency
- Use of project management for resilience support
- Understanding the difference between regional, personal and community resilience

The participants considered the following skills necessary to be able to ensure regional resiliency:

- Language skills and issues
- Vulnerability assessment
- Building trust and engagement of stakeholders
- Understanding of threats and external shocks
- Process of adaptive resilience
- Measurement of the regional resilience
- Adaptability

- Ability to recognise problems
- Integrated approach to regional and community planning
- Risk management approach
- Relationship between migration, resilience and security
- Effective public decision-making processes - methods and techniques
- Experience in public participation within the resiliency' issues
- Creation and management of public policy in resiliency
- Issues related to non-similarity between regional, personal and community resilience.

Most of the people that participated in the questionnaire (80,5%) wanted to participate and take part in the training. 20% considered blended learning the best option and the rest of the respondents would prefer a MOOC.

The main outputs and recommendations from interviews:

Most of the people interviewed consider that in general the term resilience is a great unknown. This term and the underlying competencies are known more on a personal level than on a regional level. One of the most repeated comments has been the inability of the institutions to prevent certain risks for society, expecting from people an innate resilience that sometimes does not occur.

In general, the interviewees consider that there is a lot of work and training left in the Basque Country related to resilience, so training in this area is something necessary both for NGOs and for those responsible for training young people who are the future of the region.

Summary on VET needs to support resiliency.

The following main conclusions can be drawn:

- Despite the fact that the term resilience is known both in the field of public institutions and NGOs, it is an issue on which historically there has not been much work.
- After the health crisis, the Basque government is starting to introduce the term resilience slightly as far as the economy is concerned.
- Vocational Training must work on skills related to resilience from the professional side and from the personal side.
- From the public institutions (Basque Government and councils) they begin to work but without going down to the most practical part, remaining only in the development of programs.
- It is essential for many NGOs to have the ability to educate different regions on resilience issues with projects with clear objectives aimed at this.

