



VOLUNTARY LOCAL ITALY 2022 LOCAL REVIEWS

ANNEX 2



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VOLUNTARY LOCAL REVIEW 2022

**Abruzzo Region,
Marche Region,
Umbria Region**



Presidential statements



Emanuele Imprudente, Abruzzo Region Vice President

“The Abruzzo Region intends to continue and strengthen the collaboration activities with the Regions of Umbria and Marche as fundamental for the achievement of the objectives of the Regional Strategy for Sustainable Development. In the future, further involvement and comparison between the Regions is hoped, also through the establishment of technical tables aimed at comparing specific issues”.

Francesco Acquaroli, Marche Region President

“Sustainability represents a bottom-up process and acts in a transversal way. Several experimentation areas have been activated, starting from our villages, which are places that represent a fundamental heritage of regional identity. On these areas, interventions such as the digital transition, the development of economic activities, the cultural heritage and activities, the active labor policies, the support for business creation and the agricultural and food supply chain promotion converge. The final aim is the social, economic and environmental sustainability.”



Roberto Morroni, Umbria Region Vice President and Councillor for agricultural and agri-food policies, protection and environmental enhancement

His department deals with:
Agricultural and agri-food policies, Rural Development, Forest planning and mountain development, Promotion of naturalistic systems, Protected areas and parks, Hunting and Fishing, Energy from renewable sources, Environmental protection and enhancement, Pollution prevention and protection, Regional waste plan, Water risk, Integrated water cycle, Quarries, Mines and mineral Waters. For the purposes of the Regional Strategy for Sustainable Development, his department ensures the coordination of the steering committee with other regional departments and Municipalities.



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Introduction



RESIDENTS (n.)	
Abruzzo	1.281.012
Marche	1.498.236
Umbria	865.452
TOT	3.644.700

TOTAL AREA (Km ²)	
Abruzzo	10.832
Marche	9.401
Umbria	8.464
TOT	28.697

GDP (€/per capita in PPS)	
Abruzzo	24.000
Marche	26.500
Umbria	24.900
Italy	28.000

Map of Italy with our three Regions

Who?

The Italian Republic is constituted by 20 Regions, which are autonomous entities with defined powers and represent the first level of the local division. Abruzzo, Marche and Umbria represent three Regions with ordinary Statutes and with no Metropolitan Cities in their territory.

Why?

Our three Regions decided to join forces and to create their own administrative grouping, in order to explore the issue of *resilience*, which, in our experience, plays a crucial role after the series of earthquakes that, in 2016, destructively affected part of our territory.

Where?

Abruzzo, Marche and Umbria are three Regions in the central part of the Italian peninsula.



What?

After the adoption of the Agenda 2030 by the UN, the Italian government, in 2017, approved its national Strategy for Sustainable Development. Consequently, the Regional Administrations, as well as the autonomous Provinces, started their own process aimed to develop local Strategies.

When?

The Italian Ministry for Ecological Transition foster the cooperation between Regions, in order to develop local strategies.

Some 65% of the actual Goals and targets cannot possibly be achieved without the contribution of local and regional governments.

Voluntary local Reviews. A Comparative Analysis of Existing VLRs, UCLG, UN Habitat, 2020

1

Resilience across Regions - a successful case of cooperation

1.1. General data about the regional partnership



The Regions of Abruzzo, Marche and Umbria are defining their regional strategies for sustainable development and, at the request of the Ministry for Ecological Transition, have started a strong collaboration to deepen the application of a specific theme at the territorial level (**resilience**).

The three Regions decided to choose the one of resilience as the joint issue in regard of their tragic common experience result of the 2016 Central Italy earthquake, actually composed of several single seismic events, which destroyed a significant part of their inhabited centres, causing extensive damages, not only under the economic aspect, but under the social one too.

The theme of resilience is a strategic tool for the Regions in order to adequately develop their actions and principles aimed at ensuring sustainability according to local and regional needs or circumstances. Although Abruzzo, Marche and Umbria are currently at different administrative stages regarding the adoption and implementation of their Regional Strategies for Sustainable Development, resilience is a common element.

In this regard, in December 2021, the Marche Region Legislative Assembly approved the Regional Strategy of Sustainable Development (*Strategia Regionale di Sviluppo Sostenibile – SRSvS*), aimed to integrate the 17 SDGs pursuit into the regional future planning and strategies. Umbria Region, in October 2021 with the administrative act n. 1016, pre-approved the preliminary document for its Regional Strategy of Sustainable Development. Abruzzo Region, on the same month (October 2021) approved the Regional Strategy for Sustainable Development Plan, with the Regional Council Resolution n. 665/2021.

In order to develop the theme of resilience and to work in line with the various local needs, the three Regions synergistically cooperate also with the academia and with regional Universities. Abruzzo Region works together with the Department of Civil and Environmental Engineering and Architecture within the University of L'Aquila, Umbria Region with the Department of Engineering within the University of Perugia, Marche Region with the University of Camerino and the Polytechnic University of Marche. This kind of cross-sector partnership ensures the production of various documents and proposals, which are extremely useful in order to create common strategic guidelines upon which Regions are supposed to base their own choices.

Therefore, after the already mentioned ministerial request, the Regions have been able to develop three different directions of development, perfectly integrated within the aspect of resilience:

1. Developing municipal **planning methodological criteria and guidelines** aimed to ensure the territorial resilience and the sustainable rebuilding, also using supra-municipal strategic documents as Regional Strategy of Sustainable Development territorial references;

2. Addressing the **climate change issue** in a synergistic way by locating the problem with respect to the Central Apennine Mountains river basin (Tiber river basin);
3. Implementing the regional and interregional **green infrastructure** through the enforcement of the interregional Ecological Network.

1.1.1. Multilevel and integrated forms of cooperation



Abruzzo, Marche and Umbria set up a specific concertation system using both formal and informal means of cooperation. In detail, referring to resilience, the three Regions have decided to cooperate without signing a specific agreement (informal mean), but defining a common working method:

- 1) one coordinator for general activities has been identified (Umbria Region),
- 2) the coordinator established a shared agenda of working meetings,
- 3) each shared step was reported to the Ministry.

While Umbria coordinates the general activities, each Region is responsible for a specific direction of development (1st direction Planning methodological criteria: Umbria; 2nd direction Climate change issue: Marche; 3rd direction Green Infrastructure: Abruzzo).

In addition, in order to ensure the full development and implementation of the three directors, several formal means of cooperation have been developed within the integrated system, such as the Q-CUMBER protocol (*see chapter 4*).

Municipalities, which represent the lower administrative level of cooperation and have the most direct connection with local stakeholders and citizens, have been involved within the multi-level partnership by each regional administration. In this regard, the Marche Region developed a specific protocol, aimed to guarantee the cooperation with the National Association of Italian Municipalities (*Associazione Nazionale Comuni Italiani - ANCI*) and to spread sustainability criteria at local level. In order to strengthen the implementation of the three directions of sustainability, regional administrations identified several Municipalities that have represented “pilot cases” and that have the capability to guarantee the cooperation at all levels. In fact, these Municipalities operate with their own Regions, as well as with the other Regions within the working group.

1.2. Governance and stakeholders involvement

The main objective of our regional grouping is to ensure the full cooperation and integration for what concerns all principles and actions of sustainability, with a specific focus on the issue of resilience. In order to do so, we are still trying to define and enhance the multi-level and multi-actor form of collaboration, which perfectly meets national and local needs.

<p>Governance</p>	<p>Our aim is the share as well as the contagion of ideas and good practices related to the principles of sustainable development and to the SDGs across different administrative levels. For what concerns the actions falling into category A, in line with the provisions of the Agreement signed with the Italian Ministry, the Regions have prepared the setting up of control rooms, which represented a crucial moment of governance.</p> <p>The construction of the governance for the Regional Strategies definition has moved along two paths. The first path was implemented through constant dialogue with representatives of the Ministry and of other Regions, the second path was activated with the involvement of institutional actors such as Municipalities, Universities and civil society, concerning the schedule and the governance of territories in a climate change scenario.</p> <p>In this regard, the involvement of local institutions and civil society, falling into category B actions, has been activated on two fronts: the first one, due to the contribution provided by Environmental Education Centres (<i>Centri di Educazione Ambientale – CEA</i>), which have activated consultation and participation forms in the field of environmental education and sustainable development within schools. For what concerns the Abruzzo Region, the project involved the creation of educational materials on the subject of sustainability and the training of teachers and students concerning the issue of hydrogen and fuel cells, with the objective to foster the general interest in this area. The educational materials, developed as part of the project, are available at the dedicated website (https://www.hyschools.eu/platform). The project was concluded in February 2020, but coordination with schools is ongoing.</p> <p>The second front of local institutions involvement has been developed as part of the participatory process carried out within the Regions with the control room, due to thematic meetings which allow the participation of local actors and, in particular, of Park Authorities.</p>
	<p>Regional activities:</p> <ul style="list-style-type: none"> • The Abruzzo Region control room is composed by managers of regional services who relate to the issues of sustainable development and it is considered to be the hub between policy activities and typically managerial and management activities. After the setting up of the control room, a series of tools have been launched to make territorial consultations even more possible. • Defining all the elements of the regional governance was the first regional step toward the Marche Region Strategy definition. The control room is composed by regional managers of sectors, which are somehow connected to sustainable development, and represents the meeting point between managerial and technical activities and the political sphere. The transversal nature of this control room allows the complete balance between all different dimensions of sustainable development and the full cooperation. In this regard, several training courses addressed to local administrations, which have been designed in order to ensure the lifelong learning opportunities (SDG 4) within the administrative area, have been launched. • The Umbria Region control room is chaired by Roberto Morroni, the regional vice-president, and it is composed by regional directors and structures and the Regional Agency for Environmental Protection. The control room aims to coordinate and manage all the development activities and the contributions resulting from regional fora within the Strategy itself.

Stakeholders involvement	<p>Since the 17 SDGs, which constitute the core of our sustainability goals and strategies, affect every aspect of everyone’s life, the full and constant involvement of stakeholders, including students, civil society, third sector and interest groups, represents an essential condition for the achievement of our local sustainable objectives.</p>
	<p>Regional activities:</p> <ul style="list-style-type: none"> • The Marche Region established several moments of confrontation between the regional administration and the stakeholders. Besides the Regional Forum of Sustainable Development, civil society, organizations and the third sector have been involved due to multiple tools. In particular: the initial survey aimed to define the common knowledge of sustainability principles, the six educational and informative webinars, several online workshops, moments of public consultation, activities for children and young people and the Regional information, training and environmental education system (<i>INFEA Marche</i>) events, realised due to the Environmental Education Centres efforts. For what concerns the Regional Forum of Sustainable Development, the Region has launched its first session before the drafting of the Strategy, in order to define the issues that are perceived to be of major relevance by civil society. Then, after the Regional Strategy approval, the Marche Region decided to launch the second session of Forum, in order to guarantee the involvement and the information of civil society for what concerns the main points of the Strategy. In particular, the latest session focuses on the issue of climate change and on the adaptation response, which is at the base of the future Regional Plan. • The Umbria Region is carrying out a specific participatory process due to the activation of six territorial FORA articulated on the basis of homogeneous areas. The FORA are coordinate by the Municipalities Association for Sustainable Development (<i>Associazione dei Comuni per lo Sviluppo Sostenibile - ANCI-FELCOS</i>) and they provide thematic meetings about the four main areas of action defined by the National Strategy for Sustainable Development (People, Peace, Planet and Prosperity – <i>the four P</i>). The discussion has been opened starting from the Strategy preliminary document, which was pre-approved by the Regional Council with Resolution 1016 of 17th October 2021. The objectives defined with the activation of the FORA are: involving the community members, in order to make people active subjects in the path towards sustainability objectives; adopting, as working method, the integration and involvement of local actors, Municipalities, Provinces, Research Institutes and Universities, but also neighboring Regions, National Park Authorities, Regional Agencies for Environmental Protection (<i>Agenzie Regionali per la Protezione dell’Ambiente – ARPA</i>) and other subjects, in order to create new opportunities and to ensure active resilience against difficulties and problems. At the end of the confrontation phase, the regional objective is to carry out a synthesis of the contributions received in order to define the participated Regional Strategy document. • The Abruzzo Region has signed a Memorandum of Understanding with the Department of Civil, Construction-Architecture and Environmental Engineering (DICEAA) of the University of L’Aquila and with the Regional Parks. This protocol establishes that the Abruzzo Region is the lead body that will follow the activities through the establishment of a permanent technical table. The aims of the Technical Roundtable are related to the experimentation and promotion of sustainable urban planning, environmental monitoring, ecological connectivity and adaptation to models of climate change. The activities that have been planned under the Memorandum of Understanding will be identified and regulated from time to time in subsequent implementation agreements. Through the Environmental Education Centres (CEA), training and awareness raising activities in schools on SNSvS issues were also launched.

1.3. Policies coherence

<p>Policies coherence</p>	<p>Our three Regions aim to ensure the full horizontal as well as vertical forms of policies coherence. In particular, while the horizontal coherence refers to the cooperation between Regions, the vertical one is related to the integration between ministerial and regional or local actions.</p>
	<ul style="list-style-type: none"> • For what concerns the Abruzzo Region, the Strategy constitutes an important strategic reference for the transformations of the territory and it is the object of integration with all regional planning and programming and with the related implementation phases. Among the planning documents, the Strategic Planning Document (DSP) and the Regional Economics and Finance Document (DEFR) are of particular importance. The DSP and the DEFR, in fact, analyse and summarize the results of the implementation of regional public policies (in economic, social, territorial and financial terms) in the medium term and describe the actions to be implemented, linking them to three strategic pillars: combining growth sustainable economy with the reduction of inequalities, while respecting the balance of public finance. The national and regional strategies are linked with the official economic policy documents with particular reference to the National Reform Program (PNR) and the Economic and Financial Documents (DEF and DEFR) and, following the Covid-19 pandemic, with the National Recovery and Resilience Plan (PNRR). The implementation of the Strategy provides a multilevel governance approach, within which the Region has the task of declining the general objectives and lines of action identified on a local scale, implementing a "territorialisation" of the national approach. • The main planning documents of the Marche Region are developed with reference to the sustainability principles. The Region aims to ensure the full coherence between, on the one hand, the objectives and activities of its Strategy of Sustainable Development and its Economic and Financial Document, European Structural and Investment Funds Management Plan (2021-2027) and Performance Plan. While, for what concerns the environmental context, the coherence is guarantee due to specific tools, such as the Strategic Environmental Assessment (SEA) procedure or the analysis of coherence for plans not following under the SEA regulation. In this regard, the Marche Region has already planned a specific training course, addressed to internal administrative officials, which is going to highlight the importance and describe the using methods of these forms of analysis. • The Umbria Region is acting in order to develop the Regional Strategy of Sustainable Development in line with the Regional Economic and Financial Document and with the strategic document of the EU 2021-2027 programming period. Moreover, the Strategy actions are supposed to be harmonised with the Recovery and Resilience Plan missions.

Regional toolbox:

- The **Global citizenship education** has been used within the Marche Region as a transversal tool in order to guarantee the policies coherence.

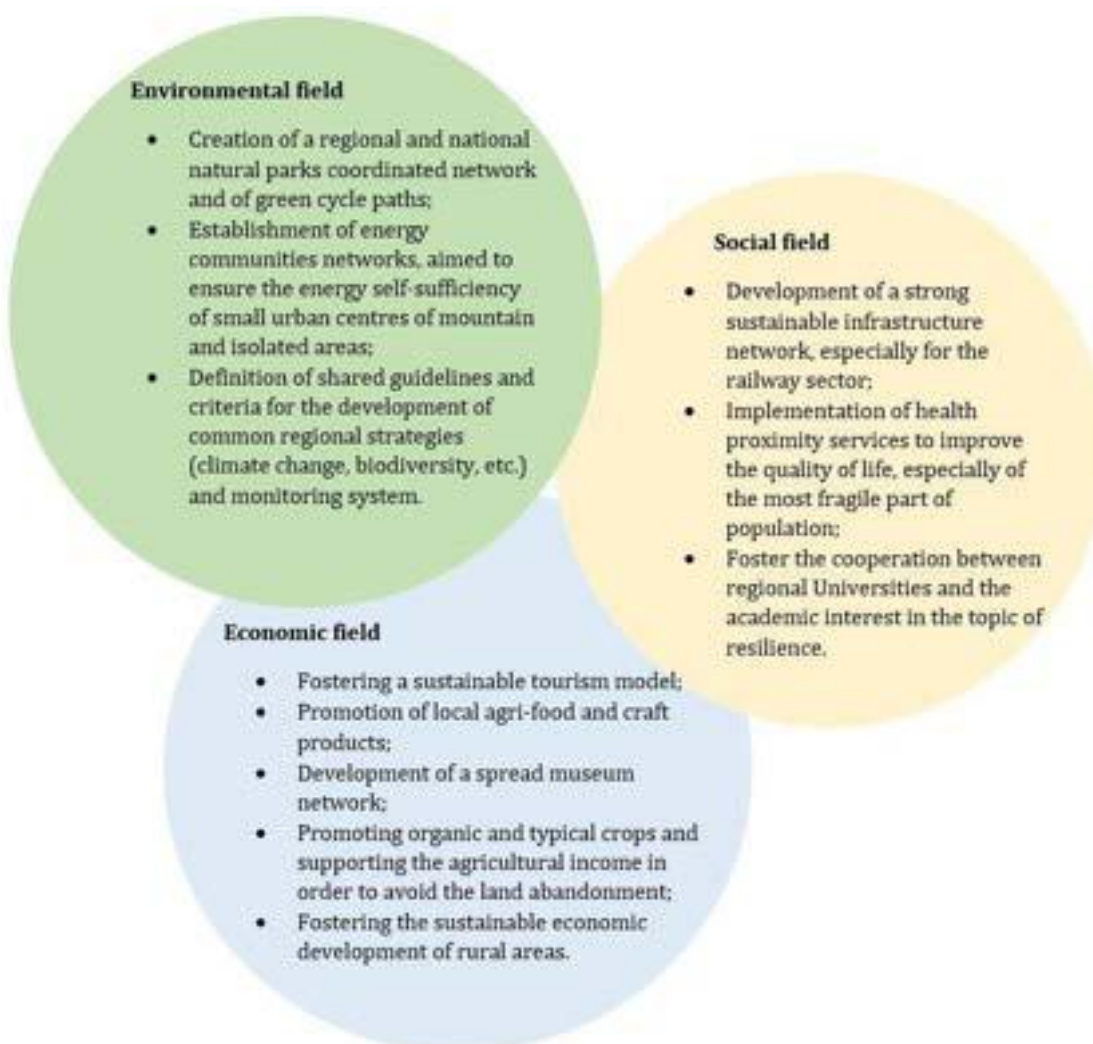
Within the Agenda 2030, the SDG 17 represents a crucial instrument that could be used in order to guarantee the cooperation between administrations at all levels, as well as the policies coherence within the same subject.



Strengthen the means of implementation and revitalize the global partnership for sustainable development

Strong forms of partnership between nations are necessary for the achievement of all the Sustainable Development Goals introduced within the 2030 Agenda. At the same time, in the local context, a stable actions and policies integration between the three Regions improves our capability to achieve sustainability at every level. Despite the administrative borders, our territories are strongly and intrinsically interconnected due to geographical, morphological, social and economic similarities, which have to be encouraged and explored.

In this regard, the SDG 17 “Partnership for the goals” may represent not only one of our goals, but also an important tool for the achievement of future objectives and for the coordination of our policies and strategies. In addition, for what concerns our regional grouping and the resulting implementation of the three directions of development, the SDG 17, in its local meaning, constitutes the main instrument and the best guarantee of success. Our future common actions, aimed at implementing the three directions, are supposed to affect any regional sphere of action:



For what concerns the issue of climate change, meant as one of the three shared directions of development adopted by our regional grouping, the *partnership of goals*, which represent the core of SDG 17, has an even more important role. In fact, in order to achieve significant goals against the threats posed by climate change, which has no boundaries, the regional strategies, including the ones related to the local adaptation plans, should follow common trends and principles. In particular, during the preparatory phase, our three regional administrations are willing to share guidelines, data and

methodologies, to ensure the best possible form of cooperation and partnership. In this regard our goals are:

- Implementing an *early warning model*, for the weather alert;
- Fostering common actions in order to reduce soil consumption and desertification;
- Acting as a regional grouping for the definition of the National Climate Change Adaptation Plan (*PNACC- Piano Nazionale di Adattamento ai Cambiamenti Climatici*);
- Implementing regional and inter-regional green infrastructure, as well as all the other practices that may be useful for carbon sink;
- Acting for the update of the National Strategy for Sustainable Development monitoring system, by defining new indicators, which should be more consistent and effective in relation to the climate change issue.

However, the *partnership for goals*, which represents the cornerstone of SDG 17, is not just about interregional cooperation, but also about the one between Regions and other subjects, especially local Universities. In particular, this cross-sectoral form of partnership aims to define a common knowledge framework and the most suitable indicators system, develop models for facing disasters and guarantee quick recovery procedures, ensure the correct territorial and emergency planning criteria and base development and recovery models on the principles of circular economy, always by including local stakeholders and actors. In this regard, the University that cooperates with the Abruzzo Region aims to develop a specific methodology for the inclusion of the Ecological Network in regional legislation and criteria for evaluating the ecosystem occlusion caused by infrastructures, and provide adequate training to public administrations. The Marche Region supports the permanent cooperation with some of its regional Universities in order to define the reference areas for environmental assessments, for the right definition of future actions and the proper way to apply the ITACA Protocol. While, the University of the Umbria Region, in line with the other Universities, aims to develop methodological criteria and guidelines for municipal planning in order to implement the territorial resilience and the sustainable reconstruction, and to create specific tools to use resources and funding according to the most urgent priorities. Moreover, the Umbria Regions is cooperating with the University in order to develop the Regional Strategy of Sustainable Development on the level of homogeneous territorial areas (the Region defined six different areas), with the aim to identify specific needs and adequate actions for the local context.

2

Municipal planning methodological criteria - The Umbria Region

The common condition and the consequent needs of Municipalities affected by the seismic events between 2016 and 2017 have pushed our three Regions to cooperate in order to define the guidelines for municipal planning in territorial contexts with high seismicity. These guidelines aim to share a common planning model, not conditioned by administrative boundaries and able to identify effective territorial solutions in order to immediately respond to the emergency and, in particular, to ensure an adequate resilient response for the urban building context affected by the disaster.

Regional toolbox:

- **The Q-CUMBER protocol** between Ministry of ecologic transition, Marche Region, Abruzzo Region and Umbria Region, aims to share and test a tool for the support to decision-making in planning, programming, design and validation to different territorial and environmental contexts in environmental evaluations (Environmental Impact Assessment (EIA) and Strategic Environmental Assessment (SEA)). For the SEA, the protocol is testing a common approach in urban planning, based on the implementation of ecological network, for some Municipality in the Apennine area shared by the three Regions (for Marche Region, three Municipalities are currently participating to the test: Castelsantangelo sul Nera, Arquata del Tronto and Colli al Metauro; for Umbria Region Norcia, Nocera Umbra, Città di Castello, Narni, Bastia Umbra; for Abruzzo Region Collaromele, Fagnano Alto, Scoppito, Ocre).
For EIA, the tool is tested for different project categories: Marche Region is testing the tool for projects interacting with river ecosystems; Umbria Region for the mining activities and waste treatment systems; Abruzzo Region for photovoltaic and livestock projects as well as for the definition of environmental sustainability actions consistent with the SNSvS.
- **VAUTERECO** (Evaluation of Urban and Territorial Assets for resilience of communities) protocol between Ministry for Ecological Transition, University of Camerino, Polytechnic University of Marche: in the framework of the Regional Strategy of Sustainable Development (RSSD) of Marche Region, the project analyses the role of open space in the urban planning and the potential for ecosystem services. It includes a territorial analysis for ecological network at trans-regional level, to provide a common framework for the SEA of urban planning.
- The Marche Region approved its **regional law "Support for integrated upgrading and enhancement initiatives of villages and historic centres of the Marche region and promotion and development of widespread and sustainable tourism"** (regional law n. 29, 22nd of November 2021). The law focuses on the actions of regional relaunch through interventions for villages, historical centres and inner areas. In addition, it is fully integrated in the strategy aiming at the revitalization of the socio-cultural and economic developed around new policies for tourism, for the enhancement of food and wine products, of craftsmanship and entrepreneurial skills and for the requalification of the urban landscape.

2.1. The relation between municipal planning methodological criteria and SDGs



Make cities and human settlements inclusive, safe, resilient and sustainable

The first common direction of development shares the majority of its objectives with the Sustainable Development Goal 11. In order to found and implement an inclusive and sustainable form of urbanization, it is necessary to pursue the common capability to plan and manage participative, integrate and sustainable human settlements. Moreover, regional administrative structures aim to significantly reduce the number of total citizens who are killed or affected by natural disasters as well

as all direct economic losses, which are especially related to global GDP and caused by natural disasters, with particular regard to the protection of poor and most vulnerable people groups.

In line with their direction of development, Regions are expected to reduce the negative per-capita environmental impact of cities, with respect to air quality and waste management (including the one of urban waste), but also to foster common access to public green, safe, inclusive and accessible areas, especially for women, children, elderly and people with disabilities. In addition, regional policies and actions have to support the positive economic, social and environmental linkages between urban, peri-urban and rural areas, enhancing the relations and the integration between the municipal, regional and interregional (especially between neighbouring Regions) forms of planning. In doing so, our Regions aim to adopt an integrated form of management, in relations to all levels of disasters risk, by enforcing prevention activities and forms of early warning in case of natural disasters. In addition, the Minimal Urban Structure (*Struttura Minima Urbana*) should be developed and implemented within the municipal planning, in order to increase the general resilience during and after natural disasters.

For what concerns the issue of social security, the Umbria Region established a form of partnership with the United Nations Children's Fund (UNICEF) in order to develop, at the local level, the Child-Friendly Cities Initiative (CFCI). The project aims to act in urban areas, in order to raise the awareness within local population and administrations about the need and urgency to create safe spaces for children. In fact, especially in the urban context, areas dedicated to children, could be, actually, dangerous ones.

2.2. Future recommendations

The Umbria Region main objective is to increase the general resilience, due to adequate preventive actions, and to allow local administrations to ensure a minimum efficient urban structure and, consequently, the functioning of essential structures, including hospitals and other places for the exercise of public functions, in case of other seismic disasters.

3

Climate change – the Marche

Region

Climate change represents one of the greatest challenges of our century, since it has the strong capability to alter the climate and so the temperatures of our Planet in a way that makes difficult to continue perceiving our life as it has been until now. This dangerous increase in global temperatures, which goes far beyond the natural climatic alterations that use to be recorded between centuries or eras, is mainly caused by human actions and behaviours, which do not respect the natural balance. According to the Intergovernmental Panel on Climate Change (IPCC), in 2021, global temperatures have already increased of 1.1°C from 1850 and 3.3-3.6 million people are nowadays described as directly affected and vulnerable to climate change. In Italy, average temperatures have already increased of almost 3°C in comparison to pre-industrial values: the main consequences are already measurable and visible. Among other things, climate change and so its countless and global consequences have the capability to worsen the situation in crisis areas, which usually already face important environmental problems. Moreover, the effects of climate change events have the power to directly affect all kind of areas and fields: indeed, they jeopardize the stability reached within the environmental, as well as within the economic and social context, making almost impossible the achievement of sustainability under all of its three crucial pillars. In addition, extreme weather events, such as extreme rainfall or tropical storms which happen to be more frequent in our territories and have direct connections with climate change, have also severe impacts on ecosystems and society. The severity of destruction caused by this kind of events depends, also, on human factors (including the increase in number of infrastructure).

In order to face the challenge of climate change we have two possible solutions: the mitigation and the adaptation strategies. In particular, the first strategy aims to adopt specific measures in order to reduce greenhouse gas emissions and to enhance the absorption. On the other hand, the adaptation objective acts in order to reduce the vulnerability of natural and socio-economic systems and to increase their resilience facing a changing climate. The adaptation strategy should be perfectly integrated with the other specific thematic policies, such as the ones related to the water resources and ecosystems management or to the regional development. In this regard, our objective is to ensure the alignment between international, national and regional policies, starting from the UN Agenda 2030, the Paris Agreement and the Sendai Framework for Disaster Risk Reduction.

The main objective of the common action line shared between Regions is to ensure development and implementation of regional adaptation plans. In fact, through the adoption of local adaptation measures and actions, natural as well as socio-economic systems are expected to become able to reduce their vulnerability to climate change and to increase their general resilience. That is the reason why, in 2022, the Marche Regions, with the support of academic and research centres, has begun its path toward the adoption of the Regional climate change adaptation plan.

Since the three Regions are located within the same river basin, namely the one of Tiber River, they deem appropriate defining one shared climate scenario, starting from the common knowledge framework, which includes also the competent River Basin Authority, able to pinpoint the most appropriate and effective actions. These common actions should be adopted in order to mitigate the potential effects of extreme climatic events that may occur in our territories. In this context the Regions want to define strong coordination approaches for a shared early weather warning system, especially for border territories and Municipalities. In addition, Regions want to work together for a common identification of measures and actions aimed to offer greater resilience to the occurrence of extreme phenomena, especially in terms of prevention. As a result, the adaptation to climate change at local level is expected to acquire increasingly importance and to be applied in the formation of new municipal

urban planning, in order to create a synergic link with the line of collaboration described in the above chapter 4.

According to our perspective, addressing the issue of climate change is crucial in order to ensure the principles of sustainable development for several reasons. The first one is that climate change has a temporal perspective that goes beyond the 2030, that represents the limit for the achievement of the SDGs goals, but the necessity of ensuring sustainability will go far beyond this date, since it represents the mean that allows the very human existence on Earth.

Regional Strategy of Sustainable Development (RSSD) of Marche Region strongly includes the principles of adaptation to and mitigation of climate change. Since the RSSD defines a close integration with environmental evaluations, the Strategic Environmental Assessment (SEA) and the Environmental Impact Assessment (EIA) represent the tools for the concretization of adaptation and mitigation measures in relation to plans and projects.

Regional toolbox:

- The Marche Region, in 2022, has started the definition of its **Regional climate change adaptation plan**, thanks to the cooperation with external experts and research centres and to the implementation of its Regional Forum for Sustainable Development second session. The Forum, in fact, has the objective to involve the civil society in the definition of the Plan priorities and to understand its perception about the issue of climate change and adaptation strategies.
- **Multifunctional forestry and plant models and techniques for compensation and mitigation measures in EIA** - Environmental Impact Assessment - proceedings (VEC): the project, developed by the Marche Region, in collaboration with the Polytechnic University of Marche, Department of Forestry Sciences, has developed a new approach to quantify the biotope to restore in the case of deterioration/destruction by project implementation. This approach considers the ecological value of different typology of biotope and allows improving not only the mere carbon absorption, but also the adaptation functions and the other ecosystem services.
- The **Covenant of Mayor** is the world's largest movement for local climate and energy actions undertaken by local authorities. In this context, the **Sustainable Energy and Climate Action Plans (SECAP)** are documents aiming to define the different actions, strategies and responsibilities to achieve local authorities' long-term energy consumption and CO₂ emissions reduction targets. The Marche Region, in 2017, has joint the Covenant of Mayor as territorial coordinator and acted in order to support the involvement of regional Municipalities, also for what concerns the supra-municipal level. According to the latest data, referring to 2020, 102 Municipalities, which represent the 70% of regional population, has joint the Covenant. Additionally, some Municipalities joint forces such as Vallesina Joint Secap (including 11 Municipalities) in order to produce common plants. In this regard, the Region is providing technical assistance to the interested Municipalities, in order to confirm their adhesion and to complete the related SECAP development. In addition, the Region is supporting the Municipalities also by increasing the specific reward criteria of public funding in order to foster the implementation of municipal strategic actions.
- The European Union leads the fight against climate change and sees it as its top priority. Local authorities have a leading role in achieving the climate and energy targets set by the EU. All 305 Municipalities in the Abruzzo Region have joined the **Covenant of Mayors** and the four Provincial Administrations together with the Region have guaranteed their support action as intermediate bodies, with a view to multilevel governance. For this shared energy policy, the Covenant of Mayors in place in the Abruzzo Region is visible at European level and has been defined by the European Commission as a **good practice** to be disseminated and replicated and has also received a special mention in the context of the Sustainable Energy campaign for Europe in Italy. A fundamental element for the municipalities that signed the Covenant of Mayors was the drafting of the Municipal Action Plan, Sustainable Energy Action Plan (SEAP). This document, based on the balance of CO₂ emissions (Baseline Emission Inventory - EIB), reports the strategies for achieving the 20-20-20 objective, and therefore the specific interventions to be carried out.
- The three Regions act in order to develop the awareness about the issue of climate change adaptation and to integrate this awareness within all the municipal planning instruments.

3.1. The relation between climate change and the SDGs

Climate change affects all 17 SDGs, below we focus on just some SDGs.



Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

In a constantly changing environment, education and information represent two essential tools to understand our reality and how to react to its continuous challenges. In addition, the issue of climate change, in consideration of its global and boundless nature, is going to increasingly affect the everyday life and activities of the global population, which, in order to adapt to this new climatic situation, need to be informed in every respect. This kind of education is pursued due to already existing tools, which should be specifically tailored, according to the target and to the specific necessities and fields of interest.

In this regard, young people are perceived to be the first target of the information and education strategy for several reasons. First of all, they represent the part of global population that is supposed to be most affected by the consequences of climate change, since, according to the nowadays predictions, their lifetime will be entirely characterized by the climate issue. As a result, they also represent the first generation which will be somehow forced to find concrete solutions to deal with the increasing temperatures, and so with their consequences, in order to preserve their existence as well as the one of our Planet.

However, lifelong education and information should be ensured to all segments of the global population, also for what concerns the climate issue, since, in order to be aware and to act in the right way, people need to know how to do so.

Moreover, the climate debate and the related action strategy should be developed according to both political principles and civil society directions, according to the so-called **bottom-up process**. However, in order to participate to the climate debate and to have an actual active part, citizens and other private actors need to have enough information and knowledge of the problem, ensuring the development of the participative process itself. Indeed, because of the very nature of the problem, climate change solutions should be developed according to the necessities and the capability of global population, which, for these reasons, is a crucial subject. With a view to make it possible, administrations and decision makers have to create strong forms of cooperation with the civil society, also by joining forces with the third sector and institutionalizing the civil involvement in the path toward local sustainability.

Regional toolbox:

- The **Regional Forum for Sustainable Development** (*Forum regionale per lo sviluppo sostenibile*) of Marche Region, developed in cooperation with the regional Centre for volunteering services (*Centro Servizi per il Volontariato- Marche*) aims to guarantee the full involvement of citizens and students as well as the civil participation for what concerns the issue of sustainable development.
- The Global citizenship education plays a crucial role within the Marche Region Strategy of Sustainable Development. It represents a sustainability vector, which connects all the actions of the Strategy together, but also a great tool in the fight against climate change.



Conserve and sustainably use the oceans, seas and marine resources for sustainable development

Climate change is supposed to have significant effects on oceans, seas and marine resources, in every respect. The coastal system plays a crucial role in the territorial strategic development, in particular due to the concentration of natural habitats, connecting infrastructures, tourist sites and urban centres. The

events related to climate change cause various problems to the coastal system: between the most challenging ones are those related to the coastal erosion, the sea level rise and the increase in frequency and intensity of extreme events. In order to face the several challenges, regional administrations need to have enough data, connected to physical (extension of the beach emerged, saline intrusion,...), bio-ecological (algae blooms, chemical and ecological status,...) and socio-economic (populations density, presence of roads and railways near the coast,...) indicators.

According to the latest scientific investigations, climate change impact in coastal areas will lead to several outcomes, including the increase of flooded areas and the reduction of beaches extension, with consequent negative effects on tourism sector and on urbanizations and infrastructures. In addition, climate change effects will also have consequences on availability of drinking water due to salt intrusion in coastal aquifers, on the increasing of infrastructure at risk of flooding and on affecting the productivities of fishing and aquaculture sectors.

As a matter of fact, degradation of coastal and marine areas and ecosystems has the capability to jeopardize the physical, economic and food stability of local as well as of the international community, since seas are no longer able to provide some of the critical ecosystem services, such as carbon storage or oxygen generation (IUCN).

In addition, climate change will exacerbate the already existing deterioration of coastal and marine environments, caused by human land-based activities (such as urban discharges or plastic waste) and by the unsustainable exploitation due to the overfishing and other environmental damaging activities.



Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss

Healthy land provides the basis for the existence of life on our Planet, and ecosystems represent important indicators in order to monitor the status of the environment.

The annual value of the world's total terrestrial ecosystem services has been estimated at 75 trillion USD in 2011, approximately equivalent to the annual global Gross Domestic Product. [...] Valuing ecosystem services with monetary methods often overlooks these intangible services that shape societies, cultures and quality of life and the intrinsic value of biodiversity.

IPCC, 2019, Climate Change and Land: an IPCC special report on climate change, desertification, land degradation, sustainable land management, food security, and greenhouse gas fluxes in terrestrial ecosystems

However, the natural balance of planet Earth is deeply in danger since the loss of biodiversity is challenging almost all the natural areas in urbanized territories. The global temperatures increase, related to climate change, has strong effects on land systems and ecosystems. In fact, warmer temperatures and changed precipitation patterns have altered the period of growing seasons, contributed to the reduction of regional crop productivity and of freshwater availability, and put biodiversity under further stress. Human society has a dual role for what concern the land and ecosystems degradation related to climate change: on the one hand, it is one of the main causing factors, especially for all polluting activities; while on the other hand, it is one of the most seriously affected entities. Almost one-quarter of total anthropogenic greenhouse gas emissions, especially methane and nitrous oxide, arise mainly from land management and agricultural activities, such as deforestation, fertiliser application and livestock.

The vulnerability of ecosystems has increased due to climate-related extreme events: land continuously interacts with the atmosphere through exchanges of natural elements, such as water or energy. Climate changes could affect the equilibrium in these exchanges affecting the stability of ecosystems.

According to the IPCC, during the last decade, climate change have started to show its effects on many plant and animal species, leading to significant range size and habitat location changes and modifications in seasonal activities.

3.2. Future recommendations

The Marche Region is active in the definition of its Regional climate change adaptation plan, which is supposed to be approved in the near future and is expecting to be the innovative tool by which the adaptation strategies will be included within all the sectorial planning. In this context, the Strategic Environmental Assessment procedures are going to be more and more focused on the issue of climate change and, in particular, on the related adaptation strategies and actions.

4

Green infrastructures – the Abruzzo Region

Green infrastructures represent important tools in the fight against climate change and its catastrophic effects on the territory as well as on society. In order to implement an integrated regional green infrastructures systems, Regions has to start with integrating green urban and suburban areas and woodland at all levels, compensating for the soil consumption, which represents a great threat for ecosystems stability.

Regional toolbox:

- The technical table will have a fundamental role in the implementation of Abruzzo Regional Sustainable Development Strategy as it represents the tool that allows the involvement of all local authorities. The University of L'Aquila will provide a fundamental contribution to the technical table. Its Department of Civil, Building-Architecture and Environmental Engineering (DICEAA) was funded by the Ministry for Ecological Transition in order to develop research projects to support the implementation of the National Strategy for Sustainable Development. The DICEAA, in fact, presented its project “**Sost.EN. & Re - Sustainability, resilience, adaptation for the protection of ecosystems and physical reconstruction in Central Italy**”, which falls within the category of "Research projects to support the processes of elaboration and implementation of regional and provincial strategies for sustainable development". Furthermore, the Memorandum of understanding, signed between the regional administration and the University, is structured in such a way as to allow the involvement of new partners, such as the Regional Reserves of Abruzzo, currently represented by the Abruzzo Region, the neighbouring Regions (primarily Marche and Umbria) and the related protected areas, with the goal of establishing an interregional ecological network. The enlargement of the partnership and the signing of Memoranda of Understanding between the Regions represent, in fact, a key point for sharing projects of large territorial value. The action of the protocol, therefore, does not end with the drafting of the Regional Strategy, but finds its origin in it, drawing its effects in the long term, and laying the foundations for a wide-ranging collaboration between the institutions operating in the area. One of the most important opportunities offered by the Memorandum of understanding is the possibility to have, through the collaboration of the Parks, a sort of "territorial laboratory", which can allow the realization of pilot projects that can lead the way for the Region as well as for the interregional cooperation.
- According to the Umbria Region, it is necessary that the new Regional Strategy of Sustainable Development could be integrated and could synergistically cooperate with the Regional Strategy for Biodiversity, based on the Regional Management Strategy for the Natura network 2000 and the Framework of Priority Actions for Natura 2000, both approved on 2018. These instruments allowed the Region to submit to the European Commission the integrated Life project “**Imagine Umbria**”, aimed to fully implement the Natura 2000 network within the Region and realize, at least, the 40% of actions expected within the Framework of Priority Actions for Natura 2000. In particular, the project, which has been launched during the last months on 2020, provides guidelines for the creation of an integrated management system, able to ensure the achievement of the conservation objectives described within the Habitat and the Birds European Directives. In this regard, the economic and technical sustainability represent the crucial elements, which have to be fulfilled due to development of management policies and actions toward:
 - The proactive management of habitats and species,
 - The coherence between the Natura 2000 network and the external territories (ecological connectivity and landscape),
 - The training of professionals suitable for the management of the Natura 200 network,
 - The citizens’ involvement,

The measures that are expected to be activated aim to the fulfilment of some general priorities, such as:

- Improving the governance structure, due to the involvement of all local stakeholders, in order to guarantee an integrated management of Natura 2000 sites,
- Maintaining and improving the conservation status of habitat and species, also in relation to the strategies of mitigation and adaptation to climate change,
- Training and increasing the awareness of technical operators and officials of Public Administrations,

- Increasing the awareness of Natura 2000 central role, related to the development of ecosystem services and green professions,
- Monitoring the conservation status of species and habitats, in accordance with European Directives.
- The Marche Region provided, on 2022, two editions of its workshop “**Sustainability elements for the buildings and structures design**”. Both editions were addressed to technicians of the Regional and of Local Authorities and had the aim to provide indications for the increase of sustainability, with regard to buildings realisation, restructuring and maintenance (roads, underground pipeline, etc.) and took into account the importance of maintaining undamaged ecosystems, fostering the green infrastructures creation and natural based solutions use.
- Marche Region and Polytechnic University of Marche signed an **agreement** in order to study different models and techniques for the realization of multifunctional forestry projects within the regional territory. In particular, the aim was defining new forestry plans, which could represent technical-scientific references for designers. These models concern the developing of site-specific tree-shrub plant modules in order to provide Ecosystem Services in urban, peri-urban and extra-urban environments in line with the Ecological Network of the Marche Region (*Rete Ecologica delle Marche – REM*) and then, for the concrete realization of the regional green infrastructure.

4.1. The relation between green infrastructure and the SDGs

The issue of green infrastructures represents a cross-cutting theme, which perfectly aligns with **all the 17 SDGs** of the Agenda 2030, as well as with our three interregional directions of development and with actions and objectives of each Regional Strategy of Sustainable Development.

Regional Strategies of Sustainable Development aim to represent implementation tools that define the regional reference framework for planning, programming and evaluating environmental and territorial processes. In this regard, at the very beginning, the definition of Regional Strategies has outlined how the active participation of local communities constitutes a crucial element.

Even if each Region follows its own administrative path towards the Strategy definition, generally our projects could be divided into three categories of actions, further divided into sub-categories:

- A - Governance of the Regional / Provincial Strategy for sustainable development;**
- B. Involvement of civil society;**
- C. Preparation of the Regional Strategy Document for Sustainable Development.**

In order to develop our documents and then the final Regional Strategies, research plans, technical documents, methods and tools for monitoring, evaluating and implementing National and Regional Sustainable Development Strategies have been defined. At the same time, it has been essential to activate consultation and participation forms with civil society and academia.

The cooperation between Regions and Universities relies on:

1. Positioning with respect to the objectives of the SNSvS and the 17 Goals of the 2030 Agenda;
2. Definition of the system of regional objectives and priority actions;
3. Definition of the system of indicators and of the monitoring and review plan.

Specifically, the University of L'Aquila has undertaken measures to define the positioning of regional planning with respect to the objectives of the SNSvS, of the 2030 Agenda Goals and of the general sustainability level, in order to consciously optimize the choice of indicators. After the definition of priority areas, a new set of regional indicators has been defined. The activity carried out by the DICEAA group has been conducted in synergy and collaboration with the regional Environmental Assessment Service through a series of periodic meetings and actions have been agreed and shared from time to time.



Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss

To achieve this goal, a collaboration is underway between the Abruzzo Region and the University of L'Aquila (DICEAA) for the definition of regional ecological networks. The collaboration is aimed at: reordering previous regional experiences; defining the regional framework on environmental fragmentation by means of technical devices called “Ecosystem occlusion profiles of infrastructures” extended to the major road arteries; proceeding with the regional mapping of the gates of the main infrastructures; defining the abacus of potential interferences with respect to the forecasts of municipal planning instruments; proceeding with the elaboration of the indicators aimed at configuring and monitoring the “effective ecological network”. The collaboration is expected to end with the study of the current regional settlement structure for the assessment of anthropogenic interference on the structures of environmental continuity.

At the same time, an activity of recognition and comparison with other Regional Plans and Programmes of different Services has been started, in order to know the evolution of the environmental context.

4.2. Future recommendations

In the near future, in order to fully implement the relation between interregional green infrastructures and SDGs, our three Regions aim to:

1. The training activity, which will be carried out by the Environmental Education Centres and will be addressed to municipal technicians, is going to be planned. The training activity is aimed at deepening and raising awareness of local authorities on the topics covered by the SNSvS;
2. One of the main objectives that our Regions wants to achieve with the Agreements with the Ministry is the final definition of regional ecological networks.
3. The Regions are trying to define specific partnership with research centres and agencies, in order to focus on the issue of indicators and data analysis, which represents the basis of all administrative policies and actions. In identifying the indicators, and in line with our strong and integrated interregional form of cooperation, other institutions will be involved:
 - the regional structures of Marche and Umbria for the identification of common indicators close to the neighbouring areas;
 - the Abruzzo Regional Services for the definition of indicators that will be more suitable for their planning activity;
 - the Park Authorities, through the Permanent Technical Table, which allow the comparison between most suitable environmental indicators to describe the various territorial realities;
 - the Abruzzo regional division of the National Association of Municipalities (Associazione Nazionale Comuni Italiani – ANCI Abruzzo), in order to inform Municipalities about the projects and the possibility of having a discussion on the work done;

4. The involvement of civil society is guaranteed by the organization of regional Forum (the Marche Region, in May 2022 launched its second edition), in order to establish a comparison on environmental procedures and focus the attention of professionals and technicians on the 2030 Agenda objectives.

Regional toolbox:

- Abruzzo Region approved a collaboration agreement with its **Regional Agency for the Environmental Safeguarding** (Agenzia Regionale per la Tutela dell'Ambiente – ARTA Abruzzo), for an in-depth study of the indicators previously launched by the University of L'Aquila. This study will be aimed at identifying, among those already selected, those indicators that, due to their availability and representativeness, will constitute the most suitable set, also identifying the scale of use at the various territorial levels.
- **SOSTENERE** (Sustainability, resilience, adaptation for the ecosystems protection, physical reconstruction in the central part of Italy): research project developed by the University of L'Aquila and Abruzzo Region.
- The Marche Region established its **Ecological Network** (REM) with the regional law n. 2 approved on 5th February 2013. The regional law establishes that: *“The Marche Region Ecological Network has been included within the instruments of territorial and urban planning adopted after the entry into force of this law. This law identifies tools for the implementation of the REM by territorial and urban planning.*

5

Conclusion

The VLR as driver of innovation, which allow our Regions to advance progress on their local priorities and to maximize our potential as a basis for behaviour change and new policy application.

Communiqué on Voluntary Local reviews, UN Habitat, Madrid, UCLG, 2021

Within this integrated and shared field of action, and in line with the Voluntary National Review presented by the Italian Ministry for Ecological Transition, our Regions decided to institutionalize their already in force partnership, by presenting to the international arena their own Voluntary Local Review. The common work behind the creation of the VLR, represented a new tool to guarantee and show this productive interregional cooperation case, as well as to explore a new instrument that no one of the three Regions had ever used.

One of our common interests is representing the results we are able to achieve by facing the issue of development during the next decades, and in particular, by teaming up, synergistically addressing problems and difficulties related to the research of a new pattern of development, which has to be dramatically different from the previous ones adopted in the past years. In our case, **three contiguous Regions, always respecting their identity characteristics, decided to join, in order to pulling together and to find common solutions to growing difficulties, especially climatic and seismic ones, also in relation to the social territorial isolation and economic hardship.** As a result, the greatest outcome has been our common and share response, which is stronger and more resilient than the ones that may be developed within each regional context.

According to our vision, the cooperation between our three Central Italy Regions plays a crucial role in the fields of sustainability and resilience, by working together and sharing some aspects of different Regional Strategies of Sustainable Development. In this context, we are aware that **the integration and the knowledge sharing are the most important tools in order to increase the territorial resilience and to allow communities to act before and after the occurrence of calamitous events.**

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 Regione Emilia-Romagna



VOLUNTARY LOCAL REVIEW 2022

EMILIA-ROMAGNA
REGION
METROPOLITAN CITY
OF BOLOGNA



FOREWORD

Institutional collaboration is added value to build a sustainable future

Stefano Bonaccini, President of the Emilia-Romagna Region

Matteo Lepore, Mayor of the Metropolitan City of Bologna

All countries are called upon to strive to define their own sustainable development strategy to achieve the goals set out in the UN 2030 Agenda for Sustainable Development. With the 2030 Agenda Regional Strategy for Sustainable Development and the Metropolitan Agenda 2.0, our territory assumes the paradigm of development and growth based on environmental, social, economic and institutional sustainability, as well as on the principles of universality, integration, participation and social inclusion. Goals aimed at reducing economic, social, environmental and territorial divides and achieving full gender equality at a time when the pandemic has inevitably marked breaking points on all fronts of sustainability. In recent months this has been compounded by the disturbing scenario of a war not far from our country's borders, which challenges us as bearers of a democratic and pacifist conscience, but also as citizens of a broader Europe where we are called upon to make our voice heard and to do our part. A crisis that is also affecting our territory and our communities economically, and that is already having a great impact on the families and businesses that live and work in this area due to the rising costs of energy and raw materials. This is why we must continue to work as one community, inspired by the Goals of the UN 2030 Agenda. Our territory has the capacity to become a laboratory for these new policies, investing in energy and waste, developing a new green production chain, stimulating a change in food consumption, reducing – as envisaged by regional law – land consumption, triggering virtuous processes of urban and environmental regeneration, and promoting biodiversity in every action. In this context, the 17 Goals of the UN 2030 Agenda represent a great opportunity for change, also in view of the resources of the National Recovery and Resilience Plan (NRRP) and the seven-year programming of European funds, for which the region has defined the priorities for action in the Regional Strategic Document for the Unified Programming of European Development Policies 2021-2027 and in the new Regional Strategy for Smart Specialisation in Research and Innovation 2021-2027.

As already shared in the Pact for Work and Climate, the objective in Emilia-Romagna is to generate new quality jobs, accompanying the region in the ecological and digital transition in order to reduce economic, social, environmental and territorial divides and achieve full gender equality.

The role and collaboration of regional and local institutions is crucial, indispensable for achieving many of the goals and targets of the UN 2030 Agenda, and this requires coordination of efforts at every level of government.

This is why it was decided to set up a multi-level regional steering committee with the local authorities to define a shared set of measurable and consistent objectives at the various levels of government, starting from the experience of the metropolitan city of Bologna and the many experiences already in place throughout the region. The objective is the involvement of municipalities in the process of the territorialisation of the SDGs, in order to create a multi-level system of Sustainable Development Agendas and Strategies embedded in the programming cycle of the authorities

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Introduction

The 2030 Agenda Strategy for Sustainable Development of the Emilia-Romagna Region and the Metropolitan Agenda for Sustainable Development 2.0 of the metropolitan city of Bologna were drafted through interaction and collaboration among the various bodies and are incorporated in their strategic instruments.

The 2030 Agenda Regional Strategy for Sustainable Development

The Emilia-Romagna 2030 Agenda Regional Strategy for Sustainable Development is rooted in the regional council's 2020-2025 Mandate Programme and in the Labour and Climate Pact signed on 14 December 2020 with the institutional, economic and social partnership and the metropolitan city of Bologna.

In keeping with the Mandate Programme, in which the council had already underscored the relationship between its own objectives and those of the UN 2030 Agenda, the Pact for Work and Climate outlines a shared project for the relaunch and development of Emilia-Romagna aimed at generating new quality jobs, accompanying Emilia-Romagna in the ecological and digital transition. This project, which takes the UN's 2030 Agenda for Sustainable Development as its primary reference, is based on sustainability in its three inseparable components, i.e. the environmental, social and economic, with the aim of reducing economic, social, environmental and territorial divides and achieving full gender equality.



The 2030 Agenda Strategy for Sustainable Development was approved by Council Resolution no. 1840/2021.

The Metropolitan Agenda for Sustainable Development 2.0

The definition of a Metropolitan Agenda for Sustainable Development 2.0 comes as the culmination of an important process lasting several years. Defined as a wide-ranging local body responsible for strategic, environmental and territorial planning, economic growth and social development, mobility and infrastructure, and services to the municipalities that make it up, the metropolitan city has the role

of identifying and coordinating development strategies for the entire metropolitan area, in close cooperation with national and regional policies. From its earliest years, the metropolitan city of Bologna has therefore been at the forefront in implementing the principles of sustainable development. It is no coincidence that in June 2017 Bologna was chosen as the venue for the G7 Environment Ministers' meeting that ended with the signing of the Bologna Charter for the Environment by the mayors of Italy's metropolitan cities. The Charter is rooted in the international principles of the United Nations 2030 Agenda and aims to translate them into virtuous local practices through the territorialisation of sustainability policies at a local level. Specifically, the Charter identifies eight environmental issues related to Goal 11 - Sustainable Cities and Communities and makes commitments that can be traced back to the EU strategy guidelines, indicates measurable goals and targets and defines possible prospects, even on a national scale. Reinforcing its commitment and involvement on sustainability issues, the metropolitan city of Bologna has placed environmental, economic and social sustainability at the forefront of the founding principles of the 2018 Metropolitan Strategic Plan 2.0 (MSP 2.0), the policy approved by the metropolitan council, which guides the actions of the metropolitan city, the municipalities and unions of municipalities, identifying strategic, medium- and long-term objectives. In this context, in 2019 a first metropolitan Agenda for Sustainable Development was drawn up in implementation of the Bologna Charter for the Environment, with the identification of strategies and political guidelines in relation to the goals more properly ascribable to the main environmental issues of interest to the territory, i.e. air pollution, land use and green management, waste management and circular economy, water supply, energy consumption and renewable sources, mobility. Following the



public notice of the Ministry of the Environment for the funding of Metropolitan Agendas for Sustainable Development of July 2019, the metropolitan city of Bologna presented the Agenda 2.0 project to apply all the SDGs at the local territorial level taking into account all the dimensions of sustainability, in an approach that includes local actors.

1

Framing

1.1 Emilia-Romagna Region



Economy (Source: Istat)

GDP (2020): 149,633 million current euros
GDP per inhabitant (2020): 33,614.10 current euros
No. of companies (Asia 2019): 359,017
No. of employees in companies (Asia 2019): 1,630,292
No. of farms (2013): 64,480

Labour market 2020 (Source: Istat)

Employment rate: 68.8%
Male employment rate: 75.5%
Female employment rate: 62.0%
Unemployment rate: 5.7%
Male unemployment rate: 4.8%
Female unemployment rate: 6.9%

Population as at 1-1-2021 (Source: Emilia-Romagna Region)

Total residents: 4,459,866

Male residents: 2,172,153

Female residents: 2,287,713

The regional population shown does not include the municipalities of Montecopiolo and Sassofeltrio (which joined Emilia-Romagna in June 2021)

Territory as at 1-1-2021

Number of provinces: 8

Number of metropolitan areas: 1

Number of municipalities: 328
(not including the municipalities of Montecopiolo and Sassofeltrio, which joined Emilia-Romagna in June 2021)

Surface area: 22,452.78 km²
(not including the territories of Montecopiolo and Sassofeltrio)
(Source: Istat)

Population density: 198.63 inhabitants per km² (Source: Istat for surface area, E-R for population)

Agricultural surface area used (2013): 1,038,052 hectares (Source: Istat)

1.2 Metropolitan city of Bologna



Population as at 1-1-2021 (Source: Emilia-Romagna Region)

Total residents: 1,015,608

Male residents: 491,283

Female residents: 524,325

Households as at 31/12/2020 (source: municipal registers): 493,495

Percentage of youth (<= 14 years) as at 31/12/2020 (source: Istat): 12.4%

Percentage of elderly (>=65 years) as at 31/12/2020 (source: Istat): 24.4%

Territory as at 1-1-2021

Number of municipalities: 55

Number of unions of municipalities: 7

Surface area: 3,702.32 km² - (Source: Istat)

Percentage of land consumed in 2020 (source: ISPRA): 8.9%

Population density: 274.3 inhabitants per km² (Source: Istat)

Agricultural surface area used (2013): 173,224.46 hectares (Source: Istat)

Economy

Average income per taxpayer (2021 tax forms for 2020 income; source: MEF): €25,934

No. of active companies (Asia 2019): 86952

Percentage of female enterprises (infocamere 2019): 21.3%

No. of employees in companies (Asia 2019): 430,499

No. of farms (2013): 10,790

Labour market 2020 (Source: Istat)

Employment rate: 70.2%

Male employment rate: 75.2%

Female employment rate: 65.2%

Youth employment rate: 18.3%

Unemployment rate: 4.7%

Male unemployment rate: 4.3%

Female unemployment rate: 5.2%

Youth unemployment rate: 23.2%

2

Governance model

2.1 Governance of the Emilia-Romagna Region's 2030 Agenda Strategy for Sustainable Development

The 2030 Agenda strategy for the Sustainable Development of the Emilia-Romagna Region was drafted by an interdepartmental technical working group made up of more than 40 representatives of the general directorates, called upon to contribute to the definition of the document, an operational steering group made up of experts from the competent structures for methodological support and the alignment with the Regional Economic and Financial Document (REFD), as well as the steering committee for the governance and strategic control of the regional planning established by Regional Decree 602/2021.

The delegation of the 2030 Agenda is entrusted to the vice president of the region, who coordinates the work together with the director of the cabinet of the council president.

A cross-cutting work, therefore, functional to generating the integration of the key dimensions of sustainability in all policies that is indispensable to achieve the objectives, carried out with the support of ASviS, and the involvement of the investee company Art-ER and the Regional Agency for Prevention, Environment and Energy (ARPAE), as well as the network of regional universities united in Emilia-Lab.

Specifically:

- *Together with ASviS, analyses of the Region's positioning with respect to the Goals of the 2030 Agenda and the identification of quantitative targets for 2025 and 2030 were performed.*
- *Together with ARPAE, methods for the construction of integrated reports and indices for decoupling environmental pressures from economic growth were studied and set up, and sustainability training and education actions were planned and implemented.*
- *With the support of Art-ER, initiatives for stakeholder involvement and communication of sustainable development goals were set up and managed, and contributions from various participatory fora or sectoral experiences were systematised.*
- *With the support of Emilia-LaB, the network of universities in Emilia-Romagna for scientific, didactic and informative collaboration in the field of economic studies, aspects such as the impact of policies and the territorialisation of sustainable development objectives were explored in particular.*

2.2 The governance of Agenda 2.0 of the Metropolitan City of Bologna

The Metropolitan Strategic Plan technical operational coordination office within the general directorate of the metropolitan city takes care of, supports and coordinates the implementation of Agenda 2.0.

It was deemed appropriate to avoid the multiplication of “places of debate”, preferring to use the institutional venues envisaged in the metropolitan by-laws. All stakeholders (institutional and non-institutional) have been involved in various ways since the early stages of the Agenda 2.0 definition project, in order to outline an Agenda 2.0 co-designed and shared with the most significant organisations of the territory.

It was decided to maintain the governance system that accompanied the work on the drafting of the strategic plan, strengthening it with the establishment of an inter-sectoral and inter-institutional working group to act as a steering committee for the implementation and deployment of the Metropolitan Agenda for Development 2.0. It is composed of one or more representatives for each sector/area of the metropolitan city and a representative for the municipality of Bologna, the Emilia-Romagna region and ARPAE. The working group is called upon to discuss and evaluate the progress of the project as a whole and the results produced by the individual actions undertaken. For specific technical issues, additional in-house or external professionals from both public and private entities may be called upon to participate as experts and authoritative witnesses.

Another place for discussion is the office of the presidency. Composed of the metropolitan mayor and the presidents of the unions of municipalities, it is the body supporting the work of the metropolitan conference of mayors, and therefore the body best suited to activate local actors. Meetings with the office of the presidency accompanied the Agenda 2.0 drafting process, and depending on the progress of the work were used for discussion and debate, gathering input and sharing content.

Furthermore, to ensure a more fruitful discussion, the councils of each union and the municipality of Bologna were directly involved in working groups and workshops.

Particular attention is paid to the participants in the table of investee companies and the development council, places of participation and discussion with economic and social actors established during the drafting of the Metropolitan Strategic Plan 2.0. Additional support was provided by ASviS as scientific and technical advisor.



3 Territorial strategies and the consistency of public policies for sustainable development

3.1 The Emilia-Romagna Region's 2030 Agenda Strategy for Sustainable Development

The positioning of Emilia-Romagna with respect to the targets defined at a national level confirms the great history of the region, undoubtedly among the most advanced in Europe in terms of health, education, employment, innovation, social inclusion and growth.

As the following radar chart shows, compared to Italy as a whole Emilia-Romagna was above the national average in 2020 in most of the goals, underscoring the need to accelerate environmental sustainability, including by continuing the coordinated action with other Po Valley basin regions with respect to air quality.



Source: Elaborations of the Emilia-Romagna Region Statistics Office on ASviS 2020 data

Indeed, the chart based on composite indices drawn up by ASviS shows that Emilia-Romagna ranks above the national average in 9 of the 14 goals: Goal is in line with the national average. It is below the national average for Goals . For goals 13, 14 and 17, there are no significant comparable and up-to-date data available on a local scale.

3.1.1. THE 17 GOALS OF THE EMILIA-ROMAGNA REGION

Each of the 17 Goals is presented as follows:

- **Introduction:** a short text framing Emilia-Romagna's objective, values and principles.
- **Positioning:** a chart and a text frame Emilia-Romagna with respect to a composite indicator that ASviS has elaborated and uses to monitor the progress made by Europe, Italy and its territories over time for each of the 17 Goals. Such elaborations make it possible to represent a set of indicators relating to the same field of analysis and territory through a single, easy-to-read index.
- **Strategic lines of action:** the Regional Strategy relates the lines of action of the Mandate Programme and the Jobs and Climate Pact to each Goal as they are instrumental in achieving the targets by 2025-2030. The source is represented by symbols:



Specific objectives of the 2020-2025 mandate programme

Jobs and Climate Pact



Emilia-Romagna, region of knowledge and know-how



Emilia-Romagna, region of ecological transition



Emilia-Romagna, region of rights and duties



Emilia-Romagna, region of work, enterprises and opportunities

DT
Digital
transformation

Digital transformation

S
Simplification

Simplification Pact

L
Legality

Legality

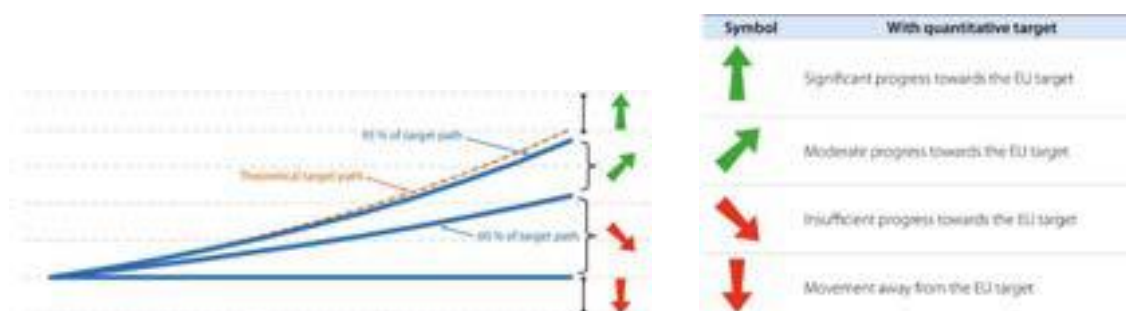
P
Participation

Participation

Regional indicators and targets: The 2030 Agenda regional strategy for Sustainable Development identifies about **100 targets**, i.e. quantitative objectives to be reached by 2025 and/or 2030, partly coinciding with those assumed at a European and national level, partly defined at a regional level. Both are **quantitative targets using result indicators** (impact and/or output indicators).

In order to monitor how the regional situation is evolving with respect to the targets defined, the **Eurostat methodology** is used, which, drawing on at least five years of historical data, assesses the intensity and direction in which an indicator is moving with respect to the target set. This assessment has four classifications:

1. Significant progress (the target will be reached)
2. Moderate progress (the target will not be reached, but movement is in the right direction)
3. Insufficient progress (target will not be reached due to minimally positive trends)
4. Wrong direction (the target will not be reached, in fact results are moving further away from the target)



Target table: for each target identified provides:

- **Indicator:** specifies whether the indicator belongs to the composite developed by ASviS or whether it is an indicator chosen by the Emilia-Romagna Region
- **Indicator description:** defines the indicator
- **Positioning of the Emilia-Romagna region**
- **Target:** indicates the quantitative objective and the institution/body that defined it. If the Emilia-Romagna region has chosen a more challenging target, both targets are noted.

Related Goals: indicates the main other goals that contribute to the achievement of the objectives.

3.1.2 IMPLEMENTING THE STRATEGY

Tools to guide administrative action

Just as at the national level the implementation of the National Sustainable Development Strategy (NSDS) has to link up with planning documents, in particular with the National Reform Programme (NRP) and, more generally, with the Economic and Financial Document (EFD), at the regional level the strategy has to coordinate with a plurality of planning and governance tools both internal and “external” to the administration.

On this aspect, both the 2030 Agenda and the National Strategy for Sustainable Development are very clear: the identified goals can only be achieved through the integration of different levels of governance. A governance that must necessarily be collaborative, multi-level (vertical and horizontal), as well as a director and catalyser of the commitments of all the actors involved, and therefore capable of co-designing with the territory itself, improving the pre-existing conditions and also targeting its own

organisational performance towards this goal in order to increase the level of economy, efficiency and effectiveness of its action.

Below are the main economic programming, planning and control instruments of the administration to implement the objectives of the regional strategy.

European session of the legislative assembly

Since 2008, the Emilia-Romagna Region has developed its own model of participation in the formation and implementation of European Union policies and law, summarised in the European session of the legislative assembly (Regional Law 16/2008).

The European session offers a political summary of what the region has achieved (ascending phase) through a report on the state of compliance of the regional system prepared by the council and on what it intends to achieve (ascending phase) in the matters within the region's remit concerning the initiatives announced by the European Commission in its annual work programme, with particular attention to those having a potential impact on the Emilia-Romagna territory.

In the regional compliance report prepared by the council, it will be necessary to report on the regional 2030 Agenda Strategy for Sustainable Development in the context of regional development policies, with a particular focus on cohesion policies.

Regional Economic and Financial Document (REFD)

The Regional Economic and Financial Document (REFD) of the Emilia-Romagna region, approved by the council by 30 June each year, starting from the Mandate Programme and the Labour and Climate Pact defines the strategic objectives that the regional government intends to achieve during the legislature, specifying the results expected for each objective each year of the three-year period, coinciding with the time span of the budget forecast, and at the end of the legislature.

The strategic objectives are illustrated by mission and budget programme as required by Italian Legislative Decree 118/2011, and are broken down by department of reference. The Regional Economic and Financial Document (REFD) defines the framework of reference for the preparation of multi-annual and annual budgets and for the definition and implementation of regional policies.

Within the REFD, objectives for change are also enumerated as strategic objectives are transformed into technical goals that the government identifies and uses to elaborate performance assessments.

For some years now, the strategic objectives in the REFD have been correlated with national strategic areas and choices, and through them with the global goals of the 2030 Agenda. Looking ahead, in order to ensure programming that is fully consistent with the strategy, as well as to implement an increasingly integrated regional policy monitoring and evaluation system, the strategic objectives of the REFD and the objectives for change will have to be correlated with the Goals and targets of the 2030 Agenda Regional Strategy for Sustainable Development.

EU and national planning (ERDF, ESF+, EAFRD, FSC)

For the 2021-2027 planning cycle, the European Union has adopted the UN 2030 Agenda for Sustainable Development and the Green Deal as a high-level strategic reference for planning.

With the **Regional Strategic Document for the unitary planning of European development policies 2021-2027** (RSD), approved by the legislative assembly in June 2021, the Region outlined the strategic

framework within which to address all the European and national resources that the region will benefit from, with the aim of relaunching the development of the regional territory in a sustainable way and to lead Emilia-Romagna towards the European targets to be achieved by 2030 and 2050.

With a vision of planning based on integration and complementarity, the RSD orients the operational programming of the funds managed by the regional administration towards the strategic objectives of the **Jobs and Climate Pact**, directs the capacity of the regional system to attract additional resources, broadening the policy mix for sustainable development and favouring a vision of planning based on integration, which enhances complementarity and synergies.

The RSD is therefore the regional planning tool for European development policies that ensures the “translation” of the strategic objectives that can be pursued through the European funds into specific objectives of the regional operational programmes, helping to define their economic and financial planning within the framework of the REFD.

The RSD, the **Smart Specialisation Strategy 2021-2027**, also approved in June 2021, which assigns research and innovation a driving role in the transition towards fairer and more sustainable production and consumption models, adopts the priorities of the UN 2030 Agenda, taking the same challenge-based approach that is indispensable for addressing the challenges of change and responding to society's new needs, both on the economic and on the environmental and social fronts. Regional Operational Programmes, also thanks to the thematic concentration thresholds^[1] indicated by Regulations, will be a decisive tool to fully and concretely implement the development objectives outlined in full consistency by regional unitary planning, the Jobs and Climate Pact and the Emilia-Romagna 2030 Agenda Strategy. This consistency gives value to the method of discussion and sharing with the local authorities and all the economic and social representatives inaugurated with the Jobs Pact of 2015 and further strengthened with the Jobs and Climate Pact, consolidates the role of direction and control proper to the regional legislative assembly, and confirms the will of the institutions and the entire territorial system to pursue a precise trajectory of sustainable development.

The "Steering Committee for the Governance and Strategic Control of Regional Planning" established by Regional Decree 602/2021 has the task of promoting and verifying the full consistency between the **regional planning of the 2021-2027 European funds and the objectives of the 2030 Regional Agenda for Sustainable Development**.

Territorial strategies

With the approval of the new Leipzig Charter entitled “Transformative power of cities for the common good”, the European states reaffirmed their commitment to the European urban agenda towards 2030 in line with the 2030 Agenda for Sustainable Development and the European Green Deal. The Leipzig Charter therefore supports transformation through integrated urban development, realised through a multi-level and participatory approach.

The reflections and learnings from the Urban Agenda for the European Union are also a reference for the urban strategies that the region promotes in the 2021-2027 planning.

The 2021-2027 RSD, in light of a strategy and objectives with a regional scope, identifies four territorial macro-areas to direct and organise coordinated resources and policies to – Via Emilia Axis, Coastal Axis,

^[1] The concentration threshold for the REFD in the most developed regions is 85% on policy objectives 1 - Smarter Europe and 2 - Greener Europe, and at least 30% of the resources on the latter. In the ESF+ at least 25% of the resources must be invested in social inclusion, 12.5% on NEETs, 5% on Child Guarantee, 3% on Fead

Po River and Lower Po Valley Axis, Apennine Axis – and two specific areas to focus integrated territorial strategies on. On the one hand, the more fragile and peripheral areas and territories, identified by the National Strategy of Interior Areas, and in any case the entire Apennine territory, with the essential objective of counteracting territorial imbalances, starting with demographics. On the other hand, cities and urban and intermediate territorial systems, as a privileged dimension for functional strategies to achieve the goals of the 2030 Agenda, to maximise the impact on a regional scale with respect to the ecological and digital transition. These are **Urban Transformation Agendas for Sustainable Development** linked to the Jobs and Climate Pact and the 2030 Agenda Regional Strategy for Sustainable Development, multi-level governance tools functional to the achievement of common objectives that, in the sharing of resources and commitments, involve the regional administration, local authorities, citizens, enterprises and stakeholders in a network, albeit with different roles.

More generally, the challenges posed through the objectives and targets of the Agenda 2030 Regional Strategy for Sustainable Development should be an integral part of all integrated territorial strategies for local development, be they urban, intermediate or inland areas, in order to foster the expected transformations, increase resilience, decrease inequalities and ensure a non-disparate development of territories.

Sectoral planning

Sectoral planning, through which the strategic objectives defined in the various regional planning documents are implemented, must in turn take into account the thematic and sectoral dimension of sustainable development by incorporating the objectives and targets of the regional strategy into plans and programmes. It will likewise be crucial to include in the monitoring of sector plans the benchmark indicators defined in the regional 2030 Agenda Strategy for Sustainable Development.

Environmental assessments

The Strategic Environmental Assessment (SEA) conceived under European Directive 2001/42/EC with the aim of enriching plans and programmes under development with appropriate environmental considerations is an important opportunity for the effective integration of sustainability aspects into planning.

For Plans and Programmes and their variants as well as for Projects and their modifications subjected to environmental assessment procedures (SEA/VALSAT, EIA, Verification of subjectivity to SEA/VALSAT and EIA), it must be made explicit in the documents provided by the proponent and in the assessments of the competent authorities how the Plan/Programme or Project contributes to the achievement of the objectives identified in the 2030 Agenda Regional Strategy for Sustainable Development.

If the implementation of a Plan/Programme or the development of a Project results in a worsening of environmental conditions with respect to the objectives and targets of the 2030 Agenda Regional Strategy for Sustainable Development, evidence of the planned mitigation and compensation measures must be provided.

The contribution to the achievement of the goals and targets of the 2030 Agenda Regional Strategy for Sustainable Development - 2030 Agenda must be monitored over time using specific indicators consistent and dialoguing (scaled) with those of the Regional Strategy.

Performance plan

The Performance Plan, a three-year planning document prepared pursuant to Italian Legislative Decree no. 150/2009 and Regional Council Decree no. 468/2017, adopted annually by the Council, contains the objectives of change and the operational objectives that derive from them starting from the strategic planning objectives of the REFD and the related Update Note (UNREFD), as well as the related indicators and targets for the measurement and evaluation of organisational performance.

Looking ahead, the measurement of organisational performance will require the introduction of change objectives, operational objectives and consequently **direct** and **indirect impact indicators** closely linked to the targets defined in the 2030 Agenda Regional Strategy for Sustainable Development.

Information systems and administrative acts

In order to highlight and monitor the contribution of the regional action to the Sustainable Development Goals outlined in the 2030 Agenda regional strategy, an explicit reference to the 17 Sustainable Development Goals may be included in the texts and information attached to the council resolutions and executive decisions. The connection between the administrative acts and the goals as defined in the 2030 Agenda Regional Strategy for Sustainable Development can be developed through an evolution of the regional information systems in use.

Sustainability education

Education is one of the central focuses of the UN 2030 Agenda for Sustainable Development. A specific goal – Goal 4 – is dedicated to education, but it cuts across all the SDGs as an interdisciplinary and systemic key. As stipulated in the national strategy, sustainability education is an integral part of the 2030 Strategy: it is a useful “vector of change” to trigger the transformation of the current development model. Referring to the most advanced international models, it does not merely transfer “knowledge” but promotes the “skills” necessary for ecological transition.

In Emilia-Romagna, sustainability education received a particular boost thanks to Regional Laws no. 15/1996 and no. 27/2009, which made it possible to implement programmes and the birth of the network of **Centres for Sustainability Education (CEAS)** coordinated by ARPAE's Regional Thematic Centre to support the sustainability strategies and actions of the regional system since the first local 21 Agendas in the 1990s. A process and function that has had significant continuity and ensured continuous improvement.

It is no coincidence that the sustainability education network (SEN), strengthened by inter-institutional partnerships (including the one with the MiTE with the project “Sustainability as a learning process”) and with the worlds of research and education, green business and volunteering, is and will be in the future an active player in the 2030 Regional Strategy for Sustainable Development and in those that will be developed at a local level with its three-year programmes.

The INFEAS 2020-2022 regional programme for sustainability education also contributes to these aims, presenting the main SDGs using educational, participatory, active and transformative teaching methods. Its five integrated educational action areas (human landscapes and ecosystems, sustainable resource

management, environment and well-being, climate crisis and urban resilience, green and circular economy) generate projects that build knowledge and consistent actions.¹

Accompanying actions

The 2030 Agenda Regional Strategy for Sustainable Development will be disseminated and accompanied by a process of establishing roots in the local communities as well as improved measurement effectiveness in accordance with the national strategy.

To this end, the following lines of action are planned:

- Establish a **partnership with ANCI-ER and UPI-ER** to foster the territorialisation of the SDGs and the identification of targets for sustainable development, consistent with the various levels of government.
- In partnership with the ASviS national training school, define a **2030 Agenda training plan** that envisages actions aimed at regional and local authority personnel, actions for employees of organisations that have an agreement with the SELF platform, educational modules to be made available for training courses co-financed by the region, and more generally training that is aimed at the entire regional community via MOOC.
- Pursue the definition of **new indicators**, including decoupling **indicators** (see paragraph 7.3.1) with the aim of improving the monitoring of the Strategy's policies and lines of action, also aimed at the creation of common and uniform methods and measurement systems at a local level.
- Support the development of **participatory processes** pursuant to Regional Law 15/2018 "Law on Participation in Public Policy Making" with the **Region's Participation Observatory**.
- Carry out a survey of **good local practices**, starting with those nominated for the Responsible Innovators Award, in order to promote the actions carried out in the region that contribute to the implementation of the 17 objectives of the 2030 Agenda for Sustainable Development.
- Launch **information and communication campaigns** aimed at the regional community to raise awareness of the 2030 Agenda Regional Strategy for Sustainable Development, the objectives it sets, the actions the region is putting in place to achieve them, and the contribution everyone can make to the project. As already shared with the signing of the Jobs and Climate Pact, the challenges we have outlined require an active and participatory public. Communicating and sharing with an informed and aware civil society is the first "**common good**" of a democracy. The implementation of the Pact and the Strategy, as well as the results of the annual integrated monitoring, will be accompanied by information and communication actions that ensure transparency, accountability and shared responsibility with respect to the change that we want to pursue together, that consistently orient individual and collective behaviour with respect to the transformation needs of the economy and society, with particular attention to the issue of

¹https://www.arpae.it/it/temi-ambientali/educazione_alla_sostenibilita/azioni-educative/progetti-e-azioni-di-sistema/educare-all2019agenda-2030/educare-agenda-2030

the climate emergency and its effects, but that also ensure that the public is aware of the opportunities that the transition processes under way offer the region and in particular the new generations.



Decoupling indicators

The relationship between economic growth and environmental degradation has long been the subject of extensive debate. The current economic model must deal with the **finite nature of the resources** the planet makes available – both non-renewable (minerals and fossil fuels) and renewable (such as biomass) – if they are consumed at a higher rate than the time needed to regenerate them.

For this reason, **breaking the link between resource consumption and economic development** (Resource Decoupling) was identified as one of the main goals of the Lisbon Strategy for Growth and Jobs (European Commission, 2005) and the 17 Sustainable Development Goals (SDGs) of the 2030 Agenda.

Indeed, some SDGs call for decoupling indices, more commonly referred to as intensity indices, of environmental pressures or material flows from the economic value produced. These indices, also called integrated indices, are a response to the need for an integrated analysis and reading of sustainable development and thus of our development model.

The OECD defines decoupling as breaking the link between environmental pressures and economic goods, considering two complementary approaches: resource decoupling and impact decoupling. **Fig 1**

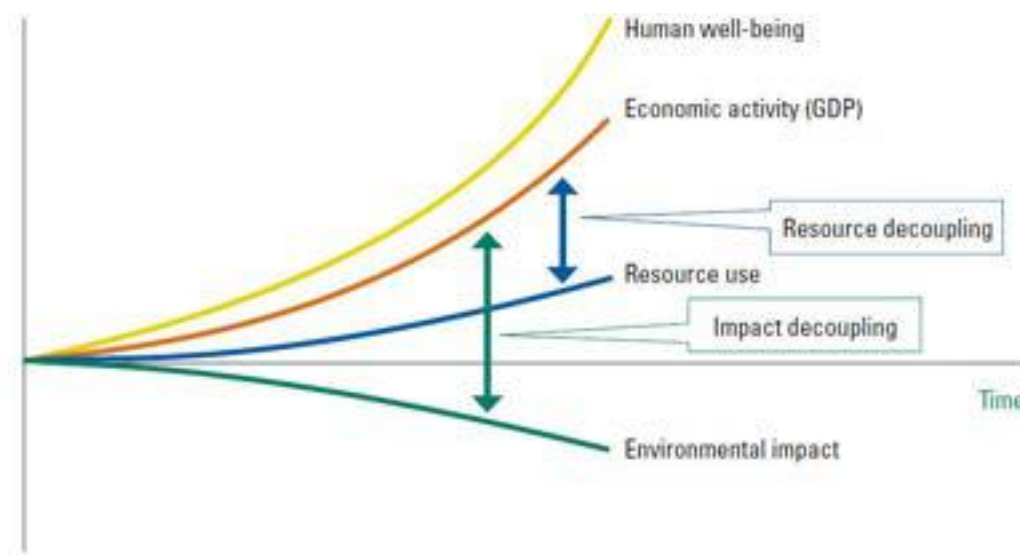


Fig 1 Stylised representation of resource decoupling and impact decoupling. Source: UNEP “Decoupling of natural resource use and environmental impacts from economic growth”, p. 5

Resource decoupling refers to the goal of reducing resource use per unit of economic activity, represented by the ratio of GDP (determinant) to the rate of resource use (Resource Use or Domestic Material Consumption), such as for example energy or material consumption.

Impact decoupling, i.e. the ratio of GDP to environmental impact, occurs over time if the environmental impact decreases as the value produced in economic terms increases. **For both indices, the higher they are the more it is confirmed that decoupling has taken place.**

The inverse of this index, the intensity index, is considered by the United Nation Environment Programme (UNEP) to be one of the most effective in representing the decoupling of environmental pressure from economic growth in a circular economy-oriented path.

1. Graphical representation of the intensity index considered as the relationship between environmental pressures and economic determinant. Where the index is decreasing, it can be assumed that decoupling is taking place
2. Contextual representation of the two component indicators of the intensity index (*determinant* and *pressure*, i.e. *denominator* and *numerator*), made comparable in the same chart. The two charts together (**1 and 2**) thus make it possible to verify a potential path of decoupling, absolute or relative, and identify respective responsibilities
3. Analytical verification with the OECD decoupling factor. If it is between 0 and 1, decoupling is confirmed. Alternatively, if the factor is equal to 0 or negative, there is no decoupling

² “Indicators to measure decoupling of environmental pressure from economic growth”, OECD 2002. ARPAAE extracted the methodology from the OECD publication and proposed it to the SNPA Task Force on the 2030 Agenda at the Decoupling Workshop held by videoconference on 20 May 2020 <https://www.arpae.it/it/notizie/workshop-online-sul-disaccoppiamento>

The first analysis proposed is on the **decoupling of unsorted municipal waste generation over the period 2007-2019**³ which may be followed by other decoupling analyses such as on energy consumption and climate-altering gas emissions.

Application to the case study:

- 1) When checking the decoupling of the generation of unsorted municipal waste (MSW)⁴ from the economic growth indicator (Expenditures on household consumption)⁵ the intensity index shows a decreasing trend and thus it can be assumed that decoupling has occurred.

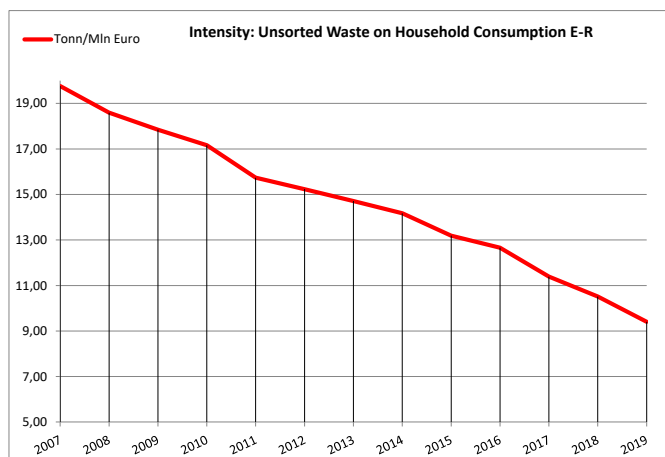


Chart 1 Intensity index - Elaboration by ARP AE

- 2) Analysing the trends of **Chart 2** and maintaining the focus on Intensity, one can look for cross confirmation of the decoupling taking place, whether absolute or relative, and the respective responsibilities: whether due to an increase in economic output (the denominator) or a decrease in environmental pressure (the numerator).

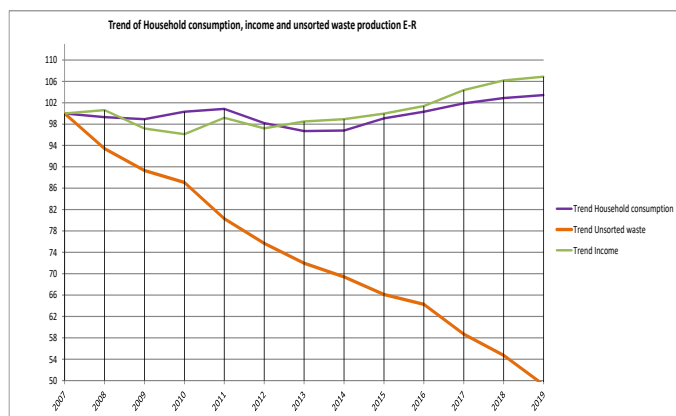


Chart 2 Household consumption and production of unsorted municipal waste - Elaboration by ARP AE

³ <https://www.arpae.it/it/ecoscienza/numeri-ecoscienza/anno-2021/numero-3-anno-2021/la-sostenibilita-al-centro/bonazzi-palumbo-ecos2021-03.pdf/view> [Bonazzi and Palumbo in *Ecoscienza* 3/2021, p. 32-35]

⁴ This indicator of waste production, also referred to as *Intercepted*, is suggested by the OECD 2002 document: i.e. the total amount of municipal waste production that is sent for disposal and/or energy recovery.

⁵ Household consumption expenditures are suggested as a determinant by the 2002 OECD paper for the verification of municipal waste decoupling.

This latter check gives us confirmation of a convincing decoupling over the same time period. (**Chart 3**)

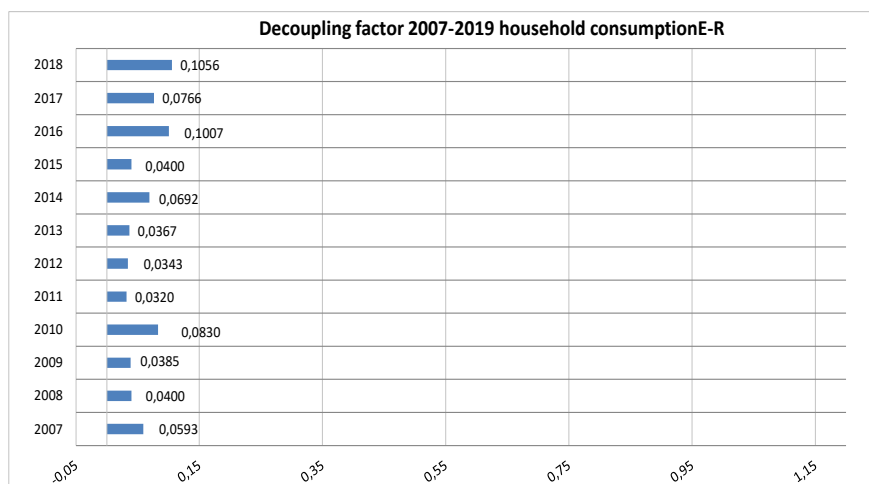


Chart 3 Decoupling factor - Elaboration by ARPAE

Summary comment: The decoupling of the regional production of unsorted municipal waste from the indicator of economic growth, both graphically and analytically, is confirmed over the period.

Indeed, it can be seen from **Chart 2** how close we are to *absolute decoupling*, which is already anticipated by the continuously decreasing trend of the intensity index in **Chart 1**.

The satisfactory presence in Emilia-Romagna of an absolute decoupling of the production of this waste, in itself rare, is further characterised by the assignment of responsibility to the constant decrease in environmental pressure.

The contribution to decoupling made by the continued reduction of unsorted municipal waste, the intercepted, is greater than the increase in the economic indicator.

Thus the absolute decoupling in the years 2007-2019 is due to a greater reduction in unsorted waste rather than not entirely confirmable economic growth after the financial crisis that started in 2007 and then became transversal and global.

3.2 Agenda 2.0 and the consistency of the public policies of the metropolitan city of Bologna

The Metropolitan Agenda 2.0 is consistent with the national strategy and with the Emilia-Romagna region's Strategy for Sustainable Development, not to mention the main European Union strategies and policies. The Agenda identifies 77 indicators related to the 17 UN Agenda Goals that can analyse the metropolitan context and compare it with regional and national contexts. The selection of indicators chosen to monitor the metropolitan city's progress was done in keeping with the Ministry of Ecological Transition's proposal to assign the indicators of the national sustainable development strategy to the National Strategic Objectives (NSOs) and the first ASviS Territorial Report of 2020. Based on the indicators selected, the relevant 29 quantitative targets defined by European, national and regional planning were identified, offering an assessment of the analysed territory's distance from them over time. As described for the regional strategy, here again the Eurostat method was used to assess the achievement of the quantitative targets, which involves assessing the intensity and direction the indicator is moving in with respect to the target using arrows.

For each UN 2030 Goal the Agenda 2.0⁶ is divided into two components:

1. **mcBO's positioning** with respect to: quantitative contextual objectives measured by indicators defined by European, national and regional planning or identified by ASviS-Urban@it experts or obtained using the Eurostat method⁷; specific objectives relevant to mcBO's strategic choices.

These data are compared with larger territories (national, regional).



2. The **main actions already in place or in the process of being implemented**, resulting from a wide-ranging survey of European, national, regional, metropolitan and where possible municipal strategies, plans, programmes and regulations. The actions are included in the **"planning scenario"** where they are actions already in place or planned; or in the **"target"**

⁶ https://www.cittametropolitana.bo.it/agenda_sviluppo_sostenibile/Home_Page/Agenda_in_evidenza

⁷ 29 were identified: the list is detailed in Chapter 6.

scenario” where they refer to longer-term guideline actions contained in the **National Recovery and Resilience Plan**, in the **Emilia-Romagna Regional Pact for Work and Climate** and in the **Metropolitan City Pact for Work and Sustainable Development**.

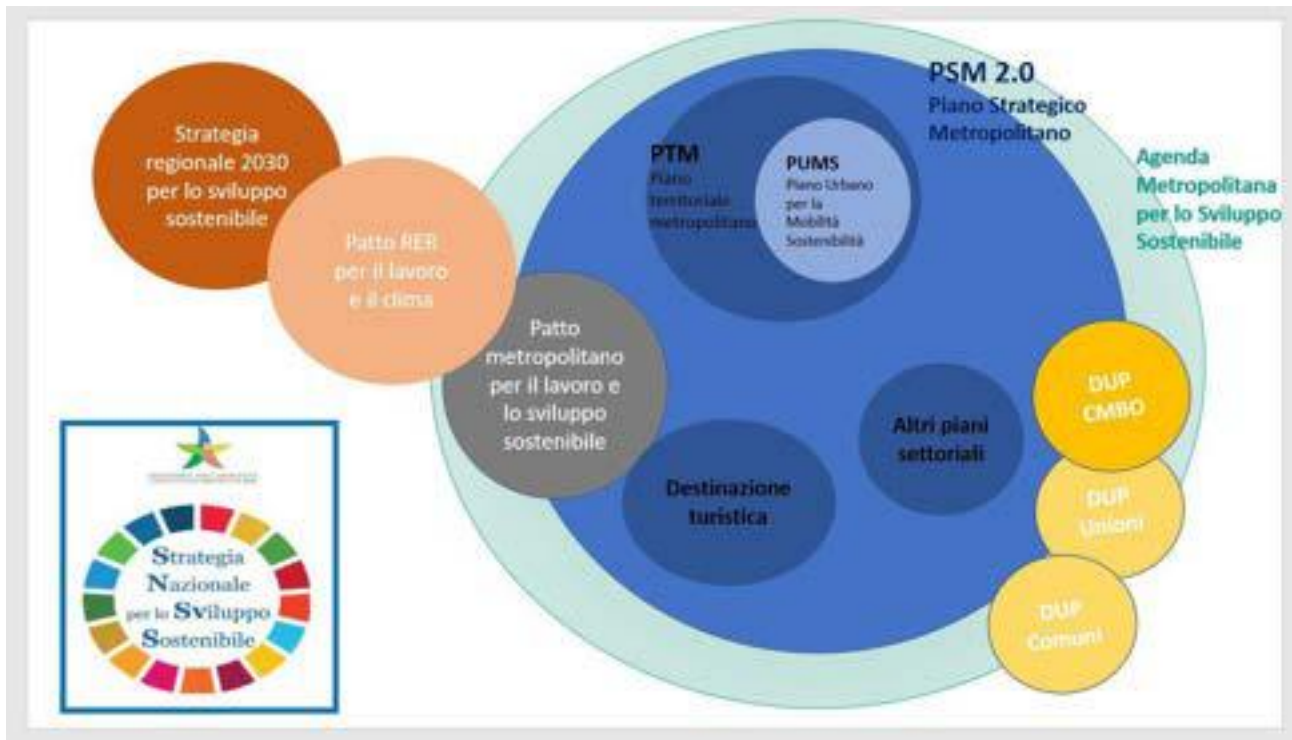
Target	Azioni scenario Programmatico CM	Azioni scenario Obiettivo (Patto per il lavoro e lo sviluppo sostenibile della CM, 2021)	Policy e/o progetti del PSM 2.0 e indicatori specifici
3.6	Servizio di supporto alle relazioni scuola territorio-mondo del lavoro. Finalità tra le altre cose progetti di innovazione dei percorsi tecnico-professionali in sintonia con gli obiettivi di sostenibilità economico-sociale-ambientale e con le esigenze del mondo del lavoro e i temi di sviluppo locale, al fine di una migliore occupabilità (PSM 2.0 2018, 4, IV, 4, 1, p. 55)		Policy: Insieme per il lavoro. Indicatore: n. percorsi formativi insieme per il lavoro, 243 nel 2019. Policy: Piano di intervento metropolitano per il secondo tra scuola, Formazione e lavoro. Indicatore: n. azioni/progetti compresi nel Piano, 25 nel 2019 n. soggetti pubblici e privati compresi nel Piano, 114 nel 2019. Policy: Protocollo di intesa tra CM, Camera di Commercio e Ufficio scolastico territoriale. Indicatore: n. azioni/progetti attivati, 25 nel 2019. Policy: Protocollo di intesa tra CM, Impati Emilia e Ufficio scolastico territoriale. Indicatore: n. azioni/progetti attivati in collaborazione con Impati Emilia, 1 nel 2019.
3.6	Progetto Operazioni orientative per il successo formativo. Realizza servizi in tema di orientamento scolastico, formativo e professionale rivolti a docenti, giovani e famiglie (PSM 2.0 2018, 4, IV, 8, 1 e 2, p. 69-70)	Progetto 1.6 Orientamento e supporto al successo formativo per adolescenti e giovani. Consolidamento del sistema metropolitano di orientamento per il successo formativo, strutturandone ulteriormente l'architettura metropolitana e distribuita, sviluppando le azioni e gli strumenti innovativi già in essere e incrementando la capacità di integrazione sinergica degli attori pubblici e privati interessati.	Policy: Piano triennale e annuale Orientamento e successo formativo. Indicatore: n. delle istituzioni scolastiche di secondo grado ed enti di alta formazione nel Piano, 80 nel 2019. Progetti: Bando annuale per la concessione delle borse di studio. Indicatore: n. beneficiari borse di studio, 1528 nel 2019 (suoi 424.088 complessivi).
3.6	Festival della Cultura tecnica. È un cartellone annuale di eventi aperti alla cittadinanza che si svolge dal 2014 ed è promosso in collaborazione con numerosi partner, valorizza il percorso tecnico e professionale e la cultura tecnica, scientifica e tecnologica in raccordo con la cultura umanistica, approfondisce il rapporto tra sviluppo sociale, culturale ed economico e ospita eventi di avvicinamento tra giovani e mondo del lavoro (PSM 2.0 2018, 4, IV, 5, 1, p. 26)	Progetto 1.7 Cultura tecnica, scientifica e tecnologica e nuove competenze nella scuola secondaria per la sostenibilità sociale, economica e ambientale. Il prevede il potenziamento delle azioni metropolitane e regionali del Festival della Cultura tecnica, con engagement alla dimensione nazionale.	Progetto: Festival della Cultura tecnica-edizione metropolitana di Bologna. Indicatore: 200 eventi e 100 soggetti coinvolti nel 2019.
3.6	Investimento continuo e costante nella cultura tecnica. Deve divenire strumento competitivo nazionale, rappresentando un fattore cruciale anche per la creazione delle startup lavorative delle persone e delle imprese (PSM 2.0 2018, 4, IV, 4, 1, p. 54)	Progetto 1.7 Cultura tecnica, scientifica e tecnologica e nuove competenze nella scuola secondaria per la sostenibilità sociale, economica e ambientale. Azioni nella scuola secondaria di primo grado (progetto pilota, Summer school della Cultura tecnica) Azioni nella scuola secondaria di secondo grado (percorsi per le Competenze trasversali e Forteggiamento ICT) - ex abbinata scuola-lavoro, formazione tecnica e professionale in rete).	Progetto: Cultura tecnico-scientifica nella scuola primaria e secondaria di primo grado. Indicatore: n. azioni/progetti attivati nella scuola primaria e secondaria di primo grado, 5 in 81 istituti nel 2019. Progetto: Cultura tecnico-scientifica nella secondaria di secondo grado e nella IFT. Indicatore: n. azioni/progetti attivati nella scuola secondaria di secondo grado e nella IFT, 11 in 83 istituti nel 2019.

Finally, the actions of the province capital are assessed. This part could be expanded to include other municipalities.

The Metropolitan Strategic Plan 2.0⁸ took a central role in identifying actions for the pursuit of targets on all dimensions, and its monitoring and evaluation system offered the possibility of identifying an initial set of specific indicators associated with Agenda 2.0 actions.

Agenda 2.0 is therefore a cross-cutting key for interpreting policies at various levels and not a new plan separate from the others, with the definition of qualitative-quantitative objectives and indicators that are directing the planning of the body, starting with the **Urban Plan for Sustainable Mobility** and the **Metropolitan Territorial Plan**. Moreover, the integration of Agenda 2.0 into the metropolitan strategic and sectoral planning is ensured through its embedding in the Single Planning Document (SPD) of the metropolitan city, for which a specific experimental action has been implemented.

⁸ https://psm.bologna.it/Engine/RAServeFile.php/f/documenti/Relazione_PSM_2.0.pdf



4

Forums and means for involving civil society

In order for the Strategies and Agendas to work and to concretely respond to the objectives for sustainable community development, their elaboration and implementation must be shared with civil society and local stakeholders.

The metropolitan city has promoted a series of **communication and dissemination initiatives inside and outside the body**, with a focus on **its employees, school communities**, as well as **local institutions and stakeholders**. This involvement, which is fully in line with the spirit of the UN 2030 Agenda, in fact aims at ensuring mutual accountability among the actors in the area and contributes to the initiation of a shared governance process. Agenda 2.0 was publicly presented at an **international event** held remotely on 24 June 2021, which more than 200 people followed.

In order to guarantee the maximum participation of the region both in the strategy drafting phase and in its implementation, the Emilia-Romagna region has established the **“Forum for the 2030 Agenda Regional Strategy for Sustainable Development”** based on the integrated evolution of already established or ongoing regional participatory experiences.

The Forum is also instrumental in ensuring synergies with the **Emilia-Romagna Sustainable Coordination (ERSC)** and with **Agenda 2.0 for Sustainable Development of the metropolitan city of Bologna**. The aim is to optimise initiatives, resources and tools with respect to the 2030 sustainability goals, as also required by the national framework supporting the construction of metropolitan agendas.

This network, which will be expanded over time, characterised by the involvement of other administrations, the economic and social partnership, businesses and civil society, takes place in an articulated and flexible but integrated framework through tools and discussions, with a view to the continuous refinement of forms of cooperation for sustainable development.

4.1 Stakeholder engagement in the Emilia-Romagna region

On 14 December 2020, after a long process of elaboration and discussion, the region and the institutional, economic and social partnership⁹ signed the **Jobs and Climate Pact**.

The Pact – which draws significantly from the UN's **2030 Agenda for Sustainable Development** – outlines a project for the **relaunching and development** of Emilia-Romagna, establishing shared commitments and responsibilities with respect to a common path that improves the quality of life of people and the planet and overcomes the conflict between **development and the environment**. A path

Emilia-Romagna region, Associazione Generale delle Cooperative Italiane (AGCI), Associazione Nazionale Comuni Italiani (ANCI), Associazione Nazionale dei Costruttori (ANCE), Metropolitan City of Bologna, Coldiretti, Comitato unitario delle professioni intellettuali degli ordini e dei collegi professionali (CUPEP), Commissione regionale ABI, Municipality of Bologna, Municipality of Cesena, Municipality of Ferrara, Municipality of Forlì, Municipality of Modena, Municipality of Parma, Municipality of Piacenza, Municipality of Ravenna, Municipality of Reggio Emilia, Municipality of Rimini, Confagricoltura, Confapi Emilia, Confapindustria, Confartigianato, Confcommercio, Confcooperative, Confederazione Generale Italiana del Lavoro (CGIL), Confederazione italiana agricoltori (CIA), Confederazione Italiana Sindacati Lavoratori (CISL), Confederazione nazionale dell'artigianato e della piccola e media impresa (CNA), Confederazione Produttori Agricoli (COPAGRI), Confesercenti, Confimi Romagna, Confindustria, Confprofessioni, Confservizi, Consiglio Nazionale delle Ricerche (CNR), federazione italiana Biciclette (FIAB), Forum Terzo Settore, Legacoop, Legambiente, Province of Ferrara, Province of Forlì-Cesena, Province of Modena, Province of Parma, Province of Piacenza, Province of Ravenna, Province of Reggio Emilia, Province of Rimini, Politecnico di Milano, Rete dei Comuni Rifiuti Zero, Ufficio scolastico regionale, Unioncamere, Unione delle Province d'Italia (UPI), Unione Generale del Lavoro (UGL), Unione Italiana del Lavoro (UIL), Unione Nazionale Comuni Comunità Enti Montani (UNCCEM), Università Cattolica del Sacro Cuore, University of Bologna, University of Ferrara, University of Modena and Reggio, University of Parma.

as challenging as it is necessary, particularly for the Po Valley, that does not jeopardise productive and natural capital, the employment of people and the well-being of society, but is instead a **driver of new and different development**.

For these same reasons, the Pact assumes **2030** as its horizon, which is indispensable to set the territory's development on new foundations and align Emilia-Romagna's pathway with those envisaged by the 2030 Agenda, the Paris Agreement, the European Union's target to reduce climate-changing emissions by at least 55% by 2030, the 2021-2027 planning of European funds and the National Recovery and Resilience Plan.

The working method


The Pact is based on the quality of relations between institutions, economic and social representatives, mutual recognition of the role that each of the signatories plays in society, the sharing of strategic objectives and the consequent assumption of responsibility.

The signed document and the path of **democratic participation** and **shared planning** that accompanied its elaboration are a confirmation and a “relaunching” of the method started in 2015 with the signing of the Jobs Pact, which in five years allowed Emilia-Romagna to recover ground from the long crisis that began in 2008, positioning it in terms of GDP per capita, added value, unemployment rate and exports among the best performing Italian and European regions.

Debate and sharing strengthen democracy and generate cohesion, and are a heritage that this region has been able to cultivate even in the most critical moments. The region has chosen to develop them further in order to cope with the complexity of the times and to undertake those changes necessary to guarantee a prosperous future for the public, and especially for the **younger generations**.

Strategic objectives and cross-cutting processes

The Pact outlines four strategic objectives and four cross-cutting processes that drive decisive dynamics for the inhabitants of the region. Each of them sets out guidelines that indicate the actions that the signatories consider to be priorities and undertake to implement in accordance with their own roles.

FROM THE STRATEGIC OBJECTIVES OF THE PACT TO THE REGIONAL STRATEGY		
Emilia-Romagna, region of knowledge and know-how	Investing in education, training, research and culture: not to undergo change but to bring about change; to generate quality jobs and combat precariousness and inequalities; to innovate manufacturing and services; to accelerate the ecological and digital transition.	
Emilia-Romagna, region of ecological transition	Accelerating the ecological transition to achieve carbon neutrality before 2050 and moving to clean and renewable energy by 2035; combining productivity, equity and sustainability, generating new quality jobs.	
Emilia-Romagna, region of rights and duties	Tackling territorial, economic, social and gender inequalities that weaken cohesion and prevent equitable and sustainable development	
Emilia-Romagna, region of work, enterprises and opportunities	Design a European, young and open region that invests in quality, professionalism and innovation, beauty and sustainability; to attract businesses and talent, supporting territorial vocations and adding new value to manufacturing, services and professions.	

FROM THE CROSS-CUTTING PROCESSES OF THE PACT TO THE REGIONAL STRATEGY	
Digital transformation	Make a major investment in the digital transformation of the economy and society starting with the three indispensable components: infrastructure, right of access and people's skills.
Simplification Pact	Strengthen and qualify the public administration and reduce bureaucracy to increase competitiveness and protect the environment and work within the law.
Legality	Promote legality, an identity value of our society and a guarantee of social and environmental quality.
Participation	Foster a new empowerment of communities and cities, engines of innovation and development, in the concrete management of Pact strategies.



4.2 Stakeholder engagement in the metropolitan city of Bologna

The opportunities for engagement with the metropolitan city's **stakeholders** took place through **institutional and project meetings**, such as the seminars of the mayors (16 November 2020) and of the development council together with the table of investee companies (17 November 2020), the participatory process in the Union of Municipalities of the Reno, Lavino and Samoggia Valleys, in the new Imola district and in the municipality of Bologna (25 March-23 April 2021), and **quantitative and qualitative surveys**: all this contributed to generating an ecosystem leading to the validation of the metropolitan city's Agenda 2.0 proposal.

The **path**¹⁰ that involved the administrators and stakeholders of the municipality of Bologna, the new Imola district and the Union of the Municipalities of the Reno, Lavino and Samoggia Valleys was aimed at creating a shared vision on the sustainable development objectives and actions included in Agenda 2.0. It was prepared by sending a guide to participants to help and direct their reflection. This document has a part on context and a part listing the quantitative objectives and core indicators of UN Agenda Goal 11 "Sustainable Cities and Communities", with an analysis of the specific territory, classified by dimensions (social,¹¹ environmental,¹² economic¹³ and institutional¹⁴). For each Goal/Target the following are presented: the distance from the Goals at a national, regional, metropolitan city and specific territory level, when data availability allows, with relevant commentary; the main actions

¹⁰ https://www.cittametropolitana.bo.it/agenda_sviluppo_sostenibile/documenti

¹¹ 1. No poverty; 2. Zero hunger; 3. Good health and well-being; 4. Quality education; 5. Gender equality; 10. Reduced inequalities.

¹² 7. Affordable and clean energy; 11.2. Mobility; 13. Climate action (combined under Metropolitan Bologna carbon neutral 2040-2050); 6. Clean water and sanitation; 11.3 Land consumption (later merged into 15. Life on Land); 11.6. Air quality; 12. Responsible consumption and production;

¹³ 8. Decent work and economic growth

¹⁴ 16. Peace, justice and strong institutions.

already in place or planned for each level, the result of a necessary selection; the summary of the Emilia-Romagna region's Pact for Jobs and Climate (December 2020) and the metropolitan city's Pact for Jobs and Sustainable Development (January 2021) with an indication of the lines of action of the strategic objectives of the regional pact and the project actions of the three clusters of the metropolitan pact.

The various meetings were conducted online as follows:

1) Plenary phase: introduction to the process, illustration of the main principles of the approaches with which Agenda 2.0 was constructed, the method employed to elaborate quantitative and qualitative objectives and the respective targets. Explanation of the quantitative targets and their main actions in Agenda 2.0 pertaining to 13 of the 17 SDGs of the 2030 Agenda including 3 targets for goal 11. The Guide to the participatory path was presented.

2) Working tables. Three working tables were structured, related to the classification of goals and targets of Goal 11 by prevailing dimensions, namely: a) social; b) environmental; c) economic and institutional. Dedicated to listening, collecting and discussing ideas and proposals in order to arrive at an overall framework – shared as much as possible throughout the Bologna metropolitan area – of objectives, indicators and actions to achieve them. During these virtual tables, the following questions were asked:

1. Quantitative targets identified at a national or a regional level can be differentiated at a metropolitan, union and municipal level and how?
2. Are there other quantitative targets that could be identified at metropolitan, union and municipal levels? If so, which?
3. What further actions should be taken at the level of the metropolitan city and municipality of Bologna to achieve the quantitative objectives (target scenario)?

3) Concluding phase: report in plenary session on what was discussed in the working tables and sharing of the main results that emerged aimed at aligning the different areas of sustainability.

In general, it can be emphasised that in the various meetings of this participatory process a significant awareness of planning instruments has emerged, including some that are supra-territorial, as well as an inclination on the part of the participating subjects to read the metropolitan context in light of sustainable development issues.

6 INCONTRI DI CONSULTAZIONE

25/03/21 Comune di Bologna – stakeholder
31/03/21 Comune di Bologna – amministratori
12/04/21 Unione Reno Lavino Samoggia – amministratori
16/04/21 Circondario Imolese – stakeholder
19/04/21 Unione Reno Lavino Samoggia – stakeholder
16/04/21 Circondario Imolese – amministratori

270 PARTECIPANTI

FINALITÀ:

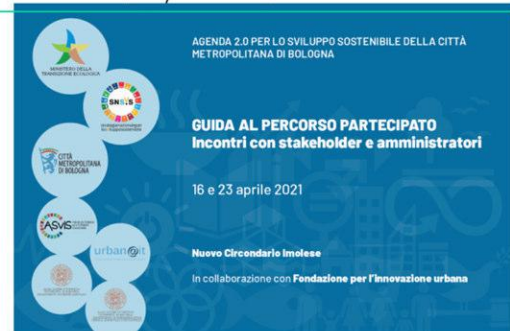
Creare una visione condivisa degli obiettivi/target ed azioni di Sviluppo Sostenibile inseriti nell'Agenda 2.0

MODALITÀ DEGLI INCONTRI

 (coordinati e facilitati da FIU)

- consultazione mediante **brainstorming** (board di Miro)
- suddivisione dei partecipanti in **3 gruppi** :
sociale e welfare (Goals 1-2-3-4-5-10), **economia** (Goals 8-12-16) ,
ambiente (Goals 6-7-11-12-13)

Nei diversi incontri del processo partecipato è emersa una **significativa consapevolezza degli strumenti di pianificazione**, anche sovra-territoriale, e una **propensione da parte dei soggetti partecipanti alla lettura del contesto metropolitano alla luce dei temi dello sviluppo sostenibile**.



At the same time as the participatory process, the mapping of ongoing actions in the metropolitan area was initiated with the aim of investigating good practices that contribute to achieving the Sustainable Development Goals (SDGs) of the UN 2030 Agenda. The survey aims to integrate Agenda 2.0 with good sustainability practices and disseminate them with a view to replicability and diffusion, raising awareness. The activity of identifying actions or good practices in the metropolitan territory started from the reconnaissance of the actions already in place or planned in the various planning instruments of the metropolitan city. The most recent instruments drawn up at a regional level (*Emilia-Romagna Regional Jobs and Climate Pact*) and at a metropolitan level (*Metropolitan Jobs and Sustainable Development Pact*) were also analysed. In both cases, the qualitative analysis of the current strategic planning was used to make an association between the various lines of action and projects and the specific targets of the SDGs. The reflection on the location of the lines of action of the Metropolitan Pact and the projects of the Regional Pact was functional to their classification by SDG goals and targets, in line with the choices of method and merit made in the various activities outlined in them and therefore consistent with the Agenda 2.0 approach.

In order to carry out a comprehensive survey of the actions and good practices implemented or being implemented by stakeholders in the area, a **questionnaire by invitation** was prepared. The questionnaire, a purely qualitative survey, was addressed to the metropolitan city's stakeholders, totalling 122 entities of various nature. The survey, which started on 8 March 2021 and ended on 2 April 2021, was conducted on the metropolitan city's web platform. The questionnaire is divided into the following three sections:

- 1) Identification questions: designed to classify the entity-stakeholder on the basis of its legal nature, size and location in the metropolitan territory.
- 2) Description of priority actions: each entity is asked to indicate a maximum of five actions/projects/good practices carried out or under way in the entity in the last five years that are considered to have contributed or contribute to the achievement of the UN 2030 Agenda's sustainable development goals, the association of which must be made explicit. If there are more than five, the entity is invited to choose the most significant ones on the basis of the area of intervention considered a priority by the entity, and of these those considered to have the

greatest impact. For each of these, basic information was requested (objectives, content, type, duration, territorial context, partnership, costs, funding sources, measurement of results), and links to external content could be included.

- 3) Additional actions: respondents were given the opportunity to list up to a maximum of 10 additional projects with a summary description and association with the relevant SDG(s) to report additional actions/projects/good practices of particular relevance.

The respondents totalled 47 out of 122 organisations, or 38.5% of those invited. The total number of priority actions/good practices/projects was 178, while 55 were “further actions” entered in the third section by the participants.

Each action was associated with one or two Sustainable Development Goals (SDGs) of the UN 2030 Agenda to which it contributes/has contributed or will contribute most.

An analysis of the surveys (*fig. 1*) reveals a primary focus on the environmental dimension of sustainable development, with an expected prevalence for its interactions with urban environments (goals 7, 11, 13, 15). Related to this was the focus on production and consumption from a circular economy perspective (goals 12 and 9), which, however, is not significantly reflected in the socio-economic implications. The goals dedicated to them (goals 1, 5, 8) remain below the median value of 10 associations, with the exception of goal 10. Reducing inequalities reached 17 associations (or 6% of the total), testifying to an increasing focus on social vulnerabilities. The focus of priority actions related to goals 3 and 4 further reflect the needs that the COVID-19 pandemic highlighted at a territorial level. Lastly, the presence of 10 associations – the median value – with Goal 17 is worthy of note. Partnerships for goal achievement: this finding indicates a positive focus on the need to create networks for sustainable development, fully in line with the spirit of the UN 2030 Agenda.

This snapshot remains valid even if we consider other actions that the respondents could describe (*fig. 2*): there is always a prevalence of goal 11. Sustainable cities and communities at 21%, followed by Goal 3. Good health and well-being at 12%, goal 13. Climate action and 4. Quality education at 10%, goal 15. Life on Land at 8%. Associations with Goals 14. Life below water and 16. Peace, justice and strong institutions are always absent.

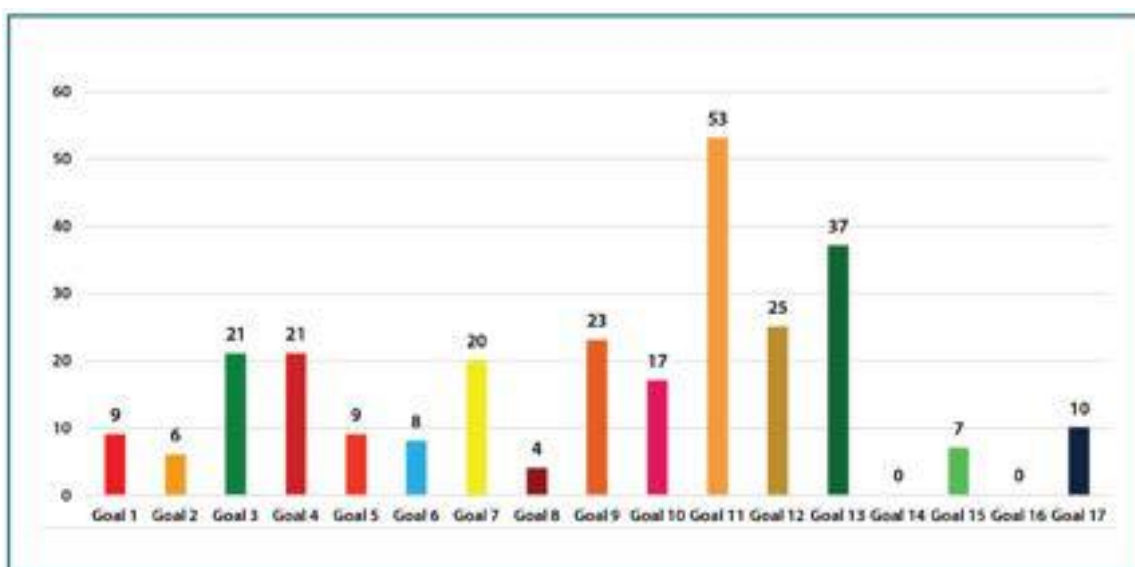


Fig. 1 - Contribution of priority actions/projects/good practices to the Sustainable Development Goals (SDGs)

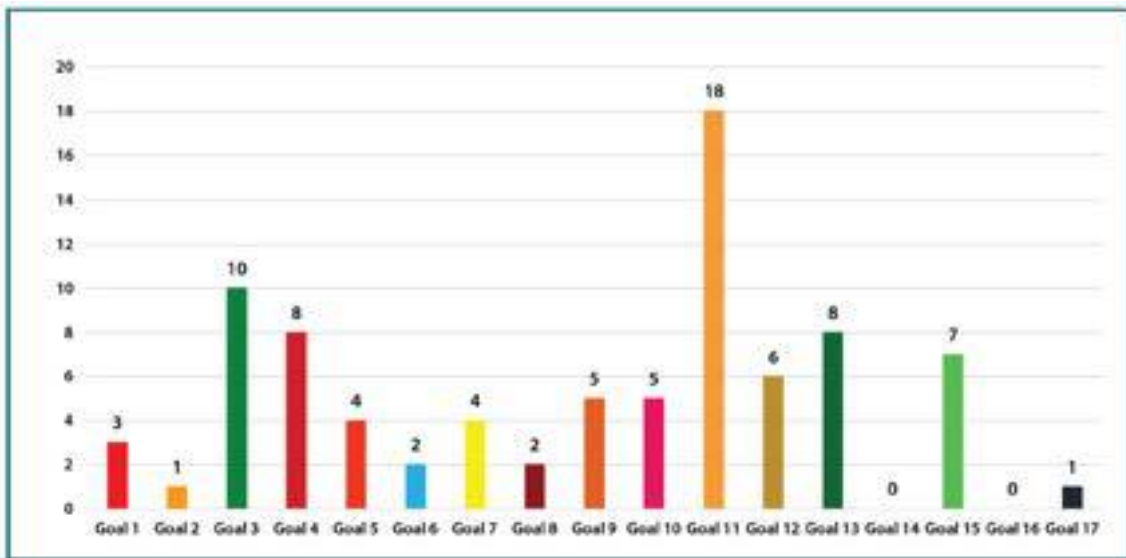


Fig. 2 - Contribution of further actions/projects/good practices to the Sustainable Development Goals (SDGs)

4.2.1 SUSTAINABLE WORKING STYLES

Sustainable work styles are defined as a way of experiencing everyday working life in a socially, environmentally and economically sustainable manner, i.e. compatible with social cohesion, environmental protection and economic development.

The metropolitan city of Bologna was committed to developing an action that would bring forth proposals for sustainable work styles from the grassroots, from the very employees who make up its communities and its social and human capital.

The avocado was provocatively chosen as the logo, the cultivation of which is known to be one of the most unsustainable, but whose local cultivation is currently being experimented with in order to reduce its importation.

The product of this project is the document *Sustainable Working Styles: a handbook for metropolitan local authorities*, produced after the participatory process with the employees of the metropolitan city of Bologna, which reports on the results and the process followed, also providing some useful tools to implement it, in order to make it replicable in other contexts and in other public organisations.

The participatory process, which started in January and ended in September 2021, consisted of three phases:

1. Exploration phase: a selected group of employees in managerial and organisational positions was interviewed, which raised the first needs and issues relevant to the organisation with regard to the topic of sustainability and the first ideas for practical proposals. Based on these initial elements, a survey was drawn up for all employees of the organisation to investigate their perception of the current status of the organisation with regard to sustainability, as well as to encourage active participation with the possibility of proposing ideas and suggestions.

2. Conceptualisation phase: this phase consisted of a focus group involving young Generation Y employees, and a collective co-design phase that made it possible to arrive at new ideas and concrete proposals from the grassroots, with the aim of taking them forward towards feasibility, even autonomously by the employees themselves. The ideas developed are as follows: *Water at 0 m* - Water for all without plastic; *Urban-indoor forestation* - Adopt a green area; *Welcome to the metropolitan city* - Onboarding.

3. Dissemination and experimentation phase: drafting of the handbook for sustainable work styles, to be supported, disseminated and replicated in the other entities of the Bologna metropolitan area.

4.2.2 INVOLVEMENT OF THE METROPOLITAN SCHOLASTIC COMMUNITY

The National Strategy for Sustainable Development 2021 aims at strengthening the area dedicated to the “Vectors of Sustainability”, enabling conditions for triggering a transformation towards sustainable development: one of these is dedicated to the “culture of sustainability”, understood as education, training, information and communication. Specifically, education is articulated both as a capacity to recompose educational fragmentation, innovating the places and actors of education, and as an activator of an educating community through, for example, the development of educational partnerships for sustainable development. The aim is to make schools and all those who attend them increasingly aware that sustainability is a choice that must be translated into concrete initiatives every day, that it is precisely the skills and creativity of teachers and students that can be promoters of this development.

At the local level, the metropolitan city of Bologna is supporting the school community in establishing paths to inform, educate and promote sustainable development issues, investing in the education of teachers, students and staff working in the school. Specifically, it took two specific actions:

1. The announcement of a **competition on sustainable development issues**¹⁵ aimed at all secondary schools in the metropolitan territory. In partnership with the regional scholastic office, Office V - Territory of Bologna, with a public notice the metropolitan city of Bologna announced for the school years 2019/2020 and 2020/2021 a competition of ideas for the dissemination of the principle of sustainable development in the metropolitan area’s secondary schools. This initiative intends to promote the establishment of scholastic communities of shared practices, to pursue the sustainability dimension through: the creativity and skills of teachers and students, promoters and protagonists of sustainable development choices; the involvement of the scholastic community, and the launching of education and awareness-raising processes for sustainable development; the promotion of environmental and sustainability culture. The aim is to raise the awareness of and responsibility for environmental issues in younger and older generations.

For the 2019/2020 edition, students were invited to design and implement an awareness-raising campaign on Agenda 2.0 issues. Forty-three classes participated and 13 project ideas were awarded

¹⁵ https://www.cittametropolitana.bo.it/agenda_sviluppo_sostenibile/Home_Page/Archivio_news/Leva_per_la_sostenibilita

€1,000. From these, a specially formed commission chose the three winning projects, which won €2,000 for first place, €1,200 for second place and €800 for third place.¹⁶

The 2020/2021 edition (still in progress) requires students to tell the story of sustainability – in the broad and articulated sense of the UN 2030 Agenda – by means of a video starting from the places/people in the metropolitan area who practise it, enhance it and promote it, identifying a public space to be reinterpreted in a sustainable key. As in the first edition, the same cash prizes are planned, which will be used by the participating schools both to make the submissions and to promote other sustainability-related actions.

2. The focus on sustainable development issues of the **Festival of Technical Culture**,¹⁷ an initiative conceived and promoted by the metropolitan city of Bologna and implemented starting in 2014 in collaboration with numerous partners including institutions, schools, bodies and companies within the framework of the Bologna Metropolitan Strategic Plan. The festival is structured as a calendar of events aimed at raising awareness and appreciation of all the channels and directions of technical and vocational education and training; at promoting greater awareness of the connections between doing and thinking and of the importance of technology and science in people's lives (technical-scientific skills as citizenship skills); to promote the connection between the education and training system, the production system, local authorities and all the players in the area, for a community development that is simultaneously social, cultural and economic; to give visibility to the innovative projects and initiatives implemented by all the metropolitan players with respect to the aforementioned topics. The events are free of charge and aimed at different targets, and great attention is paid to young people and the education system, as well as to the involvement of citizens and local communities.

Starting with the 2018 edition, the metropolitan city and the Emilia-Romagna region have promoted the dissemination of the festival in all the provinces of the region.

The 2020 festival inaugurated a cycle of editions dedicated to the UN 2030 Agenda for Sustainable Development, in strong connection with Agenda 2.0, dedicating it in particular to “sustainable development and resilience”, understanding the latter as a key factor also for overcoming the crisis caused by COVID-19. The 2021 edition paid specific attention to the education system, choosing as its focus the UN objective "Quality education" to contribute to an assessment, also from a scientific point of view, of the positive and negative effects of remote learning, lockdowns, social distancing etc. on the teaching/learning processes, on the organisation of schools and other educational agencies, on professional skills, on the psycho-social dimensions of youth and adults, on orientation, on the importance of education to counteract the loss of work and opportunities, on the role of the local region and the production system, capitalising on experiences and starting from new knowledge to reprogramme the actions and intervene on the marginalities that have been created.

¹⁶ Videos of the winning schools:

https://www.cittametropolitana.bo.it/agenda_sviluppo_sostenibile/Home_Page/IdEE_giovani_e_vincenti_per_lo_sviluppo_sostenibile

¹⁷ <https://www.festivalculturatecnica.it/>

5

Pilot actions of the metropolitan city of Bologna

As part of Agenda 2.0, the metropolitan city has launched a series of pilot projects, each of which contributes to the achievement of the SDGs.

1. Transition towards a circular economy in the hill and mountain area of the metropolitan city of Bologna.
2. Pre-feasibility study on the reorganisation of public transport services in production areas.
3. Guidelines for metropolitan forestry.
4. Operation Centre & Cities Web.

As noted in *section 4*, parallel and cross-cutting actions concern **communication and dissemination of sustainable development within and outside the organisation**.