5. Sources

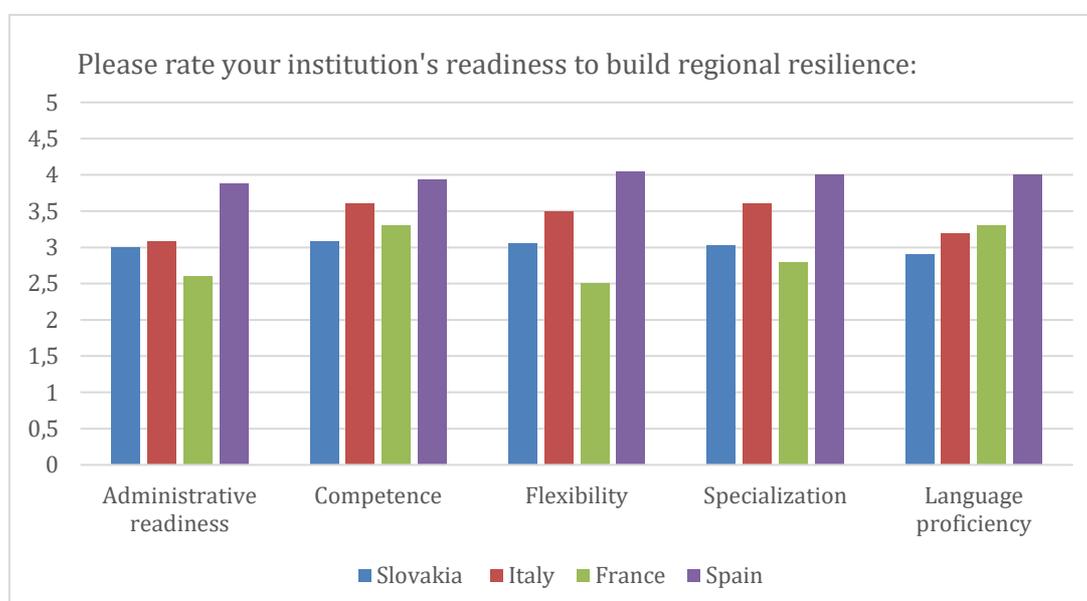
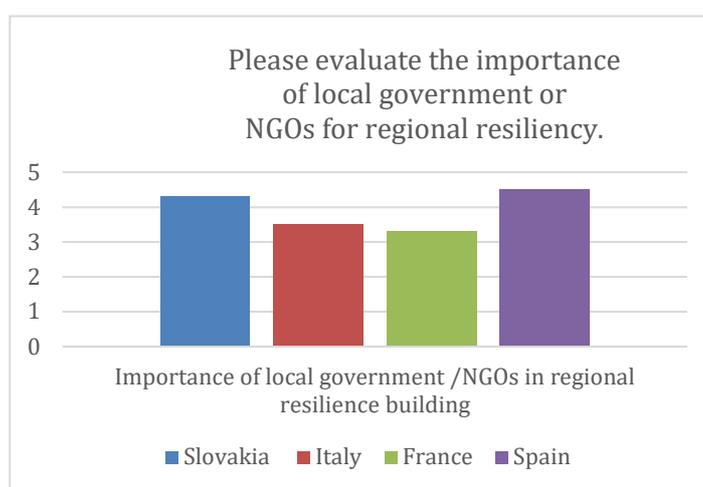
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