5.1 Transition towards a circular economy in the hill and mountain area of the metropolitan city of Bologna

The metropolitan city has addressed the issue of circular economy, developing a project that specifically concerns the 23 municipalities of the Apennines: what does it mean to pursue a circular economy in a hill and mountain area? Which aspects come more naturally and which are more complex to manage? How can companies in this area, which for geo-morphological and historical reasons are less involved in the innovation and development that characterise the Bologna metropolitan area, be supported and accompanied towards a future of circularity? To answer these questions, the metropolitan city promoted the drafting of guidelines,¹⁸ starting with an analysis of the current spread of the circular economy in the aforementioned 23 municipalities, interpreted in light of a specially designed circularity indicator.

The concept of “circular economy” was broken down into 10 relevant dimensions: eco-design; procurement; energy and resources; waste; transport and logistics; promotion of sustainable lifestyles; circularity of supply chains; sharing with the local community; inclusiveness and certification. For each of these, the document explains the different activities in which that particular dimension of circularity can manifest itself; it discusses the actual or potential problems for Apennine enterprises wishing to measure up to that dimension of circularity; it puts forward solutions and presents good practices related to the above critical issues; and finally it proposes how to cast the dimension of circularity in the context of the Apennines of Bologna.

¹⁸

https://www.cittametropolitana.bo.it/agenda_sviluppo_sostenibile/Home_Page/Archivio_news/economia_circolare_nel_territorio_collinare_e_montano

The drafting was supported by a series of interviews with companies in the area (including BASF, DISMECO, HERA, GAL Appennino Bolognese), which allowed us to discuss and better understand the needs of the Bolognese Apennine businesses in a possible circular economy.

The guidelines highlight the greater propensity for circularity of the municipalities of the foothills and those in the eastern part of the Reno Valley, but also a marked predisposition to sustainable tourism for the Setta Valley and sustainable mobility for the Reno Valley thanks to the location of two of the four local lines crossing the entire regional Apennines, and a certain attention to the issue of waste in the Santerno Valley. Finally, the map shows an evident entrepreneurial vocation for the Samoggia Valley, but certainly due to the concentration of enterprises in the lowland localities of the merged municipality, from Crespellano to Bazzano, rather than to a true aptitude for green enterprise on the Apennine side of the valley. Finally, worthy of note is the lack of a territorial position with respect to the topic of energy, and on the contrary a similarity in level of interest for environmental matters, proportionally increasing as one travels from foothill to crest.

5.2 Pre-feasibility study on the reorganisation of public transport services in production areas

This pilot project involves the drafting of a pre-feasibility study on the reorganisation of public transport services to **improve public accessibility of production areas**, including in terms of improving the quality of life of the workers themselves.

The objective is to identify the conditions, necessary services, agreements to be made and the administrative and legal framework for the realisation of new local public transport services for industrial or logistical areas of metropolitan importance also covered by private funding and/or in the form of “mobility vouchers” for workers.

In order to make the pre-feasibility study as responsive as possible to the most up-to-date actual conditions governing and directing the matter, a **preliminary in-depth study was carried out on the administrative/legal and economic/fiscal issues** related to the various possibilities and opportunities for promoting and supporting the activation of public transport services (and sustainable mobility in general) to improve the accessibility of productive areas. The most potentially effective solutions, and therefore worthy of further study, were identified as those related to the financing of local public transport passes, collective reserved transport, so-called mobility vouchers, car sharing, car pooling, and the establishment of company and area mobility managers. The work provides a complete, up-to-date and useful framework for technicians in public administrations and companies on issues related to the promotion of public transport and sustainable mobility for people working in the metropolitan production system, in particular regarding the economic/fiscal and legal/administrative definition of the formulas that can be employed; the conditions and the administrative and legal framework for the realisation of new LPT services for productive areas; the possible types of agreement between companies, public transport service managers and administrations; the favourable tax conditions for companies and employees for the purchase of public transport services, employee passes, collective reserved transport services; the opportunities for supporting company welfare (e.g. mobility bonus); innovative incentive solutions; incentives for company (and area) mobility management policies; possible sources and solutions of public/private financing; policies/measures to be included within territorial agreements and understandings to encourage sustainable mobility.

Based on the conclusions and indications of this preliminary work, a pre-feasibility study is being developed for the reorganisation of public transport services to improve the public accessibility of the Ozzano area, where both IMA and the Veterinary Department of the University of Bologna are located.

5.3 Guidelines for metropolitan forestry

Consistent with the 2019 Climate Decree, which promotes various measures to improve air quality, and in line with the strategies of the Metropolitan Territorial Plan (MTP), the metropolitan city of Bologna has developed a **strategy to define a unified, coherent and coordinated metropolitan forestation programme** capable of bringing together all the free areas available for forestation in the metropolitan territory, and involving, in particular, the most critical and sensitive areas that most urgently need action to improve their situation.

The intention is to create a true “**green infrastructure**” to serve the environment and the community, functional to the well-being and health needs of ecosystems and the public.

In order to define this strategy, the metropolitan city conducted a territorial survey that has allowed for the construction of a qualitative and quantitative framework regarding the current situation of forestation in the metropolitan territory, with an analysis of the dynamics of the last decades, also spotlighting the most critical territorial areas from the point of view of climate-altering emissions and air quality, without neglecting a framework of the regulatory and planning instruments related to forestation in the metropolitan and regional territory, starting from national and international regulations. Furthermore, an in-depth study was carried out on the planning and green regulation strategies and tools adopted by the individual municipalities through the administration of a questionnaire addressed to the municipalities that present the most critical issues with respect to air quality, i.e. those in the plains and those that, although in hilly areas, are characterised by the presence of supra-municipal production areas and metropolitan HUBs and/or integrated metropolitan functional hubs (Sasso Marconi, Pianoro and Valsamoggia).

From the overall picture, however, it clearly emerges that the metropolitan city's future projects will have to focus on the most sensitive areas such as the plains, the conurbation that has grown up around the provincial capital, the major road axes, the supra-municipal production and logistics areas and the functional poles (including Interporto in the municipality of Bentivoglio, Centergross in Castel Maggiore, the CAAB Agrifood Centre and the airport in Bologna), and in a few cases in the hilly areas in the broader stretches of the Reno, Savena and Santerno valleys.

The ***Guidelines for metropolitan forestation***¹⁹ that have thus emerged offer the reader (whether a planner, technician, administrator of the metropolitan area of Bologna, or other public or private person) a tool that contains the main planning and technical-operational elements of reference for carrying out urban and extra-urban forestation operations that are sustainable from both ecological-environmental and socio-economic points of view. The *Abacus of Green Types and Plant Species* suggests different types of interventions and technical forestation solutions according to the setting in question

¹⁹

https://www.cittametropolitana.bo.it/agenda_sviluppo_sostenibile/Home_Page/Archivio_news/Linee_guida_per_la_forestazione_metropolitana

(urban, peri-urban and extra-urban) and the characteristics of the main tree plant species suitable for use in the Bolognese territory are available, with particular attention to the city and the plains.

In the *Area Planning Sheets* the Guidelines are "put into practice", starting with certain topics that the Metropolitan Territorial Plan identifies as strategic for spatial planning purposes: Ecological network; Bicycling network; Mobility centres; Agricultural ecosystem; Supra-municipal production areas and/or integrated Metropolitan Hubs. Indeed, for each area considered, the design, execution and management aspects of the projects are identified, including the costs of installation and maintenance that must necessarily be foreseen in order to guarantee their success.

5.4 Operation Centre & Cities Web

The project envisages experimentation in three municipalities of the metropolitan area (**Bologna, Granarolo dell'Emilia, Imola**) and in the **metropolitan city** with a platform designed to monitor the indicators identified by Agenda 2.0 along with others deemed of interest by the local administrations. This tool was developed by the Hera Group to help administrations, bodies and any organisation to monitor the territory using simple, innovative methods in order to compare and be able to efficiently plan strategic improvement actions aimed at sustainability, and therefore at achieving the 17 goals of the UN 2030 Agenda.

This platform is based on the use of two monitoring dashboards working in synergy: the Operation Centre and the Cities Web.

The Operation Centre is an informative dashboard that will allow the three experimenting municipalities to collect, catalogue, represent and analyse their environmental, social and economic data on an interactive medium. Specifically, a tool known as the "environmental passport" was developed that features KPIs in three macro areas – environmental, social and economic – and is automatically updated by data that can be drawn from any system: IoT sensors, open data, proprietary or third-party data. Employing an innovative and intuitive approach, it is possible to have a detailed view of the territory and its data, comparing them with common sustainability goals in order to quickly understand what actions to take and initiate in order to improve and increase the territory's efficiency.

The Cities Web is the second, higher-level dashboard, developed for those administrations that have smaller ones within them, as in the case of the metropolitan city of Bologna. The Cities Web brings together all the individual data points produced by the three Operation Centres, making it possible – with an integrated approach – to promote, plan, implement and manage the sustainability and smartness of these territories involved in the trial.

6

The territorialisation of the SDGs

6.1 Towards an SPD scheme integrated with Agenda 2.0 for sustainable development

As we noted in *section 3*, Agenda 2.0 must become a point of reference for guiding and integrating planning and programming tools, culminating in the embedding of this document in the programming cycle of entities through the three-year Single Planning Document (SPD).

In the future, a **single integrated multi-level system** will have to be developed in order to **bring together the planning of all local authorities in the metropolitan area in a single process, ensuring consistency with the objectives of Agenda 2.0, as well as its continuous monitoring and updating.**

This experiment has involved not only the **metropolitan city** itself, but also the **new Imola district**, the **union of the municipalities of Reno, Lavino and Samoggia**, the **municipality of Bologna** and the **municipality of Monte San Pietro**. Given the cross-cutting nature of this action, which involves the various levels of government of the territory engaged in the planning and implementation of public policies, interacting with multiple sectors of intervention and disciplines, it was necessary to set up a cross-sectoral and inter-institutional working group involving external entities such as ASviS and Urban@it in addition to the aforementioned institutions.



Each of the experimenting bodies published together with the SPD 2022-2024 an **annex entitled “Towards an SPD scheme integrated with Agenda 2.0 for Sustainable Development of the Metropolitan City of Bologna”** divided into two parts.

1. The first part is devoted to the positioning of each of the experimenting institutions with respect to the 26 goals of Agenda 2.0. For each of the 26 quantitative goals the following is provided:
 - Association with the UN 2030 Agenda goals: for ease of reading, the goals and targets have been divided into four areas: social, environmental, economic and institutional.
 - Last available national, regional and metropolitan annual data. It was not possible to calculate some indicators at a municipal and/or metropolitan city level according to the methods and sources of the other territorial levels due to the lack of the relevant data. In such cases proxy indicators were used, which provide values that are not directly comparable with those calculated for the other levels.
 - Short-term (5 years) and long-term (10 years) assessment for each level, so as to facilitate an immediate comparison between the various institutional levels. To assess the achievement of the quantitative target, where historical data are available (otherwise the last available value is provided) the Eurostat method was used, which involves assessing the intensity and direction that the indicator is moving in with respect to the target using arrows. This assessment depends on the ratio between the actual growth rate and the growth rate needed to achieve the target, and has four possible assessments with the corresponding arrows having a different colour (green or red) and a different slope.

Objectives with a predominantly environmental dimension

Target	Obiettivi e indicatori	Dati ultimo anno disponibile per livello	Valutazione di breve periodo	Valutazione di lungo periodo	Metodologia
2.4	Entro il 2030 ridurre del 20% l'utilizzo di fertilizzanti distribuiti in agricoltura rispetto al 2018 (kg per ettaro)	CM 550,3 (2019) E-R 736,5 (2019) ITA 322,6 (2019)	↓ ↓ ↓	↑ ↓ ↑	A ¹
2.4	Entro il 2030 ridurre del 50% l'utilizzo di fitosanitari distribuiti in agricoltura rispetto al 2018 (kg per ettaro)	CM 10,9 (2019) E-R 19,2 (2019) ITA 9,2 (2019)	↓ ↓ ↘	↗ ↘ ↘	A ²
2.4	Entro il 2030 raggiungere il 25% della superficie agricola investita in coltivazioni biologiche	E-R 15,4% (2019) ITA 15,8% (2019)	↑ ↑	: :	A ³
6.4	Entro il 2030 raggiungere quota 80% nell'efficienza delle reti di distribuzione dell'acqua potabile	CoBo 71,9% (2018) E-R 68,8% (2018) ITA 58,0% (2018)	↓ ↓ ↓	: ↓ ↓	C

6.6	Entro il 2027 portare tutti i corpi idrici al livello buono o eccellente di qualità ecologica	CM 26% (2017-2019)	↓	:	A ⁴
7.2	Entro il 2035 raggiungere il 100% di energia da fonti rinnovabili	CM 14,3% (2019) ER 20,5% (2019) ITA 34,9% (2019)	↘ ↓ ↓	:	A ⁵
11.2	Entro il 2030 aumentare del 26% rispetto al 2004 il numero di posti-km per abitante (prodotto del numero di km percorsi nell'anno dai veicoli del TPL per la loro capacità media rapportato alla popolazione residente)	CoBo 3899 (2019) E-R 2809 (2019) ITA 4624 (2019)	↘ ↘ ↘	↓ ↓ ↓	D
11.2	Entro il 2030 raddoppiare l'estensione delle piste ciclabili rispetto al 2019 (km per 100 km ²)	CoBo 96,9 (2019) ITA 24,2 (2019)	↗ ↗	:	A ⁶

Target	Obiettivi e indicatori	Dati ultimo anno disponibile per livello	Valutazione di breve periodo	Valutazione di lungo periodo	Metodologia
11.6	Entro il 2030 ridurre i superamenti del limite di PM10 a 3 giorni all'anno (n. giorni)	CM 42 (2020) E-R 75 (2020) ITA 83 (2019)	↓ ↓ ↘	↘ ↘ ↘	A ⁷
12.4	Entro il 2030 raggiungere quota 80% di raccolta differenziata dei rifiuti urbani	CM 65,5% (2019) E-R 70,6% (2019) ITA 61,4% (2019)	↑ ↑ ↑	↑ ↑ ↑	A ⁸
12.5	Entro il 2030 ridurre la produzione di rifiuti urbani per abitante del 27% rispetto al 2003 (kg pro-capite)	CM 592,2 (2019) E-R 662,8 (2019) ITA 499,3 (2019)	↓ ↓ ↓	↓ ↓ ↘	D
13.2	Entro il 2050 azzerare le emissioni di gas climalteranti (migliaia di tonnellate di Co2 equivalente)	CoBo 1801 (2018)	↘	↘	A ⁹

15.3	Entro il 2050 azzerare l'aumento del consumo di suolo annuo (ettari annui di suolo consumati per 100.000 abitanti)	CM 7,4 (2020)		:	A ¹⁰
		E-R 9,5 (2020)		:	
		ITA 8,7 (2020)		:	
15.5	Entro il 2030 raggiungere la quota del 30% delle aree terrestri protette	E-R 4,2% (2019)	:	:	A ¹¹
		ITA 10,5% (2019)	:	:	

Objectives with a predominantly social dimension

Target	Obiettivi e indicatori	Dati ultimo anno disponibile per livello	Valutazione di breve periodo CM	Valutazione di lungo periodo CM	Metodologia
1.2	Entro il 2030 ridurre del 20% il numero di persone a rischio di povertà o esclusione sociale rispetto al 2019	CM 20,5% (2017) ¹⁶	:	:	A ¹⁷
		E-R 15,5% (2019)			
		ITA 25,6% (2019)			
3.6	Entro il 2030 dimezzare il numero di feriti derivanti da incidenti stradali rispetto al 2019 (n. feriti ogni 1.000 abitanti)	CM 3,4 (2020)			A ¹⁸
		E-R 3,4 (2020)			
		ITA 2,7 (2020)			
4.2	Entro il 2030 raggiungere quota 98% di partecipazione alla scuola d'infanzia (4-5 anni)	CM 94,4% (2019)		:	A ¹⁹
		E-R 93,5% (2019)		:	
		ITA 96,0% (2019)		:	

4.3	Entro il 2030 raggiungere la quota del 50% dei laureati tra i 30-34 anni (percentuale tra i 25 e i 39 anni)	CM 41,8% (2020)	↑	↑	A ²⁰
		E-R 33,6% (2020)	↗	↑	
		ITA 28,3% (2020)	↗	↗	
5.1	Entro il 2030 dimezzare il gap occupazionale di genere rispetto al 2020 (tasso di occupazione femminile / maschile)	CM 85,8 (2020)	↗	↓	A ²¹
		E-R 81,8 (2020)	↓	↓	
		ITA 72,6 (2020)	↓	↗	
10.4	Entro il 2030 raggiungere quota 4,2 nell'indice di disuguaglianza del reddito disponibile (ultimo quintile / primo quintile)	E-R 4,6 (2018)	↗	↓	B
		ITA 6,1 (2018)	↓	↓	
		CM 9,3 (2015) ²²	:	:	

Objectives with a predominantly economic dimension

Target	Obiettivi e indicatori	Dati ultimo anno disponibile per livello	Valutazione di breve periodo CM	Valutazione di lungo periodo CM	Metodologia
8.5	Entro il 2030 raggiungere la quota del 78% del tasso di occupazione (20-64 anni)	CM 76,6% (2020)	↑	↑	A ¹²
		E-R 73,8% (2020)	↑	↓	
		ITA 62,6% (2020)	↗	↓	
8.6	Ridurre entro il 2030, la quota di giovani che non lavorano e non studiano (Neet) al di sotto del 10%	CM 15,0% (2020)	↑	↓	A ¹³
		E-R 15,9% (2020)	↗	↓	
		ITA 23,3% (2020)	↓	↓	
9.c	Entro il 2025 raggiungere la quota del 100% di famiglie servite dalla banda larga ad almeno 30Mbps	CM 76,0% (2019)	:	:	A ¹⁴
		E-R 68,1% (2019)	:	:	
		ITA 66,0% (2019)	:	:	
9.5	Entro il 2030 raggiungere quota 3% di incidenza della spesa totale per Ricerca e Sviluppo sul PIL	E-R 2,03% (2019)	↑	↑	A ¹⁵
		ITA 1,45% (2019)	↓	↓	

Objectives with a predominantly institutional dimension

Target	Obiettivi e indicatori	Dati ultimo anno disponibile per livello	Valutazione di breve periodo CM	Valutazione di lungo periodo CM	Metodologia
16.3	Entro il 2030 ridurre l'affollamento degli istituti di pena al 100%	CM 134,2% (2020)	↗	↑	C
		E-R 104,9% (2020)	↓	↑	
		ITA 105,5% (2020)	↓	↑	
16.7	Entro il 2030 raggiungere quota 195 giorni di durata dei procedimenti civili (n. giorni)	E-R 258 (2020)	↑	:	B
		ITA 419 (2020)	↘	:	

2. The second part uses a matrix to illustrate the association between the Agenda 2.0 goals and the general and specific objectives of the 2022-2024 SPDs of each authority, and, where appropriate, the performance plan indicators related to the UN 2030 Agenda targets these goals refer to.

These matrices represent an initial tool for reading the metropolitan, union and municipal SPDs in light of the 26 objectives of Agenda 2.0, having shared a single key for interpreting these instruments: they allow each experimenting authority to reason on its own shortcomings based on the data entered by the other authorities in order to fill in any gaps. It is important to point out that in drawing up Agenda 2.0 following the logic of building a multi-level system, the metropolitan city deliberately “looked” at the area to identify the indicators, regardless of its own competences. On the other hand, it may not have considered more specific objectives for the municipal area, which it will be important to discuss.

Below is an example of the matrix that relates an Agenda 2.0 objective referring to UN Goal 8.5 with the general and specific objectives of the metropolitan city's SPD.

AGENDA 2.0: Obiettivi quantitativi a prevalente dimensione economica				
n. Target	Obiettivi indicatori quantitativi Agenda 2.0	Obiettivi generali DUP 2022 – 2024	Obiettivi specifici DUP (piano performance 2021)	Descrizione Indicatore (piano performance 2021)
8.5	Raggiungere nel 2030 il livello del 78% del tasso di occupazione.	SVILUPPO E BUONA OCCUPAZIONE	Insieme Per il Lavoro	CANDIDATI PRONTI AD UN INSERIMENTO AZIENDE COINVOLTE NEL PROGETTO RINNOVO PROTOCOLLO E CONVENZIONI
			Qualità del Lavoro	COLLOQUI EFFETTUATI PRESSO LO SPORTELLO OCC ACCORDI SIGLATI IN SENO AL TAVOLO DI SALVAGUARDIA MONITORAGGIO PROTOCOLLI DI SITO INTESE PER LA BUONA OCCUPAZIONE
		CONSOLIDAMENTO TRASFORMAZIONE ED ATTRATTIVITÀ DEL SISTEMA ECONOMICO IN UNA DIMENSIONE INTERNAZIONALE	Sostegno al sistema produttivo e promozione di investimenti di carattere locale e globale	CREAZIONE DATABASE INTERNO SITI /IMMOBILI DA PROMUOVERE INCONTRI CON SOGGETTI PROPONENTI INVESTIMENTI
		CITTÀ METROPOLITANA AREA VASTA A FINALITÀ TURISTICA	Operatività della Destinazione Turistica	APPROVAZIONE PROGRAMMA ANNUALE DELLE ATTIVITÀ TURISTICHE
		GOVERNANCE RETI E INTEGRAZIONE ISTITUZIONALE PER LO SVILUPPO ECONOMICO	Una Rete di Relazioni per il territorio metropolitano	INCONTRI NELL'AMBITO DEI PATTI TERRITORIALI PER L'OCCUPAZIONE E LO SVILUPPO INCONTRI CON AZIENDE DEL TERRITORIO INCONTRI DI ANIMAZIONE E NETWORKING CON AZIENDE ECCELLENTI TRAMITE CLUBPRO

6.2 The Project for the territorialisation of the region's SDGs

In agreement with the regional ANCI, ALI and UPI, the Emilia-Romagna region plans to set up a multi-level coordination team. The multilevel coordination team has the task of testing the construction of the multi-level system of territorial agendas for the sustainable development of the Emilia-Romagna region in the implementation of the regional strategy, hinged on the planning tools of the authorities (SPD) and accompanied by the publication of the targets to be achieved, the actions to achieve them, and the relevant updates on the respective institutional websites.

The multilevel team includes the **metropolitan city of Bologna** and **local authorities** representing **both the various levels of government and the territories themselves**.

Stakeholders are involved through the various participatory tools of the Emilia-Romagna region, in particular the regional forum for sustainable development and the table of Jobs and Climate Pact signatories.

Activity	Description
1	<i>Definition of criteria for the multilevel team with regional ANCI, ALI, UPI and the metropolitan city of Bologna</i>
2	<i>Selection of entities participating in the experiment representative of active experiences, levels of government and territories</i>
3	<i>Identification of the set of quantitative targets the REFD and SPD actions should be associated with</i>
4	<i>Consultation on the set of targets addressed to municipalities, unions and provinces via the Participation Platform</i>
5	<i>Classification of the strategic objectives of REFD 2023-2025 on the basis of the goals and targets of the UN 2030 Agenda and association with the identified set of quantitative targets</i>
6	<i>Definition and updating of a dissemination format for the publication of quantitative targets and related actions on the pages of entities' websites dedicated to strategies and agendas</i>



VOLUNTARY LOCAL REVIEW

22

**REGIONE LAZIO
SOSTENIBILE E
PARTECIPATA**



INTRODUCTION/PREMISE

The UN 2030 Agenda is a great opportunity for our community to grow because it forces everyone to make a complex but inescapable conceptual effort: to consider, at the same time and in the same space, all dimensions of living by identifying links and connections that, on closer inspection, have always been recognizable but were struggling to emerge, perhaps because they were not considered so necessary.

It is simpler to reason and act by separate compartments, domains or spheres of interest and also more effective in terms of visibility of results, probably, in the short term, however, this is no longer the way to go; complex problems can only be matched by equally complex solutions.

The pandemic has brought out with greater urgency and virulence this truth, which, moreover, is already well present in the guiding principles of sustainable development in which environmental, social and economic issues are held together in a system of continuous interaction and cause-and-effect.

It is not "just" a matter of viewing reality and problems from a broader perspective; it pertains to concrete everyday decisions at different scales: from citizens to policymakers.

The balance is a subtle one; on the one hand, the risk of getting stuck, always imagining a potential "butterfly effect," in terms solely of actions and retroactions between each phenomenon and its context; on the other hand, the perpetuation of "surgical" behaviors and decisions, treating the symptom and not the cause.

In this context, the decision to place health - citizens' well-being - at the center of the Strategy is the key to bringing together numerous instances and proposals, within a planning framework that aims to be horizontal and not generic.

SRSvS is focused on a few key words that characterize the goals and/or goal groups of the 2030 Agenda and, by reflection, the SNSvS.

*Fighting **Poverty, Hunger, Ignorance, and Gender Inequality** to ensure and facilitate access to social and health services for all, reducing food waste, ensuring quality education in compulsory schooling and subsequent training pathways, and to provide all citizens with substantial equality of opportunity in life choices.*

***Water and energy**, primary goods, must be available and usable without waste, including through the use of technologies that safeguard their quality and enable their clean distribution and monitoring.*

***Jobs, growth and businesses** must overcome the established, and sometimes conflicting, dynamics of supply and demand, sharing a vision of sustainable development that rewards the dignity of the performance of adequately trained and/or retrained human capital and intellectual assets; increased competitiveness based on innovation, research and modern infrastructure; and a shift from a linear to a circular logic of production that preserves natural resources, such as the sea, whose economy can be an important driver of regional development.*

*For those who are not yet an active part of the system, inclusion and integration policies for "**old and new poor**," **migrants, Roma, and the homeless**, with special attention to young people, to that educational poverty that must be opposed with adequate support policies to stem the growth of inequality.*

***Places to live: sustainable and smart cities**, where digitization, especially of PA, serves citizens and businesses and is inclusive. Cities and public administrations in general, with a view to coordinated and*

multilevel governance, are required to play a function consistent with the European Green deal through the recovery and reuse of spaces and buildings, to curb land consumption, ensure the safety and efficiency of public real estate. This is as true for larger centers as it is for the **Small Municipalities**, which represent a fundamental garrison of territorial control; for these centers, the accessibility and quality of essential services: schooling, health, and mobility, is fundamental.

It is clear that the **mobility** that has been made available to date is insufficient or not functional to the needs of the various regional communities and productive realities. For this reason, it is important, in addition to reviewing passenger transport, also using soft mobility, to enhance "clean" freight transport also in order to reduce greenhouse gas emissions that play a relevant role in the ongoing climate change.

In relation to this last point, looking at the reduction of risks that extreme events and poor land and resource management can generate, it is necessary to implement policies to clean up polluted sites and combat hydrogeological and coastal disruption, including through proper water management and enhancing the natural purification systems offered, for example, by wetlands.

Climate Change - also encompassing a series of very diverse phenomena (increase in temperatures; variation, frequency and intensity of precipitation; heat waves; flash floods; droughts; fires, ...) - requires an ad hoc strategy, an essential and integral part of the one related to sustainable development.

On this front, too, the Lazio Region is actively engaged through a path aimed at deepening specific knowledge in terms of vulnerability and risk of the regional territory to the consequences of the changing climate, which will end with the elaboration of the contribution the Adaptation to Climate Change."

Finally, an etymological consideration: the term Strategy (στρατηγία) means "art of the army leader" and indicates a series of actions (planning, design, coordination of different means, etc.) necessary to achieve a major goal over a long period.

Agenda 2030 has given itself medium- and long-term goals, many of which, unfortunately, have not been achieved.

Today, the time available to curb the "defeat" of our planet is limited; moreover, even the best strategist of all time can do little without an adequate army. Therefore, we are all called upon to play our role, even if marginal, in the **protection of the environment, biodiversity and ecosystems and in the interest of future generations.**"¹

¹ Cf. Constitutional Law Feb. 11, 2022 No. 1 "Amendments to Articles 9 and 41 of the Constitution on environmental protection," published in Official Journal No. 44, Feb. 22, 2022

Article 9 The Republic promotes the development of culture and scientific and technical research. It protects the nation's landscape and historical and artistic heritage. It protects the environment, biodiversity and ecosystems, including in the interest of future generations. State law regulates the ways and forms of animal protection. Article 41 Private economic initiative is free. It may not be carried out contrary to social utility or in such a way as to harm health, the environment, security, freedom, and human dignity. The law shall determine appropriate programs and controls so that public and private economic activity can be directed and coordinated for social and environmental purposes.

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Introduction Lazio Region Strategy for Sustainable Development

The Regional Strategy for Sustainable Development - SRSvS was approved by DGR No. 170 of March 30, 2021 Approval of the Regional Strategy for Sustainable Development (SRSvS) "**Lazio, a participatory and sustainable region**".

The SRSvS - constitutes, in accordance with the provisions of Article 34 of Legislative Decree 152/2006, the contribution of the individual Italian regions to the national sustainable growth objectives set forth in the SNSvS², indicating by this term a development model that places environmental, economic and social aspects on the same level.

The Regional Strategy therefore indicates, the directions, priorities and actions that are intended to be taken to achieve the sustainability goals, ensuring unity in planning and choice of strategic tools that are coherent and capable of bringing a substantial contribution to the realization of the objectives set at the national level.

Citizen well-being in its physical, psychological and economic components is at the heart of SRSvS, as, moreover, of all regional planning, understood as a state of complete physical, psychological and social well-being and not simply the absence of disease (World Health Organization-WHO) and a fundamental right of people

Sustainable development is the tool that, in a holistic approach, will be able to make possible the growth of such well-being and, at the same time, the competitiveness of the production system by reducing exposure to socio-environmental and socio-health risks, as the Covid 19 pandemic has shown us.

² The National Sustainable Development Strategy, referred to in CIPE Resolution No. 108 of 12/22/2017 "Approval of the National Strategy for Sustainable Development," now under complete revision, is, therefore, the pivotal element in the implementation in Italy of the United Nations 2030 Agenda, the result of intense technical work and a broad and complex process of consultation with central government, the Regions, civil society, universities, and the world of research and knowledge. The SNSvS declines at the national level the guidelines of economic, social and environmental policies aimed at achieving the Sustainable Development Goals by 2030, and is structured in "five areas" (People; Planet; Prosperity; Peace; Partnership) that contain the Strategic Choices and Strategic Goals for Italy and are related to the Goals of the 2030 Agenda - according to a "system of sustainability vectors" (I. Common Knowledge; II. Monitoring and evaluation of policies plans and projects; III. Institutions, participation and partnerships; IV. Education, awareness, communication; V. Modernization of Public Administration and redevelopment of public spending),

Article 34 of Legislative Decree No. 152 of April 3, 2006, as amended by Law No. 221 of December 28, 2015, stipulates that, within twelve months of the approval of the National Strategy, the Regions, must have a comprehensive Sustainable Development Strategy; to this end, with DGR no. 797 of 11/12/2018, the Lazio Region adhered to the "Collaboration Agreement for the support activities for the implementation of the fulfillments provided for in Article 34 of Legislative Decree no. 152/2006 and ss.mm.ii for the implementation of the Regional Strategies for Sustainable Development" with the Ministry of the Environment and Land Protection

Lazio orographically singular with a diverse landscape, 54 percent mostly hilly, 26 percent consisting of mountains and 20 percent of plains. The Apennine mountain system frames the region along all its borders: northwest sloping gently toward the Maremma plain, closed to the south by the Monti della Tolfa, and the valley of the Tiber River, which ends its course at Fiumicino; diagonally from north to south, the Abruzzo Lazio and Molise National Park, with the Monti della Laga and the highest peak of Mount Gorzano (2458 meters); still to the south, a second mountain range runs parallel to the first, separated by the Valle Latina where the Sacco and Liri rivers flow and end their course in the Gulf of Gaeta.

Lazio is characterized by numerous lakes of volcanic origin (Bracciano, Bolsena, Vico, Albano, and Nemi), and the plains, subtracted from swamps during the 20th century (the Agro Romano and the Pontine Plain) with its canals and coastal lakes.

Finally, the Tyrrhenian Sea that bathes the region for more than 300 km of coastline, the latter been distinguished by Mediterranean sand dunes and some promontories with centuries-old charm: San Felice Circeo in the park of the same name and the Selva di Circe, a rare example of lowland forest in Italy; Terracina with the promontory on which the temple of Jupiter Anxur stands guarding the Gulf of Gaeta; and the Pontine Islands, which are perfectly visible when the sky is clear: Ventotene, Ponza, Palmarola, Santo Stefano, Gavi and Zannone, made up of volcanic and sedimentary rocks dating back more than 200 million years.

There are 98 protected natural areas in the region (3 National Parks, 16 Regional Nature Parks, 4 State Nature Reserves, 31 Regional Nature Reserves, 2 Marine Nature Areas, 42 Natural Monuments, including two marine areas) for a total protected area of about 240 thousand hectares, 13.5 percent of the territory. An environmental heritage, made up of landscapes, archaeology and biodiversity; Lazio is one of the regions with the greatest biodiversity in Italy: in fact, it is home to 50 percent of the national fauna and flora, about 30,000 animal species and 3,500 plant species.

The region can be read through its territorial systems that collectively constitute its soul: the Tuscia, Sabina, historic Ciociaria, Castelli Romani, Monti Lepini, Ausoni, Aurunci, Ernici, Lucretili, Prenestini, and the Aniene in which traditions and knowledge have settled over the centuries. Geographical areas where historical, cultural, environmental anthropological aspects merge together with peculiar cultural identities.



2

Implementation governance

2.1 Collaboration agreements

The Lazio Region has signed with the MATTM, (now MiTE and Ministry below in the text) two Collaboration Agreements pursuant to Art. 15 of Law No. 241 of August 7, 1990 and ss.mm.ii, to support regional structures in the implementation of the fulfillments required by Art. 34 of Legislative Decree No. 152/2006, through the financing of support activities for the processes of elaboration of the Regional Strategies for Sustainable Development - SRSvS. The first Collaboration Agreement was signed on Dec. 18, 2018 following the Lazio Region's participation in the Ministry's Public Notice on July 9, 2018 (Prot. No. 211), intended for Regions and Autonomous Provinces.

- The first Collaboration Agreement was signed on Dec. 18, 2018³ following the Lazio Region's participation in the Ministry's Public Notice on July 9, 2018 (Prot. No. 211), intended for Regions and Autonomous Provinces

³ DGR 797 of December 11, 2018 D. Lgs.152/2006, Article 34. CIPE Resolution 108/2017 - Regional Strategy for Sustainable Development: - Approval of the Outline of Agreement ex art. 15 Law of August 7, 1990, n. 241 and ss.mm. and ii. and the Executive Project "Towards a Lazio of Sustainability".

- The second Collaboration Agreement, signed by the Lazio Region on April 22, 2020⁴, concerns the continuation of the activities related to SRSvS; the Ministry, in fact, issued on July 26, 2019 (prot. no. 333) an additional notice to address the needs for deepening and integrating the existing activities related to the agreements already signed that emerged during the work of the Technical Comparison Tables between the same Ministry, CREIAMO PA, the Regions and the Autonomous Provinces. The Lazio Region has therefore decided to use this additional funding to deepen the SRSvS aspects most related to Goal No. 13 of Agenda 2030, i.e., the Fight against Climate Change; in fact, the Executive Project submitted to the Ministry is called "Sustainable Development Strategy: the contribution of Climate Change Adaptation" (see below).

Both projects are divided into the three focus areas:

- Category A "Strategy Governance Construction."
- Category B "Involvement of civil society."
- Category C "Development of the Strategy document."

For the definition of the Regional Strategy for Sustainable Development and for the in-depth study of the aspects related to Climate Change Adaptation, we availed ourselves of the specialized support of Lazio Innova Spa, an "in-house providing" company of the Lazio Region, which is part of the Regional Steering Group, which also provided support for the development of the PODs, the Detailed Operational Plans, of ASViS - Alliance for Sustainable Development (only for the Strategy Document) and of CMCC - Euro-Mediterranean Center for Climate Change (now CMCC Foundation) .

2.2 Director's Cabins

The articulation of the Regional Sustainable Development Steering Committee has been modified to make it more in line with the policy and programmatic choices that have occurred over time.

In particular, it should be noted that the "functions of guiding and verifying the implementation and results of the Sustainable Development Strategy" and of "unified direction in the implementation of the planned actions" are currently attributed to the "Steering Cabin for the Implementation of Regional and European Policies 2021-2027" replacing the previous Interdepartmental Steering Cabin for Sustainable⁵ Development as the Strategy's priorities for action are framed in the Policy Goals of European programming and in the regional unitary programming 2021-2027.

The following are members of the Steering Committee: the Regional Government; the Head of the President's Cabinet Office; the Director General of the Lazio Region; the Director of the Regional Directorate "Economic Planning"; the Director of the Regional Directorate "For Economic Development and Productive Activities"; the Director of the Regional Directorate "Education, Training, Research and Labor"; the Director of the Regional Directorate, Hunting and Fishing"; the manager in charge of the Structure of Direct Collaboration with the Governing Bodies "Institutional Communication"; and the AUDIT Authority of the ERDF and ESF+ programs. The Directors of the other Regional Directorates and Agencies are invited to the work of the technical-administrative component of the Steering Committee at meetings dedicated to matters of their competence and responsibility. To ensure constant

⁴ DGR 157 of 07/04/202 D.lgs.152/2006, Article 34. CIPE Resolution 108/2017 - Regional Strategy for Sustainable Development: Approval of the Outline of Agreement ex art. 15 Law of August 7, 1990, n. 241 and ss.mm. and ii. and the Executive Project "Sustainable Development Strategy: the contribution to Climate Change Adaptation"

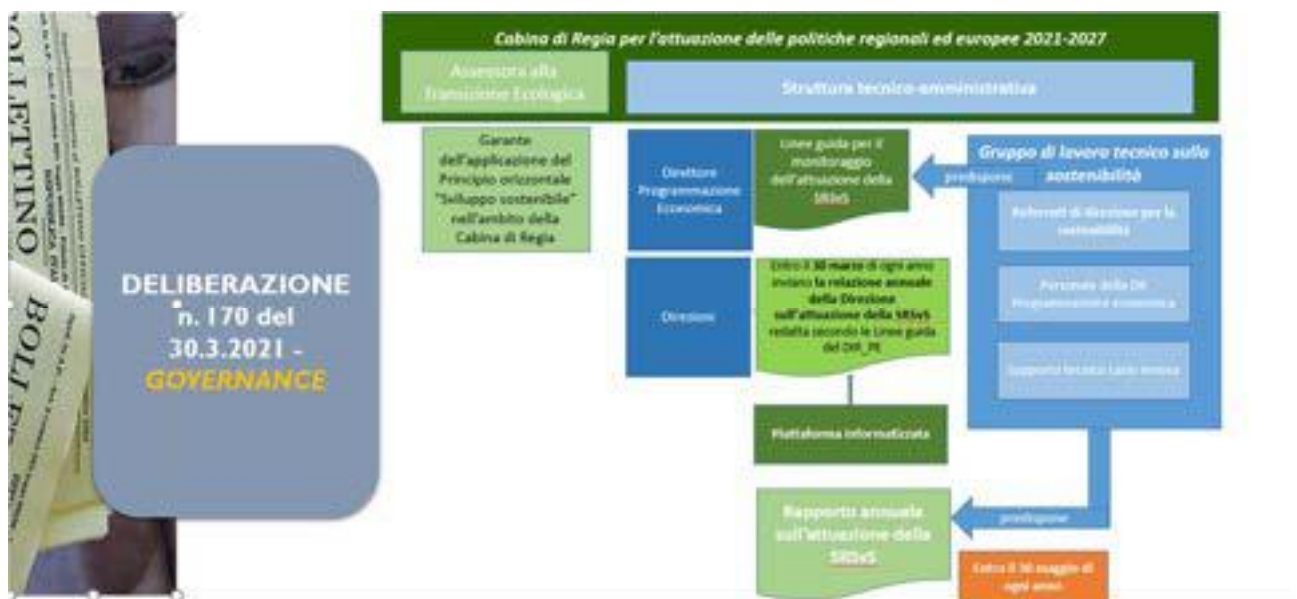
⁵ Cf. DGR 797/2018 e 157/2020

interchange with the Regional Council, the President of the Council Commission "European and International Affairs, Cooperation among Peoples" is permanently invited to the work of the Steering Committee.

Within the Steering Committee, the role of guarantor of the implementation of the Horizontal Principle "Sustainable Development" is also assigned to the Councillor for "Ecological Transition and Digital Transformation Environment and Natural Resources, Energy, Digital Agenda and Green Investment."

To support the Cabin, a "Technical Working Group on Sustainability" was established through Organization Act May 31, 2021, No. G06507, in which "Sustainability Referents" identified by the regional structures involved⁶ and the in-house company Lazio Innova participate.

Fig 1) "Steering committee for the implementation of regional and European policies 2021-2027"



2.3 Multilevel governance

The Region seized the opportunity offered by the Governance of the SNSvS to be part of a wide-ranging coordination and support system. Since the start-up phase of the Strategy, a privileged interlocution with the Metropolitan City of Rome Capital - CMRC was considered appropriate and functional.

In fact, the Ministry, in July 2019, published a Public Notice similar to the one prepared for the Regions in 2018 and, even before the publication of the notice, invited the Region and the Metropolitan City to meet to coordinate their activities and jointly present a joint pilot project.

⁶ With DGR no. 170 of March 30, 2021 Approval of the Regional Strategy for Sustainable Development (SRSvS) "Latium, a participatory and sustainable region" the Council delegated to the Director of the Regional Economic Planning Directorate the task of establishing by its own act of organization, a "technical working group on sustainability" to support the technical-administrative structure of the "Cabina di Regia for the implementation of regional and European policies 2021-2027" on the basis of the designations received from the Regional Directorates of their own "Sustainability Contact Person" the previous Inter-Departmental Steering Committee for Sustainable Development referred to in DGR 797/2018 and 157/2020 ceased its functions

Following this initiative, a fruitful collaborative relationship began between the two entities that led to the elaboration of a joint Pilot project involving Schools ("Green School H24") and saw the Metropolitan City actively participate in all the Focus Groups organized by the Region identifying shared themes, stakeholders and targeted contributions in the introductory papers⁷. CMRC also participates in the Ministry's tables - CreIAMO PA project of exchange of best practices; it was also present in the Focus Groups organized as part of the in-depth study related to aspects of climate change adaptation.

To support the development of the Strategy and for the exchange of common knowledge and experience, it should be noted that the Region participates in the Project "CREIAMO PA Competencies and Networks for Environmental Integration and Improvement of PA⁸ Organizations"; the Region has, in addition, participated in MATTM-OECD initiatives related to Policy Coherence for Sustainable Development: integrating the SDGs into decision-making.

2.4 Status of implementation of the Regional Sustainable Development Strategy.

2.4.1 ORIENTING IN READING THE SRSVS

As stated in Article 34 of Legislative Decree 152/2006, the Strategy performs the function of guidance, evaluation, monitoring and control in the decision-making processes of public administration, promoting the decoupling of economic growth and its impact on the environment, compliance with the conditions of ecological stability, the preservation of biodiversity and the fulfillment of social requirements related to the development of individual potential as necessary prerequisites for the growth of competitiveness and employment.

Therefore, the Regional Strategy for Sustainable Development (SRSvS) is framed in a process of close interdependence within the planetary and long-term targets of the Goals of the 2030 Agenda; with the European goals related to the transition towards sustainability and with those related to the Cohesion Policy 2021-2027; with the national ones constituted by the economic, social and environmental policy guidelines structured in the National Strategy for Sustainable Development (NSSD) and in the policies envisaged in the "Plan for Recovery and Resilience"; with the regional ones, as is evident in the document "A New Horizon of Socio-Economic Progress - Guidelines for Sustainable Development and Reduction of Inequalities: Regional Public Policies 2021-2027, of which it is a cornerstone.

In particular, as far as the link with the 2021-2027 Guidelines is concerned, it is necessary to emphasize the reciprocal "contamination": the 2021-2027 Guidelines contain, in fact, constant references to the 2030 Agenda and the Strategy for National and Regional Sustainable Development and, of the latter,

⁷ The Metropolitan City also participated in the recent FGs carried out by the Lazio Region as part of the project "Sustainable Development Strategy: the contribution to Climate Change Adaptation," and the Lazio Region took part in the round of collective interviews on the macro-environments envisaged by the Agenda: People, Peace, Planet and Prosperity, dedicated to the participatory definition of the main strategies for the construction of the 2030 Agenda for Sustainable Development and the Strategic Plan of the Metropolitan City of Rome Capital, which were held online on April 9 and 10

⁸ L2WP1 - PON Governance and Institutional Capacity 2014-20 MiTE Technical Table - Regions and Autonomous Provinces for the implementation of the National Strategy for Sustainable Development related to Sustainable Development Strategies and the Voluntary National and Local Review (VNR - VLR) process On-the-job coaching with Regions and Metropolitan Cities. LQS1 - IV Line of Action QS1 Environmental Assessments - Actions to improve the effectiveness of SEA and EIA processes related to programs, plans and projects Interregional grouping composed, in addition to Lazio, of Liguria, Abruzzo, Piedmont, Umbria and Tuscany Umbria. L5 Strengthening Administrative Capacity for Climate Change Adaptation - A5.1 Capacity Building - Interregional grouping composed of Sardinia, Liguria and Puglia and Lazio; Methodologies for Adaptation to Climate Change: Regional Scale Adaptation Planning: Climate and Resilience Technical Table. Adaptation in inland Apennine areas with high seismicity Regions Marche, Umbria and Abruzzo and Lazio.

they anticipate and make their own the main results deriving from the participatory process of the Focus groups and the Forum. The SRSvS, conversely, incorporates, among the proposals for possible interventions under the Goals coming from the consultation process, also those articulated in the "chain" macro-areas/programmatic goals/actions of the DSP 2018-23, the Pivotal Actions and the Projects of the Regional Recovery and Resilience Plan contained in the 2021-2027 Guidelines.

For a better understanding of the structure of the Strategy document "Latium, a participatory and sustainable region", the contents of its chapters are described below⁹.

Chapter 2 - Lazio's positioning and trends with respect to the 2030 Agenda Goals notes the strengths and weaknesses of the regional system and provides, from a statistical point of view, the medium/long-term positioning and trends with respect to the 2030 Agenda Goals through tables and graphs with reference to benchmarks of interest. To this end, it is noted that the analysis conducted on 14 of the 17 Goals of the Agenda¹⁰ of the trend, relative to the years 2010 - 2019, calculated on the basis of the composite indicators of ASVIS source and compared with Italy, showed that Lazio presents trends very similar to the national ones in most areas with respect to both the absolute value reached by the index and its trend over the time period considered. Progress is evident for Goals 3. Health and well-being; 5. Gender equality; 9. Business, innovation and infrastructure and 12. Responsible consumption; critical issues are noted for Goals 1. Defeating poverty; 4. Education; 6. Clean water and 10. Reducing inequality.

In the same chapter, therefore, the 27 quantitative goals with their related indicators belonging to the different Goals proposed by ASviS, essential for the evaluation of the implementation of the SDGs at the different territorial levels and the methodology used to identify each type of goal, are indicated. In particular, the Eurostat methodology was used to assess the achievement of the Goals; the outcomes are represented through oriented arrows to facilitate their immediate readability, considering for the time horizon of analysis, two time scales: long-term (10 - 15 years) and short-term (5 years).

In Chapter 3 - Framework of the Strategy, we highlight the double level of depth that characterizes the work of the Strategy. On the one hand, the reading of the regional reality on all the goals of the 2030 Agenda, both in terms of positioning, to check its strengths and weaknesses, and in terms of lines and proposals for action to close the gaps on universal issues such as poverty, inequality, climate change, work and development, and human rights; and on the other hand, the "quasi-vertical" deepening on specific themes of priority interest that will be part of the cornerstones of the 2021-2027 regional unitary programming and that will characterize the Programs financed with EU, national and regional funds. The topics of priority interest include: climate change, with a focus on water resources and sustainable mobility (environmental dimension); the circular economy and the economy of the sea

⁹ The Strategy document consists of 9 Chapters plus a chapter dedicated to Acronyms and Glossary that includes an exhaustive list of acronyms and terms used; an Appendix, which reports The Positioning of Latium and Trends and contains data, statistics and graphs regarding the current regional positioning based on the latest available data, as well as assessments of the potential to achieve certain goals (set at the community, national or regional level) taking into account the projection of historical series; an Annex that collects the introductory and preparatory "Thematic Papers" for the Focus Groups

It was not possible to develop the composite indicators needed for statistical analysis for Goals 13 (combating climate change), 14 (life under water) and 17 (partnerships). With reference to Goals 13 and 14, the impossibility depends on the lack of comparable data across regions on CO2 emissions and time series data on marine protected areas. However, a framing of the two Goals with respect to available data is proposed in the Appendix

¹⁰ It was not possible to develop the composite indicators needed for statistical analysis for Goals 13 (combating climate change), 14 (life under water) and 17 (partnerships). With reference to Goals 13 and 14, the impossibility depends on the lack of comparable data across regions on CO2 emissions and time-series data on marine protected areas. However, a framing of the two Goals with respect to available data is proposed in the Appendix

(economic and environmental dimension); poverty and access to education (social dimension); and smart cities (horizontal dimension to the above) in connection with the 2030 Agenda, the European Green deal and the main EU and national guidance and steering documents.

The Methodological Approach for the Strategy construction process is recounted in Chapter 4 and summarized below.

The path of construction of the Regional Strategy

The path of construction of the Regional Strategy has several steps, characterized by statistical analysis, consultations, desk analysis, and participatory paths. Below is a summary of them.

- Regional positioning analysis. The analysis of the region's positioning on the 17 goals of the 2030 Agenda (in collaboration with ASviS) with respect to territorial benchmarks (Italy and the Center) made it possible to identify, from a purely statistical point of view, the specific strengths and weaknesses with respect to the "dimensions" investigated by the 2030 Agenda.
- Preliminary identification of the qualifying points of the Strategy. The Region, following the approach mentioned below, has identified seven macro themes of priority interest involving all components of sustainable development (environmental, economic and social): climate change adaptation and water resources; circular economy; marine economy; sustainable mobility; smart cities; access to education; poverty
- Consultations at Regional Directorates. Between the months of July and October 2019, the Region started the operational process of defining the SRSvS by carrying out a series of hearings at the Regional Directorates with direct or indirect responsibility for Sustainable Development (see §. 3.1.3)
- Regional stakeholder consultations. The Lazio Region, between July and September 2020, organized 7 Focus Groups (FGs) focused on the previously identified priority issues of interest, to consult qualified stakeholders, experts and practitioners and gather proposals, opinions and suggestions for the definition of the Regional Strategy (see § 3.1.2)
- Consultation of civil society at large. A virtual forum has been established, complementary to the National Forum envisaged in the National Sustainable Development Strategy (see § 3.4.1.)
- Interaction with targeted targets. Through a series of webinars, organized between January and February 2021, focusing on general topics related to the 2030 Agenda, the National Strategy for Sustainable Development, Focus Group themes or more specific aspects of particular relevance, schools, businesses and Local Authorities were involved (see § 3.4.2)
- Interlocution with the Metropolitan City of Rome Capital. Through the organization of working tables, also with the participation of MATTM
- Participation in the CREIAMO PA Project. In 2018, the MATTM launched an institutional path of on-the-job coaching to the regions, aimed at spreading the culture of climate change adaptation and supporting regional administrations in the implementation of adaptation strategies and plans. Lazio has joined the above initiative and, almost in parallel, also the Interregional Working Group dealing with climate change adaptation (see § 3.1.2)
- Construction of a dedicated website. This is a dedicated area within the regional website, aimed at interaction with all stakeholders involved (see § 3.4.1)

Chapter 5 is dedicated focuses to the **Communication** activities implemented during the most acute phase of the Covid-19 pandemic, centered on the website and carried out necessarily through platforms. The chapter sets out the content, target audience, and methods of interaction and engagement with stakeholders, civil society, and all those with various interests in the strategy, as well as data on participation. It should be noted that the site accessed through the home page of the Lazio Europa and Lazio Region websites contains all the materials produced and recordings of the events carried out as part of the Strategy implementation process.

Chapters 6 and 7 represent the core of the document.

Chapter 6 - The Regional Strategy for Sustainable Development and Priority Issues of Concern outlines the directions to which the Region, starting from its own positioning, and with a view to coherence with supranational, EU and unitary regional development policy guidelines, intends to orient its sustainability policies. The chapter indicates the *fil rouge* that moves the entire Regional Strategy and the 7 selected priority themes: the wellbeing of the citizen in its physical, psychological and economic components is at the center of the SRSvS, as, moreover, of all regional planning, according to a comprehensive and unified approach. Sustainable development is the tool that will be able to make possible the growth of this well-being but, at the same time, also the competitiveness of the production system, reducing exposure to socio-environmental and socio-health risks, as the Covid 19 pandemic has shown us. According to this approach, the achievement of the Agenda's Goal 3 targets, "Health and well-being for all," is interrelated with all the other goals, as health is closely related to all dimensions of development, not depending only on the availability of health services, but is linked to the context in which we live. In Ch. 6, in particular are highlighted

- Consistency among the seven priority themes identified with respect to the overall approach of the National Strategy for Sustainable Development, with reference to the areas:
 - Planet: climate change and smart cities (strategic objectives II.6 and III.3)
 - People: poverty and access to education (strategic objectives I.1 and II.3)
 - Prosperity: circular economy and sustainable mobility (strategic objectives III.1 and IV.2)
 - People and Prosperity: economy of the sea
- linkages with the UN Agenda 2030, EU 2021-2027 programming, the programma Next Generation EU (NGEU), the National Recovery and Resilience Plan (NRP), and regional economic planning (Economic and Financial Document 2021-2023; Strategic Programming Document 2018-2023).

The chapter also summarizes the contents of the "thematic papers" related to the 7 priority topics of interest (climate change and water resources; sustainable mobility; circular economy; marine economy; smart cities; poverty; and access to education), prepared as introductory and preparatory documents for the individual Focus Groups to engage stakeholders in a discussion aimed at gathering possible input.

Chapter 7, First Definition of Proposals/Actions constitutes an indicative outline of possible actions (or types of actions) to be implemented in order to flesh out the outlined Strategy, derived from the outcomes of the Focus groups and stakeholder input.

The chapter is divided into two parts

- first part **7.1 - Directions and Proposals under the Goals of Agenda 2030** contains an initial indication of possible quantitative goals to be achieved and a series of proposals and actions under all the Goals of Agenda 2030 that derive from the outcomes of the work of the Focus Groups; for each of them, a summary table is included that also leads back to the Regional

Recovery and Resilience Projects, the Pivotal Actions and the main Programmatic Goals of the Strategic Programming Document (DSP) 2018-2023, allowing to arrive at a summary of the links between the goals of regional public policies for the long term

- the second part 7.2 - **Directions and Proposals from the participatory process (Focus Groups and Forums)** includes an in-depth analysis focused on the 7 priority issues of interest covered by the Focus Groups and collects the contributions, proposals or actions, received during the participatory process from stakeholders and civil society. The direct and indirect relationship to the relevant Agenda 2030 Goals is also indicated for each of the priority themes. The chapter highlights the transversality of certain elements consistently represented to all the issues addressed in the Focus Groups, albeit with different intensities depending on individual specificities: awareness and knowledge of the processes underway; **governance** of the phenomena, especially by administrations, local, which have the task of acting as an "enabling platform"; the simplification of decision-making processes and procedures for a more efficient and effective relationship between PPAA and citizens; the role of research and innovation, also with a view to transferring the spillovers of technological achievements effectively and efficiently to the production system, institutions, and citizens

The Possible Impacts of the Strategy are discussed in **Chapter 8**. Since the SRSvS is a broad policy instrument that, while embedded in a logic of unified regional development policy, does not have its own allocation of financial resources, the estimation of possible impacts takes on only a qualitative connotation, with assessments of the direct or indirect extent of the contribution that each action or chain of actions can make to the achievement of the targets in Chapter 2 to the conditionalities to which they are subject.

Therefore, for each of the proposals mentioned in Chapter 7 on the Goals of the 2030 Agenda, a matrix is proposed where, by way of example, the type is indicated, the possible implementing party (in some cases where non-exclusive competence is configured, the Region is nevertheless indicated), the targets to which the proposal is addressed, the reference time frame, the amount of estimated resources (qualitative indication; €: resources needed of small magnitude; €€: resources needed of medium magnitude; €€€: resources needed of high magnitude), and the type of impact.

Chapter 9 covers the issues of **Implementation and Monitoring**, from the perspective of regional unitary planning, and mentions the ways in which it is intended to account for the actions undertaken, based on the indicators identified.

2.4.2 SRSVS MONITORING GUIDELINES (IN PROGRESS)

The SRSvS indicates the directions, priorities and actions to be taken to achieve the sustainability goals, ensuring unity in planning and choice of strategic tools that are coherent and capable of bringing a substantial contribution to the realization of the objectives set at the national level.

To this end, DGR 170/2021 approving the SRSvS, therefore, stipulates that each regional directorate shall produce an annual report on the implementation of the objectives set by the Strategy and assigns the technical-administrative structure of the Steering Committee (see § 2.2 Steering Committees) the task of producing a "synthesis," i.e., an annual report that gives an account of the various activities produced by all regional structures of a legislative, regulatory and related to the use of funding programmed and granted by the Region to implement the Strategy.

In order to facilitate the work of the Directorates and homogenize the format of the reports, DGR 170/2021 stipulates that the Steering Committee shall define Guidelines in order to provide the regional structures with operational tools to:

- Identify and assume in legislative, regulatory, programmatic and planning activities, and in related initiatives and implementation activities within its competence, the directions and objectives of SRSvS
- Demonstrate the contribution of individual activities and overall activity, of each directorate and regional structures as a whole, to the implementation of SRSvS, by
 - the Annual Report of each individual directorate
 - the Annual Summary Report of the Steering Committee
 - the accompanying Reports to the environmental assessment documents (for new plans and programs)

Making use of the dedicated regional information technology platform (MIR).

2.4.2.1 The objectives of monitoring

The monitoring activity is intended to address some specific needs:

- deepen the implementation of certain actions inherent in the Strategy; monitor the resources allocated and spent and what results they have contributed to achieving
- promote reflection on the effectiveness of programs/plans in achieving SRSvS objectives, so that the data and information collected can be used to support future operational planning
- return an accessible and usable pool of common knowledge to the regional administration, i.e., policy makers, so that it can be shared and the subject of critical reflection in the eventual need to reorient policies

2.4.2.2 "Levels" of monitoring and tools

There are two levels of monitoring of SRSvS:













- the first concerns the **monitoring of Lazio's trends with respect to the Goals of Agenda 2030** and will be carried out by the technical-administrative structure of the Cabina di Regia for the implementation of regional and European policies 2021-2027, supported by the technical working group on sustainability¹¹.
- the second is inherent to the **monitoring of the achievement of the goals of the Regional Strategy implemented** by the individual Directorates.

¹¹ In 2018, the Working Table on Indicators for the Implementation of SNSvS was established with the aim of defining a core set of indicators for its monitoring, which was attended by representatives from the Ministry of Environment, Ministry of Foreign Affairs, Ministry of Economy, ISTAT and ISPRA. The Summary Report of the work carried out by the Table with the selected set of indicators was sent to the Prime Minister's Office in July 2019. The proposed indicators are associated with the strategic choices of the SNSvS and all the goals of the 2030 Agenda, and allow comparability with the European and international level. The Report sent to the Prime Minister's Office was subsequently shared with the Regions and Autonomous Provinces and Metropolitan Cities, and the selected indicators were taken as the core for monitoring the achievement of sustainability goals















2.4.2.3 Monitoring Lazio's trends against the Goals of Agenda 2030

Regarding the first level, as part of the SRSVS for each goal, a short-term analysis has been carried out, taking into account trends over the past five years, on the basis of which any progress or departure from the goal is identified. Where an adequate time series is available, the long-term trend is also commented on. Given the context brought about by the health crisis and the consequent difficulty in achieving the targets set for 2020, these were postponed to 2030, while the original time horizon was maintained for the targets already planned for the year 2025. The summary table is shown below¹². (Tab.1)



Table 1 - Targets available 2020-2021

Goal Agenda 2030	Target 2030	Fonti	Lazio	Breve Periodo	Lungo Periodo
Goal 1: NO POVERTY	Reaching in 2030 the share of 21.8 % - of people at risk of poverty or social exclusion	<i>(Europe 2020 Strategy)</i>	27.5% (2018)		
Goal 2: ZERO HUNGER	By 2030, reduce the share of fertilizer distributed in agriculture by 20% (362.4kg per ha) compared to 2018	<i>(EU Farm to Fork Strategy)</i>	453 kg per ha (2018)		:
	By 2030, reach 25% of UAA invested by organic crops	<i>(EU Farm to Fork Strategy)</i>	22.6% (2018)		:
Goal 3: GOOD HEALTH AND WELL-BEING	Reduce, by 2030, mortality from chronic noncommunicable diseases by 25% (186 per 100,000 population) compared to 2013	(World Health Organization)	234 per 100,000 population (2017)		
	Halve the number of deaths and injuries from road accidents compared to 2010 by 2030 compared to 2015, (35.8 per 100,000 population) and to zero by 2050	<i>(European Transport White Paper)</i>	44.3 per 100,000 population (2019)		
Goal 4: QUALITY EDUCATION	Achieving 10 percent of the school dropout rate by 2030	<i>(National reform plan)</i>	12.0% (2019)		
	By 2030 to reach the 40 percent share of college graduates	<i>(National reform plan)</i>	33.4% (2019)		

¹² In particular, it should be noted that the appendix to the Strategy document shows Lazio's performance against the identified sustainable development goals and the distance to their achievement (see 2 Lazio's positioning and trends against the Agenda 2030 goals). Quantitative targets identified by the region itself were considered where available; for areas where the region could not identify specific targets, targets set at the national and/or supranational level were used.