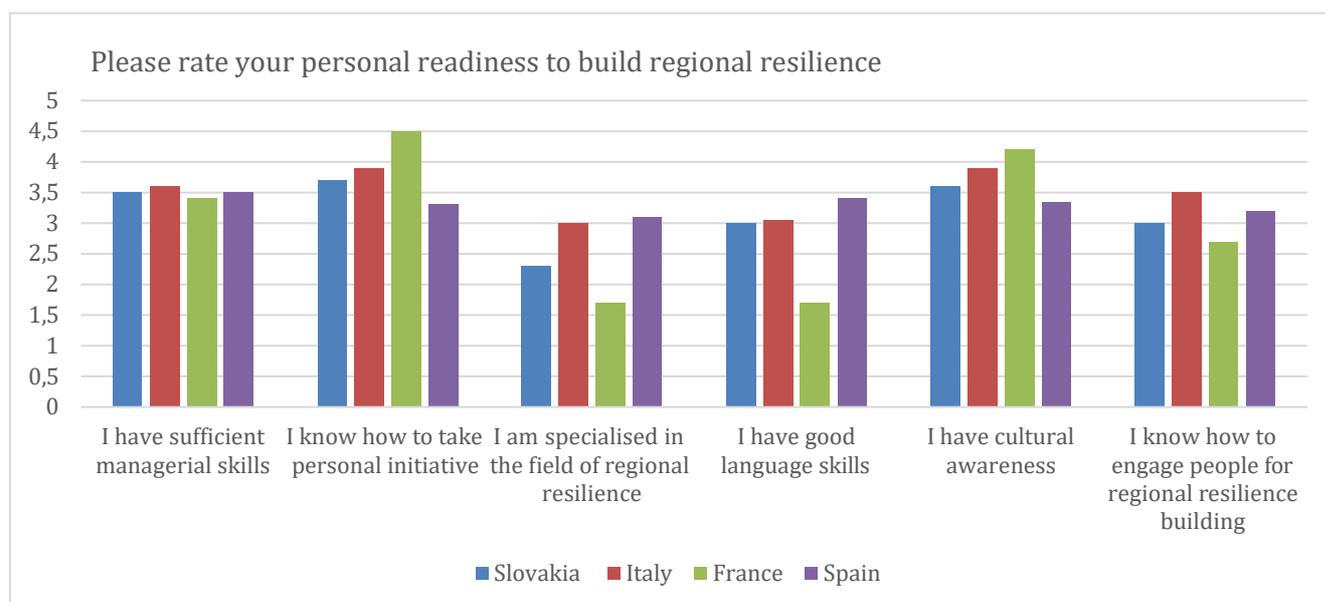
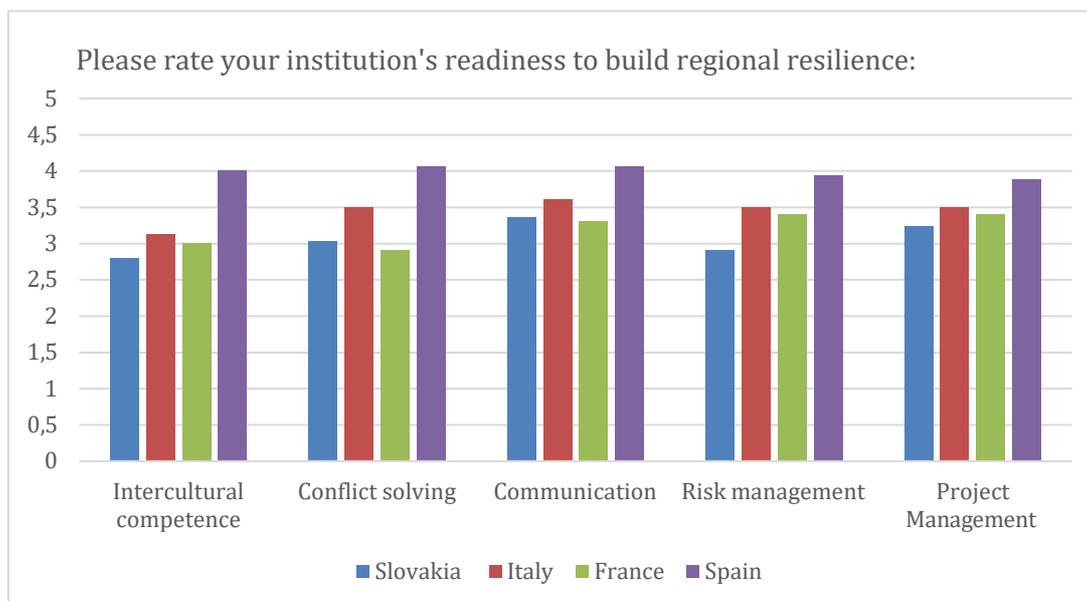
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