Goal Agenda 2030	Target 2030	Fonti	Lazio	Breve Periodo	Lungo Periodo
Goal 5: GENDER EQUALITY	Achieving gender parity in the ratio of employment rates by 2030 (Agenda 2030)	<i>(Agenda 2030)</i>	0.77 females/males (2019)		
	Achieve, by 2030 a 50 percent share of women in regional councils	<i>(Agenda 2030)</i>	50%		:
Goal 6: CLEAN WATER AND SANITATION	By 2030 to reach 20 percent of water leakage in drinking water distribution networks (-80 percent)	<i>(Asvis)</i>	47.1 (2015)	:	
	Achieve 100% of the proportion of households served by secondary sewage treatment plants by 2030	<i>(Directive 91/271/CEE)</i>	67% (2015)		:
Goal 7: AFFORDABLE AND CLEAN ENERGY	Reach 21% regional share of renewable electric and thermal energy in total consumption by 2030	<i>(Regional Energy Plan)</i>	10,5% (2017)		:
	Reduce energy consumption in end uses (civil, industry, transportation and agriculture), compared to 2014 values, by 13% to 2030	<i>(Regional Energy Plan)</i>	10.174 Ktep (2014)		:
Goal 8: DECENT WORK AND ECONOMIC GROWTH	Reach 73.2 percent employment rate by 2030	<i>(Regional Energy Plan)</i>	65.7% (2019)		
Goal 9: INDUSTRY, INNOVATION AND INFRASTRUCTURE	Reach the 3% share of GDP devoted to research and development by 2030	<i>(Regional Energy Plan)</i>	1.75% (2018)		
	Reaching 100% of the share of households served by a broadband connection by 2030	<i>(National Strategy for Ultra Broadband)</i>	79.20% (2019)		:
Goal 10: REDUCED INEQUALITIES	By 2030 to reach 4.2 in the disposable income inequality index	(Confronto best performer UE)	6.4 last/first quintile (2017)		

Goal Agenda 2030	Target 2030	Fonti	Lazio	Breve Periodo	Lungo Periodo
Goal 11: SUSTAINABLE CITIES AND COMMUNITIES	By 2025 reduction in PM2.5 emissions (11,740 tons emitted per year by 2025)	<i>(Lazio Region Air Quality Plan)</i>	13,025 tons (2017)	:	
	By 2030, reduction of PM10 limit value exceedance days (3 days)	(OMS)	21.6 days (2018)		:
	By 2030, increase the share of seat-km offered by local public transport by 26% compared to 2004 (9,986.13 km per inhabitant)	<i>(ASviS)</i>	6,368 places - km per inhabitant (2018)		
Goal 12: RESPONSIBLE CONSUMPTION AND PRODUCTION	Decrease in waste generation as a result of implementing the reduction actions in the PRGR of 3% (487.2 kg/inhab*year compared to 2017) to 2025	<i>Regional Plan (Waste 2019-2025)</i>	515 kg/inhab*year (2018)		
	Annual increase in the share of separate collection (DR) to reach 70% DR in 2025	<i>(Regional Waste Plan 2019-2025)</i>	47.78% (2018)		
Goal 13: CLIMATE ACTION	Limiting the use of fossil fuels to reduce climate-changing emissions, compared to 1990, by 37 percent to 2030 and 80 percent to 2050	<i>(Regional Energy Plan)</i>	-11% 37546 thousand toe (2017)	:	
Goal 14: LIFE BELOW WATER	Achieving 100% of marine coastal water bodies in good or excellent ecological status in 2027	<i>(EU Directive 2000/60/EEC)</i>	2015-2017- Monitoring the ecological status of 22 stations: 23% "sufficient" status; 77% "good" status	:	:
	By 2030 to reach 10% share of marine protected areas	<i>(EU Biodiversity Strategy for 2030)</i>	0.50% (2019)	:	
Goal 15: LIFE ON LAND	Land consumption of "0" to 2050	<i>(European goal of zero annual land consumption by 2050)</i>	288.1 ha (2019)		:
	By 2030 to reach 30% share of protected land areas	<i>(EU Biodiversity Strategy for 2030)</i>	12.6% (2019)	:	:
Goal 16:	By 2030 to reach 171 days of duration of civil proceedings	<i>(comparison with Italian best performer)</i>	423 days (2019)		:

Goal Agenda 2030	Target 2030	Fonti	Lazio	Breve Periodo	Lungo Periodo
PEACE, JUSTICE AND STRONG INSTITUTIONS	By 2030, reduce prison crowding to 100 percent	(ASviS)	124.3% (2018)		

For the monitoring of the goals, which will be carried out by the technical-administrative structure of the Steering Committee for the Implementation of Regional and European Policies 2021-2027, the set of indicators may be supplemented with the new indicators included as part of the work on updating the National Sustainable Development Strategy 2022¹³.

2.4.2.4 The monitoring of the achievement of the objectives of the actions of the Regional Strategy

With regard to the monitoring to be carried out by the Regional Directorates, it is represented that as part of the drafting of the SRSvS, about 500 among possible lines of address, proposals and actions have been identified under the Goals and/or priority themes in which the Strategy itself is articulated, collected through the contributions received during the participatory process by the stakeholders involved (proposals that emerged during the interventions of the Focus Groups, received in the form of written contributions, transmitted through the dedicated mail address and/or the Forum section of the website).

In general, all the guidelines, proposals and actions listed are very diverse in terms of type (tangible or intangible), time profile (short/medium/long term), reference target, implementing party, degree of implementation maturity and, sometimes, they are configured more as objectives to be pursued or even broad indications of a guiding character, being, however, useful to calibrate and direct intervention policies targeted to the needs received.

The result has been a work of rereading/revising, thematic and definitional systematization aimed at the dual objective of making these actions:

- **measurable** through a system of indicators that are meaningful and relevant to the scope; easily accessible and reproducible (by means, for example, of tables and/or graphs); controllable and comparable
- **contextualizable** and "anchorable" in a broad planning framework, which refers to the 2030 Agenda, the National Strategy for Sustainable Development and, above all, to the regional unitary planning 2021 - 2027, with particular reference to the Strategic Programming Document – DSP 2018 - 2023 (and subsequent update 2021); to sector planning.

In this way, all policies and actions of regional government find their foundation in the SRSvS and the monitoring of sustainability objectives of interventions can be ensured through the indicators of the 2021-2027 programming and the Regional Investment Monitoring (MIR) system.

Therefore, for the monitoring activity, a **Monitoring Matrix** in Excel (an example of which is given) was prepared for each directorate to fill in for the fields pertaining to it (Tab. 2); the **Matrix** reports the correlation between the reinterpreted SRSvS actions, the Strategic Programming Document - DSP (Macro Area; Programmatic Objective; Programmatic Address; Action), Agenda 2030 (Reference Goal), the National Sustainable Development Strategy - SNSvS (Strategy Area), the Community Programming

¹³ As part of the work on updating the National Strategy, the indicators for integrated monitoring were revised to ensure their consistency with the objectives (national targets), of the ETP and the NRP; in particular, 10 indicators were added in consistency with the ETP Ecological Transition Plan while 11 indicators were already consistent with the NRP. Therefore, the number of indicators was increased from 41 to 55.

2021-2027 (identifying the specific ERDF, ESF+ and EAFRD Objectives that can be associated with it) and the indicators to be valued.

More specifically, the "revised" SRSvS actions are broken down into:

- **operational objectives**, which are directly related to the DSP mandate actions
- **Sustainability guidelines**, which decline the operational objectives.

Regarding the **indicators to be enhanced**, again in the logic of a correspondence with other planning/programming tools, it was opted, in principle, to select the relevant output indicators of the EU programs ERDF, ESF+ and EAFRD for the period 2021-2027¹⁴ or, where not relevant, to identify other output indicators (realization) directly referable and explanatory to the "chain" action of mandate of the DSP" - operational objectives - sustainability addresses of the SRSvS."

Below is an exemplification of the Monitoring Matrix that Directorates are required to fill out with reference to the last field (Indicator to be valorized) only.

Specifically:

- **SECTOR PLANNING** (pre-filled field): sectoral plans or programs and the relevant regional directorates with reference to the revised SRSvS actions are entered
- **STRATEGIC PROGRAMMING DOCUMENT (DSP) 2018 - 2023, updated to 2021** (pre-filled field): the "chain" of the DSP articulated in Macro Area, Programmatic Address, Programmatic Objective, Action with respect to the revised actions of the SRSvS
- **AGENDA 2030** (pre-filled field): the benchmark Goals with respect to the revised actions of the SRSvS
- **NATIONAL SUSTAINABLE DEVELOPMENT STRATEGY - SNSvS:** (pre-filled field): the Reference Area with respect to the revised actions of the SRSvS
- **REGIONAL STRATEGY SUSTAINABLE DEVELOPMENT - SRSvS** (pre-filled field): the revised actions of the SRSvS, broken down into Strategic Objectives and Sustainability Guidelines
- **PROGRAMMING 2021 - 2027** (pre-filled field): the specific Objectives of the ERDF, ESF+ and EAFRD Programs referenced against the revised actions of the SRSvS
- **INDICATOR:** the output - achievement indicator aimed at measuring "how much" of the SRSvS action has been achieved. The indicator has been identified (pre-filled field); its measurement is the responsibility of the Regional Directorates.

¹⁴ <https://eur-lex.europa.eu/legal-content/IT/TXT/PDF/?uri=CELEX:32021R1058&from=IT> - attachment 1
<https://eur-lex.europa.eu/legal-content/IT/TXT/PDF/?uri=CELEX:32021R1057&from=IT> - attachments 1-4

Table 2- Monitoring matrix

SECTOR PLANNING		STRATEGIC PROGRAMMING DOCUMENT (DSP) 2018 - 2023				AGENDA 2030	NATIONAL SUSTAINABLE DEVELOPMENT STRATEGY (SNSvS)	REGIONAL SUSTAINABLE DEVELOPMENT STRATEGY (SRSvS)		PROGRAMMING 2021 - 2027	INDICATOR (to be valorized)
Plane / Program	Regional direction	Macro Area	Programmatic Address	Programmatic objective	Action	Goal	Area	Strategic Goals	Sustainability addresses	Specific Objective (ERDF, ESF, EAFRD)	
Waste Management Plan/APEA Guidelines	Waste Directorate/Economic Development Directorate	Create value	Enterprise value	Development of enterprise places	2.01.02.0 4 Ecological ly Equipped Productive Areas (APEAs) (AC 10)	Goal 12: Ensure sustainable patterns of production and consumption.	Planet	Promoti ng the environ mental sustaina bility of producti on activitie s	Support business networks that promote production processes that reduce the impact on the territory and comply with environmental criteria and minimum recycling targets, which use eco- efficient technologies and practices, including through incentives and defiscalization and/or reward systems	b6 - promoting the transition to a circular economy	RCO 119 - Waste prepared for reuse. Number of recognized APEAs.

2.4.2.5 The Monitoring of Sector Planning

Sectoral planning guides the objectives on which the activities of regional directorates are based; to this end, it assumes relevance to identify and qualify the relationship between SRSvS and planning in order to coordinate different policies and actions, monitor their effects and maximize their implementation effectiveness. An initial exercise in this regard is the Correlation Matrix for assessing regional sectoral planning against the Sustainable Development Goals-SDSvS, SRSvS, Agenda 2030- (Tab. 3), which relates SRSvS (Area, Choice, Goal); the Goals of Agenda 2030; SRSvS (priority themes); and regional Plans and Programs. The degree of correlation of the Plan/Program with the sustainability chain/system is indicated with a score between 1 (minimum) and 3 (maximum).¹⁵

¹⁵ This matrix was elaborated on the example of the one shared by the within the CREIAMO PA Project at QS1 - Environmental Assessments - Actions to improve the effectiveness of SEA and EIA processes related to Programs, Plans and Projects (interregional grouping composed, in addition to Lazio, by Liguria, Abruzzo, Piedmont, Umbria and Tuscany Umbria.

Table 3- Example of the Correlation Matrix for assessing regional sectoral programming against the Sustainable Development Goals-SNSvS, SRSvS, Agenda 2030

SNSvS - STRATEGIA NAZIONALE SVILUPPO SOSTENIBILE			SRSvS - STRATEGIA REGIONALE SVILUPPO SOSTENIBILE	AGENDA 2030	PIANIFICAZIONE REGIONALE																											
AREA	SCELTA	OBBIETTIVO DELLA STRATEGIA NAZIONALE PER LO SVILUPPO SOSTENIBILE	TEMA TICHE PRIORITARI (prevalenza)	GOAL CORRELATI	PIANO Regionale Regionale	PTAR - Piano Triennale delle azioni	PAAR - Piano Agricolo Regionale (Linea Guida)	PTRO - Piano Territoriale Regionale Generale	PER - Piano Energetico Regionale	Programmi integrati di edilizia residenziale sociale	Piano Servizi Socio-sanitari Regionali 2018-2021	PTFR - Piano Territoriale Forestale Regionale	PRIANP - Piano Regionale Area Naturali Protetta	PAI - Piano Assetto Idrogeologico	PFIR - Piano Gestione Forestale	FOBA - Piano di Gestione del Bacchio Abitato	FRQA - Piano della Qualità dell'Aria	FRB - Piano Regionale della Mobilità del Territorio	Piano regionale di prevenzione, protezione e lotta attiva contro gli incendi boschivi	PHRT - Piano Regionale della Mobilità	Piano Regionale dei Rifiuti	Piano del Fiume del Lago	Piano Banda Ultralarga	Piano per l'Interoperabilità	Piano Annuale agli Indicatori del Turismo Educativo Regionale	Piano del Turismo	SRIAR - Strategia Regionale Area Interna	SI - Smart Specialization Strategy regionale	PR PER 2021 - 2027	PR PER 2021 - 2027		
PERSONE	I. CONTRARIARE LA POVERTA' E L'ESCLUSIONE SOCIALE ELIMINANDO I DIVARI TERRITORIALI	1.1 Ridurre l'intensità della povertà	Poverta'						1	1																						
		1.2 Combattere la deprivazione materiale e alimentare					2					1																			3	
		1.3 Ridurre il disagio abitativo										1																				
	II. GARANTIRE LE CONDIZIONI PER LO SVILUPPO DEL POTENZIALE UMANO	8.1 Ridurre la disoccupazione per le fasce più deboli della popolazione	Accesso allo studio																											2		
		8.2 Assicurare la piena funzionalità del sistema di protezione sociale e previdenziale																														
		8.3 Ridurre il tasso di abbandono scolastico e migliorare il sistema dell'istruzione																														
		8.4 Cambiare il divario attraverso prevenzione e integrazione sociale dei soggetti a rischio																														
	III. PROMUOVERE LA SALUTE E IL BENESSERE	III.1 Diminuire l'esposizione della popolazione ai fattori di rischio ambientale e antropico	Trasversalmente tutte le priorità				2	2	3						3	3	3	3	3	3	3								2			
		III.2 Diffondere stili di vita sani e rafforzare i sistemi di prevenzione																								1				2	1	1
		III.3 Garantire l'accesso a servizi sanitari e di cura efficaci, contrastando i divari territoriali																										1				

2.4.2.6 Operational modalities for monitoring regional directorates activities

In summary, regional directorates are asked to prepare an Annual Report on SRSvS implementation through:

1. Indication of the **Editor**, who is identified as the "Sustainability Contact Person"¹⁶
2. Indications of the **Areas** of the Directorate that collaborated in the implementation of monitoring actions
3. Compilation of the **Monitoring Matrix** for an initial compilation of the main results obtained as of March 2021 (date of approval of the SRSvS) (in operational terms, this involves enhancing the indicators in the matrix (Tab 2))
4. Modification/integration of the **Correlation Matrix between the SNSvS, Agenda 2030; SRSvS and Programming 2021-2027**, through a possible different modulation of the pre -attributed scores (Tab 3)
5. With regard to sectoral **planning/programming**, each Directorate should also complete the following 2 diagrams (for each Sectoral Plan under its responsibility)¹⁷
6. **Comments/notes** to better clarify or supplement what is indicated in the previous points

1) General information

Plan/Program Name	
Act and date of adoption/approval	
Possible update scheduled for (insert date)	
Details of the conclusion of the SEA procedure (Act and date)	
Indications regarding any Plan/Program monitoring actions implemented.	
Estimated resources allocated to actions/ interventions / projects in the field of sustainable development of the Regional Directorate during the last year	
Possible level of "acceptance" of the indications present in the Environmental Report of the SEA ¹⁸ procedure	
Notes (max 500 characters)	

¹⁶ Organization Act May 31, 2021, No. G06507 Establishment of the "Technical Working Group on Sustainability"

¹⁷ Regarding the Strategic Environmental Assessment of Plans and Programs, see also Ch. 3

¹⁸ An exemplification of the methodology and some outputs of the SEA procedure inherent to the 2021-2027 ERDF Program (with a focus on the preparation of the Environmental Report) of the Lazio Region is provided in Appendix 1, as a possible reference model for the effort to relate the system of specific objectives (functional areas) of the Program to the 2030 Agenda, SNSvS, SRSvS, both from a conceptual point of view and a matrix exemplification.

2) First assessment of the environmental sustainability of the Plan/Program¹⁹

	Yes/ No	If Yes, to what extent	Notes
The Plan/Program has ensured/ensures the participation of citizens and their associations, representing the different instances			
The Plan/Program has ensured/ensures the decoupling of economic growth and its impact on the environment, respect for the conditions of ecological stability, preservation of biodiversity			
The Plan/Program has ensured/ensures the fulfillment of social requirements related to the development of individual potential as necessary prerequisites for the growth of competitiveness and employment			
The Plan/Program reduces the flow of matter and energy through the economic system and the associated waste generation			
Notes (max 500 characters)			

Other implementing instruments under the Directorate's responsibility on environmental issues (name and reference acts)	
.....	
Notes (max 500 characters)	

2.4.3 "SUSTAINABLE DEVELOPMENT STRATEGY: THE CONTRIBUTION OF ADAPTATION TO CLIMATE CHANGE"

As reported in the paragraph Governance of Implementation - Collaboration Agreements, the Lazio Region intended to continue the activities undertaken through the first Public Notice of the Ministry for the construction of the SRSvS, participating in the second Public Notice (DM prot. no. 333/2019), identifying, as a priority theme to be deepened that of adaptation to climate change.

Following the expression of interest by the Region, the Ministry requested the submission of the detailed executive project, with an indication of the actions to be carried out for the definition of the project

¹⁹ Outline borrowed and readjusted according to the contents of Art. 34 of Legislative Decree 152/2006

called "Sustainable Development Strategy: the contribution of Adaptation to Climate Change" and the related budget ²⁰.

To further explore this issue, the Lazio Region has also joined the interregional grouping formed within the CreIAMO PA project of which Sardinia, Liguria and Puglia²¹ are also part .

The integration actions to the Strategy related to adaptation to climate change (hereinafter ACC) being drafted, are aimed at deepening the objectives of the Strategy:

- 13.2 Integrate climate change measures into national policies, strategies, and planning
- 2.4 By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, help protect ecosystems, enhance adaptive capacity to climate change, extreme weather, droughts, floods, and other disasters, and progressively improve soil quality

The Strategy integration document will therefore contain:

- the climate and socio-economic, risk and vulnerability scenarios of specific regional land contexts and productive sectors
- the measures to enhance territorial resilience to be included in the Sustainable Development Strategy (specifically covering urban areas, urban and peri-urban parks, River Contracts and Natural Capital).

On April 22, 2020, the Ministry and the Lazio Region signed the "Agreement - ex art. 15 Law of August 7, 1990, no. 241, as amended and supplemented - of Collaboration for the activities to support the implementation of the fulfillments provided for by art. 34 of Legislative Decree no. 152/2006, as amended and supplemented, for the implementation of the Regional Strategies for Sustainable Development." The Lazio Region has therefore entrusted Lazio Innova²², already a member of the Steering Group identified for the implementation of the SRSvS project - Towards a Lazio of Sustainability, with some of the activities envisaged by the Detailed Operational Plan - POD related to the ACC.²³ In March 2021 there was a change in the components of the Regional Council of the 11th Legislature and the reshuffling of the related delegations²⁴ ; the subsequent reorganization involving the regional directorates, including those directly involved in the project, slowed down the appointment of the specific regional figures for the ACC. That was exacerbated by extension of the pandemic emergency from Covid-19 and the parallel hacker attack to the Lazio Region's IT systems that effectively halted the region's full operations for an extended time period.

The Ministry and Lazio Region then signed an additional deed extending the previous Collaboration Agreement unchanged in terms of expenditure, by virtue of the express terms of Article 7 of the Agreement, agreeing to extend by six months the final date for the finalization of activities at no

²⁰ Therefore, with DGR No. 157/2020, the Outline of Agreement ex art. 15 Law of August 7, 1990, No. 241 and ss.mm.ii. and the Executive Project called "Sustainable Development Strategy: the contribution of Adaptation to Climate Change" was approved, together with the financial business plan and timetable of activities.

²¹ A reference tool in the drafting of the Strategy is the document prepared by CreIAMO PA Line 5 - Strengthening Administrative Capacity for Climate Change Adaptation Methodologies for Defining Regional Climate Change Adaptation Strategies and Plans

²² Lazio Innova SpA is a company that operates under an in-house providing regime to the Lazio Region, which exercises similar control over Lazio Innova as it does over its own services.

²³ DE G06644 of 03/06/2021 DGR n. 157/2020 - Implementation Project "Sustainable Development Strategy: the contribution to Climate Change Adaptation": entrusting of activities to the in house providing Company Lazio Innova SpA. Approval of Outline of Agreement and Detailed Operational Plan (DOP) The signed agreement bears the Lazio Region prot. no. 716347 - of 14/09/2021

²⁴ See Decree of the President of the Lazio Region No. T00033 of March 12, 2021

additional cost to the Administrations. The new end date of the Agreement is therefore set at June 8, 2022.

Regarding the Activities under the project, a brief summary regarding the individual categories is given below:

Category of intervention A. *Governance of the Regional Strategy for Sustainable Development.*

Subcategory of intervention A3. *Activities related to the operation of the institutional steering cabinet.*

Action A3.1 *Integration of the technical group.*

As previously described, with DGR No. 170/2021 the Council deemed it appropriate, with a view to simplification and streamlining of political and administrative action, to centralize the functions of guidance and verification of the implementation of the results of the SRSvS to the Cabina di Regia for the implementation of regional and European policies 2021-2027", therefore, the technical working group²⁵ ceased its functions in relation to the additional activities provided for in DGR 170/2021 (cf. monitoring of the SRSvS) but continues to carry out technical-administrative support activities of the "Cabina di Regia for the implementation of regional and European policies 2021-2027" only for actions related to the implementation of the project related to the ACC.

In this context,²⁶the technical working group was, however, integrated with specialized expertise in the field, reporting to the Regional Directorate of Natural Capital, Parks and Protected Areas; the coordination of project activities of a technical nature were, therefore, entrusted to the pro-tempore Director of the same Directorate, Vito Consoli , while the Head of the Office of Purpose Small Municipalities and River Contracts, Cristiana Avenali, was entrusted with the coordination of a political nature has been designated as the delegate of the Councillor for Ecological Transition and Digital Transformation, for policy direction on the Regional Sustainable Development Strategy.²⁷

The working group met in order to ensure the implementation of all actions under the project the sharing of input from the individual directorates of reference.

In particular, the workshop that took place on April 5 with the support of experts from the CMCC Foundation, allowed participants to learn about the expected climate hazard and the most exposed areas, as well as to reflect on the main critical issues and adaptation goals for the Region, taking the opportunity to measure its ability to assess risks and imagine possible adaptation goals.²⁸

Intervention subcategory A4. Expanding the involvement of local institutions and synergy with metropolitan cities

Action A4.1 Establishment of a discussion table with local institutions.

With regard to the Action, the Metropolitan City of Roma Capitale has been a privileged partner for the Lazio Region since the beginning of the activities involved in the drafting of the SRSvS.

Regarding the in-depth study of the aspects related to Adaptation to Climate Change, the Lazio Region has provided for the organization of periodic meetings with representatives designated by the EELLS;

²⁵ Cf. DPR n. T00066/2019; DGR n. 797/2018 e n.157/2020

²⁶ AO G14703 del 04/12/2020

²⁷ Assessor's Directive n. D00002 of 12/07/2021 Identification of Dr. Cristiana Avenali as the delegate of the Assessor for Ecological Transition and Digital Transformation, for policy direction regarding the Regional Sustainable Development Strategy

²⁸ As part of the hazard and exposure analysis workshop, some maps were presented that identify areas for special attention in the future

the CMRC, the Provinces and the Provincial Capitals, all the Lazio municipalities with a population > 30,000 ab, as well as ANCI Lazio have been sensitized on the issue of Adaptation and invited to designate their own contact person for the comparison activities that will be carried out in June. For the purpose of preparing the comparison, a questionnaire was, in addition, prepared for completion (see dedicated website "Lazio, Sustainable Region" - <http://www.lazioeuropa.it/laziosostenibile>)

The objectives of the activities are :

- Identify shared lines of action to promote the connection between the Sustainable Development Strategy of the Region and that of the Metropolitan City
- Identify a shared methodology at the regional and local level for the development of adaptation policies
- Identify pilot projects (e.g., coastal erosion; river, shoreline and lake contracts; water resource scarcity; other (in collaboration with and based on the directions of the Office of Purpose Small Municipalities and River Contracts)
- Acquire proposals for alignment of adaptation policies at different levels of government and, in particular, coordination with PAESCs (in collaboration with Office of Purpose Small Municipalities and River Contracts)

Intervention category B

Intervention subcategory B4

Action B4.1 *Stakeholder Discussion Tables.*

Three Focus Groups were organized covering Urban Areas (28/04/2022); Infrastructure (29/04/2022); and Agriculture (5/05/2022), chosen in view of the important impacts that Climate Change may have on these areas and aimed at identifying the most appropriate adaptation actions.

The meetings held in dual modalities (in-person or through VC), were introduced by a talk summarizing the activities carried out to define the SRSvS, retracing its stages and main contents, recalling the positioning of RL with respect to the SDGs and the next steps and goals.

For each FG, an introductory paper was prepared and illustrated, prepared by the CMCC Foundation, containing a brief description of the regional context and a summary of Lazio's climate profile, the main types of climate risks for the different sectors, and possible adaptation options to cope with them, as identified by the latest IPCC (Intergovernmental Panel on Climate Change) report.

The discussion with stakeholders was animated through the use of the Mentimeter platform that allows for feedback with interactive elements such as surveys. The use of this platform allowed for immediate feedback on some of the questions posed by the speaker and certainly had the merit of acting as a "facilitator" for the initiation of discussion and involvement of stakeholders.

At the end of each FG, participants were asked to submit a written contribution, indicating May 15 as the deadline; the document summarizing the contributions received will form a part of the SRACC

Intervention subcategory B4.

Action B4.2 *Webinars aimed at enterprises.*

Webinars aimed at enterprises have been scheduled for the end of May (26 and 31/05). A number of coordination meetings were held to define the content and identify stakeholders (11/05; 16/05). With

regard to stakeholders, it was decided to involve small and medium-sized enterprises and start-ups in particular; the webinars are aimed at the entire regional productive fabric, starting with agriculture (other sectors: utilities, transport, energy, waste, agriculture, food, manufacturing, mechanical, tourism, port activity). During the webinars, a technical paper was presented containing a summary of the main reference documentation, the regional climate profile with a focus on the topics covered by the webinars, and the objectives to be achieved; companies will be asked to present some good practices. The contributions from the webinars will be processed and the outcomes summarized in the final draft of the strategy paper.

Intervention category C

Subcategory of intervention C5

Action C5.1 Mapping regional policies and actions.

Back-office work on the mapping of regional policies is nearing completion, involving the analysis of sector planning including through the use of summary matrices.

In particular, for the mapping of the planning tools in place, express reference was made to the "Guidelines for Regional Strategies for Adaptation to Climate Change"²⁹ (hereinafter Guidelines) document produced by the Conference of the Regions and Autonomous Provinces in December 2019, which enhanced the experience shared by the Regions of Sardinia and Lombardy³⁰ regarding the Regional Strategies adopted .

As indicated in the Guidelines (see Document cited §M.S3 Integration of Adaptation in Plans and Programs) a mapping of the current planning framework was carried out, according to the specific minimum criteria indicated, to indicate whether, and how, the issue of adaptation to climate change is addressed in various regional plans and programs concurrent to the environmental and risk management subject, i.e., to assess whether explicit or implicit adaptation measures are already defined.

For the purpose of the above assessments, the SRACC Objectives assumed for the consistency matrix of individual Plan/Program content and objectives are given below. These Objectives make explicit reference to what is outlined in the National Strategy for Adaptation to Climate Change (SNACC)³¹ (Tab 4).

Table 4 - Codification of the Goals of SRACC and the reduction of related risks.

Code	Macro-objective	Reducing the risks associated with the objectives
SRACC- A1	Minimizing risks from climate change	<i>Alterations in the hydro-geological regime that could increase the risk of landslides, mud and debris flows, rock collapses, and flash floods</i>
SRACC- A2		<i>Soil degradation and higher risk of soil erosion and desertification</i>

²⁹ MASTER ADAPT Program (MAINSTREAMING EXPERIENCES AT REGIONAL AND LOCAL LEVEL FOR ADAPTION TO CLIMATE CHANGE) - Conference of the Regions and Autonomous Provinces "GUIDELINES FOR REGIONAL ADAPTATION STRATEGIES TO CLIMATE CHANGE" - Document 19/220/CR9a/C5 - December 18, 2019 the Guidelines for Climate Change Adaptation Strategies developed under the project that "... can therefore be a useful reference and coordination tool when drafting their own adaptation strategies and strengthen synergies between adaptation, sustainable development and disaster risk management, as encouraged by the European Commission..."

³⁰ the two regions are collaborating on the "Life Master Adapt" project, at the head of a technical-scientific and institutional partnership comprising, in addition to the regions mentioned above, ISPRA, University of Sassari, IUAV University of Venice, Fondazione Lombardia per l'Ambiente, Coordinamento Agende 21 Locali Italiane and Ambiente Italia Srl

³¹Cf. MATTM Elements for a National Climate Change Adaptation Strategy The Context of the National Adaptation Strategy - Climate Change Impacts and Vulnerability in Italy <https://www.mite.gov.it/notizie/strategia-nazionale-di-adattamento-ai-cambiamenti-climatici-0>

Code	Macro-objective	Reducing the risks associated with the objectives
SRACC- A3	Protect the health the welfare and assets of the population	<i>Risk of forest fires and drought for crops and forests</i>
SRACC- A4		<i>Risk of flooding and erosion coastal areas for increased incidence of extreme weather events and sea level rise</i>
SRACC- B1		<i>Possible worsening of already existing conditions of heavy pressure on water resources, with reduced water quality and availability, especially in summer</i>
SRACC- B2		<i>potential reduction in agricultural productivity</i>
SRACC- B3		<i>Possible impact on human health due to increased illness and mortality related to heat waves</i>
SRACC- B4		<i>Damage to the economy as a whole, mainly due to the possibility of reduced hydropower generation potential</i>
SRACC- B5		<i>Damage to the tourism sector due to reduced winter tourism offerings and lower tourist attractiveness of the summer season</i>
SRACC- B6		<i>Decline in productivity in the agriculture and fisheries sector</i>
SRACC- B7		<i>Effects on urban and rural infrastructure with possible disruption or inaccessibility of the transportation network with damage to human settlements and socioeconomic activities</i>
SRACC- C1	Preserving the natural heritage	<i>Risk of loss of biodiversity and natural ecosystems</i>
SRACC- D1	Maintain/improve the resilience and adaptive capacity of natural, social, and economic systems	

Thus, the proposed scheme formed the basis for assessing the programmatic coherence of a plan or program and for identifying potential synergies or conflicts with other existing instruments.

Next, criteria were adopted to assess whether the issue of climate change adaptation is dealt with explicitly or implicitly.³² The criteria proposed in the guidelines can be defined as the minimum elements to be taken into account in plans and programs for the purpose of adaptation and should be checked by the entity responsible for drafting a plan or program (but also, by extension, a project) from the preliminary stages of its strategic design.

Table 5 shows the criteria for integrating the individual plan with the objectives of the ACC.

Table 5 - Criteria adopted for the integration of the individual plan into the ACC

Integration criterion	Verification element
Reference to adaptation policies	Responsible for explicit actions (SEACC)
	National Strategies (SNACC)
	National Plans (PNACC)
	Regional Strategy (ACC)
Weather-climate analysis	Identification of key climate trends
	Analysis of expected climate scenarios
	CC-related vulnerability analysis
	Assessment of land adaptive capacity
Risk analysis	Geographical analysis (location, extent)
	Temporal analysis (frequency, duration, etc.)

³² The distinction between explicit and implicit adaptation measures refers to the content of plans or programs that, while not containing, explicitly, references to climate change adaptation may, nonetheless, include measures that contribute to increasing the resilience of an area even with respect to climate change-related extreme events

Integration criterion	Verification element
	Dimensional analysis (scale, intensity)
	Probability of occurrence
Vulnerability assessment	Estimation of someone/something's vulnerability to something (i.e., a climate event) at a specific time (i.e., present or future)
Adaptation goals to be integrated into the P/P and definition of design alternative	Identification of goals and design alternatives that outline CC resilient scenarios
Analysis of impacts	Analysis of the possible impacts of the P/P on the CC and the CC on the P/P
Monitoring indicators	Identification of indicators that measure the effectiveness of adaptation actions in terms of outcomes

Based on the evaluation criteria in the above table, the analysis of consistency of the individual plan with the ACC was then developed according to a matrix scheme in the following table.

Table 6 - P/P consistency matrix with ACC

Plan/Program	References to ACC					Responsible for explicit actions	
		Analysis meteoroclimatic	Adaptation goals (Implicit/Explicit) and definition of design alternatives		Analysis of impacts		Monitoring indicators
			Explicit	Implicites			

The analysis was carried out based on the following consistency classification:

1. Direct coherence and with explicit adaptation goals
2. Indirect coherence (implicit adaptation goals)
3. Neutral where neutrality may be due to: the subject matter addressed, the specific objectives, the goals from the Plan/Program analyzed. Neutrality must not, however, outline elements of potential inconsistency or conflict
4. Elements of inconsistency
5. Elements of potential conflict

This classification was then associated with numerical values classified into 5 classes in which the lowest class represents the highest consistency and the highest class represents more critical conditions (elements of inconsistency or potential conflict). These classes were then brought back into the range of values from 0 to 1 (as shown in the table below), in order to be comparable and comparable, according to the following diagram to which, for the benefit of ease of reading, graphic symbols have been associated.

		Value range		
1	Direct coherence and with explicit adaptation goals	0 - 0,2	😊	😊(E)
2	Indirect coherence (implicit adaptation goals)	0,2 - 0,4	😊(I)	
3	Neutral	0,4 - 0,6	😐	
4	Elements of inconsistency	0,6 - 0,8	😞	
5	Elements of potential conflict	0,8 - 1,0	💣	

Table 7 - General summary of the consistency of the criteria adopted for verifying the integration of key P/Ps into the SRACC

Integration criterion	Verification element	Regional Territorial Landscape Plan (PTPR)	Regional Plan of Protected Natural Areas (PRANP) - being updated	Regional Forest Plan (RFP)	Regional Plan for the Prevention, Prevention and Active Fight against Forest Fires - 2020-2022 period (AIB Plan)	District Basin Authorities									Regional Water Protection Plan (PTAR)	Regional Energy Plan of the Lazio Region (PER)	Air Quality Restoration Plan (AQRP)	Regional Waste Management Plan (RMP)	Regional Plan of Mining Activities (PRAE)	Regional Plan for Transportation Mobility and Logistics (PRTML)
						Central Apennine District Basin Authority			Southern Apennine District Basin Authority											
						Water Management Plan (PGDAC.3)	Flood Risk Management Plan (PGRAAC Cycle II)	Basin coverage master plan	Water Management Plan (WMP).	Flood Risk Management Plan (PGADAM Cycle II)	Hydrogeological Structure Master Plan (PSAI-RI) Hydraulic Risk	Hydrogeological Structure Master Plan (PSAI-RF) Landslide Risk	Hydrogeological Structure Master Plan (PSEC) Coastal erosion							
Reference to adaptation policies	European Strategy for Adaptation to CC (SEACC)	×	×	×	×	×	✓	×	✓	✓	×	×	×	✓	✓	×	✓	✓	✓	
	ACC National Strategies	×	×	×	×	✓	✓	×	✓	✓	×	×	×	✓	✓	×	✓	×	×	
	ACC National Plans	×	×	×	×	✓	✓	×	✓	✓	×	×	×	×	×	✓	×	×	×	
Weather-climate analysis	Identification of key climate trends	×	×	×	✓	✓	✓	✓	×	✓	✓	×	✓	✓	×	✓	×	×	×	
	Analysis of expected climate scenarios	×		×	✓	✓	✓	×	×	✓	✓	×	✓	×	×	×	×	×	×	
	Analysis of CC-related vulnerabilities	×	×	×	×	×	✓	×	×	✓	×	×	×	×	×	×	×	✓	×	
	Assessment of land adaptive capacity	×	×	×	✓	×	✓	×	×	✓	✓	×	×	×	×	×	×	✓	×	
Risk analysis	Geographical analysis (location, extent)	×	✓	×	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	×	×	✓	✓	×	
	Temporal analysis (frequency, duration, etc.)	×	×	×	✓	✓	✓	✓	×	✓	✓	✓	✓	✓	×	×	✓	×	×	
	Dimensional analysis (scale, intensity)	×	×	×	✓	✓	✓	✓	×	✓	✓	✓	✓	✓	×	×	✓	×	×	
	Probability of occurrence	×	×	×	✓	✓	✓	×	×	✓	✓	✓	✓	✓	×	×	✓	×	×	
Vulnerability assessment	Estimation of someone/something's vulnerability to something (i.e., a climate event) at a specific time (i.e., present or future)	✓	✓	×	✓	✓	✓	✓	✓	✓	×	×	×	✓	×	✓	×	✓	×	
Adaptation goals to be integrated into the P/P and definition of design alternatives	Identification of goals and design alternatives that outline CC resilient scenarios	×	×	×	×	✓	×	×	✓	×	×	×	×	✓	×	×	✓	✓	✓	
Analysis of impacts	Analysis of the possible impacts of the P/P on the CC and the CC on the P/P	×	×	×	✓	✓	×	×	×	×	×	×	×	✓	×	×	✓	✓	×	
Monitoring indicators	Identification of indicators that measure the effectiveness of adaptation actions in terms of outcomes	×	×	×	✓	✓	✓	×	×	×	✓	✓	✓	✓	✓	×	✓	✓	×	

✓ Criterion/parameter consistent directly/indirectly with SRACC

× Criterion/parameter not considered in the P/P due to irrelevance of the P/P itself

✗ Criterion/parameter not considered in the P/P but hopefully to be incorporated in future P/P updates

Table 8 – Consistency Matrix Plans reviewed with SRACC

Plan/Program		References to ACC Strategy	Adaptation measures				Responsible for explicit actions	P/P classification	
			Analysis meteoroclimatic	Adaptation goals (Implicit/Explicit) and definition of design alternatives.		Analysis of impacts			Monitoring indicators
				Goals	Design alternatives				
Regional Territorial Landscape Plan (PTPR)		☹️	☹️	😊(I)	☹️	☹️	☹️	☹️	
Regional Plan of Protected Natural Areas (PRANP) - being updated		☹️	☹️	☹️	☹️	☹️	☹️	☹️	
Regional Forest Plan (RFP)		☹️	☹️	☹️	☹️	☹️	☹️	☹️	
Regional Plan for the Prevention, Prevention and Active Fight against Forest Fires - 2020-2022 period (AIB Plan)		☹️	😊	😊(I)	☹️	😊	😊	😊	
District basin plans	Central Apennine District Basin Authority	Southern Apennine River Basin District Management Plan (PGDAC)	😊	😊	😊(E)	☹️	😊	😊	😊
		Flood Risk Management Plan	😊	😊	😊(E)	☹️	😊	😊	😊
		Basin-covered outline plans (PAIs).	☹️	☹️	😊(I)	☹️	😊	☹️	☹️
	Southern Apennine District Basin Authority	Water Management Plan (WMP) di gestione delle acque (PGADAM)	😊	☹️	😊(E)	😊	☹️	😊	😊
		Flood Risk Management Plan(PGRADAM Cycle II)	😊	😊	😊	😊	☹️	☹️	😊
		Hydrogeological Structure Master Plan (PSAI-RI) Hydraulic Risk	☹️	😊	☹️	☹️	😊	😊	😊
		Stralcio Plan for Hydrogeological Structure (PSAI-RF) Landslide Risk	☹️	☹️	😊(I)	☹️	☹️	😊	☹️
		Stralcio Plan for Hydrogeological Structure (PSEC) Coastal Erosion	☹️	☹️	☹️	☹️	😊	😊	☹️
	Regional Water Protection Plan (PTAR)		😊	😊	😊(E)	☹️	☹️	😊	😊
Regional Energy Plan of the Lazio Region (PER)		😊	☹️	😊(I)	☹️	☹️	😊	☹️	
Air Quality Restoration Plan (PRQA)		😊	😊(I)	☹️	☹️	☹️	😊	☹️	
Regional Waste Management Plan (PRGR)		😊	☹️	😊(I)	😊(I)	😊	😊	😊	
Regional Plan for Mining Activities (PRAE)		😊	☹️	😊(I)	☹️	😊	😊	😊	
Regional Plan for Transportation Mobility and Logistics (PRTML)		😊	☹️	😊(I)	☹️	☹️	☹️	☹️	

Intervention subcategory C5.

Action C5.2 *Development of models and scenarios at regional and sectoral levels.*

The Latium Region Climate Profile was prepared by the CMCC Foundation. It describes the climate characteristics of the region assessed on the basis of expected climate scenarios from high-resolution climate models.

The analyses conducted made it possible to characterize the climate variability observed in the recent past at the local level, identifying, for example, trends of change already taking place for some specific climate characteristics, and to assess, again locally, the expected future climate variations due to climate change on the basis of different scenarios released by the IPCC (Intergovernmental Panel on Climate Change, <https://www.ipcc.ch>).

In particular, the analysis of historical climate was conducted by means of gridded observational datasets and re-analyses (at a resolution between about 2 and 12 km resolution), while for scenarios, both different European models made available by the EURO-CORDEX program (<http://www.euro-cordex.net>; Hennemuth et al, 2017; Jacob et al., 2020) at the resolution of about 12 km, as well as high-resolution climate projection data (at about 8 km) currently available over the entire Italian territory, made available by the CMCC Foundation (Bucchignani et al., 2015; Zollo et al., 2015).

Expected climate projections for the future 30-year periods 2016-2045 (centered on 2030) and 2036-2065 (centered on 2050) were analyzed with respect to the reference period (1981-2010), in terms of both mean and extreme values. These projections are obtained by considering two different IPCC scenarios, RCP4.5 and RCP8.5, from simulated regional climate model data available under the EURO-CORDEX program mentioned above

A focus on the city of Rome was, in addition, carried out using a recent CMCC paper on the climate risk condition for 6 Italian cities (<https://www.cmcc.it/it/rischio-clima-citta-2021>), which also contains an analysis of the current and expected climate condition. In particular, the ERA5-2km reanalysis was used to analyze the climate over the period 1989-2020.

The analyses conducted constitute the starting point for subsequent impact and risk assessments carried out by integrating the hazard and exposure components in order to define the baseline, i.e., the current criticalities against which it will be assessed whether any expected changes (e.g., decrease in precipitation values, increase in number of heat wave days) could represent a further factor of aggravation of climate conditions in the future.

Based on the knowledge of the risk phenomena and vulnerability of specific regional territorial contexts and productive sectors, measures to enhance territorial resilience will then be identified for inclusion in the Sustainable Development Strategy.

Action C5.3 *Summary document for integration between Climate Change Adaptation Measures and Sustainable Development Strategy.*

Action is currently being implemented

3.1 Accompanying pathways for policy coherence

3.1.1 THE REGIONAL HEARINGS

The Sustainable Development Strategy was realized through a bottom up process that involved the participation of different actors in the territory and the involvement of the Administration at the regional and local levels.

The process of defining the Strategy was initiated with Internal Hearings within the Lazio Region that were held in the summer of 2018 and involved 18 Regional Directorates (60 Regional Areas; 120 among Regional Managers and officials). The Hearings provided data, information, and suggestions for a first and fundamental information base on the regional state of the art in terms of programs, guidelines, actions and interventions useful to give depth to the draft SRSvS, but also to the regional unitary planning as a whole.

3.1.2 PARTICIPATION IN INTERREGIONAL GROUPS

The Region participates in the work of the CREIAMO PA Project Groups "Competencies and networks for environmental integration and improvement of PA organizations" (National Operational Program Governance and Institutional Capacity 2014-2020 - Axis 1 "Development of administrative and institutional capacity for the modernization of Public Administration")³³.

In particular, it adhered to Line of Intervention L5 - Strengthening Administrative Capacity for Climate Change Adaptation, aimed at spreading a culture of climate change adaptation at the regional and local level, activating a path of multilevel governance, in order to overcome regional and local disparities regarding the implementation of climate change adaptation pathways.

The CREIAMO PA Technical Unit of Line 5 to support the activities of the regions prepared a specific elaboration "Methodologies for the definition of regional strategies and plans for adaptation to Climate Change" with the aim of providing a tool to create conditions of coherence between Regional and local Climate Change Adaptation Strategies and the contents of the National Adaptation Strategy and Plan. The proposed methodology aims to outline governance models to be followed within the Regions and EELs, examples and techniques to define at the regional and local level the impacts and vulnerability to climate change of territories and priorities for actions.

³³ CREIAMO PA offers pathways for strengthening administrative and institutional capacity as well as technical skills to public administrations and others with environmental expertise, aimed mainly at improving the quality of human resources, management of interinstitutional and stakeholder relations, levels of digitalization, and organizational characteristics. This will be achieved through training moments alternating with on-the-job shadowing activities. These modes of operation will be flanked by actions of a more "systemic" nature aimed at enhancing the comparison between territorial actors, thus strengthening the planning and implementation of environmental policies. These operational modalities respond to the need to elevate the technical skills of professionals and to accompany regional and local administrations in reorganization processes.

The methodological document was shared among the member regions of the interregional grouping also composed of Sardinia, Liguria and Puglia; in addition, critical and/or most significant aspects were discussed in depth in the organized meetings³⁴.

Within the same line of intervention, a second table concerns the inland areas of the Apennines with high seismicity. In this case, the regions involved are those of the "crater" i.e. the regions affected by the 2016 earthquake: Lazio, Marche, Umbria and Abruzzo.

In this context, the topic dealt with mainly concerns the resilience of territories with respect to the two risk components: climate and earthquake.

Another line of intervention of CREIAMO PA to which the Lazio Region has joined is QS1 - Environmental Assessments - Actions to improve the effectiveness of SEA and EIA processes related to Programs, Plans and Projects. The interregional grouping also includes Liguria, Abruzzo, Piedmont, Umbria and Tuscany Umbria. The main focus was on the need to use a "uniform" system of indicators and to have reference targets for strategic environmental assessment that could coincide with the strategic objectives tree of the SNSvS and thus with the SRSvS.

As previously mentioned, the Correlation Matrix for assessing regional sectoral programming against the Sustainable Development Goals (SNSvS, SRSvS, Agenda 2030) used for Strategy monitoring was borrowed precisely from the work of the QS1- SEA table.

Finally, the Region took part in the table - CREIAMO PA - L2WP1 - "Regions and Autonomous Provinces for the implementation of the National Sustainable Development Strategies" for the Update of the Strategy by sending timely comments in relation to the work done for the rationalization of the Sustainability Vectors as well as to the workshops organized by MiTE within the framework of the PCSD project on policy coherence for sustainable development from the European Commission's Structural Reforms Support Program³⁵.

3.1.3 INVOLVEMENT OF TERRITORIES AND NEXT STEPS (SEE ALSO § 3.4.1)

As already reported, for the drafting of the SRSvS a dedicated website was built, which constituted the engine and container of all the activities of the Strategy as well as the main connection tool with the territory, given that, for the well-known reasons related to the pandemic, the activities planned in presence on the entire regional territory could not be realized. The site is a dedicated area within the regional website, aimed at interacting with all stakeholders involved citizens, businesses, local authorities, schools, research world, through web marketing and web advertising activities, envisaging the integrated use of social media to communicate with the different levels of recipients. Within the site, the Focus groups, Forum, webinars and general participation activities previously planned in presence have been implemented.

The site will also continue to perform this bridging function as part of the process of building the Climate Change Adaptation Contribution Document.

³⁴ The Methodological Document prepared by line 5 of CREIAMO PA was used by the Lazio Region as a conceptual reference for the work of initiating the construction of the project start-up documents

³⁵ The project aims to define a proposal for a National Action Plan for Policy Coherence for Sustainable Development, as a pivotal tool for the implementation of the National Strategy for Sustainable Development, i.e., the integration of the SDGs into Italian decision-making.

Through the consultation of the same, it will be possible not only to access the documentation produced and all the events planned by the project: (3 Focus groups inherent to the themes "Urban Areas", "Infrastructure" and "Agriculture" and 2 webinars addressed to businesses in the area; targeted meetings with EELs and concluding Forum), but also to detect needs, requirements and proposals coming from the area, including through the online administration of a questionnaire targeted on climate adaptation issues and addressed to differentiated targets (local authorities, businesses, citizens, research institutions).

The purpose of this activity, like the one previously carried out for SRSvS, is to (in)train and raise awareness on the issues of sustainable development and climate change adaptation. In particular, as far as the work still in progress is concerned, in the face of the elaborated climate scenarios, the work with the EE LLs will allow to detect roles and responsibilities for the implementation of adaptation actions and measures by enhancing opportunities and synergies.

3.2 Consistency and integration of instruments

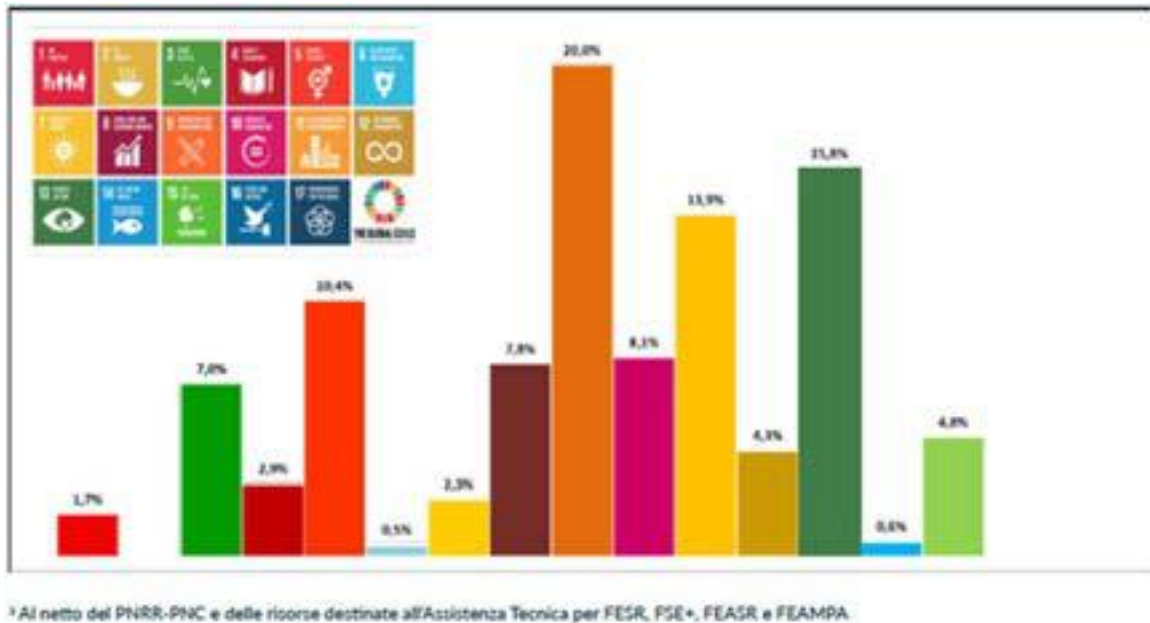
The Strategy³⁶ is framed, in a process of close interdependence, within the planetary and long-term targets of the Goals of the 2030 Agenda, the European goals related to the transition to sustainability and with those related to cohesion policy 2021-2027; of the national ones, made up of the economic, social and environmental policy guidelines structured in the National Strategy for Sustainable Development and the policies provided in the "Plan for Recovery and Resilience".

As far as regional policies are concerned, we highlight the strong link and mutual "contamination" between the SRSvS and the Unified Regional Programming: the 2021-2027 Guidelines contain, in fact, constant references to the 2030 Agenda and the National and Regional Sustainable Development Strategy and, of the latter, they make their own the main results deriving from the participatory process of the Focus groups and the Forum. The SRSvS, conversely, accepts, among the proposals for possible interventions under the Goals coming from the consultation process, also those articulated in the "chain" macro-areas/programmatic goals/actions, of the Pivotal Actions and Projects of the Regional Recovery and Resilience Plan contained in the 2021-2027 Guidelines.

The document presented on May 13, 2022 as part of the launch event for the 2021-2027 Programming "Lazio Present with Europe in the Future - The Projects of Regional Programming 2021-27 To do well, for all" is reiterated the strong link with the Sustainable Development Strategy and the clear will to contribute of the same programming to the achievement of the SDGs of the 2030 Agenda for a growth that is able to combine aspects of economic competitiveness with the principles of sustainable development.

³⁶ Article 34 of Legislative Decree 157/2006, performs the function of guidance, evaluation, supervision and control in the decision-making processes of public administration, promoting the dissociation between economic growth and its impact on the environment, compliance with the conditions of ecological stability, the preservation of biodiversity and the fulfillment of social requirements related to the development of individual potential as necessary prerequisites for the growth of competitiveness and employment

UNITARIAN FRAMEWORK OF RESOURCES PROGRAMMING DEDUCED TO DEVELOPMENT FOR SUSTAINABLE DEVELOPMENT GOALS OF AGENDA 2030 (% values)



Each intervention supported by unitary programming (Pivot Actions, PRRs, and other actions), described in timely project fact sheets, has been related to one or more goals of the 2030 Agenda and contributes to one or more Goals.

The SEA procedure and the Environmental Report of the Lazio 2021 - 2027 ERDF Program. ³⁷

An example of policy coherence can be represented by the preparation of the Environmental Report carried out for the SEA procedure related to the Lazio 2021 - 2027³⁸ ERDF Program .

The evaluation model adopted is that of the "Evaluation of the Overall Efficiency of Environmental and Territorial Strategies" (VECSAT Model), endowed with the flexibility to lend itself - with the appropriate adaptations - to evaluating policies, plans and programs of any level or thematic sector, although it is (or perhaps precisely because it is) very circumstantial with respect to the underlying methodological choices that inform it.

The Model aims to frame environmental assessment within a methodological framework that organically includes the "social pillar" and the "economic pillar" alongside the "environmental pillar," as they all interact profoundly in sustainable development.

In the case of the ERDF Program, in the application of the Model, the System of Reference Objectives for the evaluation is made to coincide directly with the Strategic Objectives Tree of the SNSvS-rev21³⁹ , representative of the Programmatic Framework of reference, including international, EU and national level

³⁷ The Consolidated Environment Act (Legislative Decree 152/2006 and ss.mm.ii) regulates, among others, the SEA procedure and states in paragraph 5 of Article 34 that:

"Sustainable development strategies define the framework for the environmental assessments referred to in this decree. Said strategies, defined consistently at the different territorial levels, through the participation of citizens and their associations, representing the different instances, ensure the dissociation between economic growth and its impact on the environment, respect for the conditions of ecological stability, the preservation of biodiversity and the fulfillment of social requirements related to the development of individual potential as necessary prerequisites for the growth of competitiveness and employment."

³⁸ Lazio ERDF Program 2021-2027 - Strategic Environmental Assessment - Environmental Report, prepared by Lazio Innova with the specialized support of Cras srl

³⁹ SNSvS is under review

documents of specific interest to the Program. The traditional environmental components have, therefore, been integrated with the National Strategic Objectives (NSOs) of the SNSvS, so that, in the RA, it is systematically, under the different aspects, always 7 Macrocomponents, corresponding to as many reasoned aggregations of the NSOs of the Areas People, Planet, Prosperity:

- Macro-component 1. Biodiversity /Strategic choice PLANET I - Halting the loss of biodiversity;
- Macro-component 2. Natural resource consumption /Strategic choice PLANET II - Ensure sustainable management of natural resources;
- Macro-component 3. Resilience of communities and territories, hydrogeological risk, Landscape and cultural heritage / Strategic choice PLANET III - Creating resilient communities and territories, preserving landscapes and cultural heritage;
- Macro-component 4. Climate-altering gases and decarbonization of the economy / Strategic choice PROSPERITY IV. Cutting climate-altering emissions and decarbonizing the economy;
- Macro-component 5. Health and quality of urban environment / Strategic choice PEOPLE III - Promoting health and well-being;
- Macro-component 6. Social inclusion / Strategic choices PEOPLE I. Combat poverty and social exclusion by eliminating territorial gaps; PEOPLE II. Ensure conditions for the development of human potential;
- Macro-component 7. Welfare and socio-economic development / Strategic choices PROSPERITY I - Promoting sustainable economic welfare; PROSPERITY II - Financing and promoting

The functionality of the adopted Model proves particularly effective in several respects well argued in Ch. 5 of the ERDF Program RA. Among these, it is highlighted that the two areas of evaluation (environmental and socio-economic performance) can be commensurable, but also that it is always possible to compare them separately, which is why evaluations of the pursuit of purely environmental objectives are always distinguishable from those inherent in the pursuit of socio-economic objectives, even when a synthesis evaluation of the three components is made.

Not only that, but the Model also interfaces very well with the needs for integration of multilevel strategies, assessments and monitoring placed at the heart of development policies. Limiting ourselves to listing only the instances of greatest interest for the SEA of a Program such as the ERDF, we point out the verification:

- of the ability of the ERDF Program to pursue the Strategic Objectives of the SNSvS (which are already taken as the System of Objectives for the SEA itself in this Model)
- That the ERDF Program balances the principle of Do Not Significant Harm (or DNSH), i.e., to support activities that meet Union climate and environmental standards and priorities and do not significantly harm environmental objectives as defined in Article 17 of Regulation (EU) 2020/852 of the European Parliament and of the Council;
- Of the capacity of the ERDF Programmes to pursue the Sustainable Development Goals (SDGs) of the 2030 Agenda for Sustainable Development
- that the Lazio ERDF Program, in particular, takes into due consideration the "priority themes of interest" indicated by the Regional Sustainable Development Strategy (SRSvS) that declines the national one according to local peculiarities

In summary, the SEA of the ERDF Program (and the elaboration of its RA) aimed to make a methodological contribution to the systematization of strategies, evaluations and monitoring now considered by many as a priority. From a more operational point of view, an Evaluation Matrix was developed and is proposed by the RA.⁴⁰

⁴⁰ Because of its informational scope, the Matrix, at first approach, is complex to read and interpret; therefore, the reader is invited to read Chapter 5 of the RA, where the methodological approach adopted and the outputs provided are detailed

The Strategic Programming Document and the MIR

Regional planning as a whole is based on the five-year Strategic Programming Document (DSP), in its first version derived from President Zingaretti's electoral program, articulated on four hierarchical levels: 8 Macro Areas, 19 Programmatic Addresses, 90 Programmatic Objectives, and about 600 Mandate Actions. The latest update of the SDR, covering the five-year period 2018 - 2023, approved by DGR No. 656 of 9/11/2018 and updated by DGR No. 327 of June 4, 2021.

The programmatic outline of the DSP also informs the annually approved DEFRs, most recently by DCR No.19 of December 22, 2021. In 2020, the 2021-27 Guidelines were also approved (DCR No. 13 of Dec. 22, 2020), which summarize, again referring to the DSP's logical structure, the regional investment strategy for the seven-year period 2021 - 2027.

For some time now, internal budget management tools have made it possible, through data entry at the same time as the operation is carried out on the system, to record the connection between investments and the Mandate Actions contained in current planning documents. In practice, the operator on the budget is asked to choose a Mandate Action to associate with the expenditure he or she is making; the choice of the operation is "guided" by the association, processed upstream and made available on the system, of subsets of Mandate Actions to a given "cost center" represented by the budget chapter on which one is operating.

Starting in 2018, a parallel activity was also initiated aimed at identifying possible correlations between the Mandate Actions of regional programming and instances of available environmental strategies, namely Agenda 2030 and the National Sustainable Development Strategy - SNSvS. The result of this operation is a matrix of correlations, in which each Mandate Action is associated with one or more environmental strategy instances, for all levels of the strategies: Goals and Targets for the 2030 Agenda; Areas, Choices and National Strategic Goals for the SNSS. This enables the development of frameworks for budget items, both forecast and operational, to environmental strategies. The correlation level related to the Regional Sustainable Development Strategy will also be made available soon.

Dynamic and continuous monitoring of the relationship of spending to regional strategies is made possible, along with a number of other services, by a module called Monitoring Regional Investments (MIR), added and integrated to the regional budget management software, which enables the census and monitoring of projects corresponding to regional planning actions as soon as they produce spending.

3.3 Areas of innovation and the role of research

The SRSvS also establishes conceptual relationships and interdependencies of an operational nature with Lazio's Smart Specialization Strategy (S3), whose update was adopted by the Regional Council last December 2021⁴¹. The S3 can be understood as "the place" where research, technological development and innovation are directed to the expansion of a competitive but sustainable production system.

The S3 update is part of the broader framework of the 2021-2027⁴² programming and was carried out through an intensive partnership process and an innovative approach aimed at fostering growth and employment starting with the identification of the most competitive areas and sectors of activity, involving economic operators and knowledge

⁴¹ DGR n.997 of 30/12/2021 "PR ERDF Lazio 2021-2027 Adoption of the update document "Smart Specialization Strategy (S3) Lazio Region"

⁴² Cf. Annex IV "Thematic Enabling Conditions applicable to ERDF, ESF+ and Cohesion Fund" of Regulation (EU) 2021/1060 (CPR) provides, among the requirements for the fulfillment of ex ante conditionality of operational objectives, the definition or update of the regional smart specialization strategy.

actors active in the region in an entrepreneurial process of discovery ("entrepreneurial process of discovery"). The S3 update included the introduction of two new Areas of Specialization, Automotive and Economy of the Sea, which were added to the existing ones: Aerospace, Life Sciences, Cultural Heritage and Cultural Technologies, Agrifood, Digital Creative Industries, Green Economy and Security, areas that affect much of the sustainability goals of SRSvS.

Although the reference contexts and cultural approaches of SRSvS (more "transversal" and aimed at the environment in the conception of sustainable development) and S3 (more "vertical" and focused on development aspects and trajectories of a technological, research and innovation nature) are different, elements of contact and contamination are discernible, for example regarding the Thematic Areas of the former and the Specialization Areas of the latter.

In particular, the SRSvS Thematic Areas related to Sustainable Mobility, Circular Economy, Sea Economy and Poverty are complementary and partly overlapping with the S3 Specialization Areas of Automotive, Green economy, Sea Economy, Agrifood, respectively. The very elaboration of some of the content of the Papers is affected by this contamination.

More generally, within S3, constant references to SRSvS/SNSvS and the achievement of the 2030 Agenda goals are easily identified.

Regarding the areas of innovation, another important element of context and contamination with SRSvS is represented by the Plan for Ecological Transition - PTE of the Lazio Region currently being developed.

The ETP was born on the heels of the one elaborated at the national level by MiTE and was launched with an Expression of Interest promoted by the Lazio Region in November 2021 with the aim of promoting any initiative aimed at achieving the goal of climate neutrality by 2050 through an integrated and scientifically grounded approach in a holistic vision that embraces the following sectors: Energy Communities; Agrivoltaics; Hydrogen; Smart-grid; Electric Mobility and Storage; Water Resource Management; Circular Economy; Natural Heritage/Biodiversity; and Land Care. Again, it is evident that the above-mentioned sectors are to a good extent relatable to those of both SRSvS and S3.

The Manifestation started in November 2021 and ended in January 2022.

A total of 479 proposals were received, with about 40 percent coming from companies of all sizes, but the presence of Local Authorities and Research Organizations is significant. The themes where the interest of proposals was most concentrated were Circular Economy, the energy theme as a whole, Natural Heritage and Biodiversity. With reference to the energy theme, a 'special attention was paid to Energy Communities, to be developed both in urban and in regional peripheral areas. This is a model directed toward a just ecological transition, based on facilities and self-production and sharing of energy from renewable sources that overcomes the current centralized model of energy production consisting of large plants powered by fossil fuels, polluting and climate-changing.

Finally, the proposals underwent careful analysis and clustering in order to identify the most interesting needs and projects that will feed into the contents of the Plan.

3.4 Participation and promotion of a culture for sustainability

3.4.1 TERRITORIAL HOLES

The period of implementation of the Regional Sustainable Development Strategy partly coincided with the most difficult moments of the Covid -19 pandemic. In this context, especially those activities that involved the direct involvement of the public in attendance were significantly penalized.

For this reason, it was necessary to transform the "physical" Forum, into a virtual Forum, "Lazio, Sustainable Region" (<http://www.lazioeuropa.it/laziosostenibile/>), accessible from the Lazio Region web page, which allowed, through the completion of a Questionnaire, the participation of all citizens, businesses, organizations, and local authorities that applied for online registration.

However, it was possible to present the Forum in parallel with the holding of the 2021- 2027 Regional Unified Planning Partnership Tables, which were held between June and July 2020 at various regional venues.

The SRSvS was, therefore, publicly presented during the concluding Forum, again held remotely (minus a few speakers) for the event held at the Rossellini Theater on March 2, 2021.

During the Forum, 3 videos were presented regarding the Strategy as a whole; the priority issues; and the Region's positioning with respect to the Goals of Agenda 2030. The Forum reached 506 people via Facebook.

It should be noted that the virtual space, (<http://www.lazioeuropa.it/laziosostenibile/>), is active and is being used for the continuation of activities related to the second Notice of the MATTM (MiTE) i.e. for the implementation of the project called "Sustainable Development Strategy: the contribution of Climate Change Adaptation."

3.4.2 FURTHER ACTIONS FOR THE INVOLVEMENT OF CIVIL SOCIETY

Focus Group

As mentioned above, the Lazio Region declined the activities of the Forum through the organization of 7 Focus groups focused on priority issues, identified in coherence with the strategic choices and objectives of the SNSvS.

- III.1 Dematerializing the economy by improving resource use efficiency and promoting circular economy mechanisms
- Sea Economy
- IV.2 Increasing the sustainable mobility of people and goods
- I.1. Reduce the intensity of poverty
- II.3 Reduce school dropout rates and improve the education system (Access to Study)
- Climate change and sustainable management of water resources (II.6 Minimize emissions and lower pollutant concentrations in the atmosphere; III.5 Ensure the development of potential, sustainable management and custodianship of territories, landscapes and cultural heritage)
- III.3 Regenerate cities, ensure accessibility and ensure sustainability of connections (smart cities).

As part of the FGs, qualified experts and practitioners, some of whom were also reported during the Hearings, were consulted and proposals, opinions, and suggestions for the definition of the SRSvS were collected. For each FG, the JP developed an Introductory Paper that constituted the initial framing/contextualization document of the priority issues identified with respect to the National Sustainable Development Strategy, the 2030 Agenda, and medium to long-term regional unitary planning.

Each Paper contains: conceptual contextualization; Lazio statistical and positioning aspects with respect to the theme addressed; link with EU 2021 - 2027 programming, Agenda 2030, SNSvS; EU, Italy, Lazio Region programmatic framework; effects of the Covid-19 pandemic; possible lines of intervention. nThe contributions received were enhanced within the Strategy document.

514 stakeholders participated in the FGs; more than **70,000** views on social media; 1,200 online interactions; reports with key findings were prepared.

Webinars

Due to the Pandemic, it was not possible to hold in-person dissemination/information days aimed at citizens and schools on Sustainable Development issues and the path taken at the regional level.

Therefore, it was decided to hold some webinars in order to promote greater awareness on the part of EELs on the meaning of Sustainable Development and the proactive role that the same Administrations can/must have in the planning and implementation phases of policies.

On January 20, 2021, a webinar dedicated exclusively to EELs on targeted issues was held, which was attended on the Zoom platform by 76 local governments while 766 people were able to follow it on Facebook. As part of the meeting, a questionnaire was administered, the results of which showed that training and awareness-raising actions on sustainability-related issues should be encouraged.

As part of the webinar, the Agenda 2030 roadmap, regional positioning on some of the issues of greatest interest to EELs, trends and the main results of the Focus groups in terms of proposals and directions for regional unitary planning were presented.

The two webinars dedicated to schools were held on 2/02/2021, targeting elementary and middle schools (I cycle of education) and 4/02/2021, which covered high schools.

For the first webinar, a video, produced by ASviS, on Agenda 2030 was also screened and an online application on sustainable city building was illustrated. The webinars were attended by: 34 second-cycle institutions, with over 912 students; 59 first-cycle institutions, with 774 students. It should be noted that the number and tenor of questions asked at the end of the Slide presentation showed a high level of participation and understanding by students, even the youngest ones to the topic of sustainability.

The second meeting, organized for the older children, is also part of the targeted training for teachers on sustainability issues and the Pathways for Transversal Skills and Orientation (PCTO) through the Startupper School Academy project of Lazio Innova, a subject accredited by MIUR.

As far as schools are concerned, it should be noted that MIUR is already active on the topic of sustainability and that in many cycle I and II schools Agenda 2030 is a topic of study and in-depth study.

In any case, the participation of about 1700 students shows how much the topic is felt by the school directors who joined the initiative; moreover, the interest of the students, even the youngest showed how much the topics discussed are part of everyday life for the youngest, in terms of both the behaviors adopted (separate waste collection) and the "concern" for the future (Climate Change)

3.4.3 TERRITORIES FOR THE PROMOTION OF A CULTURE FOR SUSTAINABILITY

As mentioned in the previous section, as part of the drafting of the Sustainable Development Strategy there has been a significant involvement of the territories through the realization of dedicated events, despite the fact that they were all held remotely due to the difficulties brought about by the pandemic. The participation of EELs in moments of dissemination/training on Sustainable Development issues was significant and very important because municipalities, above all, play the dual role of planning/programming and implementing

policies that affect the majority of citizens' lives. The webinars organized for schools and businesses also had an appreciable number of participants, taking into account.

For the drafting of the contribution of climate change adaptation to the SRSvS, as mentioned above, it is planned to hold a number of meetings with EELs that will be conducted in the dual mode of presence and remote at the Active Spaces in the territory with the aim of also recovering that "contact" and "closeness" between administrations of different levels interrupted due to the pandemic.

A concluding Forum is also planned for the presentation of the project



VOLUNTARY LOCAL REVIEW 2022

LIGURIA REGION





FOREWORD

This document, drawn up on a voluntary basis, contains an analysis of the Sustainable Development Goals (SDGs) for the territory of Liguria, intended as a monitoring tool for their implementation at a regional level, also in coherence with other planning tools. The SDGs localisation process allows local authorities to identify their own priorities and territorial specificities.

The declination of the Sustainable Development Goals is linked with a participatory process involving citizens and local stakeholders and a coherence analysis of existing policies as a basis for policy design, in order to also become a strategic planning tool.

The local and regional levels play a central role as drivers of sustainable human development. The interaction between the two levels also favours the creation of bottom-up mechanisms for the implementation of objectives.

The Liguria Region's Voluntary Local Review includes:

- the definition of the governance process that led to the selection of Sustainable Development Goals and indicators for monitoring regional needs
- the various analyses of coherence between existing development plans and strategies to foster horizontal and vertical alignment, to strengthen the interaction of resources, skills and knowledge between different levels and sectors. Policy coherence also includes financial planning, with the Regional Economic and Financial Document, in order to establish clear priorities that can orient strategic planning and budget choices towards the SDGs
- the participation of local authorities and the involvement and empowerment of local communities through the activation of Regional Environmental and Sustainability Education Centres (CEAS)
- the implementation of the Sustainable Development Goals on the basis of thematic synergies, such as climate change adaptation and the circular economy.



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Introduction

In 2015, the governments of the UN member states signed the **2030 Agenda** for Sustainable Development, the action programme for people, planet and prosperity, structured in five areas: People, Planet, Prosperity, Peace and Partnership.

The first step to declining the Agenda's principles and objectives at the national level, with a system of strategic choices, declined in national strategic objectives, specific to the Italian reality, was the approval of the **National Sustainable Development Strategy (NSDS)**, a reference document for all sectoral and territorial policies in Italy until 2030, whether they deal with the environment, society or economy.

As provided for in Article 34 of Legislative Decree No. 152 of 2006, the Regions, following the approval of the NSDS, were called upon to provide themselves with an overall sustainable development strategy that is coherent and defines the contribution to the realisation of the objectives of the national strategy, identifying the instruments, priorities, and actions that they intend to undertake.

In 2018, Regione Liguria carried out an initial reconnaissance of the instruments activated to define the objectives of the Regional Strategy for Sustainable Development, in line with the sustainable development objectives defined at a national level. This reconnaissance was updated in 2020. The results of the reconnaissance were cross-referenced with those of the territorial reconnaissance carried out by the Environmental and Sustainability Education Centres in order to identify the sustainable development objectives pursued at the regional level.

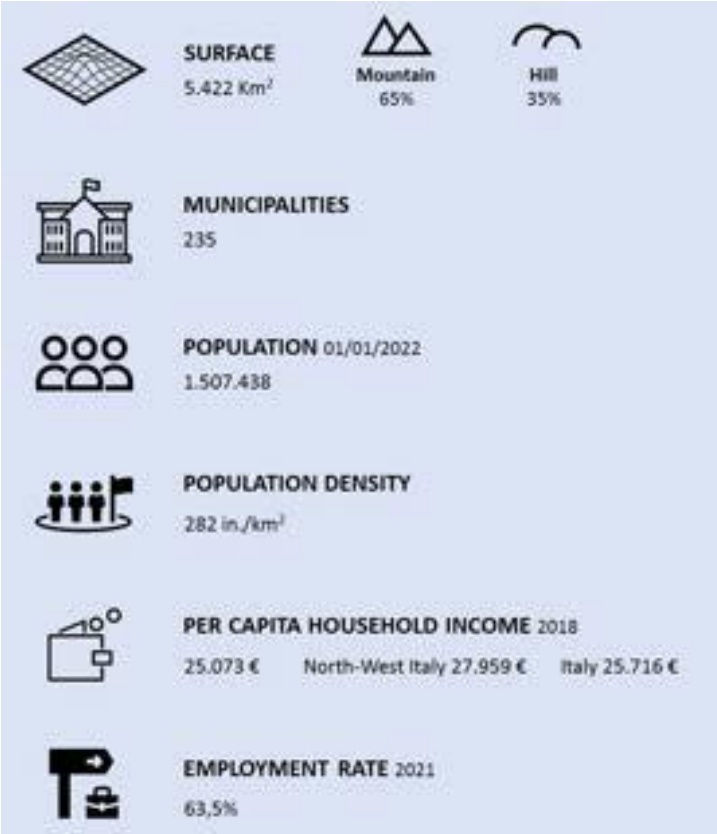
Once the strategic objectives had been identified, indicators were selected from those available in the ISTAT-Sistan SDGs Information System and those for monitoring equitable and sustainable wellbeing, subsequently supplemented with indicators from other national and regional institutional sources

Following the first Regional Sustainable Development Forum held on 10 December 2020, the Regional Council approved the final documentation of the **Regional Sustainable Development Strategy (RSDS)** with Resolution no. 60 of 29 January 2021.



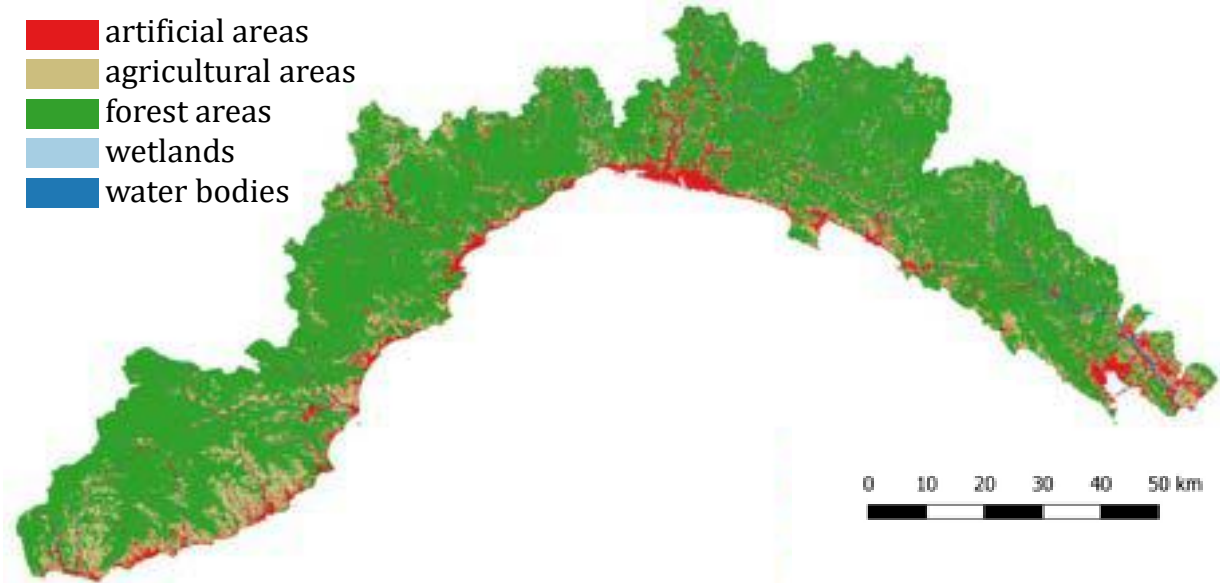
Liguria Region overview

The region of Liguria consists of 235 municipalities and covers an area of 5422 square kilometres, with a population of just more than one and a half million inhabitants.

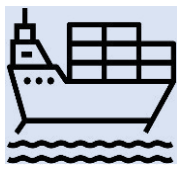


Its geographical position close to the sea, its deep waters and the conformation of its coasts have historically made the Liguria Region an important commercial port: a place of exchange of goods, people and ideas, within international dynamics. Land use in Liguria is shown in the following map.

- artificial areas
- agricultural areas
- forest areas
- wetlands
- water bodies



The identity of the Region is defined through its strengths and characterizing sectors: the economy of the sea, tourism, Life sciences, Research & innovation and Smart technologies.



BLUE ECONOMY

The close relationship with the sea represents a strategic element for the Ligurian economy: blue economy sector includes **marine environment protection, naval supply chain** (construction, service, refitting), and **harbour system** (logistics, safety, controls, integrated logistics) which, altogether, represents 2% of the national GDP.

With 2,7 million TEUs in container traffic, total traffic of 68,1 million tons and 2,5 million passengers in 2019, the **Port of Genoa** (comprising four different ports distributed throughout the region and handled by a sole managing authority) is the **major Italian harbour** and among the biggest ones in the Mediterranean, managing major gateways for goods directed to northern Europe.

Blue economy in Liguria Region comprises **115 firms and 2.100 employees**, which allowed the development of **highly specialised, innovative and competitive supply** chains around large industrial groups in the fields of shipbuilding and ship repair: Liguria Region ranks 1st in the field of shipyard activities, and 2nd in terms of ship/boat building, port activities, maritime transport, and ship owning.



LIFE SCIENCE

Life Sciences is a broad concept: it includes technologies, products, and services for the healthcare sector, development and production of medicines, dietary supplements, and in-vitro diagnostic devices, as well as technologies, equipment, and systems in support of health and the quality of life, for disabilities and fragility, and aimed to prevention, education, screening, diagnosis, therapy, assistance, rehabilitation and management of sanitary facilities and systems.

Life sciences has high social value, and the offer of high quality and high-tech products and services has immediate repercussions on the citizens' health and wellbeing. Such a sector is all the more strategic in a region characterized by a **demographic trend of aging**, with the highest average age data in Italy (48.7 vs 45.4 in 2019) - to cope with these dynamics, Liguria Region is a **Reference Site for the European Innovation Partnership on Active and Healthy Ageing (EIP-AHA)**.

The sector is strategic also in terms of economic and employment potential: health-related activities involve 3.500 firms and 15.000 workers, including the biggest paediatric hospital in northern Italy (IRCSS Gianna Gaslini).

Taking into account the characteristics and needs of its territory, Regione Liguria has identified the following sub-areas of specialization: Technologies for regenerative, predictive, and personalized medicine, Diagnostic platforms, Technologies for rehabilitation, assistance, integration, and education, and Technologies and methods of using Big Data in healthcare.

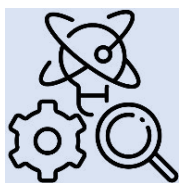


TOURISM & LEISURE

Liguria Region offers a range of touristic and leisure opportunities that make it unique: **cultural and artistic, naturalistic and environmental heritage, food and wine**, each category boasts local excellence and uniqueness **able to satisfy the preferences of all travellers**.

The tourism sector has **developed and grown considerably** over the past years (except for the anomaly due to covid-19), recording 9 million tourists in 2019, reaching peaks in summertime.

Liguria has over 4.000 accommodation facilities, over 150.000 sleeping places, and approximately 50.000 workers in the tourism sector, which accounts for **10,2% of the regional GDP**, 11% of domestic consumption, and brings into the regional territory **over 15 million visitors per year**, 39% of which from abroad.



RESEARCH & INNOVATION

The regional research & innovation context can count on a **consolidated network of specialized entities**: the Italian Institute of Technology, 15 university Departments, 5 Research & Innovation Centres working on the Regional Smart Specialisation Strategy priorities, 8 NRC institutes, the Scientific and Technological Park “Erzelli” and the IRCSSs “San Martino and Gianna Gaslini”.

Also, thanks to the activity of these organizations, Liguria Region records **positive data and trends** related to productive specialization in high-technology sectors, the incidence of high-tech export, the employees (5,7 out 1.000 inhabitants in 2019) and expenditure (1,46% GDP in 2019) in R&D, SMEs introducing product/process innovations (43,5% in 2019), and the high propensity to continuing education of the workforce employed in such fields. Some criticisms still affect the registration of patents, trademarks, and models, and the level of employment in the fields of mid-tech and high-tech industrial sectors and in knowledge-intensive services.

Liguria is the **1st Italian region in terms of mid-tech and high-tech industrial exports**. It is above the national average and in line with the European one in terms of **public expenditure on research and development** (which corresponds to 0,6% of the regional GDP). Private expenditure in R&D, instead, is in line with national values, but significantly below the European average.

Liguria Region according to the Regional Innovation Scoreboard (RIS 2021) data places among the **Moderate innovators**, in **12th place among the 21 Italian regions**.



SMART TECHNOLOGIES

With 8.000 firms and 51.000 employees in this sector, the region devotes **significant resources** to the fields of Safety & Security, Smart Mobility, Smart Energy, and Factories for the Future.

In particular, the topic of **Smart Mobility**, and more generally the sustainability and efficiency of goods and people transport systems, is **one of the key points of the broader concept of “Smart Society”** and comprises various interacting sectors, such as the private and public people mobility, within-city and broader goods transport.

Moreover, Regione Liguria prioritizes the issue of **Smart Energy**, leveraging on the local availability of **industrial entities with great technological skills** in the energetic sector, **thermal power stations** with a growing need to lower the environmental impact, and **new technological and productive capacities** in the field of smart energy distribution. Within the context of Smart energy, the region features consolidated skills in the industrial and academic fields regarding the optimization of combustion processes and the rationalization of productive cycles with an aim to improve their energy efficiency, through the generation of energy from renewable sources, the development of smart grids and the energy efficiency of buildings.

1

Positioning of Liguria Region with respect to the Goals of the 2030 Agenda

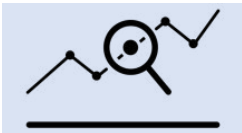
The **Italian Alliance for Sustainable Development** (ASviS) periodically develops **composite indicators** that measure the progress of Italy, its regions, provinces, and metropolitan cities **towards the SDGs**.

In April 2020, Regione Liguria signed a memorandum of understanding with ASviS for the purpose of collaboration in promoting the principles of the 2030 Agenda and defining the Regional Strategy for Sustainable Development.

It is summarised below the **positioning of the Liguria Region and its objectives, with respect to the 17 Sustainable Development set by the UN 2030 Agenda**. This work is the result of the collaboration experience between the ASviS and Regione Liguria.

The positioning of the Region in relation to the UN Agenda 2030 is **made starting from 105 elementary indicators**, mostly produced by the National Statistical System (SISTAN, ISTAT) and sources whose validity has been carefully analysed.

For the elaboration of the composite indicators, the ASviS uses the methodology of the Adjusted Mazziotta-Pareto Index (AMPI) also adopted by ISTAT¹ to build similar indicators on equitable and sustainable well-being. This methodology has been applied for the calculation of almost all SDGs². If the trend of a composite index is improving, this does not necessarily mean that the region will reach the Goals in 2030, but simply that it is moving in the right direction.



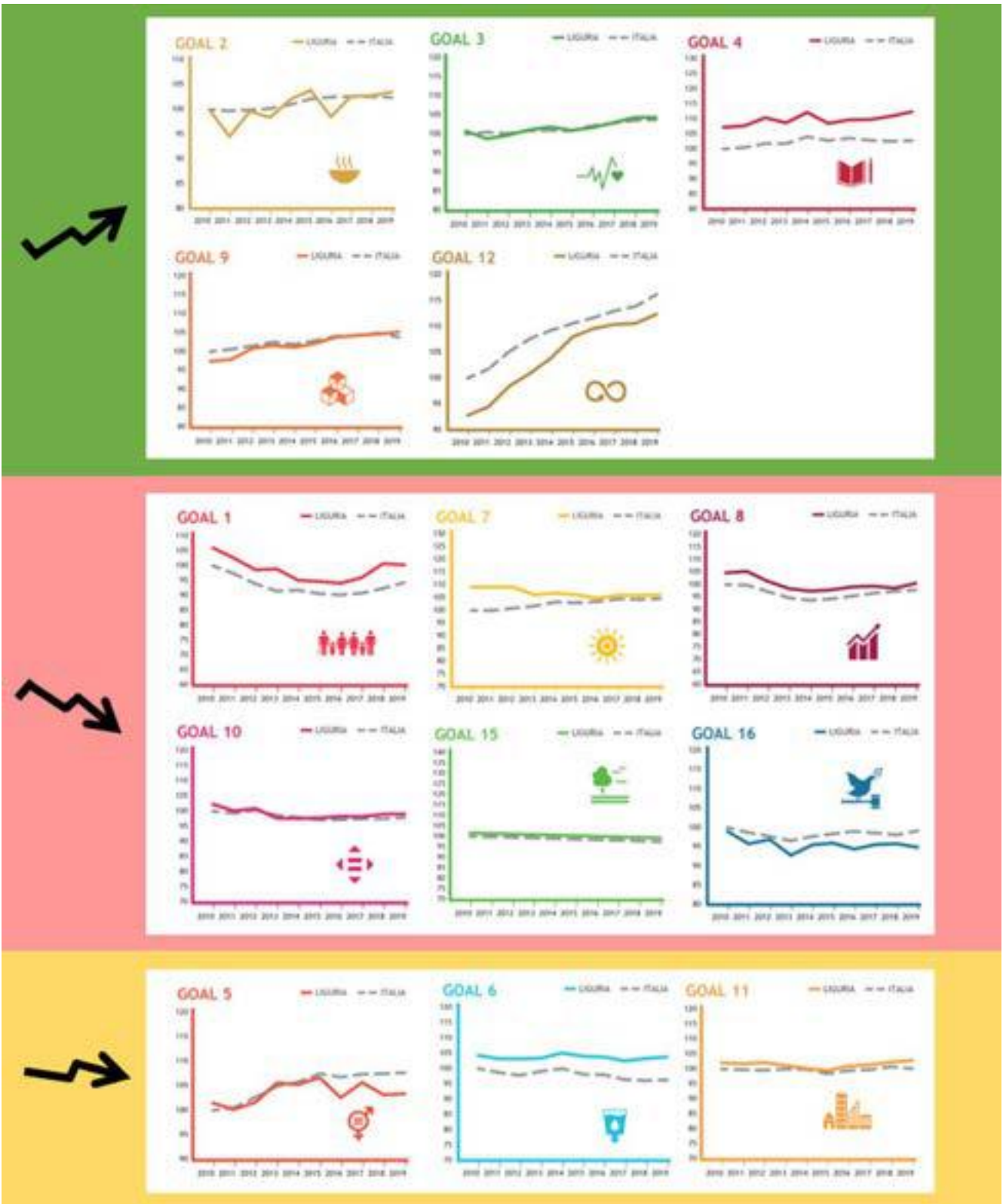
Analysing the trends observed between 2010 and 2019, it appears that Liguria is improving in 5 Objectives: sustainable food and agriculture, health, education, innovation, sustainable production, and consumption models. For 6 objectives, however, the situation is worsening: poverty, energy system, economic and employment conditions, inequalities, terrestrial ecosystem, and solid justice and institutions, while for the remaining 3 (gender equality, water, and conditions of the cities) the condition appears substantially unchanged.

¹ Italian National Institute of Statistics

² For Goal 13, Goal 14, and Goal 17 it was not possible, due to the lack of data at the regional level.



REGIONE LIGURIA



2

The regional sustainable development strategy: governance, objectives, and indicators

2.1 Governance

An interdepartmental working group was set up in July 2017 with the following objectives:

- to develop the contents of the regional sustainable development strategy, through the following activities
 - identification in the various areas of competence of the instruments and activities that can contribute to achieving the objectives of the National Strategies
 - involvement of local authorities and all stakeholders, through appropriate participative and informative methods
 - definition of regional-scale objectives, instruments, and actions, in coherence with the UN 2030 Agenda and the objectives identified by the National Sustainable Development Strategy
- monitoring the implementation of the regional strategy and contributing to the monitoring of the national strategy

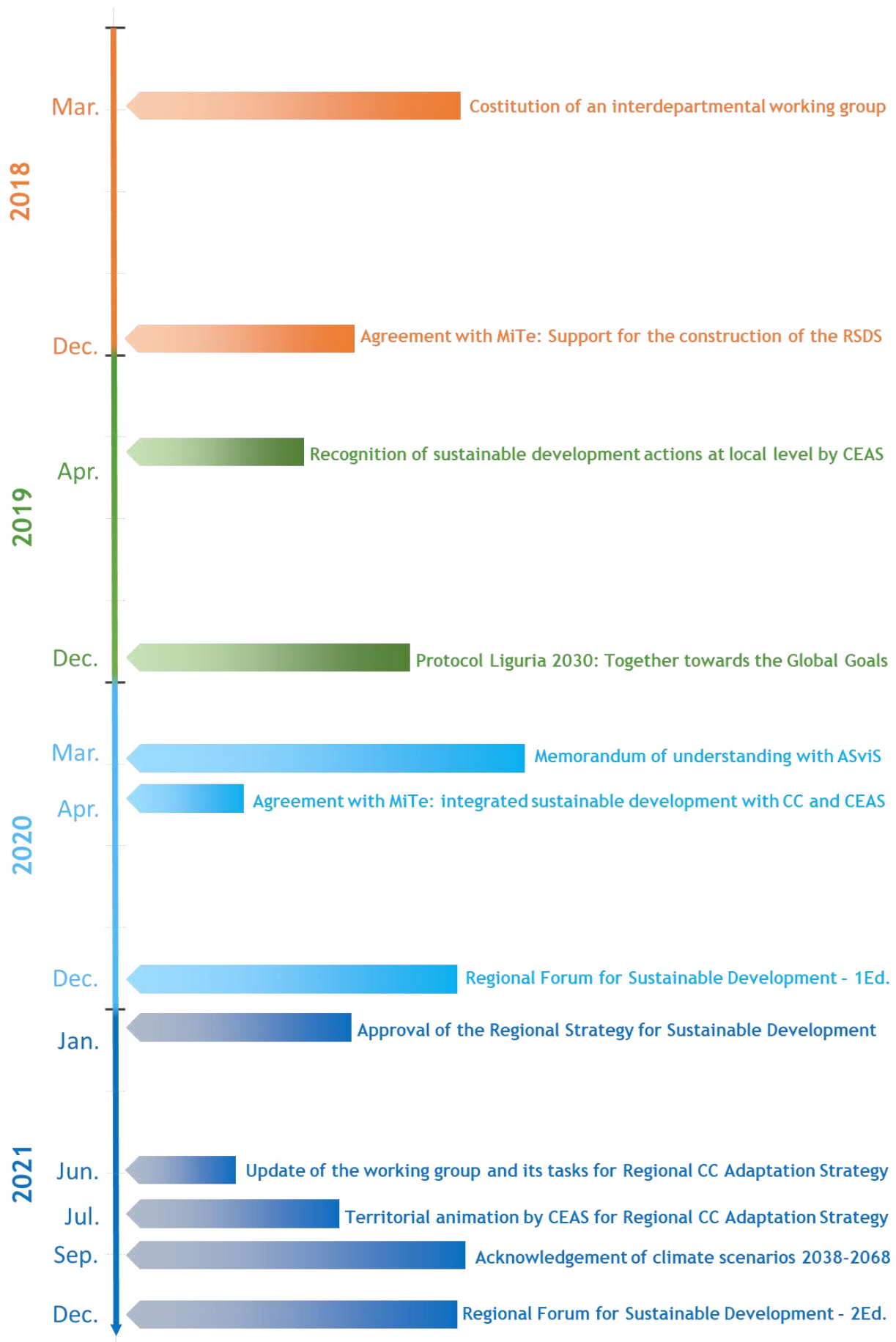
This working group was expanded in June 2021 to include representatives from all Regional Central Directorate/Departments and is coordinated by the Environmental Impact Assessment and Sustainable Development Sector.

From January 2019, the Centres for Environmental and Sustainability Education (CEAS) are involved to support the construction of the regional strategy and the involvement of civil society and local governments.

In addition, the Liguria Region has signed specific cooperation agreements with the Italian Minister for Ecological Transition (MiTe, formerly MATTM) for the support, including financial resources, to the activities necessary for the elaboration of the RSDS. Moreover, the Liguria Region is part of the permanent round table between the State and the Regions that facilitates the connection and harmonisation of processes between the different territorial levels.

In this regard, Regione Liguria participates in of the CREIAMO PA Project "Skills and networks for environmental integration and for the improvement of public administration organisations".

The main steps of the sustainable development process in Liguria are depicted in the following timeline.



2.2 Objectives

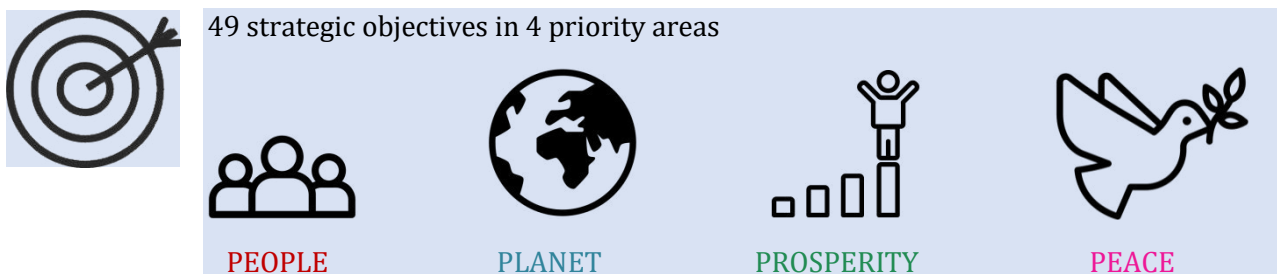
In order to **define the regional policies' contribution to the implementation of the National Sustainable Development Strategy (NSDS)**, a survey has been carried out aiming at identifying the main tools activated by the Liguria Region and the enlarged regional sector, in the various areas of competence (referring to the 2014-2020 programming period), **able to contribute to the achievement of the National Strategy objectives** (DGR 1061/2018).

The tools which have been investigated with the support of the interdepartmental Working Group include both regional regulations, Plans, and Programs (activated or planned), with the related specific action lines.

Considering the resulting instruments, a first selection of regional strategic objectives was approved with DGR 957/2019 and starting from the 88 objectives included in the NSDS, linked with a first set of indicators and with the Mission and Program objectives of the Regional Economic and Financial Document.

At the regional level, **PEOPLE, PLANET, PROSPERITY** and, in a more limited form, **PEACE** have been identified as **priority action Areas**. The **PARTNERSHIP** area of the National Strategy concerning international cooperation actions was excluded because falling under the competence of the Ministry of Foreign Affairs.

The final selection of the objectives of regional interest relates the relative implementation tools initially identified to strategic objectives of the other aforementioned 4 Areas, for a total of **49 strategic objectives** (DGR 60/2021).



 PEOPLE	1	I.1 Reduce the poverty intensity
	2	I.2 Combat material and food deprivation
	3	I.3 Reduce housing discomfort
	4	II.1 Reduce unemployment for the population's weakest groups
	5	II.2 Ensure the social protection and welfare system full-functioning
	6	II.3 Reduce the school dropout rate and improve the education system
	7	II.4 Fighting deviance through prevention and social integration of those at risk
	8	III.1 Decrease the exposure to environmental and anthropogenic risk factors
	9	III.2 Promote healthy lifestyles and strengthen prevention systems
	10	III.3 Ensure access to effective health and care services, counteracting territorial gaps
 PLANET	11	I.1 Safeguard the conservation status of species and ecosystems habitats
	12	I.2 Stop the spread of invasive alien species
	13	I.3 Increase the land and sea protected area and ensure effective management
	14	I.4 Protect and restore genetic resources and natural ecosystems
	15	I.5 Integrate the value of natural capital into plans, policies, and accounting systems
	16	II.1 Maintain the seas vitality and prevent impacts on marine and coastal environment
	17	II.2 Stop land consumption and fight desertification
	18	II.3 Minimize pollutant loads in soils, water bodies, and aquifers
	19	II.4 Implement integrated water management at all planning levels
	20	II.5 Maximize water efficiency and adapt withdrawals to water scarcity
	21	II.6 Minimize emissions and reduce polluting concentrations in the atmosphere
	22	II.7 Ensure the sustainable management of forests and fight their abandonment
	23	III.1 Prevent natural and anthropogenic risks and strengthen the resilience capacities
	24	III.2 Ensure the high environmental performance of buildings and infrastructures
	25	III.3 Regenerate cities, ensure accessibility and the sustainability of connections
	26	III.4 Ensure the restoration of ecosystems and foster urban/rural connections
	27	III.5 Ensure the development of potential and care of territories and cultural heritage
 PROSPERITY	28	I.1 Increase investment in research & development
	29	I.2 Implement the digital agenda and enhance the deployment of smart grids
	30	I.3 Innovate processes and products and promote technology transfer
	31	II.1 Ensure accessibility, quality, and continuity of training
	32	II.2 Increase sustainable and quality employment
	33	III.1 Dematerialize the economy, and promote circular economy mechanisms
	34	III.2 Promote environmental taxation
	35	III.4 Promote social & environmental responsibility in businesses and administrations
	36	III.5 Abate waste production and promote the secondary raw materials market
	37	III.6 Promote demand and increase the supply of sustainable tourism
38	III.7 Ensure the sustainability of agriculture and forestry along the entire supply chain	
39	III.8 Ensure the sustainability of aquaculture and fishing along the entire supply chain	
40	III.9 Promote Italian excellence	
 PEACE	41	IV.1 Increase energy efficiency and by avoiding/reducing impacts on cultural heritage
	42	IV.2 Increase the sustainable mobility of people and goods
	43	IV.3 Reduce greenhouse gas emissions in non-ETS sectors
	44	I.1 Prevent violence against women & children and ensure fair assistance to victims
	45	I.2 Ensure the inclusion of ethnic and religious minorities
	46	II.2 Ensure gender equality
	47	II.3 Fight all discrimination and promote respect for diversity
	48	III.1 Intensify the fight against crime
	49	III.2 Fight corruption and extortion in the public system

TAB. 2 – Priority areas and strategic objectives

The connection of the Areas taken into consideration in the Regional Strategy (and the choices and objectives associated with them) with the Goals of 2030 the Agenda is complex and articulated, as shown below (Figure 1).

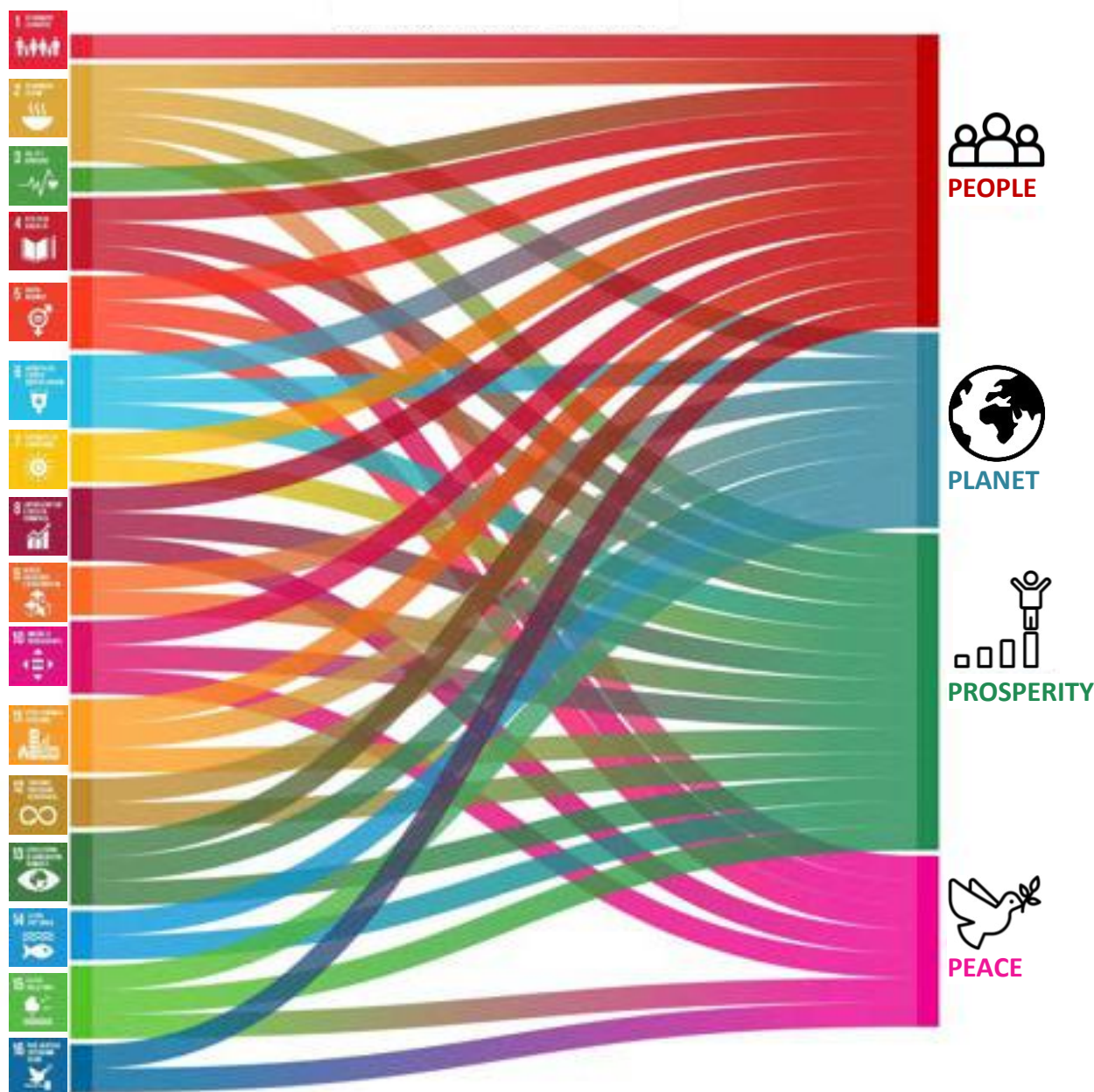


Figure 1 - Connection between the 4P and the Goals of the 2030 Agenda

2.2 Indicators

The United Nations Statistical Commission has set up the Inter-Agency Expert Group on SDG (IAEG-SDGs) to define a **shared statistical framework useful for monitoring and assessing progress toward the objectives of the 2030 Agenda**. The UN-IAEG-SDGs indicators for monitoring the 17 Sustainable Development Goals constitute a **complex system in continuous evolution**: it includes both **consolidated indicators** available for most countries and **indicators not yet defined in all details** at the international level.

To monitor the objectives of the Regional Strategy, 70 ISTAT-SISTAN SDGs indicators populated for Liguria were used, some of which were repeated in correspondence with several strategic objectives.

The following figure (Figure 2) shows the number of used indicators associated with each of the 17 Goals of the 2030 Agenda.

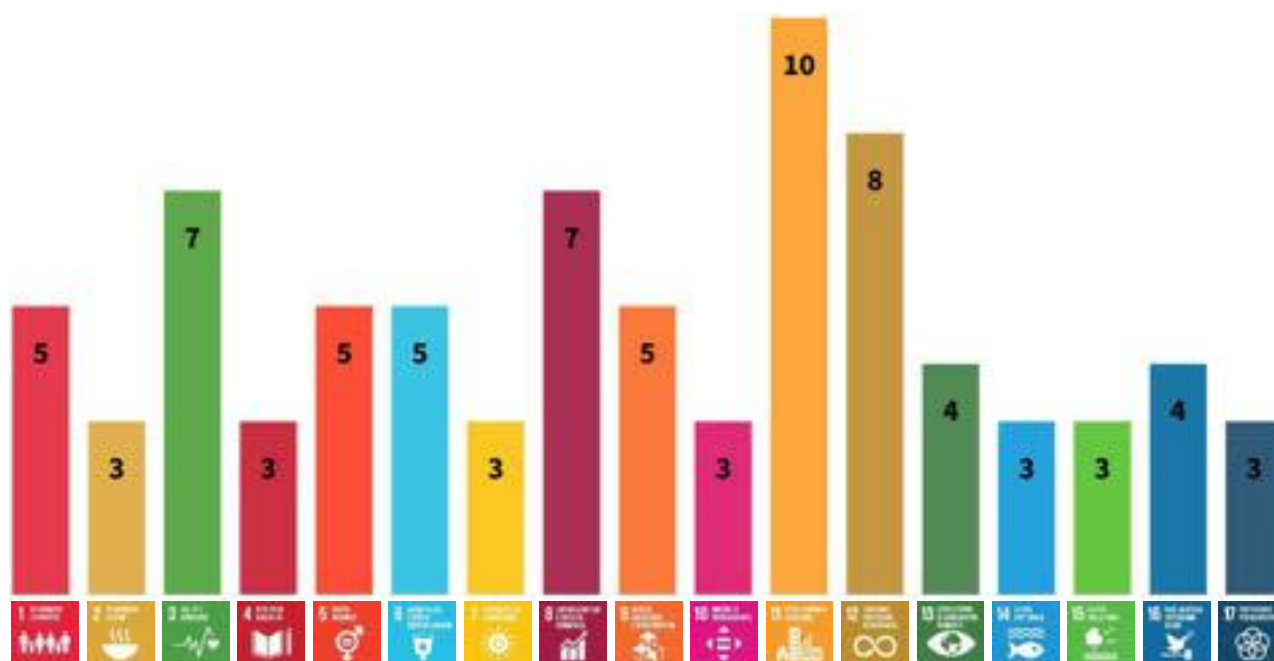



Figure 2 - Number of used indicators associated with each of the 17 Goals of the Agenda 2030 (last update: June 2020)

In summary, the reference framework for the selected indicators consists of 111 indicators, distributed as follows:

- 36 indicators proposed by the Working Table on Indicators for the implementation of the NSDS
- 38 additional BES indicators and/or ISTAT-SISTAN SDGs
- 3 ISTAT indicators
- 25 indicators already monitored by the regional Sectors or proposed by the Regional Working Group
- 9 indicators from other institution sources (Italian Institute for Environmental Protection and Research, Ministry of Agriculture, Food and Forestry and others).



Monitoring based on 111 indicators from different databases.

9 of the 12 indicators monitoring fair and sustainable well-being, included in the national economic and financial document, are included in the set of indicators of the regional sustainable development strategy.

Each indicator is defined by its **characteristics**:

- **name**; obviously, in the case of indicators present in existing sets, the wording conforms to the one already in use
- **nature**, or if the indicator is BES (BES12) and / or SDGs
- **source**, that is, its database of origin
- whether or not they belong to the set proposed by the Working Table on Indicators for the implementation of the NSDS

- **measurement unit** of the numerical value
- **latest data available for Liguria**, and where available for Northern Italy (or, as a second choice, the North-West) and the national value, for comparison
- **year** (or period) relating to the last data
- **reference target for 2030** (where available); the target value was identified mainly on the basis of the reference regulations or set objectives. These regulations and objectives can be at a regional, national or supranational level. In some cases, when the target is not indicated by legislation, we proceeded to insert the best value among the Italian regions (best Italian performer) or the best among France, Germany, Spain and the United Kingdom (best European performer). Furthermore, where the Targets defined by the institutional levels for 2020 are not achieved, the Targets have been moved to 2030.

Each objective of the Regional Strategy is monitored by 1 indicator up to a maximum of 6 indicators; some indicators are repeated in correspondence with several Strategic Objectives (Figure 3).

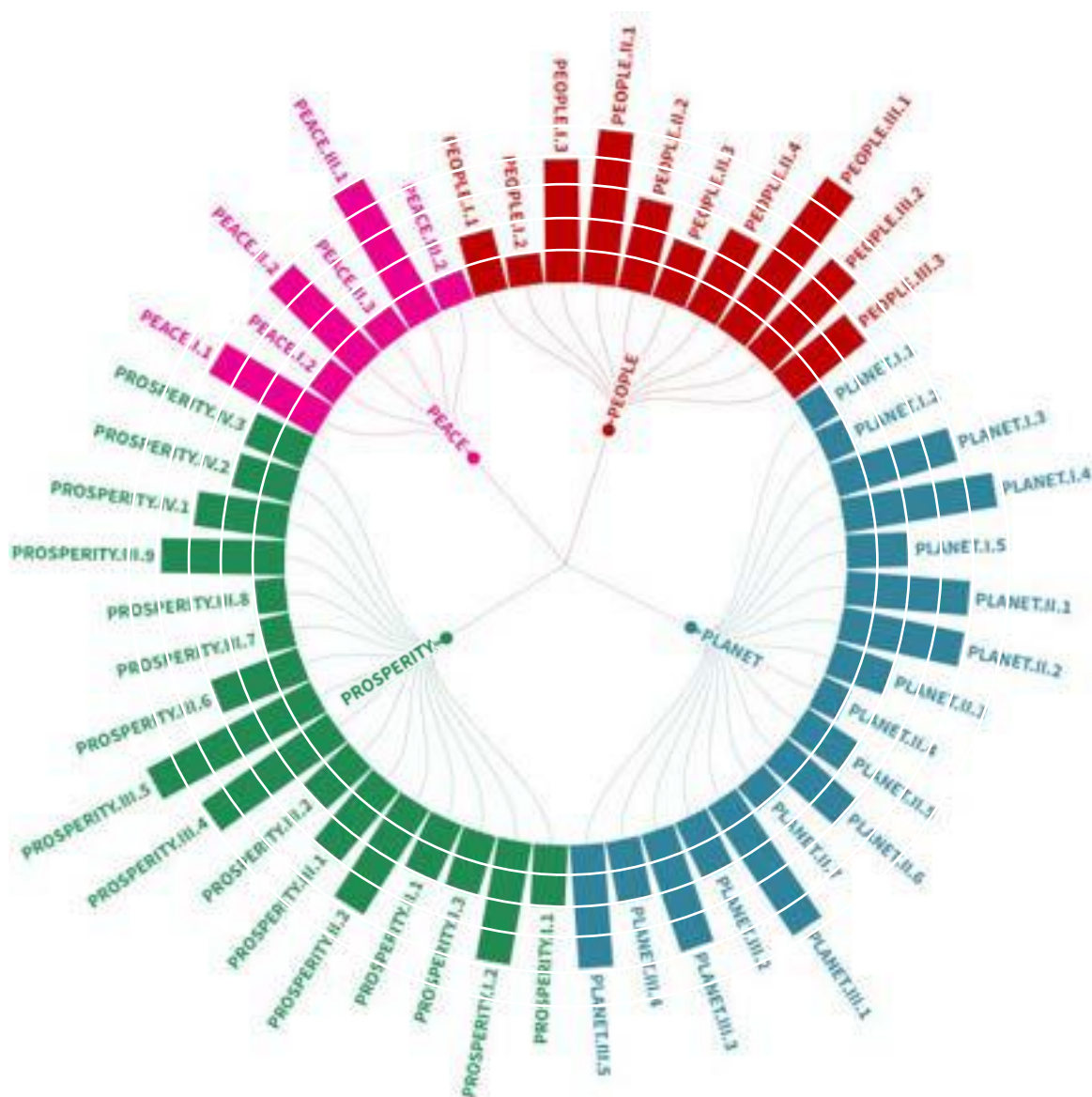


Figure 3 - Graphic representation of the number of indicators for each strategic objective of the 4Ps taken into consideration by the Regional Strategy. The length of the bars is proportional to the number of indicators, from 1 to 6.

3

Coordination between Regional Programming Instruments

The endeavour to make policies on several vertical - European, national, regional and sub-regional - and horizontal levels acting on a territory coherent aims at full cooperation and integration in the management of different issues and an optimised use of financial resources.

The Liguria Region participated in the coaching organised by MiTe (formerly MATTM) within the CREIAMO PA project - intervention line LQS1 "Environmental Assessments - Actions to improve the efficacy of SEA and EIA processes for programmes, plans and projects", during which an experiment on the construction of planning sustainability was launched. The main Plans and Programmes, whether subject to SEA or not, at the regional, provincial and municipal level were analysed to assess their relevance for achieving sustainability objectives.

The 25 Plans and/or Programmes listed below were included in the analysis:

No.	Name Plan/Program	IT acronym
1	Regional Programme European Regional Development Fund	PR FESR
2	Rural Development Programme	PSR
3	Hydrogeological Structure Plan	PAI
4	Flood Risk Management Plan	PGRA
5	Regional Territorial Plan	PTR
6	Regional Landscape Plan	
7	Regional Integrated Infrastructure, Mobility and Transport Plan	PRIIMT
8	Regional Plan for Air Quality Remediation and Protection and Greenhouse Gas Reduction and Air Quality Remediation Measures (DGR. 941/2018)	PRQA
9	Regional Water Protection Plan	PTA
10	Regional Environmental Energy Plan	PEAR
11	Regional Waste Management and Remediation Plan	PRGR
12	Regional Territorial Plan for Quarry Activities	PTRAC
13	Regional Forestry Programme	PFR
14	Wildlife and hunting plan	
15	Park Plan	
16	Municipal General Regulatory Plans	
17	Territorial Plan for Coastal Coordination	PTCC
18	Territorial Plan for Landscape Coordination	PTCP
19	Plan for the Protection of the Marine and Coastal Environment	PTAMC
20	Operational Programme European Maritime, Fisheries and Aquaculture Fund	PO FEAMPA
21	Three-year Green Procurement Action Plan	
22	Regional Prevention Plan	
23	Regional Programme European Social Fund	PR FSE
24	Interreg V-A Programme	
25	Special Areas of Conservation Management Plans	

For these, a level of consistency was indicated among the following: 1 low relevance, 2 medium relevance, 3 high relevance.

	No. Plan/Program																								
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
PEOPLE.I.1																									
PEOPLE.I.2																						2			
PEOPLE.I.3	1									1															
PEOPLE.II.1	3	2									1									2	1		3		
PEOPLE.II.2	1																						2		
PEOPLE.II.3																							3		
PEOPLE.II.4	1												1												
PEOPLE.III.1	3	3	3	3			1	3	3		2	2	2		2				3		2	3		3	2
PEOPLE.III.2								3					1		1						2	3			2
PEOPLE.III.3	2																					2		1	
PLANET.I.1	1	3							3		2	2	2	2	3				3	3	1			3	3
PLANET.I.2									2				2		3				1				2	2	
PLANET.I.3	1	3							2				2	3	3				3						3
PLANET.I.4		3			1	1			3				1	2	2				1	3	2				3
PLANET.I.5		1			2	3			3				3	3	3	2	2	2			3				3
PLANET.II.1	1		1	1					3		1								3	2	2				3
PLANET.II.2	1	1	1		3	3			2			2	1		3	2	1	2	3		2				3
PLANET.II.3	2	3			1	1			3		2				3				2		1				3
PLANET.II.4		1							3						1				2						3
PLANET.II.5	1	2							3			1							1		1				2
PLANET.II.6	3	2			1		3	3	1	2	2	1	1			1					2			3	3
PLANET.II.7		3			2	2			1				3		3	1								3	3
PLANET.III.1	3	3	3	3	3		3		1		1	2	2	1	3	3			3		1			3	3
PLANET.III.2	3	1			3				3				1			3			1		2				
PLANET.III.3	3				3		3									3			1		2				
PLANET.III.4		1			2	2						1	1	3	3	1		2	1		1				3
PLANET.III.5	2	3	1	1	2	3			1		1	2	3	3	3	3		3	1		1			3	3
PROSPERITY.I.1	3	3	1	1										1						2					1
PROSPERITY.I.2	3	3		2			2			2												1			
PROSPERITY.I.3	3	3									1		1		1						3			3	
PROSPERITY.II.1	1	3		1									2							2	1		3		
PROSPERITY.II.2	2	1			1					1	1		2		3					2		2	3		
PROSPERITY.III.1	1	2									2	2	1		3						3			1	1
PROSPERITY.III.2											1										1				2
PROSPERITY.III.4	2	2	1	1					1		1		1		3						3				2
PROSPERITY.III.5	1	2									3	2									2	2			1
PROSPERITY.III.6	2	3			1		3		1		1		1		3				1	2				3	2
PROSPERITY.III.7		3							1				3		2										3
PROSPERITY.III.8									1										1	3				2	3
PROSPERITY.III.9		3			1								1		2							1			
PROSPERITY.IV.1	3	3			1			1	2	3	1	1	2		1						2				
PROSPERITY.IV.2	2	1			2		3	3		1					1	2					1			3	
PROSPERITY.IV.3	3	2					3	1		3	1										1				
PEACE.I.1	1																							2	
PEACE.I.2	1																								
PEACE.II.2	1	1																			1				
PEACE.II.3	1	1																			1				
PEACE.III.1	1																								
PEACE.III.2	1																								

3.1 Coherence between regional policies and with main national policies

One of the main tasks of the regional administration is to adopt a programming, in coherence with local authorities, the state and the European Union, defining objectives, criteria and modalities of its action, respecting the principle of subsidiarity. For this reason, it is necessary to coordinate and link the regional policies with European and national programming in a coherent manner to respond effectively to the needs of the community and to pursue the social and economic development of the Ligurian territory.

The identification of a strategic directive for the regional administration is the first step towards the definition of a regional strategy that is integrated with the European and national directives and for a functional reorganisation of the regional programming instruments.

The Regional Strategy for Sustainable Development approved with DGR 60/2021 identifies and declines the strategic objectives with respect to the socio-economic context of the Liguria Region.

The Interdepartmental working group composed of the Vice Direction General for the Presidency, the Central Organisation Direction, the Central Finance, Budget and Control Direction and the Environment and Civil Protection Department highlighted the connection between the objectives for sustainable development and the different programming instruments at European, national and regional level in relation to the areas of competence of the Regional Executive and identify specific indicators and targets associated with the respective objectives (DGR 1260/2021).

The objectives of the regional sustainable development strategy have been linked to the policy objectives of the Regional Program 2021-2027 funded by European Regional Development Fund, the National Reform Programme (NRP), the missions of the National Recovery and Resilience Plan (NRRP), the budget missions, the specific objectives of the Regional Economic and Financial Document (REFD) 2022-2024, the programmatic lines of the regional government programme and the Growth Act.

The following diagram shows an example of links between the different programming instruments and the objectives of the sustainable development strategy for an area of competence of the regional executive.



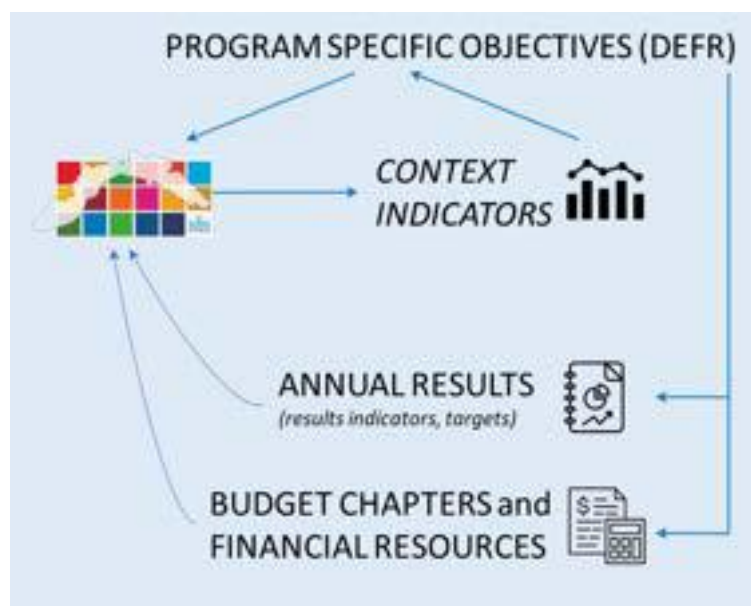
3.2 Coherence between the information system to support the Programming - Budget - Control (PBC) cycle and the RSDS

The regional planning process is formalised in documents that specify the activities and instruments necessary to achieve the objectives set by the Region, starting from the Government Programme and the Regional Economic and Financial Document (REFD) up to the necessary coherence of sectoral programming.

The mapping of the Programming Objectives against the objectives and indicators of the RSDS and the SDGs provides an initial correspondence between the specific objectives of the Regional Economic and Financial Document and the objectives of the RSDS.

In 2021, the Region of Liguria has equipped itself with an information system to support the Programming - Budget - Control (PBC) cycle, which manages the preparation of the specific three-year programme objectives of the REFD (and its update) and their information set (Context Indicators - SDGs and equitable and sustainable well-being indicators - Results, annual indicators and targets, financial requirements and related chapters). Through this information system, the link between the REFD objectives and the RSDS objectives has been strengthened.

The specific objectives represent the concrete objectives, aimed at final recipients, measurable by results and indicators, that the Sectors (operational unit) of the regional administration must pursue, according to their competences, constraints, resources. Through these formalized connections it is possible to link financial resources with the objectives of the Strategy and check their progressive achievement.

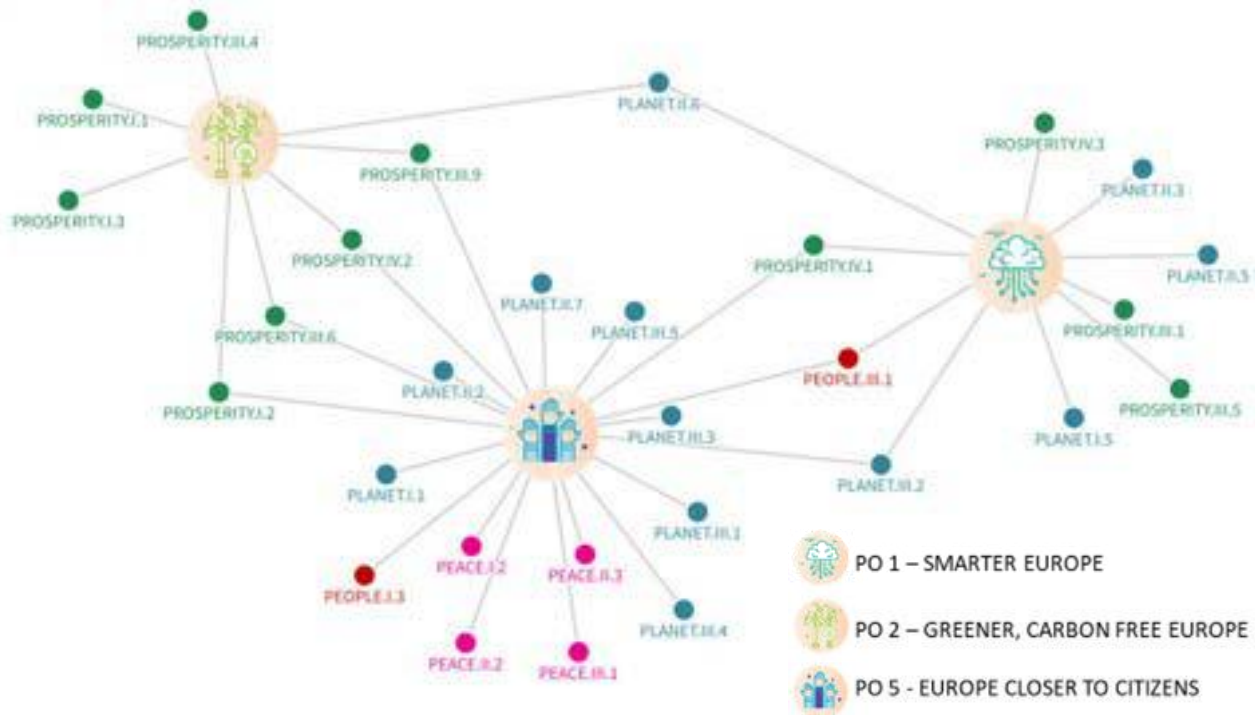


3.3 Coherence between the RP ERDF 2021-2027 and the RSDS

An example of policy coherence can be found in the Environmental Report produced for the Strategic Environmental Assessment procedure for the Liguria Regional Programme 2021-2027 funded by European Regional Development Fund.

The sustainability objectives are the reference for the definition of the Strategic Environmental Assessment process of the Plans and Programmes.

Therefore, appropriate ones were selected to assess the sustainability orientation of the Regional Program 2021-2027. The following diagram shows the link from the Policy Objectives and the Strategic Objectives.



3.4 Coherence between the Integrated Activity and Organisation Plan and the RSDS

Decree-Law No. 80/2021 introduced into the regional system, as a new planning tool, the Integrated Activity and Organisation Plan, which performs the functions of connection and support for the various programming areas covered by the same and the coordination of activities for the collection and processing of the data and information necessary for the adoption of the plan itself.

One of the focuses of the document is to describe, in coherence with economic and financial planning documents, strategies for the creation of Public Value. In this context, Regione Liguria is in the process of identifying a set of indicators associated with the budget missions and more than half of them are shared with those used for the RSDS monitoring.

4

Participation & engagement of local stakeholders

The **involvement of local public and private stakeholders** is a fundamental aspect of territorial management, right from the planning stage.

To support the construction of the regional sustainable development strategy, the **Regional Sustainability Education System** was activated: the network made of 12 territorial areas, 1 regional centre, and 14 environmental and sustainability education centres scattered throughout the region (Figure 4) was called to managed several **engagement initiatives**, such as information days, public events in the area and moments of confrontation with stakeholders.

In particular, the CEAS have carried out a **survey of the activities in progress/already planned in the short term and of those desired, consistent with the strategic objectives and the goals of the 2030 Agenda**.