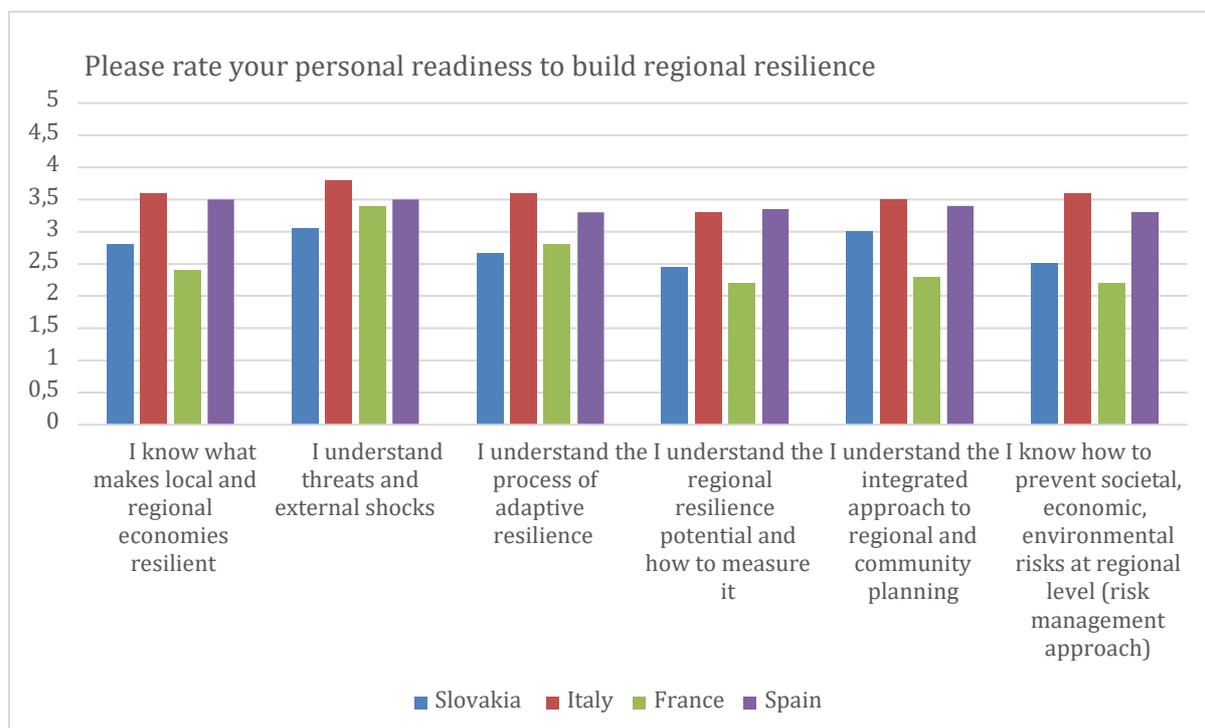
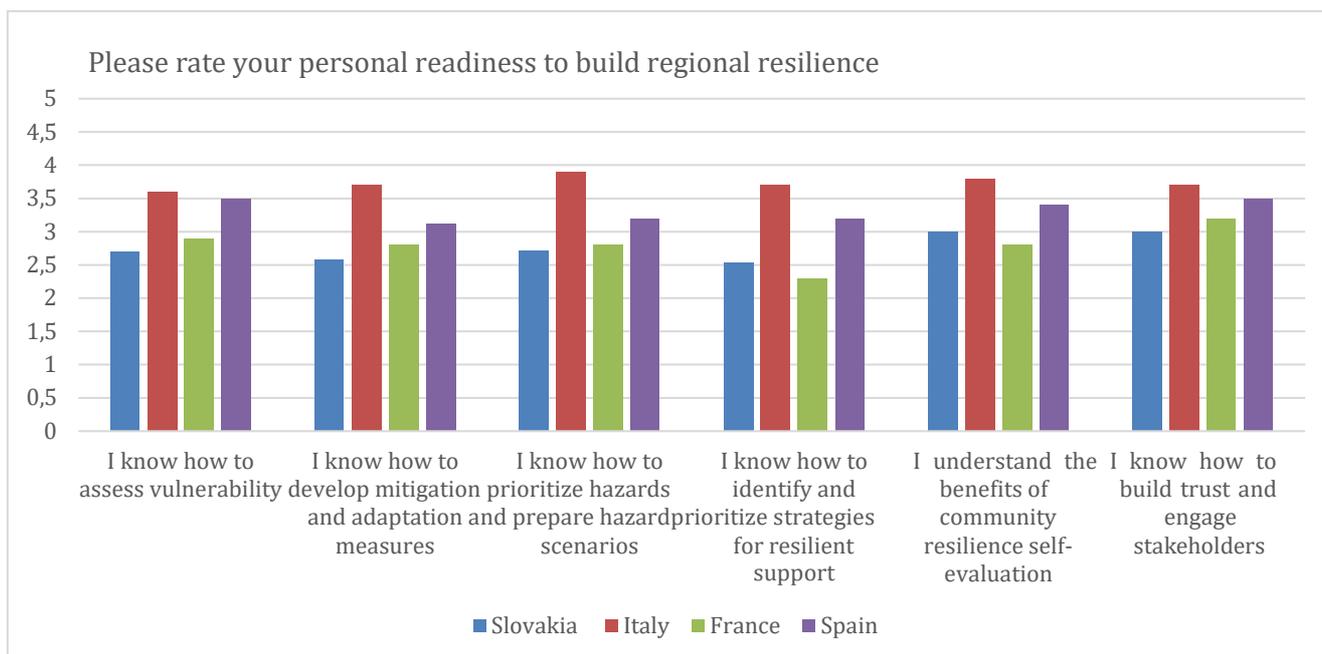
Annex V. The Summary of Questionnaires Survey