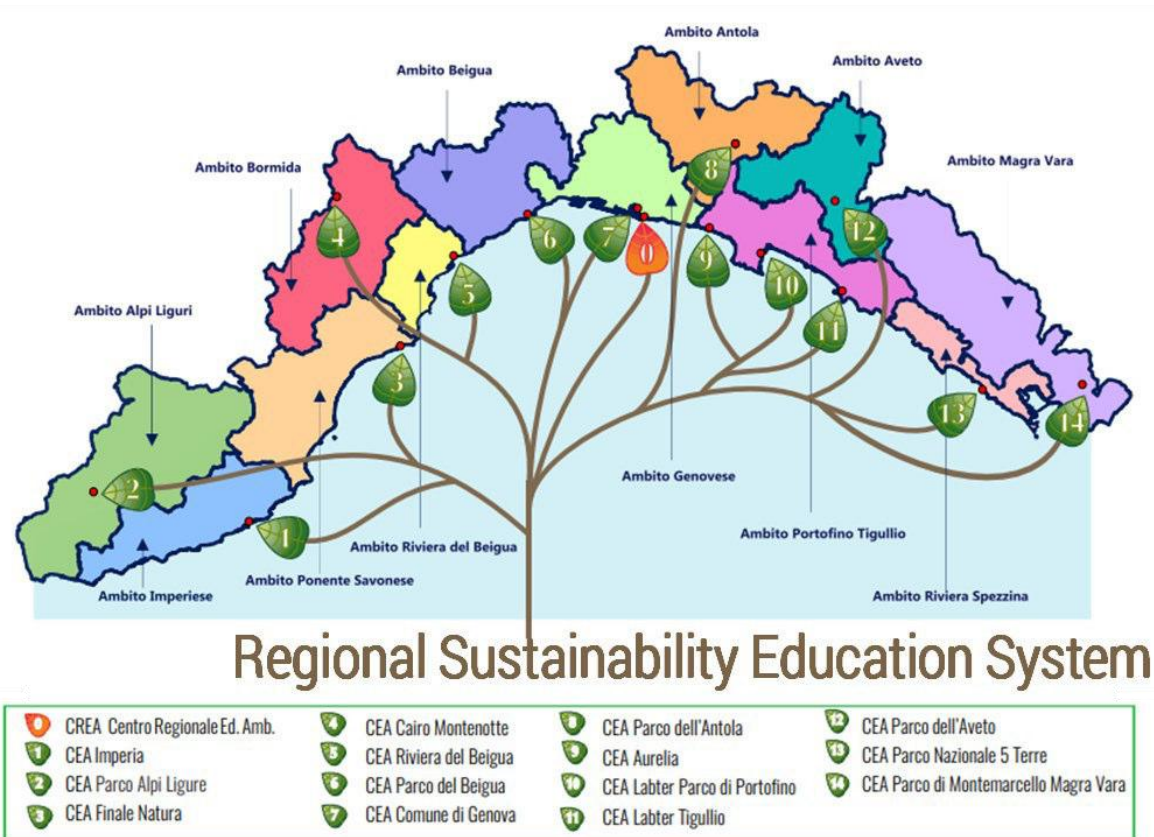


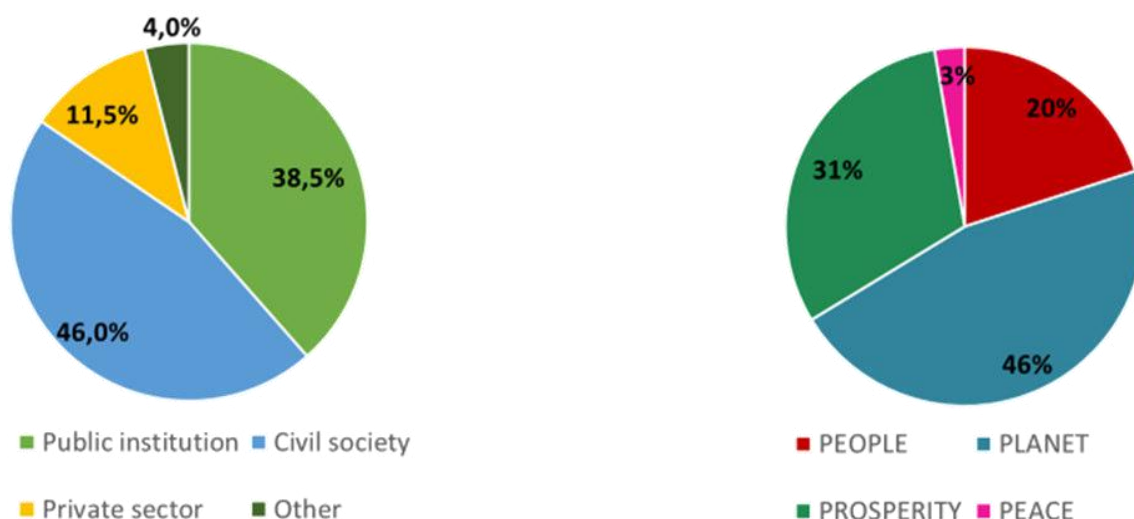
Figure 4 – Regional Sustainability Education System

The forum represents a place for discussion which, through the organization of specific working groups will accompany the implementation, monitoring, and revision of the Regional Sustainable Development Strategy.



The 2nd meeting of the Regional Forum for Sustainable Development took place online on **20 October 2021**, focusing on the launch of the construction process of the **Regional Strategy for Adaptation to Climate Change**, identified as a priority area for the implementation of the Ligurian sustainability objectives.

The survey made it possible to map a total of **891 initiatives** relating to sustainable development activated or planned in the near future, involving 1266 stakeholder coming from public institutions, civil society and private sector. The initiatives were therefore related to the strategic objectives divided by area.



Among the **most frequent** there are:

PLANET



III.1 concerning projects for the prevention of natural and anthropogenic risks and the strengthening of the resilience capacities of communities and territories

III.5 about the development of potential, sustainable management and care of territories, landscapes and cultural heritage

PEOPLE



III.1 to reduce the exposure of the population to environmental and anthropic risk factors

PROSPERITY



III.5 concerning the abatement of waste production and the promotion of the secondary raw materials market

III.6 inherent to the promoting demand and increasing the supply of sustainable tourism.

Finally, the survey carried out by the CEAS highlighted, among others, the **following priority actions**:

- Sensitization of administrators and identification of solutions to improve the response of the population in the event of floods and **promotion of self-protection measures** through weather alert systems through the use of apps, text messages, installation of visual panels and warning lights.
- **Education of the population to sustainable mobility** also through the creation of cycle paths in urban areas, bike sharing services, and ecological days.

- Promotion of door-to-door separate **waste collection** including the wet fraction, installation of biodegradable garbage bag dispensers on beaches, and containers for the collection of diapers, installation of water "houses", distribution of aluminium water bottles at school, plastic-free initiatives, reuse market, collection of used clothes and broken mobile phones (WEEE)
- Recovery and maintenance of **ancient paths**, city and path cleaning initiatives
- **Energy requalification interventions**, ordinary and extraordinary maintenance, the technological innovation of some public lighting systems, improvement of thermal insulation on the roof and installation of air conditioning systems with high-efficiency technologies.

The CEAS also carried out territorial animation activities aimed at civil society through exhibitions, conferences, theatrical performances, and excursions. They also involved schools with educational activities and games. Direct interaction was implemented by the CEAS in the form of territorial co-design tables, training meetings, interactive workshops, and video interviews.



5

Future perspectives

To **achieve its sustainable development goals** as indicated in the Strategy, the Liguria Region has prepared a series of **priority implementation actions** and investigated some **thematic synergies** that can be activated with some traditional regional socio-economic sectors.

The Liguria Region has identified **two priority areas of action**, approved and partly financed also by the Ministry for the Ecological Transition (MiTe, formerly Ministry of the Environment and Land and Sea Protection MATTM).



Activation of the Regional Environmental Education Centers System for the implementation of **information and education activities** relating the implementation of the Regional Strategy for Sustainable Development

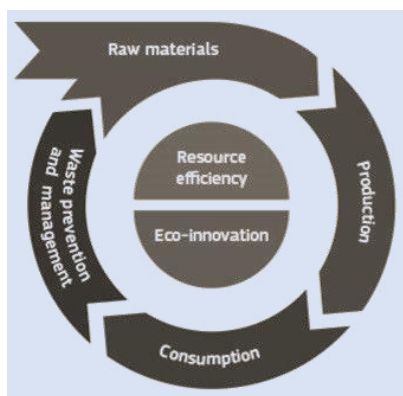


Development of areas of integrated action with the **construction of a regional strategy for adaptation to climate change** as part of the broader strategy for sustainable development.

As regards the **first area**, the CEAS accredited in the Regional System have been identified as **privileged interlocutors and intermediaries to reach the wider public** and transmit messages on sustainable development, through information and environmental education and sustainable development **activities to support the implementation of the regional strategy**. Among the initiatives carried out in the Region and traced there are exhibition stands, exhibitions, conferences, communication campaigns, excursions, guided tours, theatrical performances, territorial co-planning tables, training meetings, info points, interactive laboratories, video interviews, didactic paths in the presence or through distance learning.

As regards the **second area**, the **Interdepartmental Working group for the Sustainable Development Strategy** has been **expanded in its composition and tasks**, to include the construction of the regional strategy for adaptation to climate change (SRACC), identified as a **priority area** of integrated action for the implementation of the regional strategy for sustainable development (DGR 60/2021).

Liguria Region has started the construction process of the SRACC, which will end in **September 2022**, benefiting from the scientific support of CIMA Foundation and the University of Genoa, in the framework of a specific project financed by the MiTe.



Furthermore, the connection with the **circular economy** is certainly one of the most relevant issues for regional sustainable development: the growing consumption of natural resources has accentuated the **interdependence between the economic and environmental systems**, and the circular economy is central to a sustainable development able to combine economic needs with environmental and social ones, aiming at minimizing waste and reducing the use of virgin raw materials and energy consumption.

With the aim of **promoting the adoption of more sustainable consumption and production styles**, the Liguria Region intends to enhance the **thematic and transversal synergies between the circular economy and fundamental sectoral issues for sustainable development**, such as **public purchases**.



Combine the theme of the circular economy with the **purchases of public administration**, so that they integrated **environmental and circular criteria in the purchasing procedures** to reorient production styles



Update the **regional waste management and remediation plan** in order to promote the reduction of waste produced and the use of secondary raw materials in order to minimize waste, reduce the use of virgin raw materials and decrease energy consumption, in **circular economy perspective and waste management**

The **purchasing power of public administrations** has enormous potential in reorienting production and consumption processes since it accounts for 14% of GDP at the European level: asking for products and services with **specific environmental characteristics through green and circular public tenders** can really push the private world to invest in new production models, towards a more sustainable economic growth on a social and environmental level.

In 2021, the Liguria Region approved its **second three-year Plan for green public procurement**, recognizing the GPP as a **powerful driving factor for the demand for sustainable products** and a fundamental implementation tool of the Regional Sustainable Development Strategy.

Products and materials' end of life is certainly a fundamental element of the production cycle, on which action must necessarily be taken with a view to circularity and environmental sustainability: the **regional waste management and remediation Plan** currently being updated recognizes this close link, in order to promote the reduction of waste produced and the use of secondary raw materials in order to minimize waste, reduce the exploitation of virgin raw materials and decrease energy consumption, with a view to the circular economy.

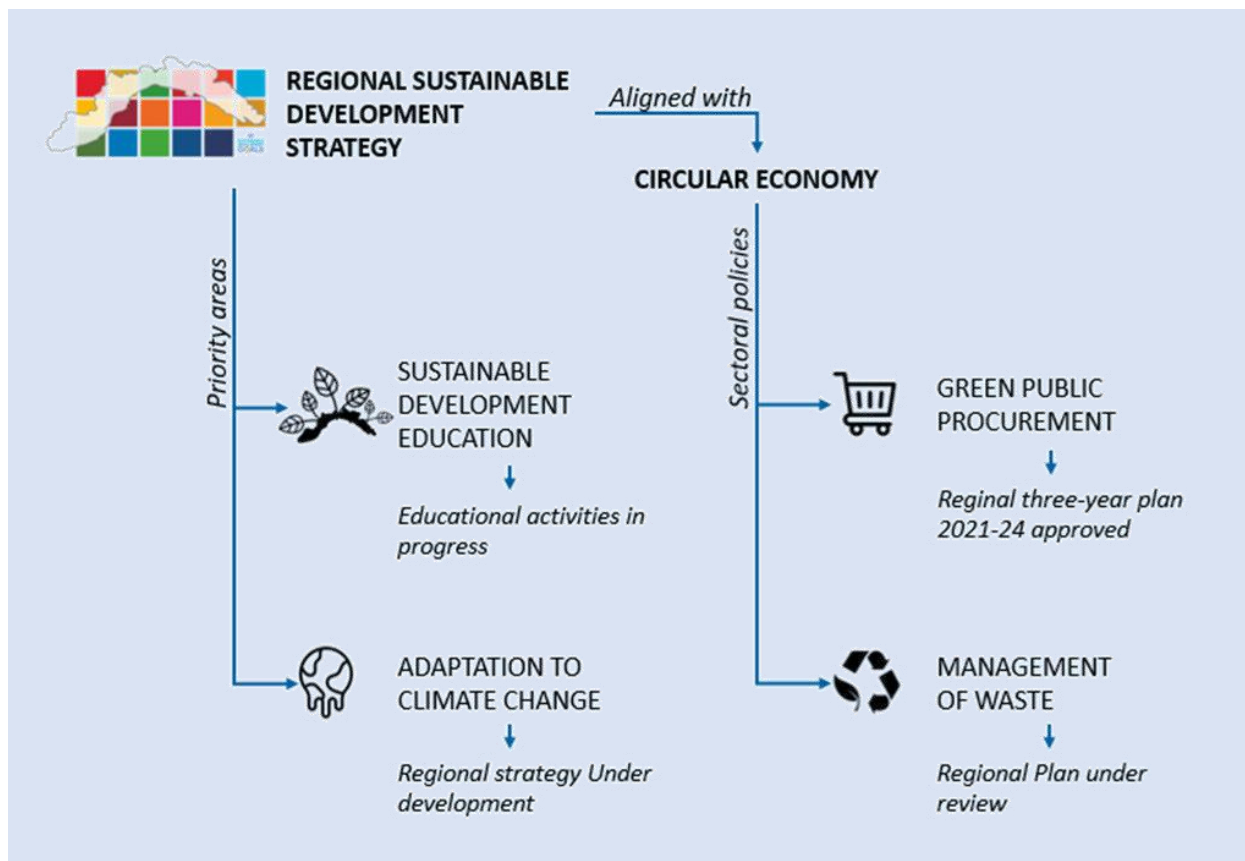


Figure 5 - Summary of priority actions and regional implementation sectors for sustainable development



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REGIONE LIGURIA

Dipartimento Ambiente e Protezione Civile

Settore Valutazione impatto ambientale e sviluppo sostenibile

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Regione
Lombardia

VOLUNTARY LOCAL REVIEW OF LOMBARDY 2022

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“Sappiamo che non saremo in grado di realizzare i nostri ambiziosi obiettivi e traguardi senza **un partenariato globale rivitalizzato e rinforzato** e senza **ambiziosi mezzi di realizzazione**. Il rinnovo del Partenariato Globale faciliterà un impegno complessivo intenso per la realizzazione di tutti gli obiettivi e traguardi, **unendo i Governi, la società civile, il settore privato, il sistema delle Nazioni Unite e altri attori** e mobilitando **tutte le risorse disponibili**”

*“We recognize that we will not be able to achieve our ambitious Goals and targets without a revitalized and enhanced **Global Partnership** and comparably ambitious means of implementation. The revitalized Global Partnership will facilitate an intensive global engagement in support of implementation of all the Goals and targets, bringing together **Governments, civil society, the private sector, the United Nations system and other actors** and mobilizing all available resources.”*

Agenda 2030

1. Sustainability in Lombardy

The recent shocks due to the pandemic and armed conflicts are part of a broader framework of crisis, which now sees the inadequacy of the development model inherited from the 20th century. In particular, the idea that there is a competition between **environment, rights, peace** and **prosperity**, and that the latter can be pursued to the detriment of the others, proves wrong. On the contrary, any damage to one of these dimensions affects the others: it is no longer possible to ignore their interdependence. Among the factors at the origin of the crisis is an imbalance in the distribution of resources which causes, for example, the obesity of about two billion people compared to eight hundred million in absolute poverty: sufficient resources for the entire human population are distributed in an asymmetrical and harmful way for everyone, demonstrating that material wealth is not sufficient to determine the quality of life. The very concept of well-being must evolve to reflect what is truly good for the person - a balanced diet, physical movement, life in peaceful conditions, the health of ecosystems - a list that ends up coinciding with what does the good of the planet. On the other hand, it is not a matter of chance: humankind has evolved on Earth and adapted to its conditions. Therefore, being sustainable does not mean giving up well-being, but the superfluous that hurts and which, if left, will not be lost, but automatically redistributed among those who demand it.

From our choices, as individuals and as a society, a chain of consequences can be negative (inequality, environmental damage, conflicts) or positive (equality, peace, well-being, health). The Lombardy Region takes this into account, whose activity as a local government is now part of the context of the recovery from the pandemic and the war crisis in the heart of Europe, which has also sharply exacerbated the energy issue. The recovery from the consequences of these events will require unprecedented efforts, but above all, it requires a **choice** on the way and the objectives to be pursued. In fact, it is a question of choosing between a conservative recovery, aimed at restoring the previous system, and an evolutionary one, capable of bringing about a structural and improving change to our way of life. Companies are also increasingly aware of it, which no longer see sustainability as a choice linked to reputation, but as concrete and direct advantages, such as the security of supply chains, the absence of socio-political risks, and the activation of inner creativity, with significant economic savings.

The green economy, in fact, is structurally virtuous: instead of being based on mass production that exhausts resources and enriches few, it requires durability and quality of goods; it is therefore based on knowledge and services and requires educated and competent people: it is therefore structurally redistributive and does not wear out resources. Italy, in particular, has a strong competitive advantage in this sense because, in the face of a historical scarcity of raw materials, it has its strong point in environmental and cultural wealth, which is even more valid in a collaborative perspective of sharing of knowledge, creativity, and competence. The adoption of Agenda 2030, in the pre-Covid era, as a guide for development, represents a firm stance towards **systemic change**, which retains its momentum well beyond the events taking place and lays the foundations for a system capable of preserving all dimensions of well-being. The Lombardy Region has joined the path undertaken by the European Union and Italy, launching the initiatives described in this report, which represent important steps toward a zero-impact region, resilient to climate change, equitable, and creator of lasting well-being.

1.1. Lombardy at a glance



Lombardy is a region located in the northwest of Italy, in the center of the plain formed by the river Po and circumscribed by the Alps to the north and the Apennines to the south. Its territory is densely populated (420 inhabitants / sq km), especially in the Metropolitan City of Milan and in the province of Monza-Brianza, and heavily industrialized. It is in fact the most populous Italian region (about 10 million inhabitants), and with the highest GDP in the country (almost 400 billion euros in 2019), while it is in second place for per capita GDP (about \$ 40,000 / inhabitant). These characteristics make Lombardy one of the Four Motors of European development, together with Auvergne-Rhône-Alpes (F), Baden-Württemberg (D) and Catalonia (ES). The advanced economy, the high number of companies, and the rate of innovation make it suitable for experimenting with new economic and social models, oriented toward a different development paradigm. One of the main strengths of Lombardy is its human capital: it is the destination of thousands of Italian and foreign students who are trained in its numerous universities and in many cases become part of its productive fabric.

The main challenges in the perspective of sustainable development concern, in this region, the protection and enhancement of the environment and natural capital, the adoption of circular production models, the transition to an energy system not dependent on fossil sources and zero emissions, the stop land use and resilience to climate change, leaving no one behind. Furthermore, the size and variety of its territory, which alternates densely inhabited urban areas with a large agricultural plain and equally extensive mountain areas, make the government's action towards structural changes particularly complex. A role of primary importance belongs to institutional actors, associations and entrepreneurs that are able to implement initiatives according to the peculiarities of the territory.

1.2. A sustainability path

Following the adoption of **Agenda 2030** as a development paradigm by the United Nations, Italy has drawn up its own **National Strategy for Sustainable Development**, published in 2018, which identifies the objectives to be pursued for sustainable growth of the country. According to the principle of coordination between levels of government, with the updating of **Legislative Decree 152/2006**, the Italian Government requested the Regions to develop their own strategy and adopt governance tools and the involvement of stakeholders and civil society to coordinate action toward these goals. In this way, the process of the Lombardy Region starts to make the sustainable development one of the key drivers of its activity, based on a long-term vision inspired by a model of fair, circular, and environmentally friendly growth. The first step was the inclusion of the principle of sustainable development among the pillars of the Regional Development Program - the main programming tool for the region's policies and actions over the course of the legislature - to then start the development of the Strategy. At the same time, various channels of involvement were established as well as tools were developed to support programming. This path led the Lombardy Region, in 2021, to have a **regional strategy for sustainable development** officially approved and accompanied by a **monitoring system** and **tools for evaluating and adapting policies, governance** within the body and capable of involving outside, a **network** of active partners who contribute to the achievement of shared objectives.

The stages

2018 Sustainability among the pillars of the PRS of the 11th Legislature

2018 Pact for Development as an involvement tool

2018 Observatory on Circular Economy and Energy Transition

2019 Agreement with the Ministry of Ecological Transition

2019 Lombard Protocol for sustainable development

2019 Definition of internal governance

2020 First regional Forum for sustainable development

2020 Online platform svilupposostenibile.regione.lombardia.it

2021 Regional Strategy for sustainable development

2021 Second regional Forum for sustainable development

1.3. Involvement and governance

The Ministry of Ecological Transition established in 2018 the national coordination and comparison table on strategies for sustainable development, with the aim of involving the Regions Metropolitan Cities, in the coordinated implementation of the national strategy. The table is a very useful tool for the Lombardy Region, which took the opportunity to provide its contributions to the national document and obtained relevant information for its business. In turn, in October 2018 Lombardy launched a discussion table with its main stakeholders, dedicated to two key themes of the ecological transition: the **Regional Observatory on Circular Economy and Energy Transition** (see *BOX*), created to discuss and define the objectives of regional policies on climate and use of resources in sharing with all the players in the area. It is flanked by the **Pact for the Development of the economy, work, quality, and social cohesion**, a table that has been active since 2001 on cross-cutting issues, which brings together representatives of the social partners, labor, and the productive world in planning regional policies. The desire to extend involvement and create a network of partners also led Lombardy to promote the **regional Protocol for sustainable development**. The Protocol consists



“ARPA - ARPA - Regional Environmental Protection Agency. PoliS – Regional research center. FLA - Lombardy’s Foundation for the Environment. ERSAF - Regional body for agricultural and forestry services. Observatory – Regional Observatory on circular economy and energy transition: governance and stakeholder involvement tool. Protocol – regional Protocol for SD: stakeholder involvement tool. INTEGRA project – Ministerial research project supporting the regional Strategy and its monitoring system. SEA – Strategic Environmental Assessment.

tender, the construction of urban strategies for sustainable development for 13 of the most populous Lombard municipalities, towards which to direct European funds. Among the partners of the Region, there is also the **Network of Universities for Sustainable Development (RUS)**, which coordinates the activity of the Italian academic world in favour of the sustainable development goals, constituting an important point of connection with the regional Strategy. Its action goes hand in hand with that coordinated by the Region through the **Regional Network for Environmental Education**, which promotes the initiatives of a series of partners to spread the culture of the environment and sustainability at all levels of education.

To coordinate activities relating to sustainable development, the Lombardy Region has defined internal governance that sees the **coordination cabinet at the center**. The Cabinet brings together the representatives of all the General Directions on a quarterly basis and is led by the head of regional planning in agreement with the Department of Environment and Climate. It is flanked by the **Committee of General Managers**, to share the strategic elements and the work path. Sustainability has also become a performance parameter on which to measure the effectiveness of the entity’s action and contributes to forming the variable component of the remuneration of General Managers and all staff.

The initiatives of the Region and the experiences carried out in the area find visibility in the **Regional Forum for Sustainable Development** (see *BOX*), a moment of discussion organized annually by the Region that gives a voice to local and international political representatives,

of a declaration of commitment that any subject, public or private, can sign to show their adherence to the principles and objectives indicated by the Region, becoming part of a network that favors the exchange of information and best practices.

These comparison tools also contribute to coordination with the institutional levels of sub-regional government; in fact, the Union of Lombard Provinces (UPL) and the Lombard section of the National Association of Municipalities (ANCI) take part. The Metropolitan City of Milan, in defining its own Metropolitan Urban Agenda for Sustainable Development, worked closely with the Region to align the method and contents of the strategies at the two levels. A **workshop on sustainable development** (see *BOX*), organized in collaboration with ANCI, was dedicated to the Municipalities to enhance the exchange of information, practices, and methodological reflections on the territorialization of the Strategy. The Lombardy Region has promoted, through a specific

exponents of the academic world, businesses and of civil society, which find space to present the good practices adopted, identify problems and priorities, update the shared vision on the future of the region. To facilitate activities and involvement, the Lombardy Region has activated an **online platform** (see *BOX*) dedicated to sustainable development, which allows the dissemination of news and collaboration between stakeholders:

www.svilupposostenibile.regione.lombardia.it.

1.4. The Regional Strategy for Sustainable Development of Lombardy

Lombardy Region has elaborated its own Strategy for sustainable development between 2019 and 2021, after signing a collaboration agreement with the Ministry of Ecological Transition (formerly the Ministry of the Environment). The path started with the analysis conducted by PoliS-Lombardia, the regional research institute for supporting Lombardy's policies, from positioning (also through the annual Lombardy Report) to the regional policies with respect to the SDGs. With the collaboration of all the Region's General Directorates, a first Strategic Document was drawn up, which indicated about 90 objectives, some quantitative targets, and a series of indicators for monitoring.

The dialogue with the stakeholders held through the governance bodies and during the first regional Forum for sustainable development, together with the consultation of citizenship thanks to the dedicated website, led to the first version of the Strategy, approved on 29 June 2021, and updated in the October of the same year, with the support of Lombardy's Foundation for the Environment (FLA). In the current version, the Strategy is divided into five strategic macro-areas, which, in turn, are divided into 27 areas of intervention. These group the 96 Regional Strategic Objectives (OSR). An introductory section summarizes the elaboration of the document, its context, and the relationship with the national, European, and international levels, while the concluding section describes the governance and the next steps. The qualitative dimension of the strategic objectives is accompanied by the quantitative dimension expressed in the **targets** and related indicators.

To keep track of Lombardy's progress towards the goals, **monitoring system** has been developed, based on two tiers of indicators: the "core" tier only involves "state indicators" and in limited

The Observatory on Circular Economy and Energy Transition

Established in 2018, the Observatory is a discussion body dedicated to energy issues and production models, open to the representatives of all stakeholder groups. It includes two coordination tables, one at an institutional level and one at a technical level, and a series of thematic tables. The purpose of the Observatory is to jointly define the guidelines, objectives and expected results of regional policies and strategies for the environment and climate, and to provide technical contributions to be integrated into regional plans and programs.

In addition to the formal members of the Observatory, bodies, organizations and experts with specific experience and expertise in the sector in question are invited to the thematic tables. The thematic tables activated up to now are the following:

Circular Economy Area:

- Sewage sludge
- Construction and demolition waste
- Melt slag
- Food waste
- Plastics
- Policies for the circular economy
- Non-recoverable residues

Energy Transition Area:

- Regional requalification of public and private buildings
- Energy efficiency in industry and monitoring of technological innovation
- Behavioral Measures
- Potential development of photovoltaics in the region
- Energy communities and self-consumption
- Review of RES Guidelines
- Biogas and biomethane
- Resilience of the regional electricity system
- TRASFER OF RED II directive

The laboratory on sustainable development dedicated to municipalities

The involvement of local authorities was promoted through a laboratory on sustainable development, organized in collaboration with ANCI. In six days, the workshop accompanied the representatives of thirty local administrations, together with the Metropolitan City of Milan and the Lombardy Region in a path of information and dialogue. The technical speakers explored topics such as European planning, nature-based solutions for urban environments and energy communities; the Region presented its initiatives on sustainable development, including the Strategy and the Regional Air, Energy and Climate Program, and informed about the possible role of the territorial offices and the functionalities of the Regional Information System, as an instrument of knowledge.

Municipalities had space to present their experiences on international projects, energy communities and near-zero energy building, public-private partnerships, use of big data; they shared operational indications and tools and pointed out some critical issues in their work as local administrators, especially in the face of the anomalous conditions of the present moment.

*The subjects that contributed to the laboratory include the Politecnico di Milano, the Milanese Transport Company, the Regional Agency for Agricultural and Forestry Services, the PoliS Lombardia research center and the Italian Alliance for Sustainable Development. , together with the private partners who presented their services: Edison, ABB, Comoli-Ferrari. The sixth day of the workshop, dedicated to the summary and conclusions, took place as part of the Forum for Sustainable Development of 2021; all the contents that emerged were collected in an **e-book**.*

number, thus providing a **synthetic view**, useful to update priorities in regional policymaking; the second tier extends to “process” and “contribution” indicators and goes into more detail on the specificities of the territory. Its purpose is to support the policies that implement the Strategy and to serve as a reference for the **Strategic Environmental Assessment**. The criteria for selecting the indicators were, on the one hand, **comparability** with other Italian and foreign territories, with the adoption of many indicators from national and European statistics; on the other hand, the **specificity** with respect to the characteristics of Lombardy, in addition to the **availability** of data on a local scale, the presence of a historical series and warranties on the future continuity

The online platform www.svilupposostenibile.regione.lombardia.it

To facilitate the dissemination of information, the presentation of its initiatives and collaboration with stakeholders, the Lombardy Region has created an online platform dedicated to sustainable development.

The site consists of a public section and a reserved access after registration. The first offers an overview of activities related to sustainable development, presents the actors of the Protocol, makes available the text of the Strategy, the related indicators and the recordings of the Forum, of which it also hosts live streaming.

It also hosts a news page on the activities of the Region and its partners. The reserved area is mainly dedicated to the subscribers of the Protocol, who with access to different communities can collaborate, discuss and exchange documents on various topics. The site was used for citizens on the first draft strategy in 2021 and to stimulate subscriber participation through news.



The Regional Forum for Sustainable Development

Since 2020, the Lombardy Region has organized an annual regional Forum dedicated to sustainable development. Alongside the regional initiatives, the Forum brings the experiences of local actors to the stage, to give visibility to good practices and keep open the dialogue on the local implementation of Agenda 2030. International politicians are invited to the debate, who in the past they included representatives from the United Nations, the European Union, and the Italian government, and from foreign regional administrations such as Wales in the United Kingdom and the state of Paraná in Brazil.

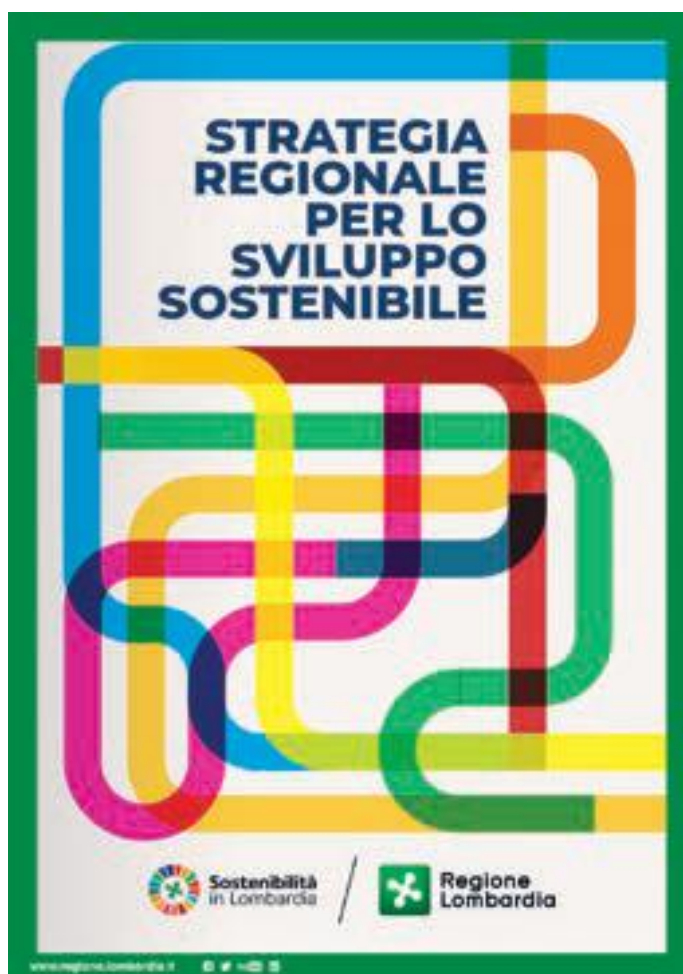
Among the issues addressed in the past sessions we find the relationship between businesses, work and sustainable development, the opportunities for young people in the Ecological Transition, the challenges for institutions at a strategic level and in the governance of the territory, the experiences of sustainability applied in the characteristic supply chains of Lombardy.

The Forum is usually divided into 3-4 days, which are joined by related events in the previous days. This guarantees a wider space to explore topics of specific interest for some groups, and for the organization of initiatives by stakeholders. For the third edition of the Forum, to be held in October 2022, the proposals for events, sessions, and contents by the partners of the Region have already been collected.

Their participation has become central to this initiative which has the very purpose of involving civil society and contributing to the spread of a culture of sustainable development, first showing how it is already being implemented in Lombardy

of the data; more generally, the statistical quality, assessed through specific metadata cards. Targets were selected according to the **obligations** in implementation of European Directives and national standards, or of the **commitments** undertaken autonomously by the Region through legislation or agreements. The list of indicators and targets can be consulted in the attachment to the Strategy.

The monitoring system was developed by a **working group**, which was attended by internal members of the Region, bodies of the regional system, institutional and academic figures. Among the former, the Region's Environment General Directorate, the Environmental Authority, the Presidency and the SEA Nucleus; among the Regional System: ARPA Lombardia (Environmental Protection Agency), PoliS Lombardia (research center), the Lombardia Foundation for the Environment (FLA), the Regional Body for Agricultural and Forestry Services (ERSAF); the Metropolitan City of Milan as an institutional partner; among the subjects of the academic world, the Poliedra research center of the Polytechnic of Milan, the University of Bergamo and, through the INTEGRA project funded by the Ministry of Ecological Transition, the Universities of Milan, Milan Bicocca and Brescia. The selection of indicators and targets also involved all the Region's General Directorates.



The objectives of the Strategy concern, in summary, the following themes:

Macro-area 1: Health, equality, inclusion



Fight against poverty: integrate public, third sector, and private initiatives to fight poverty in a widespread way throughout the territory; promote social cohesion; guarantee food safety; collaborate

internationally to manage migration flows

Fight against inequalities: reduce economic inequalities through welfare services; those of gender, fighting violence against women and promoting the reconciliation between life and work and the participation of women in society; intergenerational ones, protecting the well-being of future generations.

Health and well-being: reduce the health risks caused by pollution and unhealthy lifestyles; strengthen local health and the recruitment system for health personnel; improve prevention and care services for the elderly; facilitate access to services thanks to digital technologies.

Macro-area 2: Education, training, work



Education: fighting early school leaving; strengthening the University; contributing to an updated and adequate training offer; reducing inequalities in the education system.

Training: improving the link between the school system, the world of work, and research; promoting the employment and resilience of people through lifelong learning.

Sustainable growth: ensuring that economic growth translates into employment, access of young people to the labor market, reduction of gender inequalities, improvement of working conditions, and the balance between work and private life, especially for women..

Macro-area 3: Development and innovation, city, territory and infrastructure



Research and innovation: strengthening the link between research and businesses, promoting innovation and digitization of production processes to develop a knowledge-based, increasingly less

linked to the consumption of resources and emissions of pollutants and climate-altering gases. **Digital:** strengthen and disseminate computer networks; promote the adoption of strategic technologies for competitiveness; digitize citizen services and public administration.

Cities and settlements: promoting sustainability and innovation of building interventions; combat housing deprivation, increase the efficiency of public housing services, bring land consumption to zero, and invest in urban regeneration.

Infrastructures: enabling the energy, digital, and mobility transition through updated, safe, and sustainable infrastructures; promoting sustainable urban logistics.

Culture and tourism: making the area attractive and livable thanks to the services, the cultural offer, and the quality of the environment.

Territorial governance: adopting participatory governance methods in complex projects, involving stakeholders, and encouraging collaboration between levels of government.

Macro-area 4: Mitigation of climate change, energy, production, and consumption



Climate change: guiding the transition towards carbon neutrality in all sectors, promoting energy efficiency, electrification of demand, and renewable sources.

Mobility: adopting new models for efficient, sustainable, and human-friendly mobility; promoting smart ways and partnerships to create new sustainable infrastructure.

Energy: developing renewable sources and an intelligent electricity grid, making them a lever for growth; promoting energy communities.

Circular economy: integrating research and the productive world to develop and disseminate circular processes; coordinate sectors to bring together new demands and offers.

Sustainable lifestyles: supporting the exchange of good practices and citizen awareness; stabilizing the demand for sustainable solutions through green public procurement.

Macroarea 5: Environment, landscape, adaptation to climate change, agriculture



Adaptation, and resilience: updating the policies and tools of territorial governance to make Lombardy resilient to climate change and manage related risks.

Environmental culture: disseminating knowledge and skills, to train the necessary professionals and involve citizens in the protection and enhancement of the environmental heritage.

Pollution: adopt structural measures and partnerships to improve the quality of air, water and soil, including through protection and remediation measures.

Biodiversity: protecting and enhancing habitats through the regional ecological network and its cultural promotion; combatting invasive alien species; managing forests in a sustainable way.

The regional Catalog of environmentally relevant subsidies

Among the commitments signed by the Lombardy Region, the construction of the regional catalog of subsidies was envisaged, based on the international commitments undertaken by Italy and as established by Article 68 of Law 221/2015.

The Catalog of subsidies acts as a support tool for public decisions that aims to represent interventions that have an impact on the environment, improving the knowledge base on the environmental sustainability of the actions taken. The document uses a broad meaning of subsidy, which includes “incentives, concessions, subsidized loans and exemptions from taxes aimed at protecting the environment”, which can be categorized into direct subsidies (that is to be found in the balance sheet items) and indirect subsidies, which can be quantified through differential estimates of the lower revenue obtained with respect to the reference benchmarks. Measures with significant environmental effects have been classified into environmentally harmful subsidies (SAD), favorable subsidies (SAF) and uncertain subsidies.

The regional Catalog, built with the support of Polis-Lombardia in collaboration with the regional General Directions, maintains an alignment with the national methodology. In order to be able to make a coherent distinction between environmentally favorable and unfavorable subsidies, they were presented analyzed and presented with a wide range of information, the assessment of which was comprehensive of the environmental impact, sustainability and social repercussions.

In the first edition (April 2021), favorable subsidies of € 224.7 million were identified, mainly concentrated in direct subsidies, and indirect, environmentally harmful subsidies of € 215.9 million. An update of the Catalog is currently in progress.

Subsidies' environmental effect	<i>harmful</i>	<i>favorable</i>	<i>uncertain</i>	<i>total</i>
<i>Indirect subsidies (minimum hypothesis)</i>	215,9	4,2	3,5	223,6
<i>Direct subsidies</i>	0	220,7	65,1	285,8
<i>Total (millions of euros)</i>	215,9	224,9	68,6	509,4

Waters: to restore rivers and lakes to natural conditions; integrate water management, hydrogeological risk prevention, renewable energy production, and local economic development.

Cities: build livable urban environments rich in biodiversity, adopting solutions based on nature; promote citizen awareness and participation.

Landscape: enhancing the landscape as an element of development and attractiveness, especially the waters and the mountains; developing green infrastructure.

Agriculture: promoting sustainable and competitive agriculture, with an active role in safeguarding ecosystems, resilience to climate risks, and absorption of emissions.

1.5. Policy coherence

The implementation of the Regional Strategy requires that **plans, programs, and actions** of the Region **comply** with its indications and that the policies aimed at different objectives do not conflict with each other. Achieving consistency depends on several factors, including the presence of solid governance capable of informing, involving, and motivating officials and the political level; the presence of quantitative targets and tools for assessing impacts of policies and their interactions.

The Lombard strategy has been connected with programming in several ways. Within the text, the objectives are related to the **main plans and programs** capable of favoring their achievement. As early as June 2021, the **Regional Economy and Finance Document (EAER)** has been linked to the Strategy, by marking each "action" with reference to the regional sustainable development goals to which it contributes. Furthermore, in accordance with Legislative Decree 152/06, the Strategy will constitute the reference for the **Strategic Environmental Assessment (SEA)** that accompanies the approval of new plans and programs, providing the criteria for aligning the new policies to a vision consistent and systemic sustainable development. Also contribute to this process of policy evaluation **Catalog of subsidies of environmental relevance** (see *BOX*) and the impact assessment model currently being developed by three Lombard universities as part of **the INTEGRA project**. The first was drawn up in line with the corresponding National Catalog and requires the Region to evaluate adjustments in the case of harmful subsidies. The second will lay the foundations for decision-making, thanks to the possibility of accurately predicting the effects of policies with respect to the relevant parameters in the perspective of sustainable development. The prospect is to place the Strategy at the foundation of the Regional Development Program, starting as early as the new legislature elected in 2023, to make it a **Regional Sustainable Development Program**.

1.6. Future commitments

The vision for the future of the Lombardy region responds to the broader project of a human system with the person at the center and fully integrated with natural cycles. The institutional and productive structure, supported by constant innovation, can only be at the service of life, human and natural, in a balance between the fundamental elements that can guarantee its quality: respect for rights, the health of the environment, development, peacekeeping. Elements, as mentioned, are inseparable in their mutual dependence, and cannot be prosecuted separately or, much less, concurrently. The 2030 Agenda model responds precisely to the need for a systemic approach, capable of sustaining at the same time all the factors of well-being in a lasting way. Our region is in a privileged position thanks, among other things, to the wealth of its human capital, the wealth of environmental resources and biodiversity, the solidity of its production and financial system, the efficiency of its infrastructures, and its potential for technical and technological innovation. It is therefore in the conditions to proceed swiftly toward a new structure, such as to guarantee a better quality of life accessible to all, minimize the consumption of non-renewable natural resources, achieve energy independence and climate neutrality, and

protect and enhance the ecosystems by integrating human environments with natural ones, in order to also increase resilience to adverse climatic and environmental phenomena. A region, moreover, fully inserted in the network of European territories and in international cooperation to achieve the sustainable development goals all over the world; capable, in this context, of actively contributing to global progress, focusing in particular on the ability to enhance human capital, to contribute to social and technical innovation processes and scientific research, and directing its high entrepreneurial potential towards objectives of Agenda 2030. A vision that immediately requires the adoption of new paradigms of action based on collaboration rather than competition and on a long-term perspective prior to that of a short one.

Lombardy continues on the path it has begun towards sustainability with a commitment increasingly focused on achieving the objectives shared at a global level. In particular, 2023 will be an election year for the regional administration; the new Legislature will present a new Regional Development Program to be implemented in coherence with the Strategy, in the perspective of a **Regional Sustainable Development Program**. Introducing sustainability objectives and targets at the highest level of programming can give a strong impetus to the adaptation of policies and actions, which will be implemented more and more effectively thanks to the improvement of impact forecasting models, Strategic Environmental Assessment, and indications of the Catalog of Subsidies. Furthermore, regulatory interventions on **climate change and sustainable development**, consolidate the governance and the tools identified, thus strengthening the effectiveness of the Strategy in determining the Region's activity.

The institutional action, on the other hand, is only one among the many in progress, and however relevant it may not be separated from that of all the actors of the territory, public and private, to achieve the set objectives. For this reason, future efforts will increasingly go in the direction of expanding and intensifying the **involvement** of civil society and the productive fabric, especially through the relaunch of the Protocol and the promotion of training initiatives, sustainability reporting practices, green investments, transition paths towards sustainable business models and circular production and consumption processes. A key tool in this regard will be **Green Public Procurement (GPP)**, whose progressive consolidation, also through the Regional Action Plan for GPP, will allow the Region to leverage the financial volume of its tenders to stimulate the demand for goods and sustainable services.

As President Fontana declared at the opening of the second Forum for sustainable development, the present moment represents an **opportunity of historical significance**, since a short time window still allows us to contain the effects of climate change and the loss of biodiversity; at the same time, the response to the pandemic has mobilized enough resources to bring about the necessary change. The targets on many issues, in particular on emissions, energy, circular economy and ESG performance, are defined by Europe: the responsibility of the Regions is to contribute to the creation of favorable conditions so that their territory is prepared for the deadlines and is able to grasp the many opportunities contained in the Transition.

2. The positioning of Lombardy Region in the National and European context

Effective and coordinated action between all the actors involved requires awareness of the starting point and the deviation from the targets to be achieved. This section presents the positioning of the Lombardy Region, with reference to the fourteen goals of the 2030 Agenda recalled by the Regional Sustainable Development Strategy.

The analysis of the positioning of the Region was developed, starting from 2017, through the “**Lombardy Report**” produced annually by PoliS-Lombardia, as a support to policy makers and, more generally, an information and knowledge tool of the Lombard reality.

In relation to the availability of statistical elaborations, refined and consolidated over the years, it was decided to provide a summary photograph of the Lombard context using, in the first place, precisely the composite indicators developed by PoliS-Lombardia; these indices, elaborated on the basis of Eurostat and ISTAT indicators, measure performance with respect to the sustainable development objectives, comparing Lombardy with 20 European countries belonging to the OECD and making use of historical series analysis for a synthetic reading of the trends.

In each of the fourteen cards referring to the SDGs, the composite indicators are flanked by two indicators selected from the ISTAT SDGs dataset, so as to allow a comparison between the values and trends over time in Lombardy, the Italian average and the Northern one. Italy. The criterion that guided the choice of the phenomena to be represented was their inclusion in the list of indicators whose targets have already been assumed by the SRSvS. Only in some cases, in the absence of a specific regional target, it was opted for indicators for which there are reference values defined by national or European planning documents, with different degrees of cogency. As will be evident from reading the fourteen fact sheets, for numerous ISTAT statistical measures that investigate the issues covered by the SDGs and only for some composite indicators, the values referring to the years 2020 and 2021 are already available and reported here; therefore, the data show variations, even sensitive ones, which record the impacts of the COVID-19 pandemic, departing from trends that could be considered as a consolidated reference base-line.

The performance of composite indicators



Source: RL elaboration of PoliS-Lombardia data, 2021

The composite indicators: base years and last year available

	GOAL 1	GOAL 2	GOAL 3	GOAL 4	GOAL 5	GOAL 6	GOAL 7	GOAL 8	GOAL 9	GOAL 10	GOAL 11	GOAL 12	GOAL 13	GOAL 15
base years	2008	2014	2013	2008	2008	2017	2013	2008	2008	2008	2010	2013	2012	2011
last year	2019	2019	2018	2020	2020	2018	2018	2020	2019	2019	2019	2019	2018	2019

Notes on composite indicators

The composite indices have as their reference point the threshold value equal to 100, made up of the composite index of Lombardy in the first year of observation: they therefore assume a value of less than 100 in cases of worse positioning or worsening trend compared to the reference index and higher than 100 in cases of better positioning or improving trend. The results of the analyzes are presented according to the following structure:

- representation of the composite index of the Goal for the 20 countries organized by area, indicating the positioning with respect to the median value;
- trend reading of the positioning of Lombardy and Italy with respect to other countries using the composite index.

The details of the indicators that make up the indices elaborated by PoliS-Lombardia are shown below.

	Indicator	Description	Data provider	years
GOAL 1 - No poverty	Population at risk of poverty or social exclusion	Percentage share of the total population	Eurostat	2008-2019
	Population in severe material deprivation	Percentage share of the total population	Eurostat	2008-2019
	People living in very low work intensity households	Percentage share of the 0-59 year population	Eurostat	2008-2019
	Population at risk of income poverty after social transfers	Percentage share of the total population	Eurostat	2008-2019
GOAL 2 - Zero hunger	Obese people aged 18 and over	Percentage of obese people over 18 years old	Eurostat e ISTAT noi Italia	2014-2019
	Share of utilized agricultural area (UAA) invested by organic crops	Percentage share	Eurostat e ISTAT	2014-2019
GOAL 3 - Health and Well-being	Life expectancy at birth	Number of years	Eurostat	2013-2018
	Infant mortality rate	Deaths per 1000 live births	Eurostat e ISTAT noi Italia	2013-2018
	Mortality rate attributed to accidental poisoning	Deaths per 100 000 inhabitants	Eurostat	2013-2018
	Death rate from suicide (standardized rate per 100,000 population)	three-year averages, including suicides and intentional self-harm	Eurostat	2013-2018
	Road accident death rate	Deaths per 100 000 inhabitants	Eurostat e ISTAT	2013-2018
GOAL 4 - Quality education	Young people who leave education and training prematurely	Percentage share of young people aged 18 to 24	Eurostat	2008-2020
	Population with tertiary education	Percentage share of the population between 25 and 64 years old	Eurostat	2008-2020
	Participation of adults in education and training	In the 4 weeks prior to the interview. Percentage share of the population between 25 and 64 years old	Eurostat	2008-2020

	Indicator	Description	Data provider	years
GOAL 5 - Gender equality	Seats occupied by women in legislative assemblies	Percentage share of seats for national parliament (both chambers)	European Institute for Gender Equality, ISTAT	2008-2020
	Ratio between the percentage share of the female and male active population	The active population by sex is calculated on the population aged 15 to 64 years	Eurostat, Istat	2008-2020
GOAL 6 - Clean water and sanitation	Bathing sites with excellent water quality	Percentage share of total bathing waters	ISTAT Noi Italia (calculated from Istat and Eurostat data)	2013-2018
	Population having neither a bath, nor a shower, nor indoor flushing toilet in their household	Percentage share of the total population	Eurostat + Istat (Lombard data calculated from IT-SILC microdata)	2008-2018
GOAL 7 - Affordable and clean energy	Share of renewable energy in gross final energy consumption	Percentage ratio between renewable energy consumption and gross final energy consumption	ISTAT Noi Italia (calculated on Terna and Eurostat data)	2013-2014; 2016-2018
	Population unable to keep home adequately warm	Percentage share of the total population	Eurostat + Istat (Lombard data calculated from IT-SILC microdata)	2013-2014; 2016-2018
GOAL 8 - Decent work and economic growth	Annual growth rate of real GDP <i>per capita</i>	GDP at market price, chain linked volumes in EUR and % change on previous year.	Eurostat, Istat	2008-2020
	Employment rate (Age class: From 20 to 64 years)	% of total population	Eurostat	2008-2020
	Young people neither in employment nor in education and training	% of the population aged 15 to 29	Eurostat	2008-2020
	Long-term unemployment rate (Age class: From 15 to 74 years; unemployed for 12 months or more)	% of total active population aged 15 to 74	Eurostat	2008-2020
GOAL 9 - Industry, innovation and infrastructure	Gross domestic expenditure on R&D	% of GDP	Eurostat	2008-2019
	Employment in technology and knowledge-intensive sectors	Number of researchers per 1000 employed	Eurostat	2008-2019
	R&D personnel	Purchasing power parity	Eurostat	2008-2019

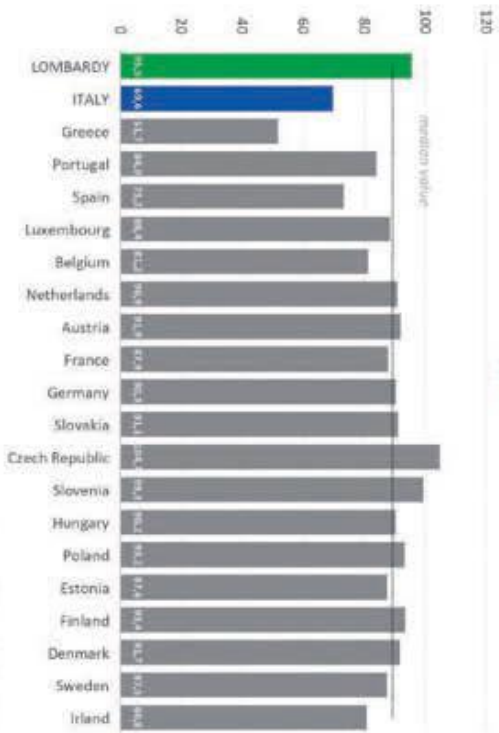
	Indicator	Description	Data provider	years
GOAL 10 - Reduced inequalities	Purchasing power adjusted GDP per capita	Number of researchers per 1000 employed	Eurostat	2008-2019
	Gini coefficient of equivalised disposable income	Purchasing power parity	Eurostat + Istat (Lombard data calculated from IT-SILC microdata)	2008-2019
	Income share of the bottom 40 % of the population	Income inequality measure	Eurostat + Istat (Lombard data calculated from IT-SILC microdata)	2008-2019
GOAL 11 - Sustainable cities and communities	Average number of rooms <i>per person</i>	Average of the ratio between the number of rooms in the home and the number of members of the resident family	Eurostat	2010-2019
	Road traffic deaths (standardized rate per 100,000 inhabitants)	three-year averages	Eurostat	2010-2019
GOAL 12 Responsible consumption and production	Generation of municipal waste per capita	Kg per capita of municipal waste collected	ISTAT Noi Italia (calculated on ISPRA and Eurostat data)	2013-2014; 2016-2019
	Municipal waste disposed of in landfills	Kg per capita of municipal waste disposed of in landfills	ISTAT Noi Italia (calculated on ISPRA and Eurostat data)	2013-2014; 2016-2019
GOAL 13 - Climate action	Greenhouse gas emissions	Tons of CO ₂ equivalent per inhabitant	Eurostat, ISTAT Noi Italia	2012-2018
GOAL 15 - Life on land	Protected areas	The indicator comprises nationally designated protected areas and Natura 2000 sites under the EU Habitats and Birds Directives. Percentage share of the territorial surface	Eurostat e ISTAT Noi Italia	2011-2019



END POVERTY IN ALL ITS FORMS EVERYWHERE

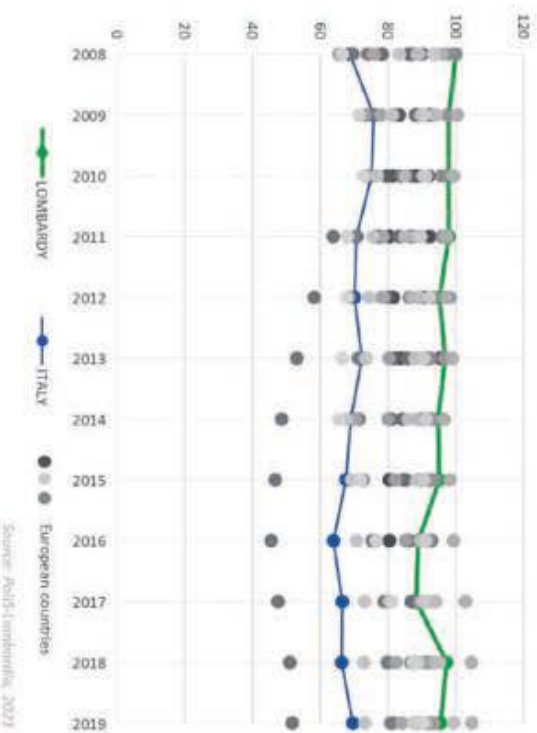
SDG 1 – COMPOSITE INDEX

2019



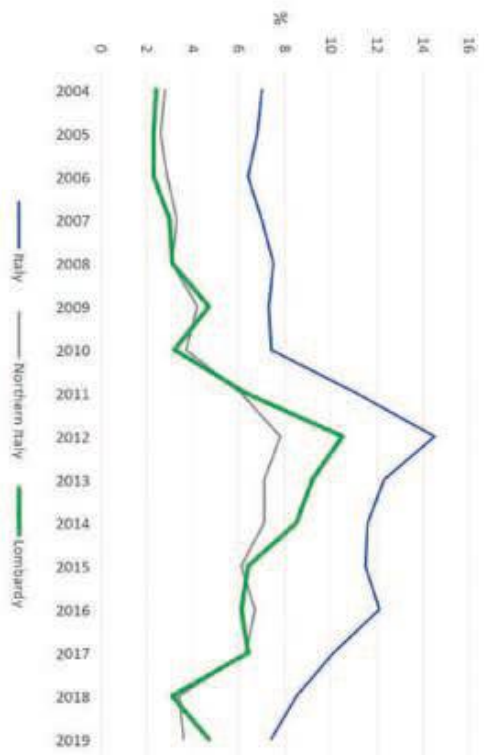
Source: Inhlis-ombardia, 2022

2008-2019



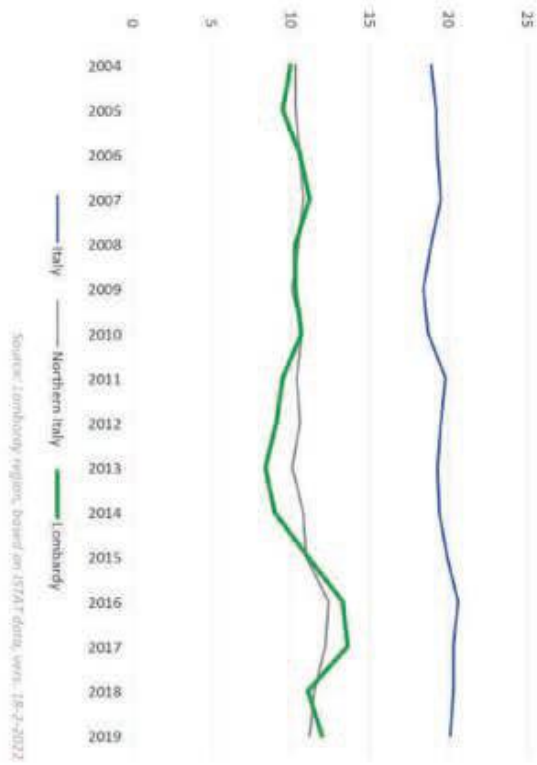
Source: Inhlis-ombardia, 2022

SDG 1.2.2 - SEVERE MATERIAL DEPRIVATION RATE



Source: Lombardia region, based on ISTAT data, years: 18-2-2022

SDG 1.2.2 - PEOPLE AT RISK OF POVERTY

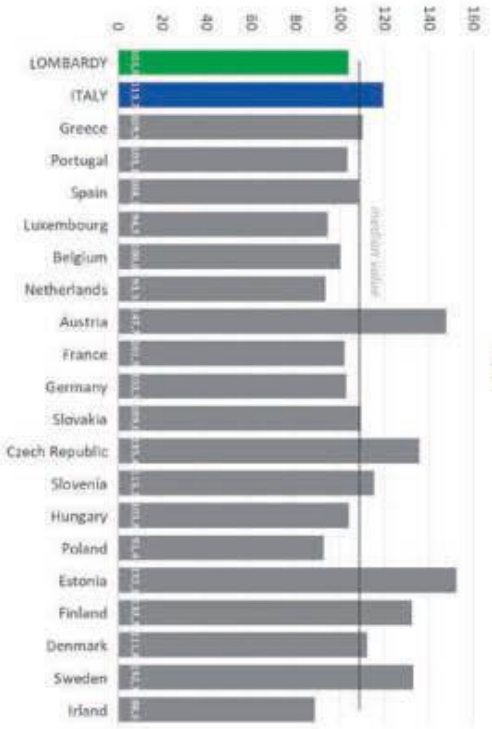


Source: Lombardia region, based on ISTAT data, years: 18-2-2022



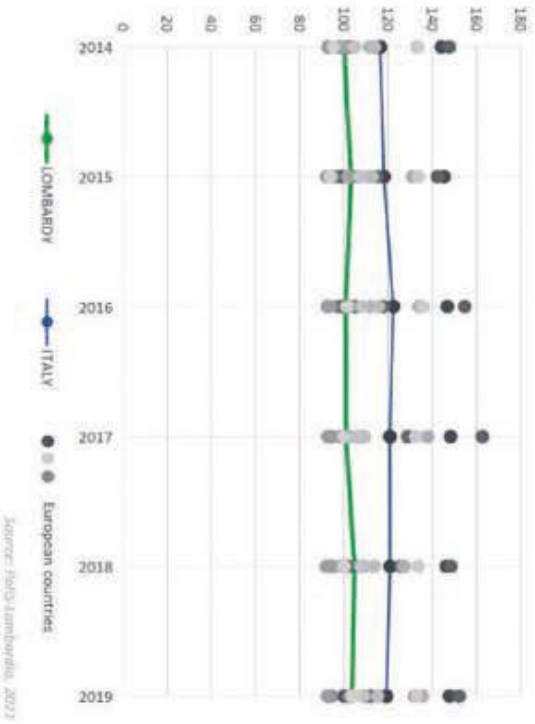
END HUNGER, ACHIEVE FOOD SECURITY AND IMPROVED NUTRITION AND PROMOTE SUSTAINABLE AGRICULTURE

SDG 2 - COMPOSITE INDEX 2019



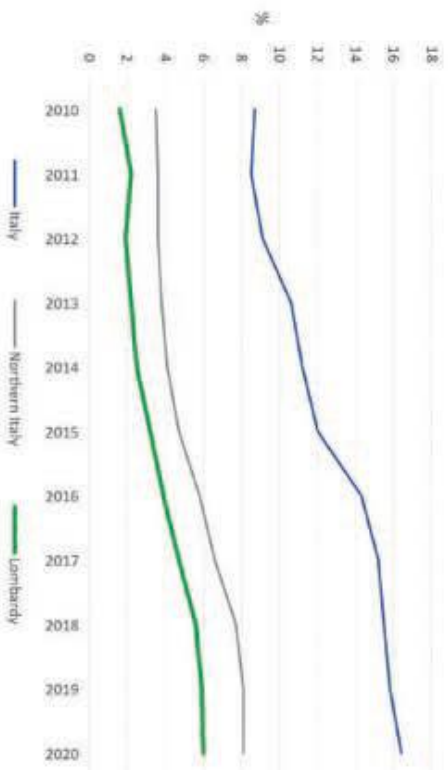
Source: PoS-Lombardia, 2021

2014-2019



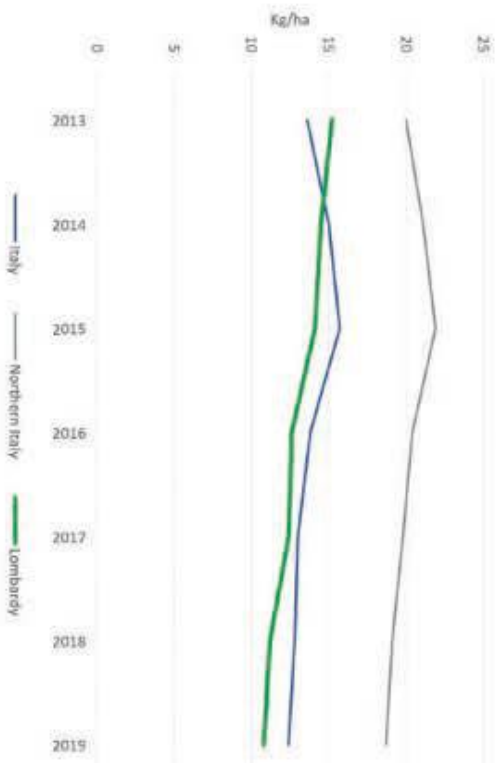
Source: PoS-Lombardia, 2021

SDG 2.4.1 - PERCENTAGE OF UTILIZED AGRICULTURAL AREA UNDER ORGANIC FARMING



Source: Lombardy region, based on ISTAT data, v. 18-2-2022

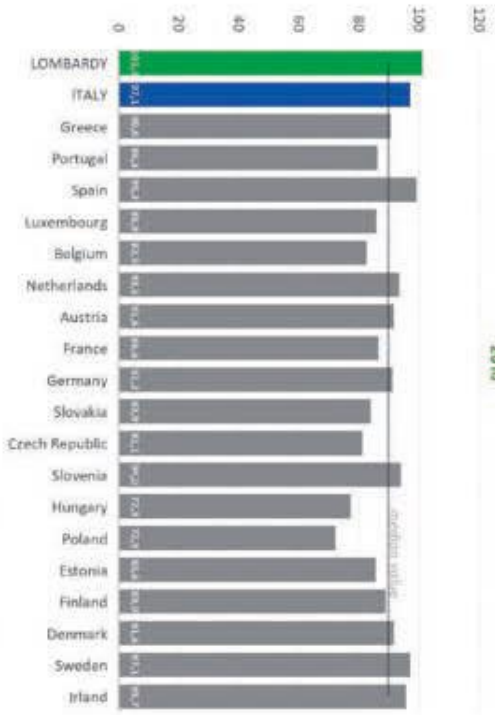
SDG 2.4.1 - PLANT PROTECTION PRODUCTS DISTRIBUTED IN AGRICULTURE



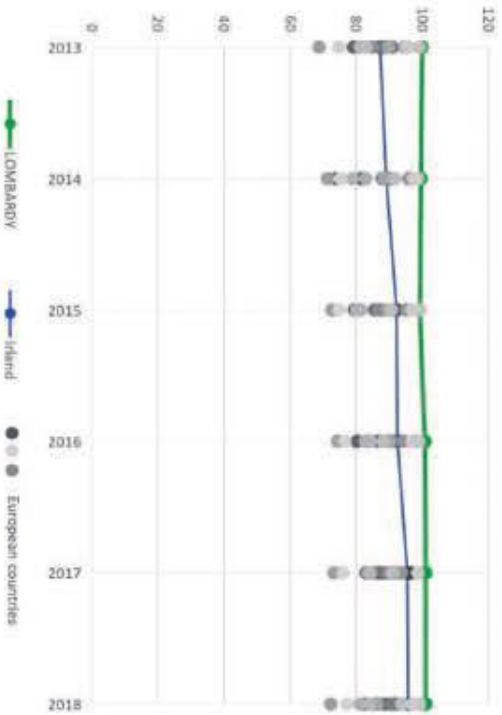
Source: Lombardy region, based on ISTAT data, v. 18-2-2022

ENSURE HEALTHY LIVES AND PROMOTE WELL-BEING FOR ALL AT ALL AGES

SDG 3 – COMPOSITE INDEX

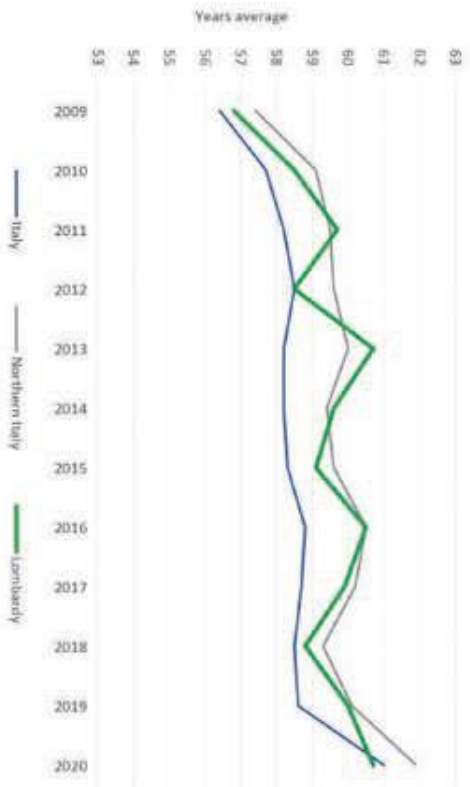


Source: Euro-Lombardy, 2022



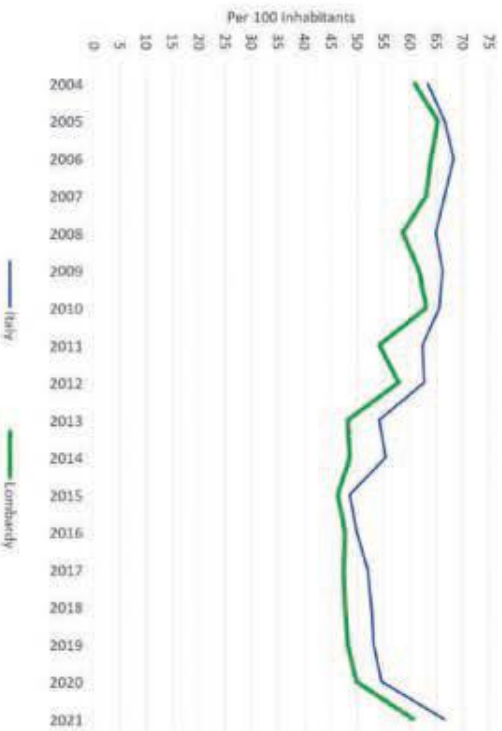
Source: Euro-Lombardy, 2022

SDG 3.4.1 - HEALTHY LIFE EXPECTANCY AT BIRTH



Source: Lombardy region, based on ISTAT data, year: 2009-2020

SDG 3.B.1 - INFLUENZA VACCINATION COVERAGE AGE 65+



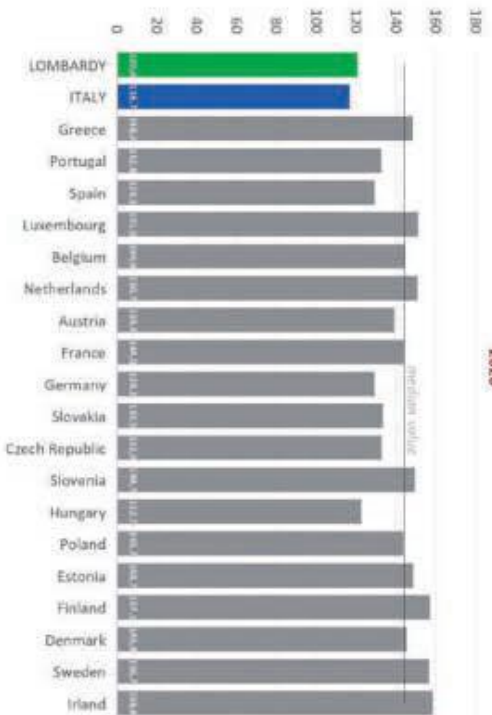
Source: Lombardy region, based on ISTAT data, year: 2004-2021



ENSURE INCLUSIVE AND EQUITABLE QUALITY EDUCATION AND PROMOTE LIFELONG LEARNING OPPORTUNITIES FOR ALL

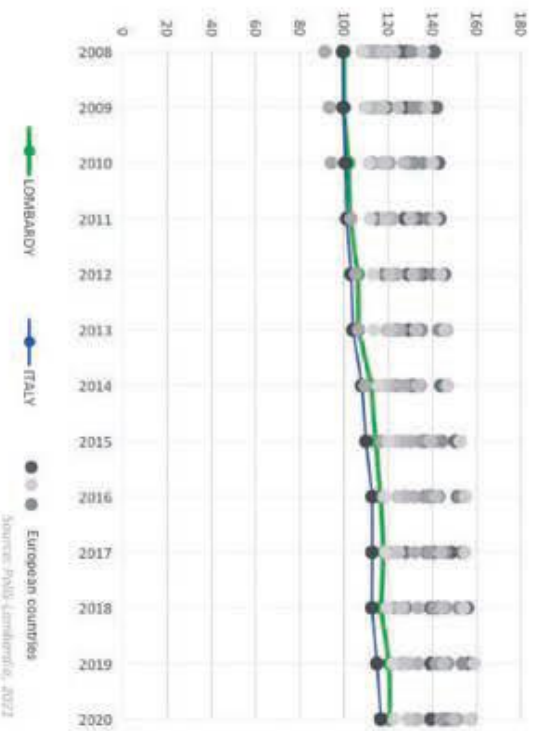
SDG 4 – COMPOSITE INDEX

2020



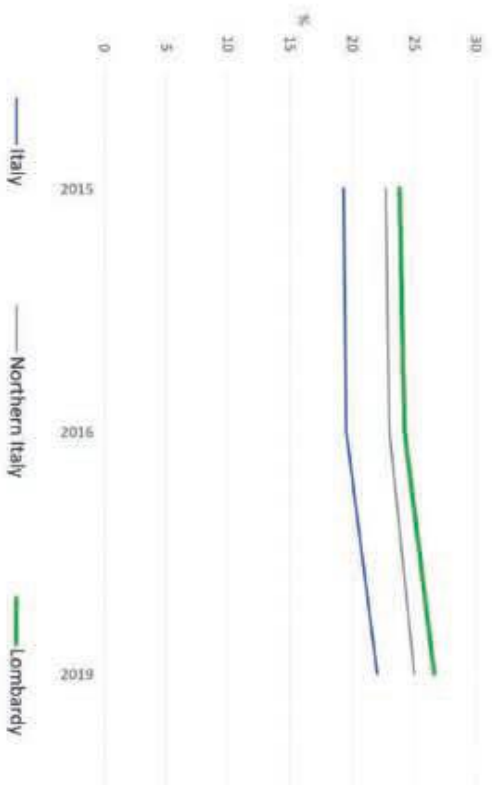
Source: PISA/Lombardy, 2021

2008-2020



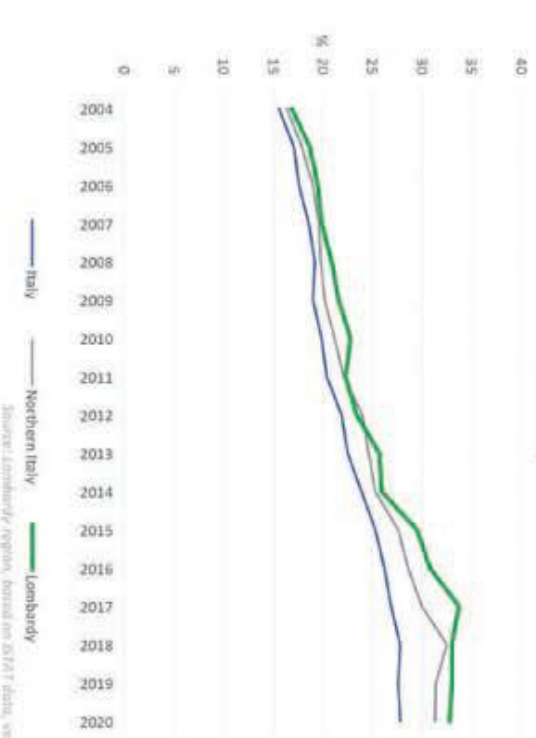
Source: PISA/Lombardy, 2021

SDG 4.4.1 - PEOPLE WITH HIGH LEVEL OF IT COMPETENCIES



Source: Lombardy region, based on ISTAT data, years: 16-2-2022

SDG 4.6.1 - PEOPLE HAVING COMPLETED TERTIARY EDUCATION (30-34 YEARS)

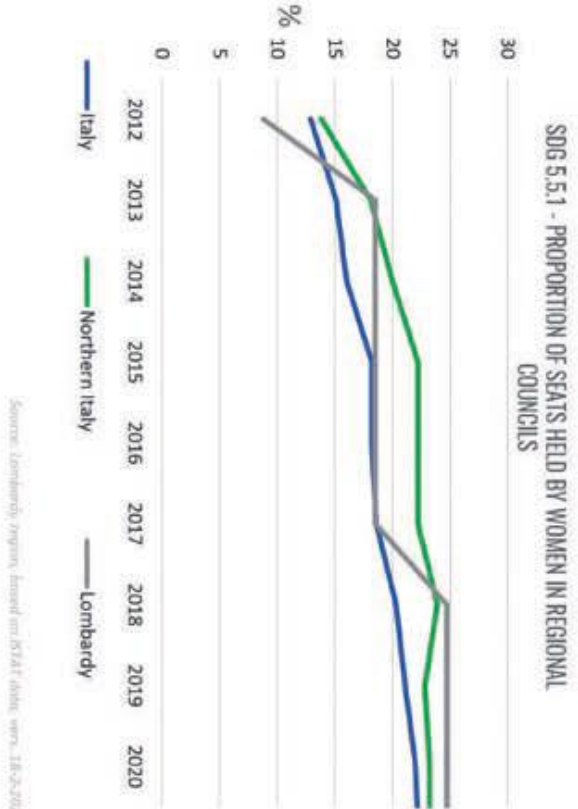
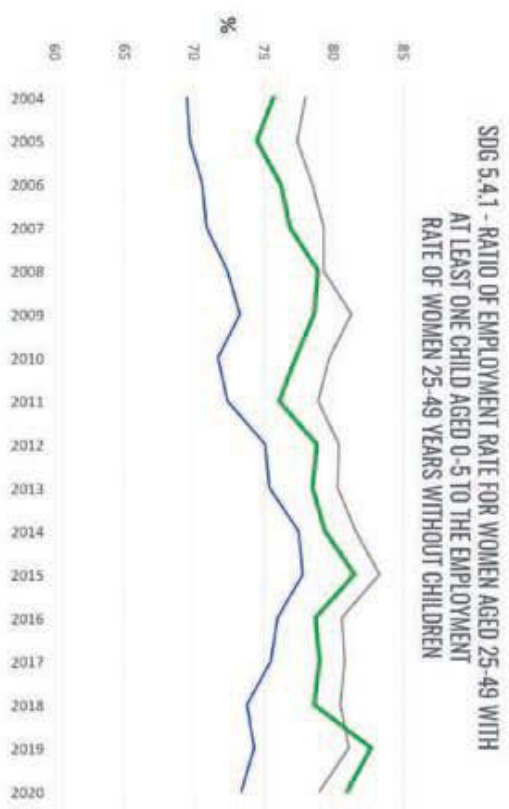
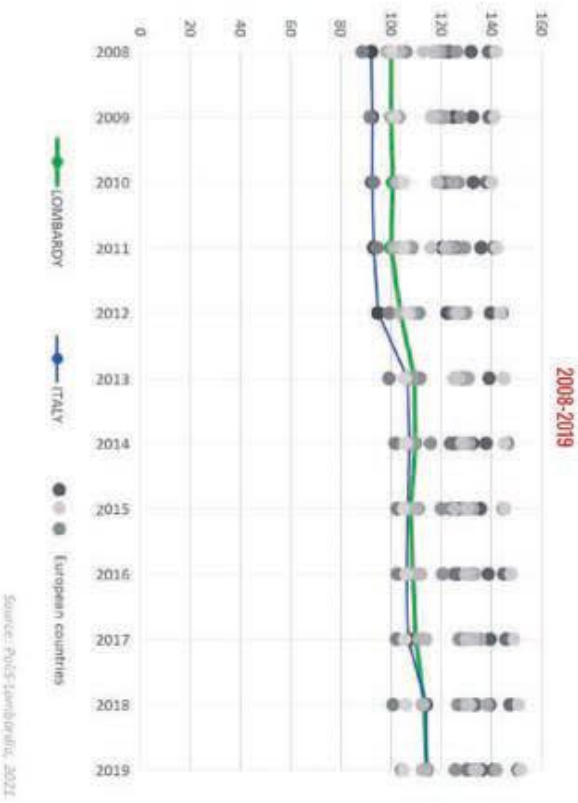
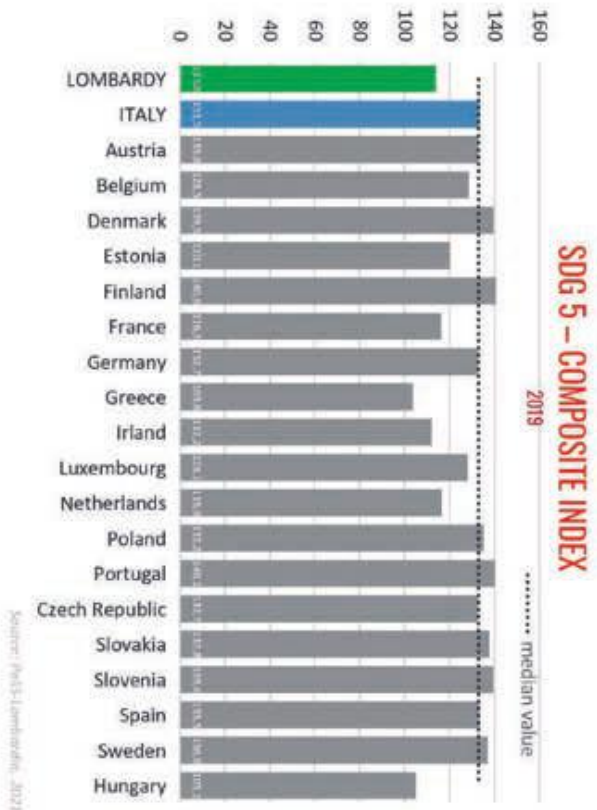


Source: Lombardy region, based on ISTAT data, years: 16-2-2022



5 GENDER EQUALITY

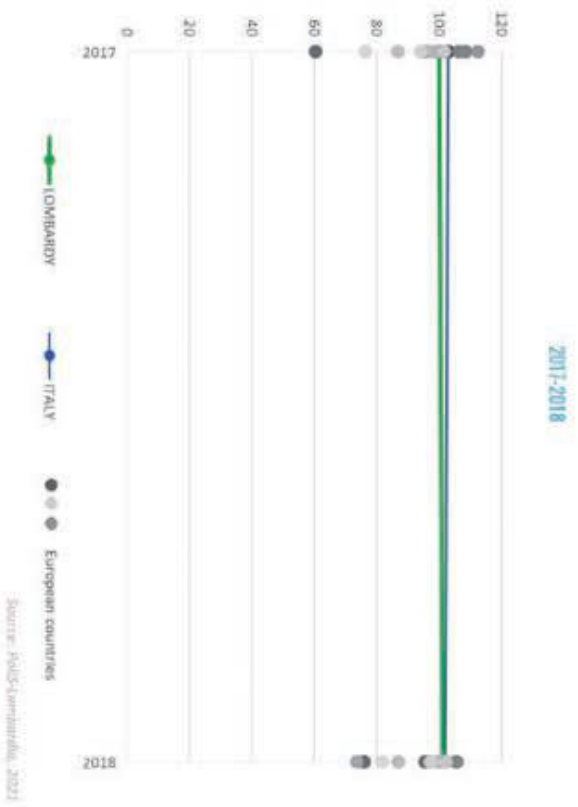
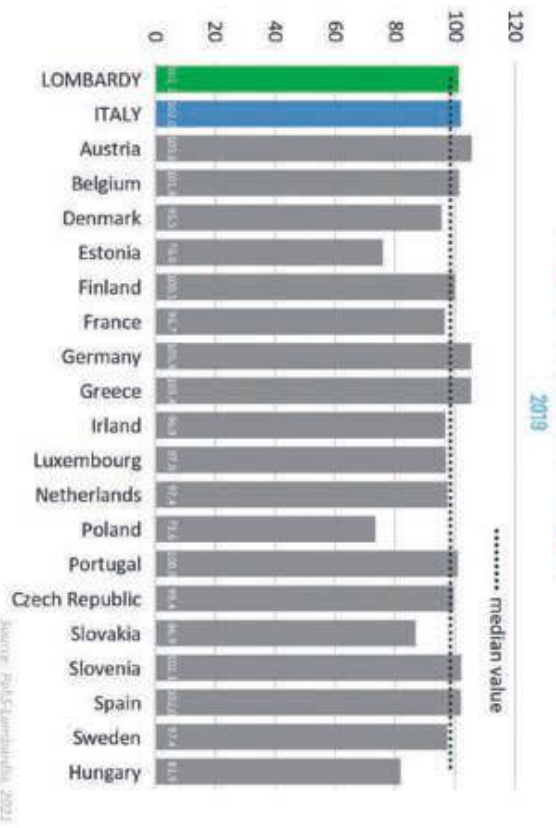
ACHIEVE GENDER EQUALITY AND EMPOWER ALL WOMEN AND GIRLS



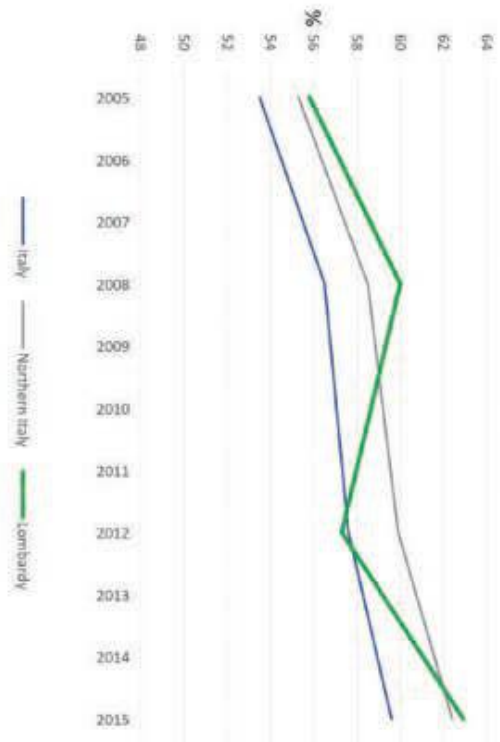


ENSURE AVAILABILITY AND SUSTAINABLE MANAGEMENT OF WATER AND SANITATION FOR ALL

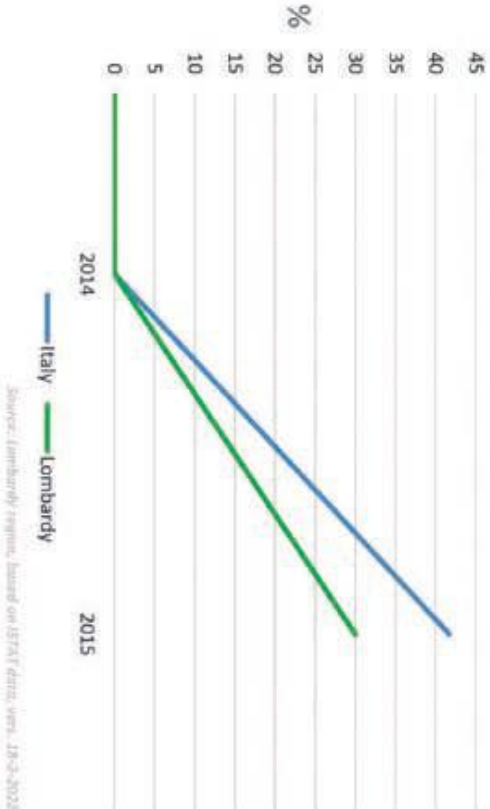
SDG 6 - COMPOSITE INDEX



SDG 6.3.1 - URBAN SEWAGE TREATMENT



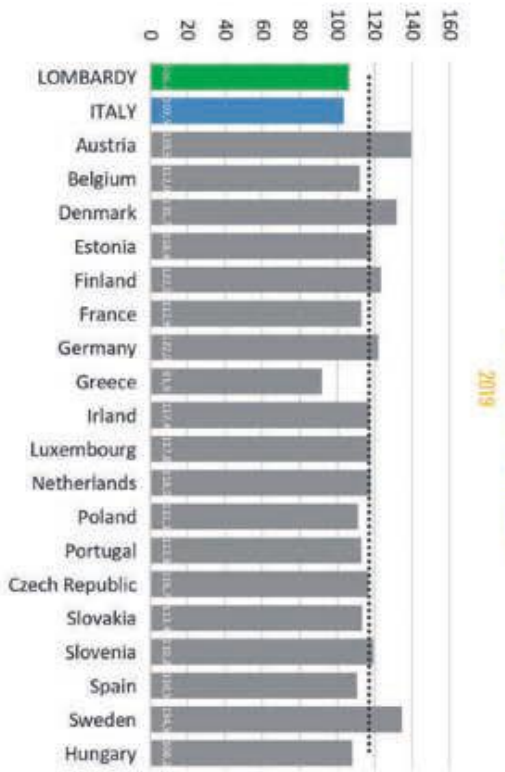
SDG 6.3.2 - PERCENTAGE OF WATER BODIES THAT HAVE ACHIEVED THE OBJECTIVE OF ECOLOGICAL QUALITY ON THE TOTAL WATER BODIES OF SURFACE WATERS (RIVERS AND LAKES)





7 ENSURE ACCESS TO AFFORDABLE, RELIABLE, SUSTAINABLE AND MODERN ENERGY FOR ALL

SDG 7 – COMPOSITE INDEX

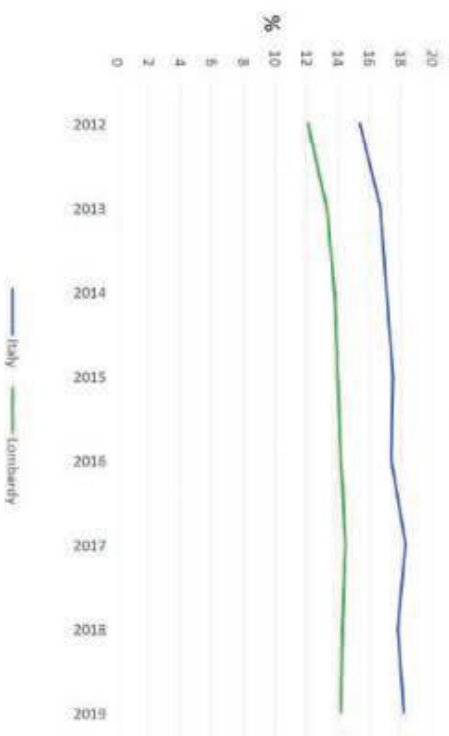


Source: PwC Lombardy, 2022



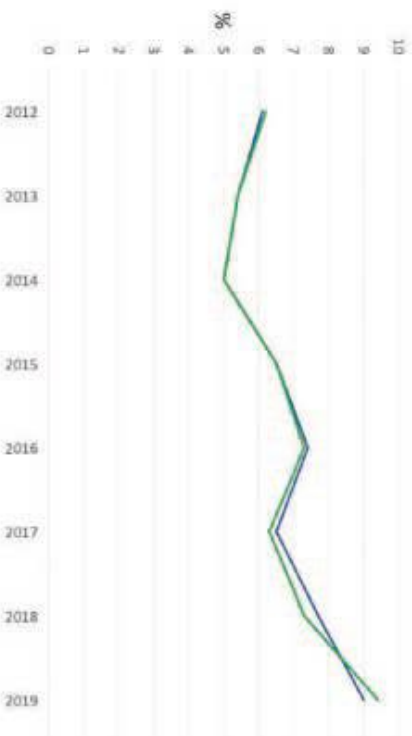
Source: PwC Lombardy, 2022

SDG 7.2.1 - RENEWABLE ENERGY SHARE IN THE GROSS FINAL ENERGY CONSUMPTION



Source: Lombardy region, based on ISTAT data, year 2019-2022

SDG 7.2.1 - RENEWABLE ENERGY SHARE IN TRANSPORT SECTOR (IN THE GROSS FINAL ENERGY CONSUMPTION)



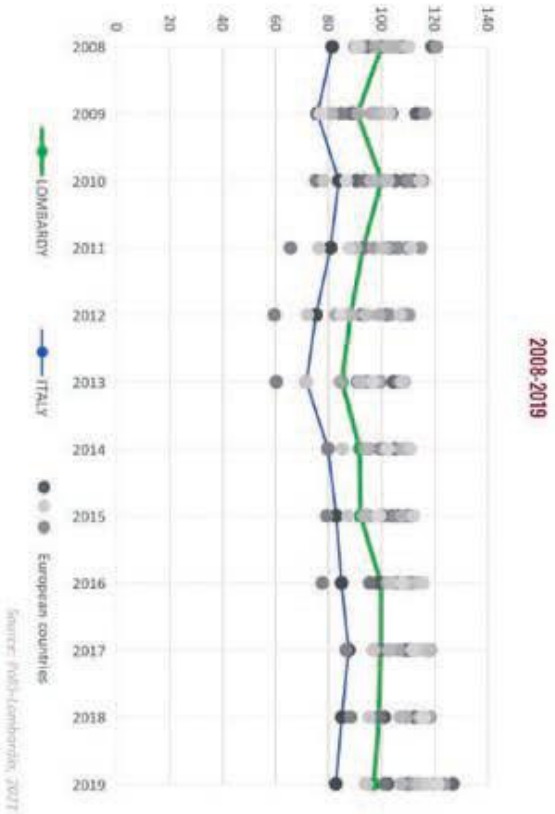
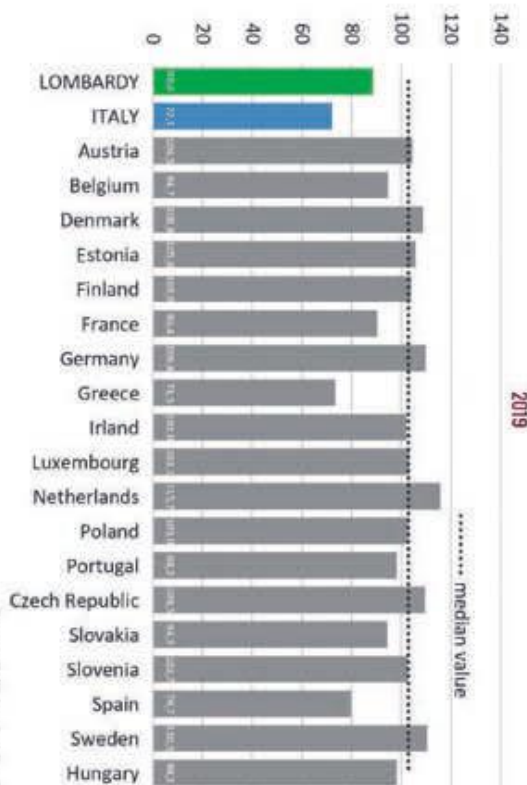
Source: Lombardy region, based on ISTAT data, year 2019-2022



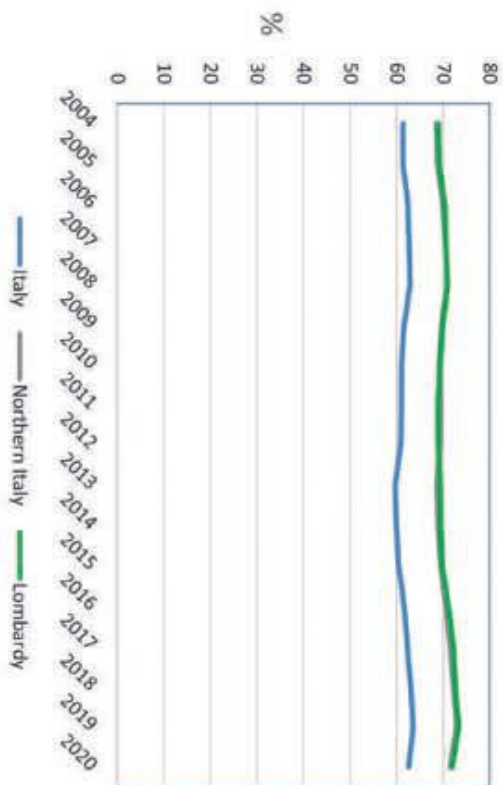
8 PROMOTE SUSTAINED, INCLUSIVE AND SUSTAINABLE ECONOMIC GROWTH, FULL AND PRODUCTIVE EMPLOYMENT AND DECENT WORK FOR ALL

PROMOTE SUSTAINED, INCLUSIVE AND SUSTAINABLE ECONOMIC GROWTH, FULL AND PRODUCTIVE EMPLOYMENT AND DECENT WORK FOR ALL

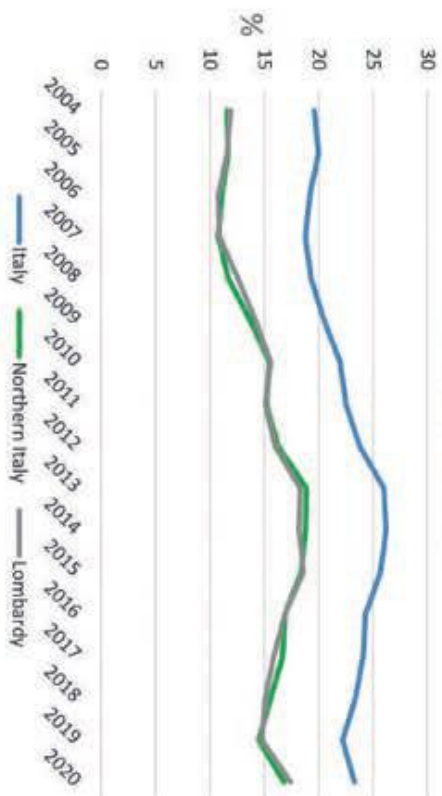
SDG 8 - COMPOSITE INDEX



SDG 8.5.2 - EMPLOYMENT RATE (20-64)



SDG 8.6.1 - PEOPLE NOT IN EDUCATION, EMPLOYMENT, OR TRAINING (NEET) (AGED 15-29)

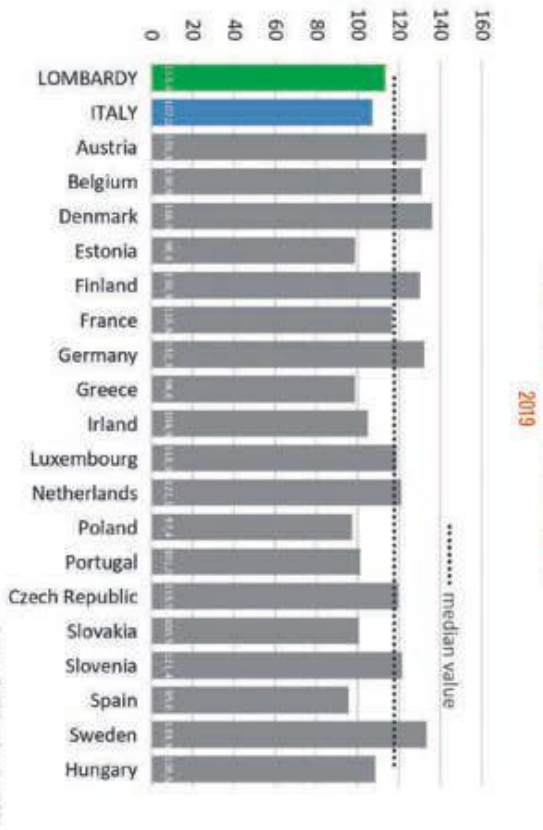




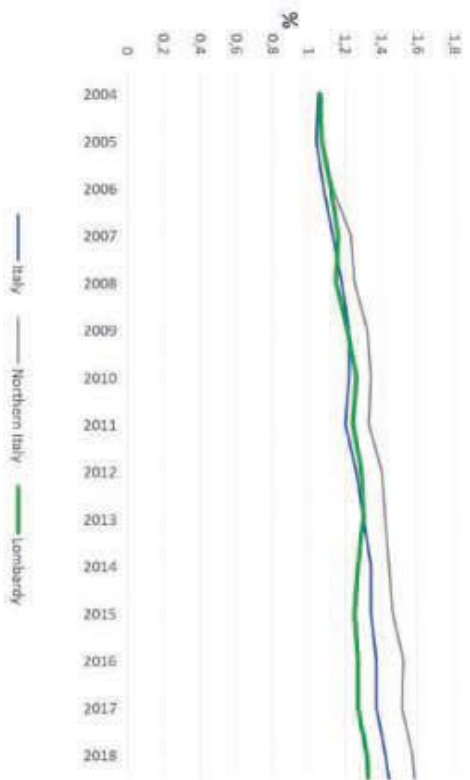
9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

BUILD RESILIENT INFRASTRUCTURE, PROMOTE INCLUSIVE AND SUSTAINABLE INDUSTRIALIZATION AND FOSTER INNOVATION

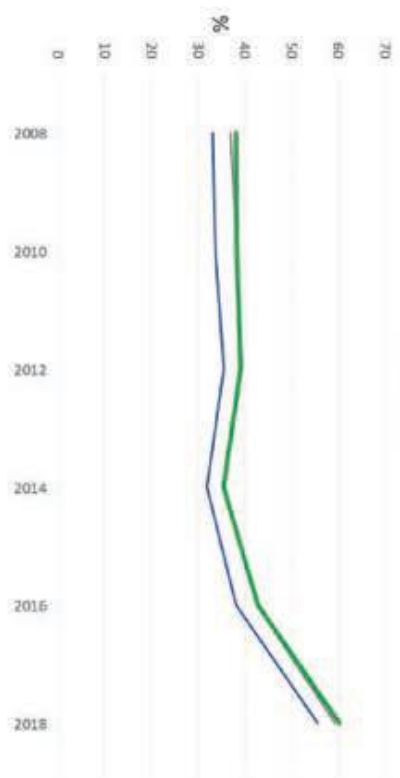
SDG 9 - COMPOSITE INDEX



SDG 9.5.1 - R&D INTENSITY



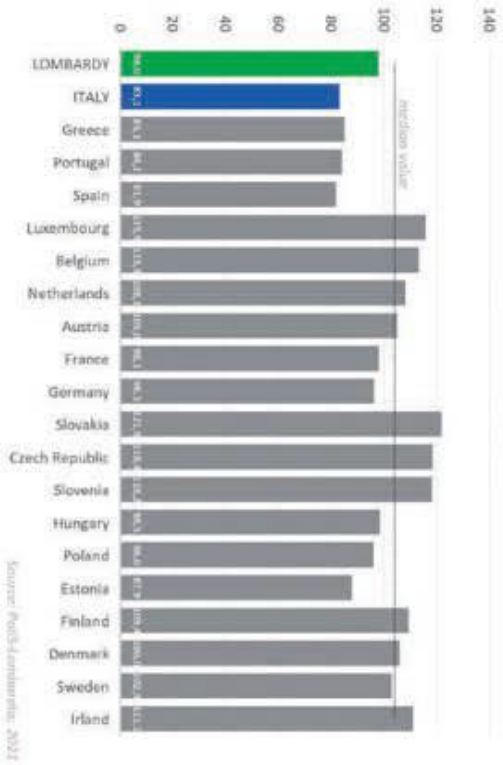
SDG 9.5.1 - PRODUCI AND/OR PROCESS INNOVATIVE ENTERPRISES (PER 100 ENTERPRISES)



10
REDUCED INEQUALITY

REDUCE INEQUALITY WITHIN AND AMONG COUNTRIES

SDG 10 – COMPOSITE INDEX
 2019



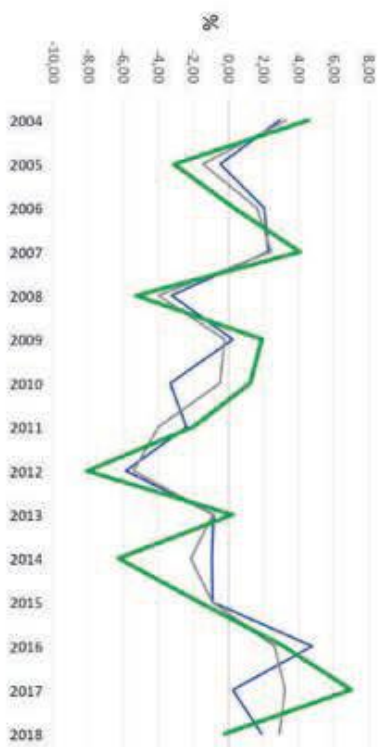
Source: Eurostat, 2022



2008-2019

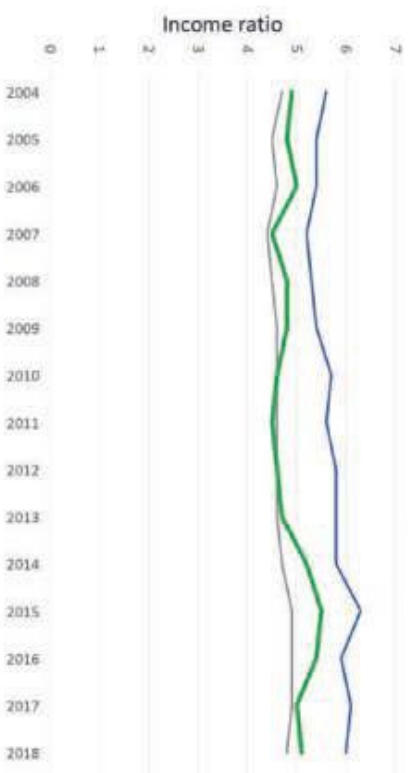
Source: Eurostat, 2022

SDG 10.1.1 - GROWTH RATES OF HOUSEHOLD EXPENDITURE OR INCOME PER CAPITA AMONG THE BOTTOM 40 PER CENT OF THE POPULATION AND THE TOTAL POPULATION



Source: Lombardy region, based on ISTAT data, 18-2-2022

SDG 10.1.1 – NET INCOME INEQUALITY (S80/S20)

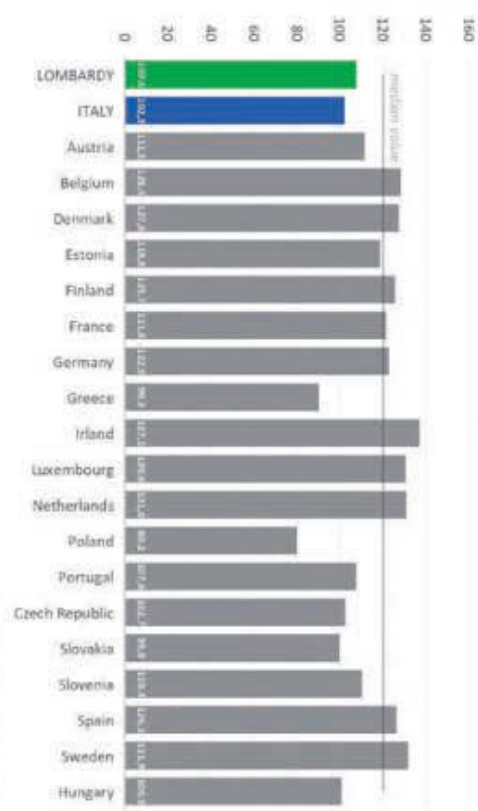


Source: Lombardy region, based on ISTAT data, 18-2-2022

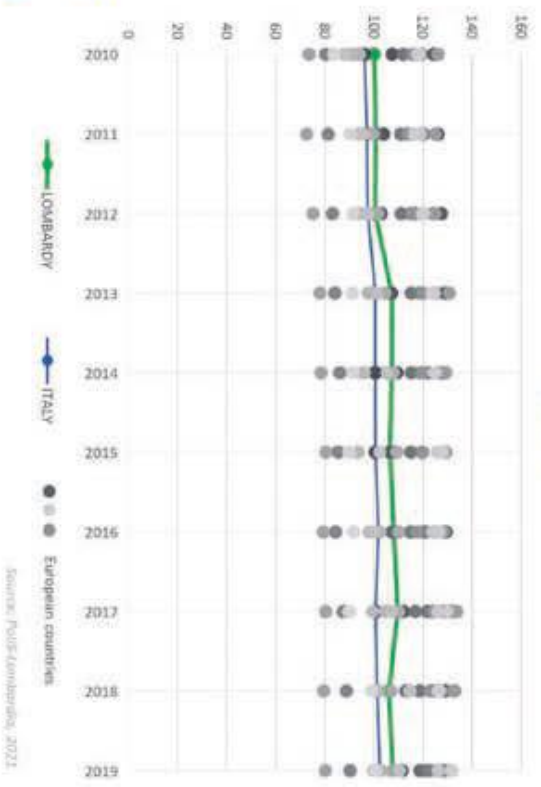


MAKE CITIES AND HUMAN SETTLEMENTS INCLUSIVE, SAFE, RESILIENT AND SUSTAINABLE

SDG 11 - COMPOSITE INDEX

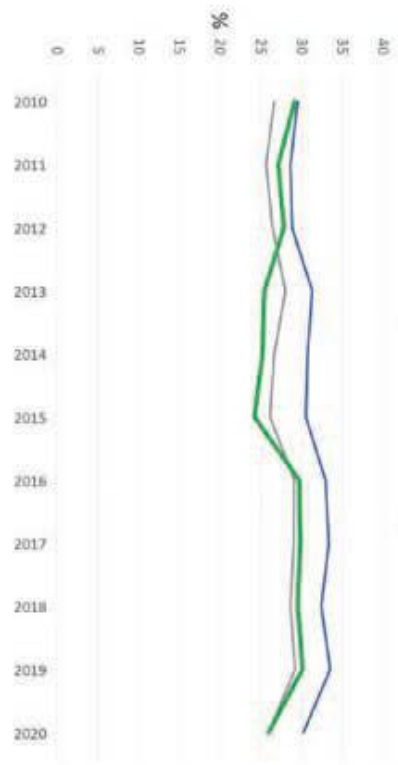


Source: PwC-Lombardia, 2021



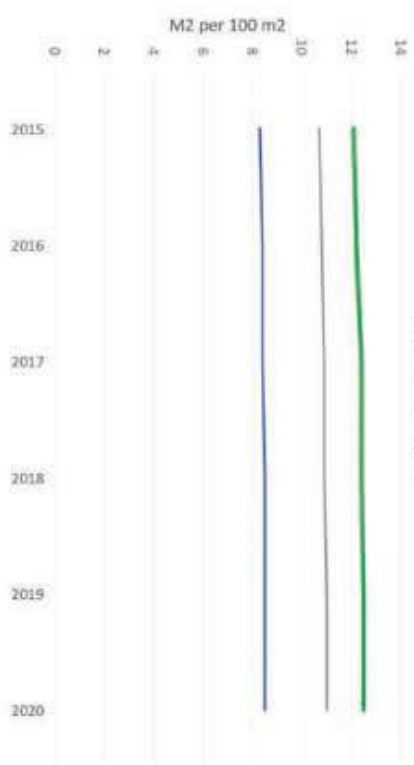
Source: PwC-Lombardia, 2021

SDG 11.2.1 - HOUSEHOLDS PER DIFFICULTIES OF LINKS WITH PUBLIC TRANSPORT MEANS (PER 100 HOUSEHOLDS)



Source: Lombardia region, based on ISTAT data, v. 18.2.2022

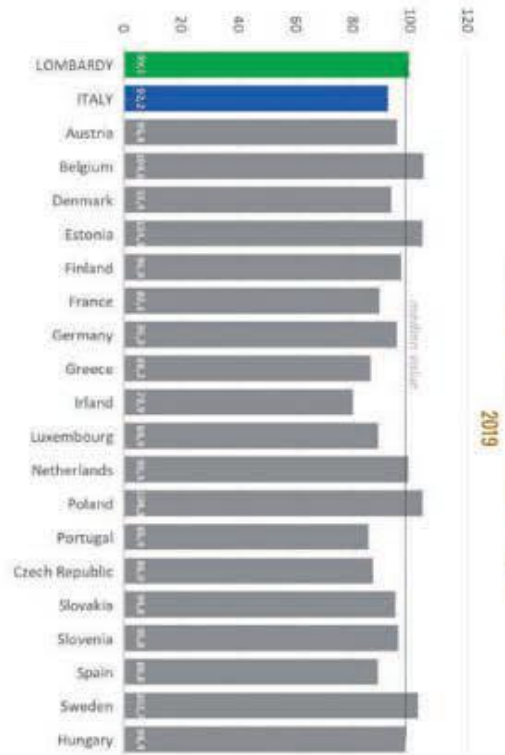
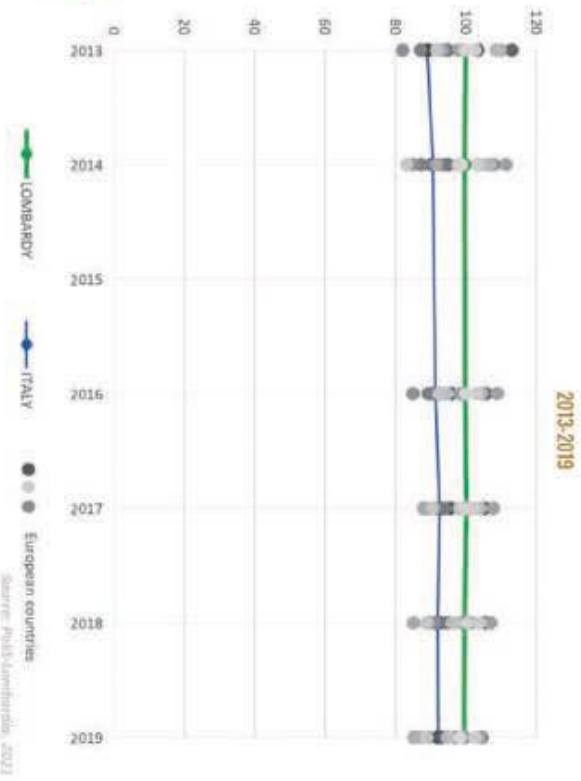
SDG 11.7.1 - INCIDENCE OF URBAN GREEN AREAS ON URBANIZED AREA OF THE CITIES



Source: Lombardia region, based on ISTAT data, v. 18.2.2022

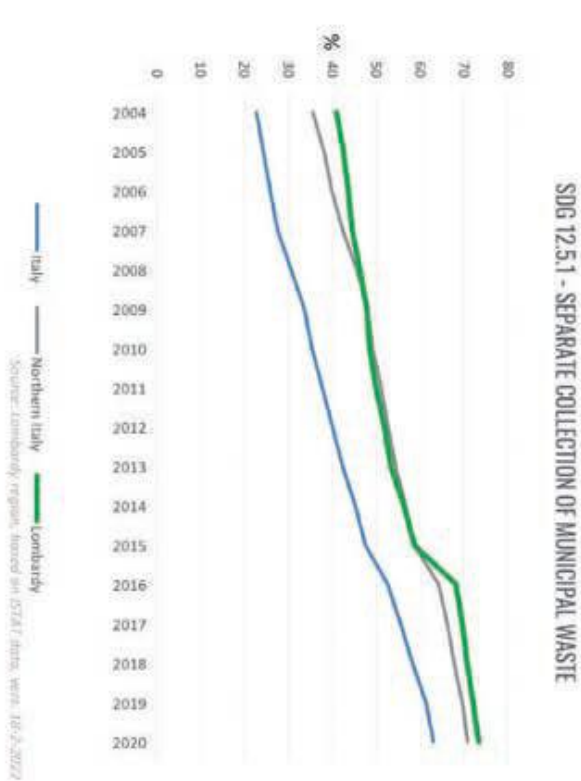


ENSURE SUSTAINABLE CONSUMPTION AND PRODUCTION PATTERNS



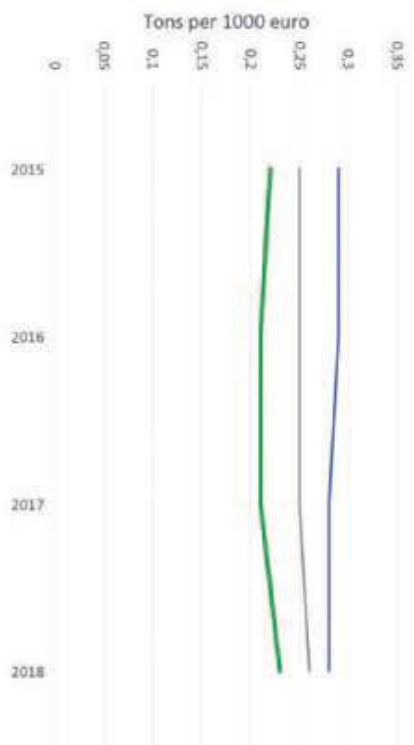
SDG 12 – COMPOSITE INDEX

2019



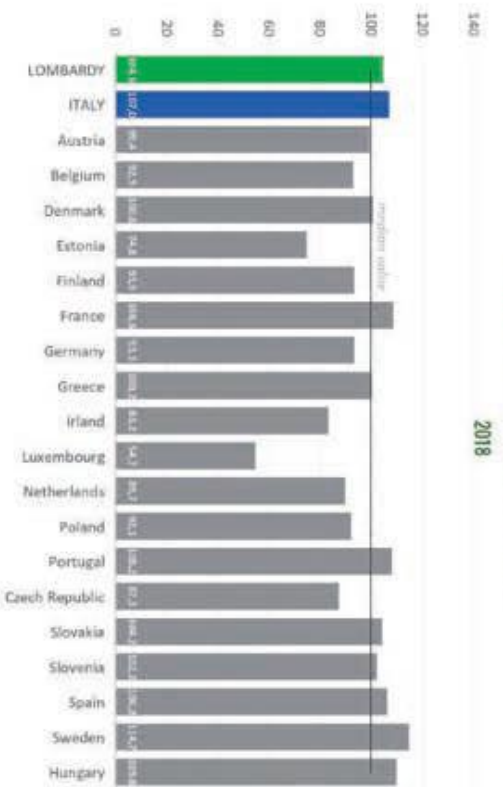
SDG 12.5.1 - SEPARATE COLLECTION OF MUNICIPAL WASTE

Source: Lombardy region, based on ISTAT data, year: 18-9-2022



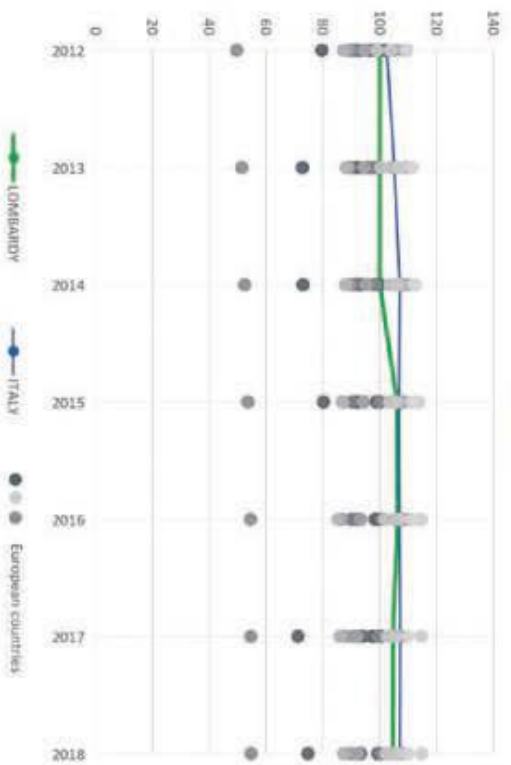
SDG 12.2.2 - DOMESTIC MATERIAL CONSUMPTION PER GDP

SDG 13 – COMPOSITE INDEX



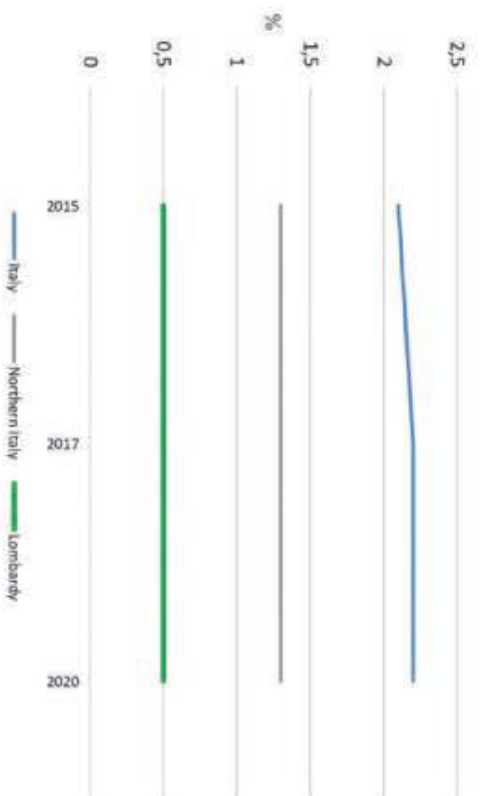
Source: Eurostat/Lombardy, 2022

2012-2018



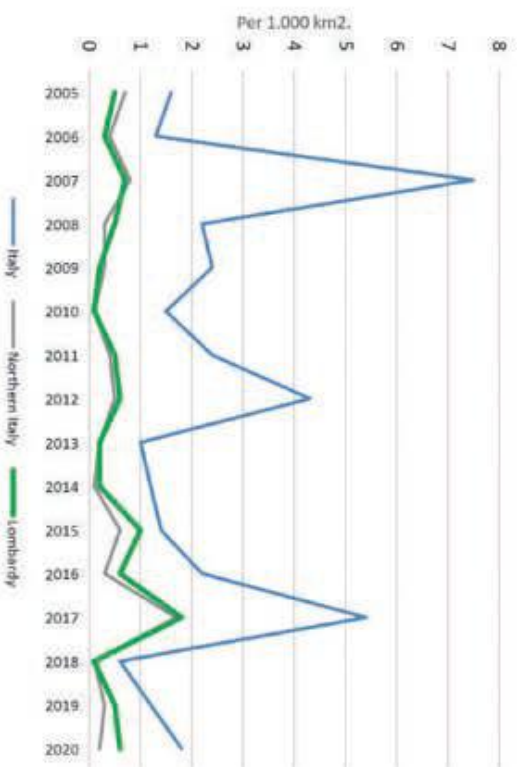
Source: Eurostat/Lombardy, 2022

SDG 13.1.1 POPULATION AT RISK OF LANDSLIDES



Source: Eurostat/Lombardy region, based on UNISDR Global Report on Disaster Resilience, 2015-2022

SDG 13.1.1 FOREST FIRES IMPACT: AREA COVERED BY THE FIRE

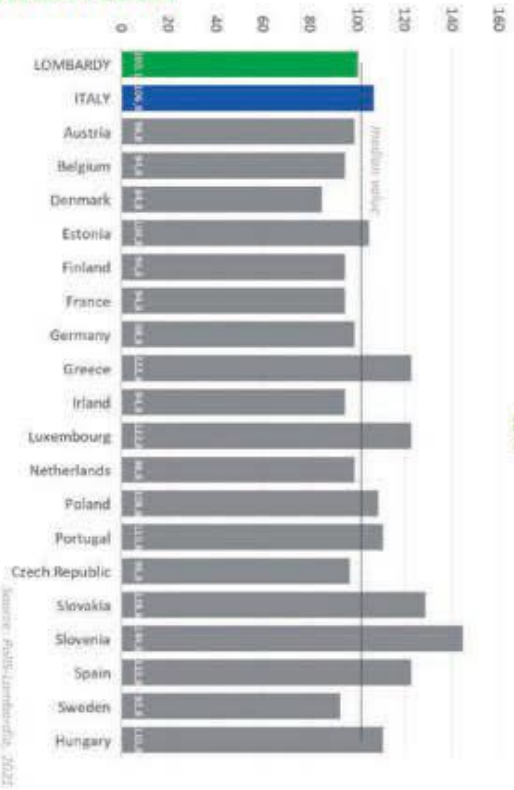


Source: Lombardy region, based on ISNT data, years: 2005-2022

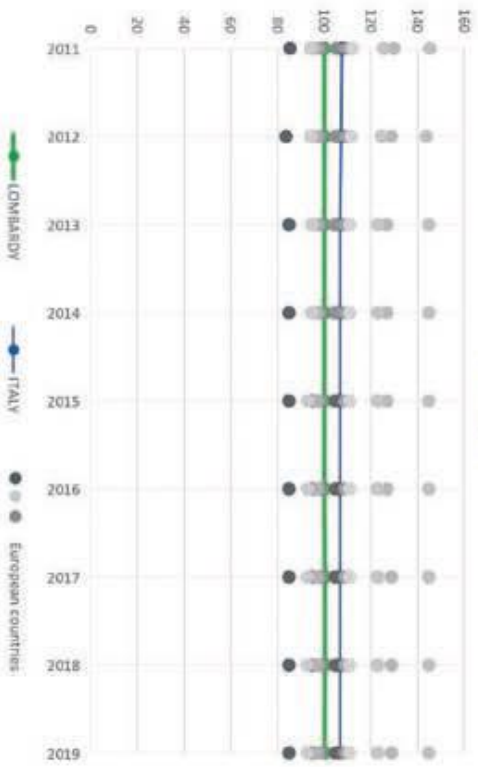


PROTECT, RESTORE AND PROMOTE SUSTAINABLE USE OF TERRESTRIAL ECOSYSTEMS, SUSTAINABLY MANAGE FORESTS, COMBAT DESERTIFICATION, AND HALT AND REVERSE LAND DEGRADATION AND HALT BIODIVERSITY LOSS

SDG 15 – COMPOSITE INDEX

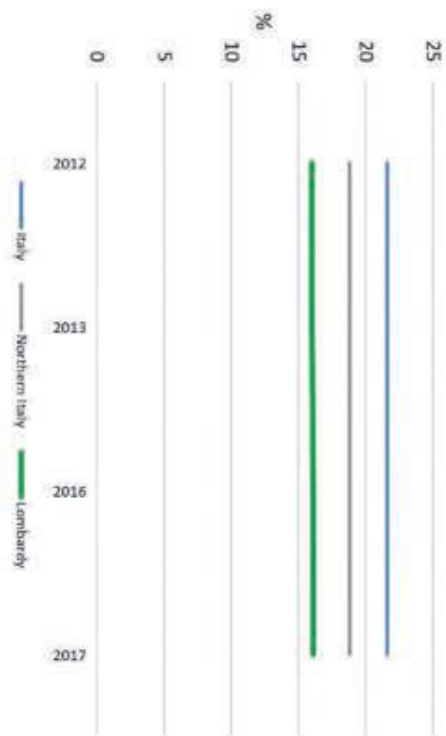


Source: Eurostat, 2021



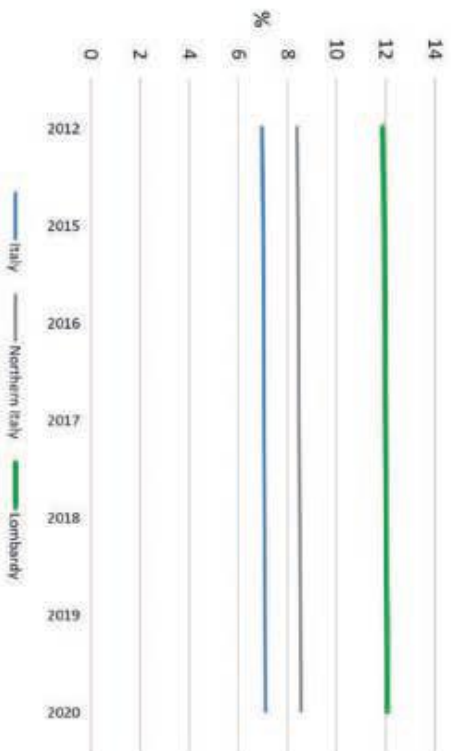
Source: Eurostat, 2021

15.1.2 - AVERAGE PROPORTION OF TERRESTRIAL KEY BIODIVERSITY AREAS (KBAs) COVERED BY PROTECTED AREAS



Source: Lombardy region, based on ECAD data, v.18-2-2022

15.3.1 SOIL SEALING FROM ARTIFICIAL LAND COVER



Source: Lombardy region, based on ESA's data, v.18-2-2022

3. Actions for sustainability in Lombardy

The choice of regional targets and evaluation of Lombardy's positioning allow to identify the gap between the current situation and the objectives set. The analysis of this gap highlights which fields and actions to put in place to concretely implement the regional strategy and therefore the UN Agenda. According to the partnership principle affirmed with Goal 17, such implementation depends as much on the contribution of institutions at all levels as on the stakeholders. This section lists some of the most significant actions implemented by the Lombardy Region, the Metropolitan City of Milan, and the signatories of the Lombard Protocol for sustainable development to progress toward the objectives of the regional strategy.

3.1. The actions of the Lombardy Region

Sustainability is one of the five priorities identified by the Regional Development Program of the XI Legislature for the five-year period 2018-2023. Over the past four years, the Lombardy Region has planned, financed, and implemented activities and interventions not only in the environmental field, but also in the social and economic field, in favor of a sustainable development model. The fulfillment of the commitments through interventions and actions was qualified as a performance parameter of the regional body, to enhance the remuneration of the result by the General Managers, executives, and all staff.

Here, are some projects and initiatives that represent the best practices of the region, collected under the five strategic macro-areas of the SRSVS.