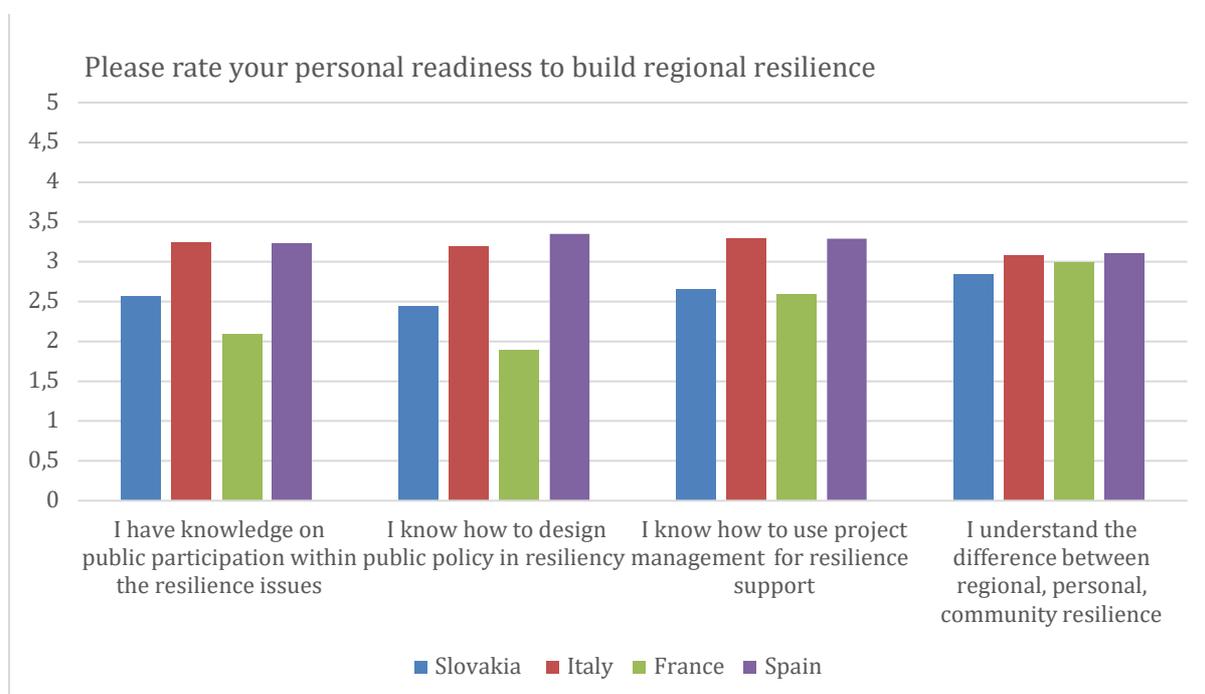
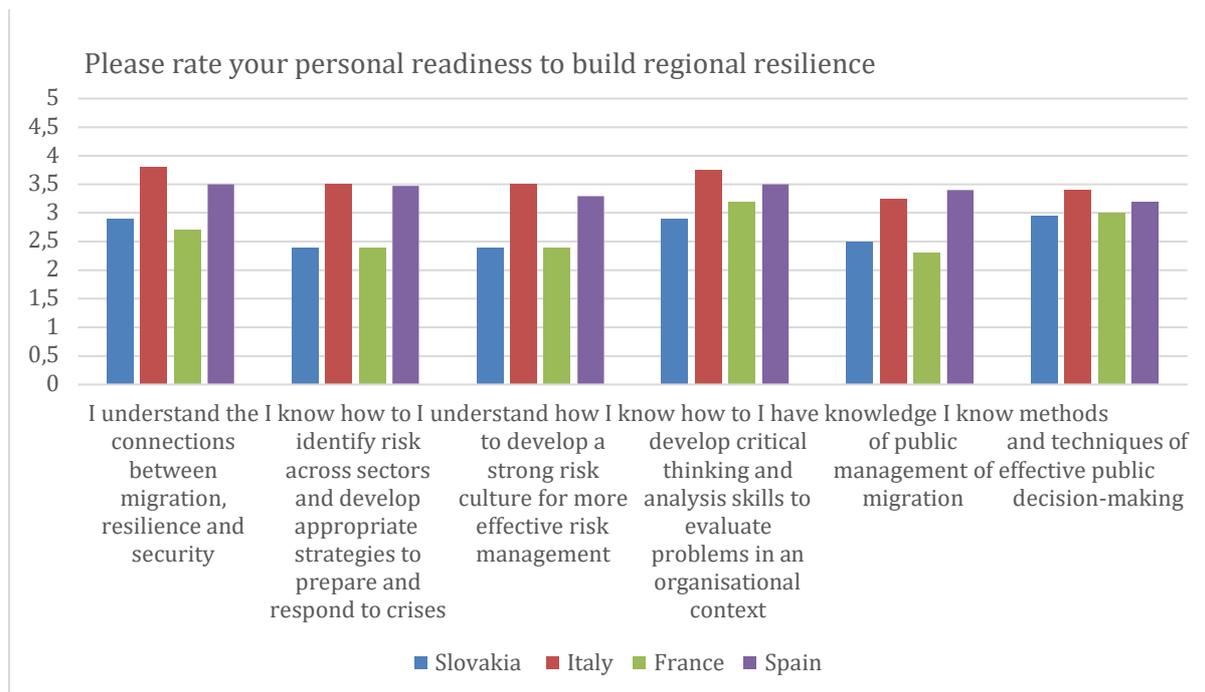
Field research was conducted in each project partner country (Slovakia, Italy, France, Spain), in order to evaluate the real training needs and areas of interest in the field of regional resilience building. Project partners distributed online questionnaire surveys to relevant stakeholders, mainly based on their personal contacts and previous collaboration. The following graphs offer an overview of the responses collected from the four project partner countries through online questionnaire surveys, based on a sample of 94 respondents (33 Slovakia, 24 Italy, 20 Spain, 17 France).

Values were expressed on a scale from 1 to 5 (1- very low; 2 – low; 3 – medium; 4 – rather high; 5- high)

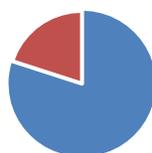








Would you like to attend trainings focused to engance your skills to build regional resilience?



■ Yes ■ No



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