1. HEALTH, EQUALITY, INCLUSION



OSN 1P_I; OSN 1P_II; OSN 1P_III; OSN 3P_II; OSN 3P_II; OSN 3P_III;
OSN 4P_I; OSN 4P_II; OSN 4P_III

Include and counter discomfort

A PLAN AGAINST POVERTY. The Lombardy Region has adopted a regional plan to address poverty, with policies, interventions, and resources aimed at favoring - at the territorial level - a systematic and coordinated action by the various public and private subjects: Municipalities, Health Protection Agencies, Local Healthcare Companies, Employment Centers and the Third Sector. The interventions carried out and supported for the right to food (in implementation of Regional Law no. 34/2015) also fit into this framework, launching an important interconnection between the right to food, food poverty, and food waste.

A PLAN IN FAVOR OF PEOPLE WITH DISABILITIES. The Lombardy Region has adopted a strategy aimed at ensuring as much as possible that all people with disabilities, regardless of sex, race or ethnic origin, religion or personal beliefs, age or sexual orientation, can enjoy their human rights, and move freely regardless of their care needs and be able to decide where, how and with whom to live. In 2021, the new Regional Action Plan (PAR) was approved for policies in favor of people with disabilities 2021-2023; the PAR provides for interventions for over 1 billion euros, of which 113 million euros in support of severe and very serious disability and over 14 million, additional to the 2020 programming, for support for severe and very serious disability for the financing of life projects independent of people with disabilities and of the "After us" (the path of emancipation of people with disabilities from their family of origin). The Region also disbursed 10.8 million euros to support the care and assistance role played by family caregivers of people with severe and very serious disabilities and 10.678 million euros for school inclusion in favor of children with sensory disabilities.

THE RIGHT TO FOOD: A FUNDAMENTAL HUMAN RIGHT. As part of the Action Plan for the right to food, ten projects were financed for the protection and promotion of the right to food in the two-year period 2019/2020 (2.6 million euros of public contribution, 1 million euros more than for the previous two-year period) and 17 projects for the two-year period 2021/2022 (2.6 million euros). The projects, carried out by non-profit organizations, concern the

recovery, collection, and distribution of food surpluses in favor of people who are unable to access sufficient, safe, and nutritious food such as to guarantee a food balance and a healthy life, in particularly vulnerable groups of the population who, also because of the economic repercussions due to the Covid-19 pandemic, have lost or significantly reduced their income capacity.

DECENTRALIZED COOPERATION. In 2019, the Lombardy Region allocated 1.3 million euros for cooperation projects in developing countries. International cooperation projects were financed by civil society organizations in Ethiopia, Kenya, Mozambique, the Central African Republic, South Sudan, and Syria and by UNFPA (United Nations Population Fund) through a multi-country program for states with low income.

SOCIAL INCLUSION FOR ALL. The Lombardy Region promotes the strengthening of integration opportunities for citizens in difficulty and those belonging to disadvantaged groups, favoring inclusion paths aimed at people with disabilities, the elderly, and the population at a disadvantage and/or at risk of poverty and extreme marginality. In recent years, projects have been carried out:

- for the implementation of autonomy paths aimed at the inclusion of disabled people and to improve the quality of life of elderly people implemented by local areas and financed through vouchers, for a total of paths activated in the area regional in December 2021, respectively of 516 and 335.
- for the implementation of psycho-socio-educational interventions in response to the difficulties and problems of discomfort of young people and adolescents and their families for a total, in December 2021, of 934 activated vouchers.
- for the insertion into the labor market in favor of people in conditions of vulnerability and hardship through preparatory actions for insertion, for a total contribution of € 9.6 million and 53 funded projects.
- for the consolidation of social inclusion paths for people, young and old, at serious risk of marginalization, for a total contribution of 4.9 million euros and 40 funded projects.
- for the social accompaniment and for the reintegration of people subject to judicial authority provisions (young people and adults); in 2021 in particular, 35 social support projects were activated, with a loan of 7.2 million euros, which will be carried out in the period January 2021-June 2022 and the agreement between Regions and Cassa delle Amende was implemented for the realization integrated planning for paths aimed at people in particularly frail situations (psychic discomfort, chronically ill, etc.). Restorative justice programs and interventions for listening to and supporting the victims of crimes were also financed.

DISCOVERING THE REALITY OF PENITENTIARY INSTITUTES. Since October 2018, the Lombardy Region has launched, in concert with the Regional Superintendency of the Penitentiary Administration and the Center for Juvenile Justice of Milan, the "Path 5 Sensi" a regional awareness project, which saw the involvement of 6 Prisons throughout Lombardy. The initiative aims to bring the world of prison closer to local administrations and citizens, through a path of knowledge to facilitate the reintegration paths of the person with judicial authority provisions, with particular attention to the young adult range.

PLAYGROUNDS ARE ACCESSIBLE TO ALL. Continuing an experiment started already in 2018, in 2020 the Lombardy Region allocated 7 million euros in favor of the Municipalities, for the financing of projects aimed at the construction and adaptation of inclusive playgrounds in public areas. As a demonstration of the centrality of the issue of inclusion in regional policies, the Lombardy Region has decided to subsidize the tender again, expanding the actions and resources made available, for a total of 13 million euros. The new lines of action aim to finance the implementation of recreational and sporting activities such as the construction and adaptation of inclusive playgrounds, the creation of accessible nature trails, the renovation or redevelopment of semi-residential facilities for the disabled, and the organization of sports services.

Economic, gender, and intergenerational equality

ALONGSIDE FAMILIES. Starting from 2018, the Lombardy Region has experimented with the Lombard Family Factor measure, an innovative tool that allows - on the basis of the evaluation of some parameters ranging from the presence of a loan for the purchase of the main house, to the seniority of residence in the territory of the region and to factors such as the number of children, the presence of disabled people in the family, pregnant women and elderly dependents - to guarantee an additional amount to the contributions granted in implementation of regional measures to provide concrete support from point socio-economic point of view to situations of vulnerability.

IN SUPPORT OF GENDER EQUALITY. In 2020, the Lombardy Region approved the Regional Four-Year Plan for Equality and Prevention and Fight against Violence against Women 2020-2023 policies which provides, thanks also to the involvement of local stakeholders, a system of integrated and synergistic actions aimed at preventing and

eradicating violence against women in all its forms, not only in the home, but also in the workplace. The objective is to affirm a culture of equal opportunities based on the recognition and protection of the fundamental rights of women in every context of economic, social, and family life. The Plan also extends the sphere of intervention to issues and targets that have not been dealt with until now or treated only marginally, such as women victims of violence belonging to disadvantaged categories or with frailties, abused men, minors victims of violence and / or witnesses of intra-family violence and orphans of femicide. The creation of the ["You are not alone" portal is part of this process](#), in which the main awareness and training campaigns promoted by the Lombardy Region and the development of the ["NonSeiDaSola" APP converge](#), with which women, citizens, operators of health and law enforcement agencies can search, through a geolocation system, the anti-violence centers and the branches closest to the user.

LOMBARDY REGION FOR AND WITH YOUNG PEOPLE. On 5 April 2022, the Lombardy Region published the first regional law created for and with young people. The provision has a financial endowment of around 10 million euros over the next three years and among the main innovations, it includes the establishment of a regional observatory on youth policies, the creation of a youth forum, the launch of new and additional communication and communication tools, dialogue with the new generations, including the establishment of a regional award. The process started in 2021 saw the involvement of many associative subjects, an expression of the youth universe, and numerous representatives of institutional and social stakeholders, which then resulted in the collaborative drafting of the ["Generation Lombardia" Manifesto](#), a charter of values in which the main needs, expectations and requests reported to the institutions were expressed and therefore included as a priority in the regional law. To communicate this important milestone, the Lombardy Region has focused on an innovative communication campaign, using the TIK TOK platform. #OkHaiRegione is the format through which six well-known creators of TIK TOK were asked to support the activity by promoting among the thousands of followers the importance of adhering to the Lombardy Generation Manifesto. In May 2022, the Lombardy Region launched the first concrete action to combat youth discomfort. The "Giovani Smart - SportMusicaARte" call provides 1.6 million euros, for public or private entities to promote growth and social inclusion paths, through the organization of artistic and musical workshops and access, free and open, to sports activities in the area.

FREE NESTS AND WORK-LIFE BALANCE IN LOMBARDY. Since 2017, the Lombardy Region has promoted, financed, and expanded the "Nidi-Gratis" measure, with the aim of both supporting families in conditions of economic and social vulnerability, and responding to the needs of work-life balance by promoting permanence, insertion, and re-insertion into the labor market, in particular of mothers and contributing to the reduction of tuition costs. The contribution, paid directly to the municipalities participating in the initiative, initially provided for the cancellation of the tuition fee, otherwise, it would be paid by the parents. In 2021, the participating Municipalities were 606 and the applications admitted for funding were 6,746. In 2019, the European Commission cited the "Free Nursery 2018-2019" measure in the "2019 Report on equality between women and men in the European Union", as an example of good practices among the actions aimed at encouraging participation of women in the labor market.

Since 2013, the Lombardy Region has also been promoting actions to support work-life balance aimed at citizens and businesses, implemented through the work-life balance networks coordinated by the Lombard Health Protection Agencies (ATS). The funded interventions include assistance and support caregivers, services for the management of pre- and post-school and school closure periods, time-saving services, consultancy services, and services in support of self-employed collaborators and freelancers.

The current programming, launched in 2020 with an allocation of 3 million euros, will end at the end of 2023.

In recent years, to complement the actions implemented through the networks, specific notices have been financed for the management of school closure periods and the financing of summer camps, and for the financing of corporate welfare projects aimed at employees, in particular micro and small enterprises.

Health and well-being

A LAW TO STRENGTHEN TERRITORIAL MEDICINE. In the last months of 2021, the Lombardy Region completed the legislative process of strengthening its territorial health system, adapting the regulatory framework to current needs and future scenarios, as well as improving the ability to predict and prevent health crises, also through the reorganization and strengthening of territorial medicine. Specifically, Lombardy was the first Italian region to intervene for the use of funds from the National Recovery and Resilience Plan (PNRR) along with some specific intervention guidelines. It is a new way of working in the area, through the restructuring and modernization of the hospital asset, the adaptation of IT infrastructures, the improvement of data analysis, and the implementation of telemedicine. Among the innovations of the Regional Law, there is the establishment of the Center for the

prevention and control of infectious diseases to support the management of epidemic and pandemic emergencies in the logic of the one health; the development of proximity networks to strengthen home care. The law also identified the Community Hospitals, the Community Homes, and the Territorial Operational Centers, as an ongoing point of reference for citizens to take advantage of primary health care services and for prevention activities. By 2026 the Lombardy Region has foreseen the construction of 216 Community Houses, 101 Community Hospitals, and 74 Territorial Operational Centers.

THE ELECTRONIC FLEBO: TOWARDS THE HEALTH OF THE FUTURE. In February 2022, the first electronic infusion was presented, an intelligent device that allows a great innovation in infusion therapies to improve the quality of life of patients, increase more and more personalized treatments, and the effectiveness of the health system. The project, funded by the Lombardy Region with over 3 million euros (POR FESR 2014-2020) within the "Call Hub Research and Innovation", aims at the development of "smart" technologies and devices for infusion, portable, extremely precise, and reliable for ever more personalized clinical assistance, both in hospital and at the patient's home. Thanks to the electronic drip it will be possible to incentivize the delocalization of care in the area, radically reducing the number of accesses to hospitals and favoring the goal of future healthcare: home as the first place of care.

SPORT FOR EVERYONE. Sport plays a priority role not only as an opportunity for the well-being of the population, but also as an instrument of education and formation of the personality, growth and inclusion, prevention and protection of health, value transfer, and orientation towards correct lifestyles. For 2021, regional policies, in synergy with the main institutional and non-institutional players in the world of sport, have pursued the objective of promoting sport and its practice for all categories of the population ("Sport for all"), from young to less young, with attention to the world of school and the most fragile categories.

Sports-educational paths have been activated for growth, well-being, and inclusion also through the support of specific projects and the signing of targeted agreements such as the one with the Italian Paralympic Committee (CIP) to bring people with disabilities closer to the sport by undertaking important paths for the physical, psychic, and relational recovery of the person.

The "Dote Sport 2021/2022" is also included (approximately 2 million euros) to subsidize, in the form of reimbursement of expenses, the cost incurred by families residing in Lombardy for the sporting activity of minors between the ages of six and seventeen.

2. EDUCATION, TRAINING, AND WORK



OSN 1P_I; OSN 1P_II; OSN 4P_II; OSN 3P_I; OSN 3P_II; OSN 4P_II

School and tertiary education

TOWARDS QUALITY EDUCATION. Dote Scuola is the measure of the Lombardy Region that provides for a series of contributions to financially support families and the educational path of students aged 3 to 21, residents in Lombardy, and who attend ordinary education courses or education and professional training courses (IeFP). The program consists of four components: "Didactic materials"; "Merit", to reward students who achieve excellent results; "School voucher", to support enrollment in schools, equal or public, which provide a fee for enrollment and attendance; "Preschools and Support for the Disabled", with which the aim is to cover part of the cost for teaching staff engaged in educational support activities.

AGAINST BULLYING AND CYBERBULLYING. Lombardy Region, in implementation of a specific regional law for the prevention and fight against the phenomenon of bullying and cyberbullying, has been promoting since 2018, [in partnership with the Regional Scholastic Office](#), the "BULLOUT" intervention line to support awareness-raising, information, and training; implement support programs for minors, victims of bullying and cyberbullying; promote rehabilitation programs aimed at perpetrators of bullying and cyberbullying; encourage the development of a policy to fight school and community bullying and cyberbullying by involving the local actors.

Regione has continued to develop annual initiatives with a view to education to respect online, among these we recall the organization, entrusted to some Lombard schools, of a HACKATHON, or a marathon, which can be carried out in one or more days, during which teams of students discuss the topic of cyberbullying.

Vocational training

GROWING PROFESSIONAL TRAINING. In 2021, the Lombardy Region allocated 253.3 million euros for the consolidation of the education and vocational training system, subsidizing Vocational Education and Training courses and first-level apprenticeship contracts. In the same year, with a budget of 1.2 million euros, further support was also given to measures dedicated to the internationalization of the entire training chain.

In addition, a considerable effort was dedicated to the scholastic inclusion of disabled students from second-cycle secondary schools and VET, with a cost of approximately 58 million euros in favor of approximately 1000 Municipalities for 8000 students, to guarantee the right to study through a contribution for the activation of school transport services and educational assistance.

Another important segment of the training chain is constituted by non-academic tertiary training and in particular by the Higher Technical Institutes (ITS) system, which provides advanced and highly demanded skills, and stands out in the national scenario as a consolidated and constantly growing system, in which the Lombardy Region has heavily invested to ensure adequate specialization for the recovery of the economic and production system, as regards the training of new intermediate figures of technicians for production and services.

Also in 2021, in implementation of the updated Youth Guarantee Plan, which provides for the introduction of a measure dedicated to the reintegration of young NEETs into training courses, a new regional notice was approved aimed at tackling early school leaving and training through the creation of modular training courses, addressed to young people who, having abandoned their studies early, are without a second-cycle education and training qualification and are unemployed, with a total amount of 13.25 million euros.

Sustainable economic growth

ECONOMIC SUPPORT IN A "GREEN" PERSPECTIVE. Lombardy Region, in the critical context deriving from the health emergency from Covid-19, with Regional Law 4/2021, has allocated 101 million euros to Local Authorities for interventions aimed not only at securing territories and infrastructures but also at urban regeneration projects, energy conversion, use of renewable sources, social infrastructures, environmental remediation of polluted sites, green infrastructures and ecological connections. The Lombard municipalities involved were 1,493 for 1,795 intervention projects in the Lombardy area.

CIRCULAR ECONOMY CHAINS. In collaboration with Unioncamere Lombardia, the Lombardy Region has published the Call for the innovation of circular economy chains in Lombardy, with a financial endowment of 3.6 million euros. The initiative is aimed at promoting and upgrading the Lombard supply chains, their innovation, and competitive repositioning in a circular economy perspective, by financing projects that consider the entire life cycle of the product or that support reuse and use of recycled materials, of products or residues deriving from production cycles as an alternative to virgin raw materials and the reduction of waste production. The beneficiary enterprises (micro / small and medium enterprises) were 53.

SUSTAINABLE TOURISM. In the field of tourism policies, sustainability represents one of the transversal lines of intervention for the development of the tourism sector and attractiveness, representing a competitive advantage for the territories. Starting in 2018, the Lombardy Region has promoted three editions of the "Viaggio #in Lombardia" call, aimed at public entities, tourist consortia, tourist promotion agencies, Pro Loco, and associations with a prevalent statutory purpose of promoting tourism, aimed at supporting development, promotion and communication of the tourist products expressed by the territories, as well as tourist itineraries between the capital municipalities and the "out of town" destinations in order to increase tourist flows, in a logic of sustainability / seasonal adjustment and in view of the next major events (eg. "Bergamo-Brescia Italian Capitals of Culture 2023" and "Milan Cortina 2026 Olympics"). Resources amounting to 4.28 million euros have been allocated for this purpose.

Work

CUSTOMIZED PATHS ACCOMPANYING WORK. With the "Dote Unica Lavoro" measure, the Lombardy Region intends to respond to the needs of people, residents and/or domiciled in Lombardy, in the various phases of their professional life with an integrated and personalized offer of services to facilitate jobs' reintegration and professional qualification or retraining. Dote Unica Lavoro provides five levels of aid intensity, calculated on the basis of distance from the labor market, age, and gender of each individual. Each band corresponds to a Dowry. The recipients of the measure - mainly unemployed and/or employed individuals up to 65 years of age - can activate, free of charge, with an operator accredited by the Region, a Personalized Intervention Plan, functional

to job placement, self-employment, and self-entrepreneurship or retraining of one's professional profile.

TO REVERSE THE WORKING MISMATCH. With the aim of overcoming the misalignment between labor supply and demand, promoting the acquisition of new skills to cope with the profound transformations of production processes, and reducing the time needed to reintegrate workers into the labor market, in July 2021 the Lombardy Region launched the initiative *Formare per Assendere*, aimed at companies that have hired people who have been unemployed for at least 30 days and at the same time implement, before or after hiring, a training course to bridge the skills gap. The measure, increased several times during the year, reached a total allocation of 26 million euros in March 2022 (of which 2 million are reserved for micro and small enterprises in the transport sector) and is aimed at financing employment incentives. combined with training costs incurred by the employer and, where required, personnel selection costs. The call also favored the relaunch of female employment, considering that 54% of the work placements of the measure involved women.

3. INFRASTRUCTURE, INNOVATION, COMPETITIVENESS, AND CITY



OSN 1P_I; OSN 1P_III; OSN 2P_II; OSN 2P_III; OSN 3P_1;
OSN 3P_III; OSN 3P_IV;

Housing and building quality

AN EXAMPLE OF URBAN AND SOCIAL REGENERATION. Lombardy Region has promoted a significant urban and social regeneration intervention in the Lorenteggio district in Milan, according to an innovative approach that focuses on people and their needs , experimenting with a sustainable development model from the housing, construction, economic and social, replicable in other territorial contexts. The intervention, which has a financial endowment of over 100 million euros, affects a complex territorial area in which the advanced deterioration of the public heritage, both housing and collective services and open spaces, is associated with conditions of poverty, hardship social, and presence of petty crime. The project involves a multidisciplinary approach, which brings together resources and local actors, with a strong governance to develop innovative solutions capable of improving physical space and activating a process of the social and economic integration of families, creating a mix of residences, functions and collective spaces complementary to living. Specifically, the actions concern the redevelopment of public and social residential buildings, also through demolition and reconstruction; the redevelopment of the public lighting network with innovative technologies aimed not only at energy saving but also at ensuring safe pedestrian and cycle paths, equipping the district with widespread wi-fi and video surveillance and sensors for monitoring pollution and traffic and for control the occupation of parking spaces for the disabled, with a view to being a smart and inclusive city; the eco-energy efficiency of the kindergarten in the neighborhood. Not only infrastructural interventions: the project also envisaged the activation of services for accompanying housing; support for the start-up of businesses with social purposes; the provision of training courses for unemployed residents or the support of projects for the start-up or consolidation of social enterprises which at the same time activate training courses for unemployed residents.

Infrastructure and sustainable mobility

THE TRAINS OF THE FUTURE. In November 2020, an ambitious project aimed at eco-sustainable transport was presented in Lombardy. The goal is to put hydrogen-powered trains into circulation on the Brescia-Iseo-Edolo railway line, replacing the old diesel trains in service since the early 1990s. The plan provides for the purchase of at least 14 new hydrogen-powered trains (for a total of 160 million euros) which will serve the line and the construction of hydrogen distribution systems. The fuel produced will initially be destined for the new clean energy trains. In addition, between 2021 and 2022, the Lombardy Region allocated 85.5 million euros for infrastructural interventions to upgrade the network and connected to the activation of the hydrogen train service.

NEW TRAINS AND BUSES FOR A MORE SUSTAINABLE PUBLIC TRANSPORT. Lombardy Region, starting in 2017, has embarked on the largest renewal program of trains destined for the regional railway service. With an investment of 2 billion euros, 222 trains are under construction (of which 50 are already in operation in April 2022) intended to give a new impulse to the use of the railway. The first objective of a modern and functional train is to bring more travelers to use the railway, with obvious benefits in terms of travel safety, congestion reduction, and environmental protection.

Furthermore, between 2020 and 2021, the Region approved the overall allocation of approximately 250 million euros for the purchase of new buses and for the construction of support infrastructures for alternative-fueled buses (electric, methane, hydrogen) to benefit from important ministerial funding programs (National Strategic Plan for Sustainable Mobility, a complementary fund to the PNRR, etc.), which will allow approximately 1,200 new buses to enter service by 2026.

Guaranteeing new buses means improving the quality of the service offered and increasing the attractiveness of public transport, with benefits in terms of decongesting the road network, less pollution, and greater safety.

THE TOURIST CYCLING SYSTEM. Lombardy is crossed by European (EUROVELO) and National (BICITALIA) cycle paths, recognized by the Regional Plan of Cycling Mobility (PRMC), as an opportunity to increase territorial development linked to sustainable tourism.

As part of the National System of Tourist Cycle Routes (SNCT), the national tourist cycle routes VENTO, SOLE, and GARDA are currently in the planning stage.

The VENTO cycle route runs mainly along the banks of the Po River for 350 km in continuity with the Piedmont, Emilian, and Veneto sections, with a connecting section with Milan which joins in Pavia. The SOLE cycle route has a north-south route between Verona and Florence, 90 km of which insist on the Lombard territory. The GARDA cycle path, of about 80 km in the Lombard section, runs along the perimeter of Lake Garda.

The national tourist cycle routes are included in the National Recovery and Resilience Plan (PNRR) and have an activation horizon in 2026.

The network of tourist cycle routes also includes itineraries of regional interest and connecting sections between the national, regional, and premises, to allow a wide use. With a view to intermodality, the cycle path system will be reachable by rail and local public transport services.

Furthermore, the Region, in addition to having financed 24 interventions with resources under the Regional Operational Program of the European Fund for Regional Development 2014-2020 (referred to in the specific measure of Axis 4 "Supporting the transition to a low-emission economy of carbon"), with funds from the Program of interventions for economic recovery (the so-called "Lombardy Plan") continues to support cycling by financing an additional 160 interventions.

A STUDY ON ALTERNATIVE FUELS. In December 2020, the Lombardy Region signed a collaboration agreement with the Energy & Strategy Group of the Politecnico di Milano, aimed at the construction of three scenarios for the penetration of alternative fuels (LPG, methane, biofuels, electricity, and hydrogen) to 2030 and an analysis of the effects of a transport, socio-economic and environmental nature deriving from the adoption of each reference scenario in the Lombardy perimeter. The results of the research were presented in November 2021.

CHARGING COLUMNS: A CERTIFIED MAPPING. The development of electric mobility is also closely connected to the availability of tools capable of giving a reliable representation of the charging infrastructures present in the area, a condition for any subsequent planning action. Lombardy Region has developed ECOMOBS, the Ecosystem of sustainable mobility which - with its cartographic and management section with access reserved for the public administration - constitutes a support tool for the planning and programming of actions functional to the completion of the infrastructure for charging of electric vehicles. The system developed is based on an innovative approach: the population and updating of ECOMOBS data do not occur with the periodic sending of tables, but through "a connection" with the data shared by the operators of the sector through an API (programming interface). Basically, the data relating to the columns managed by the operators "pass" from their databases to E015 (the digital ecosystem of the Lombardy Region that allows data exchange between public and private subjects) to be integrated into ECOMOBS. In ECOMOBS all the charging stations for electric vehicles are displayed in real-time on the map viewer. It is possible to carry out searches and queries on the basis of geographical and technical attributes and produce summary reports. In the management section, starting from the municipal scale, sustainable mobility indicators can be calculated (eg number of charging stations by type of power - slow/accelerated/fast/ultra-fast - present in a given municipality). The binomial ECOMOBS-E015 is configured as a regional prototype of the Single National Platform, envisaged by the National Plan of Electric Charging Infrastructures. For the next few years, the use of ECOMOBS is envisaged not only for electric mobility but also as a support for the development of other sustainable mobility interventions/policies.

New territorial governance

AGAINST "LITTERING": A MULTILEVEL EXPERIMENTATION. In March 2022, the Regional Council approved the Agreement between the Lombardy Region, the Lombard Provinces, ANCI (National Association of Italian Municipalities), Lombardy and the Metropolitan City of Milan to test a pilot model of collaboration between Local

Authorities to curb the practice of “littering”, or rather the indiscriminate abandonment of waste thrown on streets and public spaces. It is an experimental model of collection and removal mechanisms, but also of waste treatment in pilot areas accompanied by investments aimed at discouraging and combating the phenomenon and identifying those responsible for the abandonment of waste. The 2.4-million-euro investment envisaged by the agreement is aimed at the purchase of technological equipment and instrumentation.

Digital innovation

INFRASTRUCTURE FOR ULTRA-FAST CONNECTIVITY. With the signing of the Program Agreement for the development of ultra-broadband between the Lombardy Region and the Ministry of Economic Development (MISE), the fiber optic infrastructure project was launched in 2016 for a total investment of 451.7 million euros.

There are 1436 Municipalities involved, for part or for the whole of their territory, in the Banda Ultra Larga (BUL) Lombardia project, while, as a result of expressions of interest by private operators, expressed to the Ministry of Economic Development, there are 95 Lombard municipalities falling, for more than 95% of the territory, in the interest of the market (“black municipalities”) and therefore not involved in the public BUL project. In fact, according to the provisions of the Community Regulations, public intervention, such as the BUL Lombardia project, cannot overlap with the action of the private sector but acts in a complementary manner and intervenes exclusively in the so-called market failure areas (white areas) for the involvement of 2,376,989 inhabitants.

As of April 2022, 554,274 real estate units are connected by fiber optic with FTTH (fiber to the home), allowing citizens, businesses, and public administrations connections starting from 100Mbps.

Sustainable and innovative manufacturing economic development

SUSTAINABLE FASHION. In consideration of the environmental impact of the textile industry and following multiple discussions with stakeholders in the fashion sector, in 2019 the Lombardy Region promoted the call for “FashionTech - Research & development projects for sustainable fashion”, with an endowment of 10 million euro, in support of R&D projects (industrial research and experimental development), aimed at supporting innovation in the “Textile, Fashion and Accessories” sector, according to the principles of environmental, economic and social sustainability within the overall production cycle, from design, to the choice of materials, to the production and distribution of products. The beneficiaries are partnerships made up of Micro, Small, and Medium Enterprises (MPMI), Large Enterprises, and Research Bodies / Universities. The measure made it possible to finance 17 projects.

LOMBARDY IS RESEARCH. With the institution of law no. 29 of November 23rd, 2016, “Lombardia is Research and Innovation”, the Lombardy Region favors, supports, and promotes research and innovation. In order to promote research and innovation, as strategic elements to support sustainable and lasting development of the territory and to respond to the global challenges of our time, the law defines two fundamental tools: the Three-year Strategic Program for Research, the ‘Innovation and Technology Transfer, and Research Day. The latter represents a fundamental appointment for all the scientific and technological excellences operating in Lombardy and an opportunity for meetings and discussions between scientists, entrepreneurs, personalities, and artists who have distinguished themselves for their contribution to innovation and for supporting the international research. The culmination of the day is the ceremony for the awarding of the “Lombardia è Ricerca” International Award, with which one million euros is awarded to the researcher, or team of researchers, who has made a significant contribution in the field of Life Sciences the advancement of scientific and technological knowledge, with specific regard to the effects on the well-being, health, and quality of life of all people. The Award, for the 2020-2021 edition, was dedicated to the vital process of Photosynthesis, which allows us to store the renewable energy of sunlight in the form of chemical energy in organic and biological molecules, providing nourishment and fuels essential for our development. The use of sunlight can find new applications for environmental sustainability: from the remediation of polluted environments to the purification of water, to the recycling and disposal of plastic, in accordance with the Sustainable Development Goals identified by the objectives of the 2030 Agenda.

Quality of life

FOR THE ENHANCEMENT OF CULTURE. In 2021 the call was published for the assignment of grants for the enhancement of the Lombard public heritage for cultural purposes: innovation and sustainability. Also in 2021, the project for the international relaunch of tools, practices, and contacts for the restart of the Lombardy live

entertainment companies was approved as part of the collaboration agreement between the Lombardy Region and the Cariplo Foundation for the sharing and support of projects in the entertainment sector for the two-year period 2021/2022.

Also worth mentioning is the Next project, a laboratory of ideas for the production and programming of the Lombard show - 2021-2022 edition, with the endowment of 1,138,000.00 euros which aimed to promote the production of live shows in order to support operators of the sector hard hit by the restrictive measures imposed by the containment of the health emergency by Covid-19 and to support artistic creativity and the work of staging and rehearsing the shows.

There was no shortage, also for 2021, of contributions intended for the realization of projects for the enhancement, promotion.

4. MITIGATION OF CLIMATE CHANGE, ENERGY, PRODUCTION AND CONSUMPTION



OSN 2P_II_6; OSN 2P_III_1; OSN 3P_II_2; OSN 3P_III_1;
OSN 3P_III_4; OSN 3P_III_5; OSN 3P_III_6; OSN 3P_IV_1;
OSN 3P_IV_2; OSN 3P_IV_3

Reduction of emissions in the civil sector and in transport

INNOVATIVE SOLUTIONS FOR AIR QUALITY. In July 2018, the Lombardy Region updated and implemented its Regional Plan of Interventions for Air Quality (PRIA), already approved in 2013. Among the initiatives aimed at improving air quality, we note "Move-In" (Monitoring of Polluting Vehicles), a project launched on an experimental basis in October 2019, to encourage innovative ways to control vehicle emissions by monitoring mileage, considering the actual use of the vehicle and the driving style adopted. Specifically, a black box, installed on the vehicle, makes possible to detect real distances through the satellite connection to dedicated technological infrastructure. By joining the Move-In, the vehicle will no longer be subject to the hourly and daily blocks in force but will instead be monitored through the total count of the km traveled in any time slot and within a maximum km/year limit established based on the type and the environmental class of the vehicle. Participation in the Move-In service implies the commitment, by the participating citizens, to respect the threshold of kilometers assigned on an annual basis to their vehicle. Reaching this threshold makes it impossible to continue to make use of the mileage exception introduced by Move-In, which translates into the impossibility of further use of the vehicle (at any time slot and on any day) until the completion of the year of validity of the service. Since 2021, the Move-In project has also been adopted and implemented by the Piedmont Region.

Development of renewable energy sources

FRENEWABLE SOURCES AND CONTRAST TO ENERGY POVERTY. In 2021, the Lombardy Region developed numerous initiatives aimed at encouraging the production of energy from renewable funds and reducing energy poverty. There are over 900 subsidized interventions (for a value of 40 million euros) for the installation of photovoltaic systems and storage systems and over 4,200 installations of electrical energy storage systems, which allow an increase in shared energy for a total of 18.1 million euros. In addition, the Region has allocated 15 million euros for the energy requalification of public structures through the installation of renewable source systems and for the increase of energy efficiency and the reduction of light pollution of public lighting systems, subsidizing the Tenders "Illumina" and "Lumen" for an amount of 15 million euros and 30.34 million euros respectively. Finally, the Lombardy Region has planned new actions, to be implemented soon, with the European resources of the 2021-2027 programming, allocating over 100 million euros of community funds to the development of infrastructures and plants using renewable sources and support for the diffusion of communities. energetic.

A REGIONAL LAW FOR ENERGY COMMUNITIES. A concrete sign of the path undertaken by the Lombardy Region towards the energy transition of the regional socio-economic system, Regional Law n. 2 "Promotion and development of a system of Renewable Energy Communities (CER) in Lombardy. Towards energy autonomy ". The legislation is supported by an initial regional investment of approximately 22 million euros which will make it possible to create a widespread network of energy production and storage plants made up of 6,000 energy communities over the next 5 years. The "network" will respond to the needs of private homes, companies, hospitals, schools, and local authorities, reducing energy costs for consumers. The coordination function of all energy communities will be carried out by the Lombardy Regional Energy Community (CERL). CERL will have to promote the culture of renewable energy sources with training and information initiatives aimed at citizens, businesses, and institutions and support the creation of individual territorial energy communities. The spread of energy communities will help to meet the 2030 objectives of

the Regional Energy, Environment and Climate Plan which provides for a reduction of one third of consumption and the doubling of energy production from renewable sources.

Circular economy and sustainable production model

CIRCULAR ECONOMY AND ENERGY TRANSITION. On November 8, 2021, the Regional Law n. 20 “Discipline of the sustainable cultivation of mineral substances from quarries and for the promotion of saving raw materials and the use of recycled materials” aligned with European policies concerning environmental sustainability and the circular economy. The law encourages the use of inert materials from the reuse, recycling, and recovery of waste, as an alternative to newly extracted raw materials.

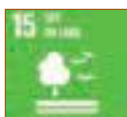
Among the initiatives of the Lombardy Region aimed at promoting a participatory approach on issues relating to the circular economy and the energy transition, particular mention deserves the establishment, in October 2018, of the Observatory on circular economy and the energy transition. It is an institutional discussion table aimed to sharing the strategic objectives of regional climate policies and for the sustainability of the use of resources with all the players in the area. Participation in the institutional debate is open to all trade associations, trade unions, universities and research bodies, associations of local authorities, environmental associations, and consumer associations. The Observatory is organized in permanent coordination tables that define the guidelines, objectives, and expected results of the process of common construction of regional policies and strategies for the environment and climate, and in thematic tables that elaborate specific contributions to be integrated into the new plans and regional programs, to which bodies, organizations, and experts with specific experience and expertise in the sector and in the topics subject to technical comparison are also invited. The multiplicity of stakeholders involved in the Observatory encourages a fertile dialogue, full of food for thought, and also for the proposal of new perspectives and regulations in the field of climate and energy policies.

CONTAMINATION PREVENTION. Lombardy Region continued the updating of the Regional Waste Management Plan, through the updating of the Regional Waste Management Program, which contains the Regional Reclamation Program for polluted areas. The update of the Waste Program is in line with the Directives referred to in the “Package for the Circular Economy” which have been in force since 4 July 2018. The package of new Directives is part of a broader European strategy that aims to achieve a profound change in production and consumption models, according to the new perspective of the so-called “Circular Economy”.

Regarding the implementation of the measures of the National Recovery and Resilience Plan (PNRR) and in particular, to that relating to the remediation of orphan sites (M2C4, Investment 3.4), the Lombardy Region, based on the contents of the Regional Remediation Program for polluted sites (PRB), has identified the list of sites to be redeveloped within the regional territory, through the aforementioned resources, and initiated discussions with the MITE. Lombardy Region was the beneficiary of the measures for a total of approximately 51 million euros. Finally, it should be noted that, even before the PNRR funds, Ministerial Decree 269 of 29 December 2020 governed the criteria and methods for transferring the resources to beneficiaries for the implementation of environmental remediation and restoration of orphan sites and assigned to Lombardy Region resources for a total of € 9.6 million.

Finally, in 2021, the Guidelines for the management of black slag from electric furnace steelworks were approved. The document was produced by the “Melt Slag” Technical Roundtable set up within the Observatory on Circular Economy and Energy Transition.

5. ECOPAESISTIC SYSTEM, ADAPTATION TO CLIMATE CHANGE, AGRICULTURE



OSN 1P_III_1; OSN 2P_I_1; OSN 2P_I_2; OSN 2P_I_3; OSN 2P_I_4; OSN 2P_I_5; OSN 2P_II_2; OSN 2P_II_3; OSN 2P_II_4; OSN 2P_II_5; OSN 2P_II_6; OSN 2P_II_7; OSN 2P_III_1; OSN 2P_III_2; OSN 2P_III_4; OSN 2P_III_5; OSN 3P_I_1; OSN 3P_III_7

Resilience and adaptation to climate change

RESOURCES TO INCREASE THE RESILIENCE OF TERRITORIES. In 2021, the Region invested 104.5 million euros to fight combat climate change, improve air quality, energy efficiency, and sustainable mobility (installation of photovoltaic panels, replacement of polluting cars and vehicles, replacement of obsolete thermal systems, columns for electric charging of vehicles for public bodies, regulation of biomass-fueled thermal systems); De-waterproofing and planting interventions.

THE NEW REGIONAL LAW TO IMPROVE THE MANAGEMENT OF EMERGENCIES. At the end of 2021, the new Regional Law on Civil Protection (LR 27/2021) was also approved. Among the important new elements alongside

the Civil Protection authorities, the assignment of specific functions on the matter to the presidents of the Lombard provinces, as heads of large-area entities, is envisaged. The new legislative text reforms the territorial coordination of emergency management, clearly defining which government authorities of the various territorial levels are responsible for the strategic direction and coordination of the resources to be used in the event of an emergency, based on the level of impact of the events. The law also formalized the regional forest fire risk prevention plan and regulated the training of highly qualified personnel and the inclusion of special groups. The figure of the Territorial Operational Coordinator (CTO) was also introduced, with tasks of operational coordination of the resources of organized volunteering. As regards the support and strengthening of the regional Civil Protection System (Provinces, Municipal Groups, and Associations), approximately 60 million euros were allocated in the three-year period 2021-2023 for the purchase of equipment and upgrading of the offices.

Soil protection

FIGHT AGAINST LAND CONSUMPTION. In December 2021, the Lombardy Region approved the adoption of the revision of the Regional Territorial Plan (PTR), including the landscape enhancement project. The Plan has the non-exclusive objective of helping local authorities in defining the landscape contents of the planning tools and proposes for the first time the Regional Green Network project, to guarantee and strengthen the conditions of protection of rural and naturalistic landscapes. It is a tool with a broad vision, no longer strictly urban planning, to regulate Lombardy to come. With a view, hoped for by the Region, to reduce land consumption. About 450 Lombard municipalities have already taken steps to reduce the areas of transformation of free soil, by over 20 million square meters. The conclusion of the approval process for the revision of the Plan is expected by 2022.

ENHANCEMENT OF THE DISPOSED OF MINING ASSETS. In 2021 the "Regional program for the recovery and enhancement of the disused mining heritage" was approved, to promote and enhance the heritage that can be visited. At the same time, 5.6 million euros were allocated to improve and implement the safety of the mining sites themselves and the conditions of usability.

Biodiversity and protected areas

BIODIVERSITY: A GOOD TO PROTECT AND ENHANCE. The Lombardy Region invested 6.3 million euros in 2021 for territorial interventions for biodiversity, the conservation of biodiversity, adaptation to climate change, and the enhancement of ecosystem services in Lombardy's forests and protected areas, through the involvement of the private sector.

LOMBARD PROTECTED AREAS: A BEAUTIFUL RE-DISCOVERY. At the end of 2021, the Lombardy Region allocated 10.5 million euros to relaunch the social economic system of the Lombard protected areas and to deal with the negative impact deriving from the health emergency caused by Covid. The resources, distributed over the territories of Lombardy, will be used to consolidate and strengthen the structural and infrastructural heritage of the protected areas which will be made more usable and functional for the reception. In fact, during the pandemic period there was a surge in visits to protected areas, with a positive impact on the local economic system. Many citizens have been able to discover or rediscover the biodiversity preserved in these areas which are the real green lung of Lombardy: 25% of the regional territory is protected.

Enhancement of forests

ENHANCEMENT OF THE RURAL-LANDSCAPE-ENVIRONMENTAL SYSTEM. In March 2021, the Lombardy Region approved the tender "Green infrastructures with ecological relevance and increase of naturalness" with which it pursues the objectives of safeguarding and enhancing the rural-landscape-environmental system. The interventions promoted are of an agroforestry nature and increase the naturalness, aimed at encouraging the green infrastructure of the Lombard territory. Enhancing naturalness means making areas more usable and increasing the quality of life and the attractiveness of the landscape. The measure allocated a financial envelope of 6 million euros for the strengthening of the agroforestry system for connecting green systems, with the containment of land consumption and urban dispersion, for the enhancement of rural areas and open spaces with an increase of naturalness, for the strengthening of the green infrastructure of the territory, for the construction of the regional ecological network and the increase of the forest heritage.

NEW WOODS IN THE PLAINS AND HILLS. The Lombardy Region is involved in safeguarding the woods and promoting more sustainable models of life also in urban centers, investing in forward-looking projects shared with local authorities. Between 2019 and 2020, in fact, the Lombardy Region has allocated 9 million euros for the creation of new woods in the plains and hills, the improvement of existing or damaged ones, forest hydraulic works, and the extraordinary maintenance of agrosilvopastoral roads. The 95 funded projects aim at the protection, conservation, and enhancement of forest ecosystems and the protection of biodiversity, including the creation of new woods in areas with insufficient woody coefficient, and are concerned with the prevention of hydrogeological instability in the areas of the foothills.

Quality of river and lake systems

DRONES FOR HYDRAULIC SAFETY. The fluvial one is a fundamental ecosystem for the Lombard territory. Seveso Stream, a project started in March 2021, uses drone technology in a new way to survey the “discharges” along the Seveso River. The surveys are used to create a geo-referenced database of discharges, thus providing local authorities with a useful tool in support of their decisions and operations. Its interdisciplinary approach combines the goal of hydraulic safety with those of water quality and environmental protection. In October 2021, the project has been extended to the rivers Olona and Lambro.

PROTECTION AND RESTORATION OF LACUSTRUM WATERS. In 2021, interventions for the protection and rehabilitation of water were financed with 16 million euros. The main areas of investment were lakes and biodiversity protection, the recovery of lakeshores, water depollution interventions and the purchase of new sweeping boats. Through the AQST Action Program “Safeguarding and rehabilitation of Lake Varese”, 4 million euros were allocated to the modernization and strengthening of sewage systems, water monitoring and the enhancement of the lake shores.

Smart and nature-based solutions for the urban environment

RECOGNITION OF URBAN AGRICULTURE. In October 2021, the Lombardy Region was the first Italian region to approve a law on urban, peri-urban, and metropolitan agriculture and on vertical farm. An initiative with several innovations, which strongly innovates the regulatory framework, recognizing green roofs in urban planning and allowing the establishment of vertical farms in all urban areas, *i.e.* innovative vertical farms where vegetables are produced in a protected environment in a continuous cycle. These activities, even if located in urban areas, such as example in industrial areas to be regenerated, will, in any case, be recognized as agricultural. The goal is to encourage innovative urban settlements to increase environmental sustainability, urban regeneration, energy-saving, resilience to climate change, and increase the supply rate of food produced in the area, reducing logistical movements. The law also recognizes multifunctional green infrastructures, that is, urban forestry interventions aimed at the implementation of a sustainable ecosystem through the interconnection between green and built and the strengthening of local ecological connections.

Sustainable agriculture

LESS POLLUTING AGRICULTURAL ENTERPRISES. The provision of aeromechanical services can play a significant role in reducing the environmental impact associated with mechanization, thanks to the use of more innovative, performing, and consequently less polluting equipment than those usually used by the aeromechanical company. With a specific regional action aimed at reducing the emissions produced by aeromechanical activities, launched in January 2022, the Lombardy Region has allocated 5 million euros to support micro and small aeromechanical companies for the purchase of new machines, equipment, software, and plant wastewater treatment to reduce emissions. This measure not only supports the competitiveness of the agricultural sector, allowing the purchase of new machinery, but also promotes the protection of the environment, allowing the reduction of emissions into the atmosphere.



3.2. The Metropolitan Agenda of the Metropolitan City of Milan

Introduction

Metropolitan City of Milan has chosen, along with the process of participation, exchange and partnership underway with the superordinate institutions, and in compliance with the vision of the GOAL 17.14 - *Increase political coherence for the sustainable development across local institutions* - to participate together with the Lombardy Region in the coordinated drafting of the Voluntary Local Review document.

The Metropolitan City of Milan intends to show itself to civil society at the direction of the just, equitable and ecological transition that must involve multiple realities in the construction of a new paradigm in the development system. Although the scenarios have drastically changed recently, this first public document intends to strengthen the enacted actions, to give visibility at an international level to the path towards change, so that the environmental, social, and economic issues of the territory keep up with the evolving historical and political scenario. The Metropolitan Urban Agenda for Sustainable Development, which will be published at the end of the ongoing process, will therefore be an instrument at the service of all, coordinated with the National Strategy and the Lombardy Region, and which will guide the territory in planning growth and well-being and will recalibrate goals where necessary.

The Metropolitan City of Milan (CMM)

The Metropolitan City of Milan is a public body formally operational since 01/01/2015 according to the National Law 56/2014. In 2015 it replaced the former Province of Milan, founded in 1860. CMM includes 133 Municipalities, including the Municipality of Milan.

Its territory is divided into 7 Homogeneous Zones. Its main tasks and functions are territorial and strategic planning, including infrastructures and the ICT network, mobility and traffic, protection of the territory and the environment, and economic and social development of the metropolitan area.

Territorial, social, and economic framework of the territory

With over 3 million inhabitants residing in 133 municipalities, of which approximately 1,330,000 live in the provincial municipality, Città Metropolitana represents the second largest metropolitan area in Italy. The population density on a metropolitan basis is in fact equal to about 2,053 inhabitants per square kilometer. A first overall reading of the state of urbanization of the metropolitan territory shows that 39% of the provincial territory is urbanized and that as much as 55% is affected by regional or local parks, with a limited amount of free residual land, which includes urban expansion forecasts. The amount of artificialized soil varies significantly, from the lower end of the Parco Sud (the rural area on the South of Milan), at 10-15%, and the high end of the North-Milanese hinterland, with 80%.

The latter shows a high presence of industrial and traffic activities, with high concentrations of PM₁₀, NO_x, and VOC, especially for the central core and the main northward routes. On the other hand, the Southern municipalities of Milan have an intermediate population density with a high presence of agricultural and livestock activities, which determines a high concentration of

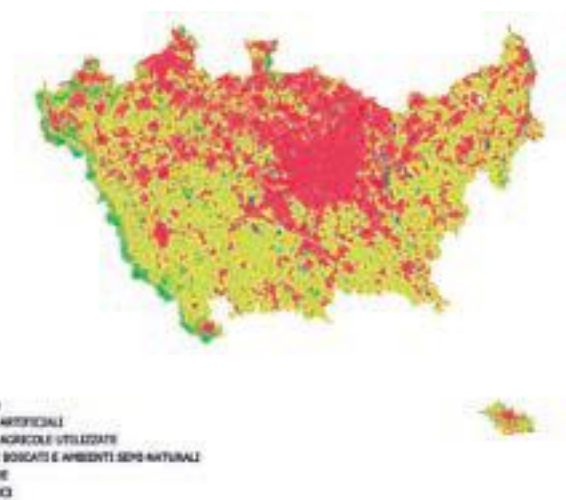
NH₃ in the area. However, the concentrations of PM₁₀ with a higher secondary component are registered to be high, in addition to less relevant emission density of PM₁₀ and NO_x. As regards the social component, the analysis of the population structure by age group reveals a demographic ageing tendency: in the metropolitan city the share of elderly people (over 65) is equal to 22.5% (mainly represented by women).

The urban agenda project of the Metropolitan City of Milan

Metropolitan city of Milan on 4 December 2019 signed a collaboration agreement with the Ministry of the Environment and Land and Sea Protection (MATTM), now the Ministry of Ecological Transition, aimed at defining, by the end of 2022, the urban metropolitan agenda for sustainable development. The path that led to defining the strategies for the Milanese metropolitan area took place through three main moments:

- Action A - Construction of governance
- Action B - Involvement of civil society
- Action C - Definition of the metropolitan agenda for sustainable development and integration with the metropolitan strategic plan

In the realization of the project, the Metropolitan City of Milan collaborated with the GREEN Research Center of Bocconi University, the Polytechnic University of Milan - Department of Architecture and Urban Studies - DASTU, the Italian Alliance for Sustainable Development (ASviS), as well as with Colouree and IS Media.



Land use (2019)

Action A. Construction of the Governance

Metropolitan city of Milan has worked to involve the main internal and external actors in the preparatory works for the definition of the guidelines of the metropolitan agenda for sustainable development. On the one hand, it has internally created the top structure of the Steering Committee, which coincides with the Management Committee of the Institution, supported by the Environment Department which coordinates the committee, the project activities, and the internal working group composed of 35 participants from 6 Directorates of the Institution. The inter-sectoral working group participated in training sessions on sustainable development issues and in frequent refresher meetings, which encouraged new collaborations between colleagues and allowed the mapping of good practices already in place in the institution. Regarding the external actors, the Metropolitan City of Milan subscribed to the Protocol for sustainable development in Lombardy on 18 September 2019 and actively participates in the Sustainable Development Forum of the Lombardy Region, engaging in the events dedicated to the Regional Sustainable Development Strategy and coordinating with the superordinate body for the exchange of good practices and for the definition of the monitoring indicators. Furthermore, CMM has invested heavily in the training of local administrators and municipal technicians by organizing training sessions about sustainable development and seminars to present decision support tools developed by the Metropolitan City of Milan. In particular, between October and November 2021, CMM technicians participated as teachers in the laboratory on sustainable development of ANCI Lombardia dedicated to Municipalities. Finally, an interinstitutional working group has been set up with the metropolitan cities of Venice, Genoa and Turin, which aims to set up a system for exchanging good administrative and technical practices, as well as

to work on strategic planning. The Datalab tool was developed in synergy with the Metropolitan City of Genoa.

Action B. Involvement of civil society

The process of involving stakeholders and engaging with strategic actors for the Milan area and civil society was fundamental to inform, train and initiate a process of sharing a common language on sustainable development. It was also very important to define the strategic priorities with the local actors. To support this process, three specific tools have been developed to implement awareness-raising, training, and engagement activities for local actors.

• Portal of the Agenda

https://www.cittametropolitana.mi.it/Agenda_metropolitana_sviluppo_sostenibile/

To give visibility to the commitment of the Metropolitan City of Milan in the field of sustainable development and in defining the objectives of the 2030 Agenda, a dedicated portal has been created to share information on the path taken, on the tools developed and on the contents produced, as well as on the proceedings of the training seminars and informative events organized. An important event was organized on March 22, 2022 - with over 100 participants - to begin the process of disseminating the contents of the studies and to discuss with the local actors in the initial presentation of the strategies identified by CMM as priorities to accelerate the sustainable transition.

Institutional events	3 events	554 participants
Training seminars on the themes of the 2030 Agenda	4 events	267 participants
Meetings within the CMM working group	5 meetings	
Support in the context of the MiTE project CReIAMO PA - L2WP1	16 meetings	

• NETlab

<https://netlab.evidence-hub.net/>

In the context of **Goal 17** the Metropolitan City has developed, in collaboration with the Politecnico di Milano - DASTU (Architecture and Urban Studies Department), a platform animated by local, regional and national stakeholders, aimed at creating a reference community to discuss, promote and implement the objectives of sustainable development in the context of the Milanese metropolitan city. The purpose of the platform is to start a discussion on the lines of action, the most relevant and urgent challenges in the area, as well as to map projects already completed or in progress, to identify sustainable development challenges, and to connect potential stakeholders.

Launch events	n. 2	NETLAB presentation event	29 participants
Virtual Mapathon	n. 3	Workshop 1 - Mobility: sustainable infrastructures and practices	18 participants
		Workshop 2 - Supralocal welfare and sustainable production	10 participants
		Workshop 3 - Adaptation to climate change and urban ecosystem	19 participants

17 subjects registered on the NETLAB platform and 22 strategic projects were already active in the area. Furthermore, thanks to the Mapathon events, 12 challenges and 12 project proposals were launched.

• School of Sustainability (S.O.S.)

https://www.cittametropolitana.mi.it/Agenda_metropolitana_sviluppo_sostenibile/SCHOOL-OF-SUSTAINABILITY/index.html

In the context of **Goal 4**, lifelong learning and training on sustainability, the Metropolitan City has developed in collaboration with the Politecnico di Milano - DASTU Department, the **School of Sustainability (SOS)**, a training course aimed at citizens, businesses, associations and institutional actors, with particular attention to municipalities and local administrators. The School of Sustainability enhances the excellence and training experiences currently offered in the Milanese metropolitan area and provides support to all those interested in deepening their knowledge and acquiring new skills on the issues of Sustainable Development.

TRAINING OFFER	University courses of the Milanese universities	n. 61
	Third parties	n. 2
	Professional associations	n. 3
CHALLENGES AND PROJECTS	Challenges	n. 10
	Projects to be replicated	n. 10

Action C - definition of the metropolitan agenda for sustainable development and integration with the metropolitan strategic plan

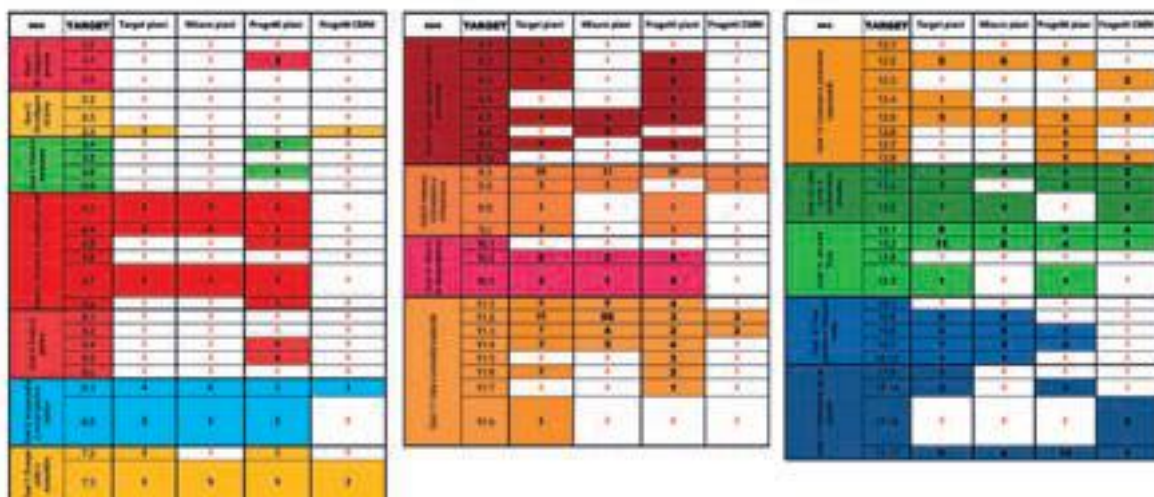
To identify the metropolitan strategies, in collaboration with the Bocconi University of Milan, it was necessary to carry out a preliminary analysis and understanding of two aspects:

- the competences of the Authority with respect to the objectives of the 2030 Agenda, as well as how these are reflected in the programming, planning and actions tools

Based on current legislation, especially on the reform of local authorities introduced with law no. 56 of 2014 and on the Statute of the CMM, 74 targets of the 2030 Agenda of metropolitan competence have been identified, of which 72 (and 16 SDGs) are relevant for the CMM.

Secondly, both the strategic and sectoral plans were analyzed, and in particular: the Three-year Strategic Plan of the Metropolitan Territory (PSTTM) 2019-2021, the Single Programming Document (DUP), the Metropolitan Territorial Plan (PTM), the Urban Sustainable Mobility Plan (SUMP), Quarry Plan, ongoing projects and good practices not included in the plans.

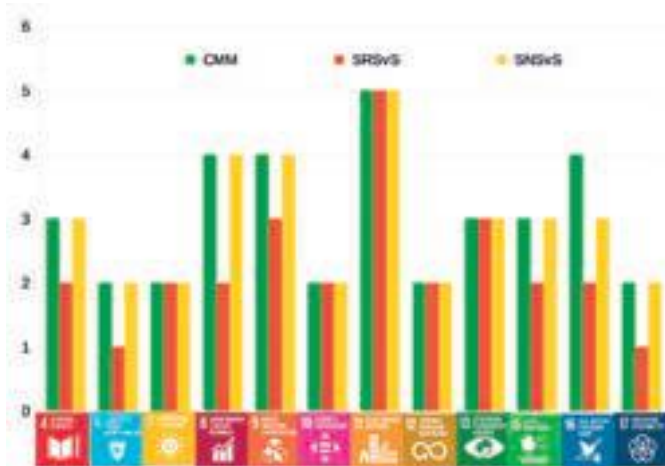
From the analysis and systematization of the actions defined in the plans and projects, it emerged that, overall, the CMM contributes to 16 SDGs and 57 targets out of a total of 72 relevant to the Entity.



CMM targets, measures, and projects that contribute to the achievement of the SDGs and targets of the 2030 Agenda.

- the coherence in terms of sustainable development objectives between the strategic and sectoral plans of CMM with the national and regional strategies

An analysis was carried out of the strategies for sustainable development of higher levels of governance, such as the National Strategy for Sustainable Development (SNSvS) and the Regional Strategy for Sustainable Development (SRSvS). Of the 36 targets of the 2030 Agenda (out of 72 of metropolitan competence) to which the CMM contributes with targets, measures, and projects, 33 are also included in the SNSvS and 27 in the SRSvS. Finally, an analysis of the National Recovery and Resilience Plan (PNRR) was conducted with the aim of defining how the Plan and the planned investments contribute to the definition of CMM's Urban Agenda for Sustainable Development.



SDGs and metropolitan competence targets are included in the SNSvS, in the SRSvS and in the CMM plans (does not include the projects, the measures and the CMM plans).

As a result of the analysis of current Metropolitan programs and of supraordinate governance levels strategies, it was possible to identify the SDGs deemed the most relevant by the CMM, hence those to be included in the CMM Agenda. The strategic priorities that emerged are: • sustainable management of water resources - **SDG 6** • energy transition - **SDG 7** • development of resilient infrastructures - **SDG 9** • housing policies and sustainable mobility - **SDG 11** • sustainable consumption and production and the circular economy - **SDG 12** • adaptation and mitigation to climate change - **SDG 13** • reducing land consumption - **SDG 15** • digitalization and innovation of the public sector - **SDG 16**

CMM has also already activated two pilot actions related to urban regeneration SDG 11 and to the circular economy SDG12, which have been studied in order to implement the sustainable development goals.

Positioning and monitoring

<https://sdgcittametropolitana.mi.it/>

Another important tool called **Datalab** was developed to support CMM and public administrators in the analysis and monitoring of data which, through elementary and composite statistical indicators, allow to measure and analyze the positioning of the Metropolitan City of Milan and its homogeneous areas with respect to the 17 Sustainable Development Goals of the 2030 Agenda. The platform, created together with ASviS and the start-up Colouree, makes the trends of the territory graphically visible and easily legible with respect to the targets of the UN 2030 Agenda. The ambition is to bring down the data more and more at a territorial level with ad hoc data and indicators. The objective is dual: on the one hand, **to make the data and indicators related to sustainable development accessible to the public**, on other hand **to support the Administration and professionals in the creation of reports as well as in planning and monitoring, so that policies can be adjusted when they are not effective.**

Conclusions

The results of the analyzes and the contents mapped thanks to the described tools, will be fundamental for defining the strategic priorities of the Authority, which will see, **by the end of 2022, the publication of the first version of the Metropolitan Urban Agenda for the Sustainable Development**. The document will provide the metropolitan bodies with a trace of the reflection process for the elaboration of the new strategic documents of the Authority.

The goals of the 2030 Agenda are **already embedded in the main current CMM Plans**, from the **Three-Year Strategic Plan of the Metropolitan Territory (PSTTM) 2019-2021** to the **Urban Sustainable Mobility Plan (PUMS)** together with the recent **CAMBIO, the BICIPLAN of the Metropolitan City of Milan**. Furthermore, many actions are already active in the CMM Offices such as the memorandum for the implementation of **Green Public Procurement** in Metropolitan Cities; the **DeciWatt System**, a one-stop-shop service to accompany the Municipalities in the complex process of energy requalification of buildings; **Resilient Territories**, the one-stop shop of the Metropolitan City of Milan for the resilient transition of the territories; the multiple **forestry activities**; + **COMMUNITY** as a lifelong learning tool, permanent and free, extended to the entire metropolitan area; **Virtuous Territories** for the energy and management requalification of 143 buildings belonging to the Metropolitan City of Milan.

In conclusion, the path followed so far has made it possible to set up an innovative multilevel governance for the implementation of internal actions, which will strengthen not only the coordination and cooperation between the national government, the Lombardy Region, metropolitan cities and municipalities, but will allow to achieve shared objectives and **to implement strategies and policies at the metropolitan level more effectively, reducing any contradictions between the different levels of governance**.

3.3. Lombardy Region and the Urban Strategies for sustainable development

Lombardy Region has promoted the Urban Strategies for Sustainable Development (U.S.S.D.) of urban contexts characterized by **fragile conditions** to increase the social inclusion of the most fragile populations (by age, gender and material and immaterial vulnerability), reduce material and immaterial inequalities and place local communities at the center.

The Region first approved (DGR 4151 of 30/12/2020) the guidelines for the selection of Lombard municipalities in which to implement the strategies, limited to the capital and larger municipalities, where fragilities are often concentrated, and subsequently (decree 295 of 18/01/2021) it published the expression of interest for the selection of strategies to be promoted through the European structural funds for the period 2021-2027 and a competition of regional resources.

A total of 14 municipalities have been selected, which will equip themselves with their own Strategy and will implement interventions to achieve it by 2027.

The selected Integrated Sustainable Urban Development Strategies pursue three strategic objectives:

- Sustainable **urban regeneration** in the physical and immaterial dimensions of some areas characterized by social fragility, concentration of poverty and inequality, degradation or inadequacy of public space and public housing stock, insufficient or low value-added neighborhood economy and commercial services.
- The reduction of **inequalities** and material and immaterial poverty, but also of the increasing fragility of the most vulnerable sections of the population.
- Strengthening **social inclusion**.

The objectives are achieved by leveraging, individually or simultaneously, the dimension of housing, economic development, school and the quality of social and health services through the coordinated implementation of material and intangible operations, the latter to be financed under the ESF + - European Social Fund.



3.4. The commitments and actions of the Lombard Protocol for sustainable development

Lombardy's Protocol for sustainable development concretely implements the challenge posed by the Regional Development Program (PRS) (2018-2023) which has indicated sustainability among the 5 priorities of the regional governance, as a *"Distinctive element of administrative action and as an opportunity to improve the quality of life of the Lombards, reconciling the needs for productive growth and involving all the players in the area: from businesses to citizens, from schools to public administrations"*.

The PRS proposes, in fact, to sign *"a Lombard Protocol among all the public and private actors that are committed to the environment, territory, transport system and the Lombard infrastructures"*, so that it can draw the first lines of work.

Development must respect the environment and must heal those critical situations that still exists today. We must consider all aspects as a whole: the social, economic and environmental ones for a sustainable development of society. "
(A. Fontana, President of the Lombardy Region).

the Lombardy Region and the Lombard system as a whole contribute concretely with the adoption of the Protocol, combining the three dimensions of sustainability (economic-social-environmental).

"Development is essential, but it must be pursued in respect of the environment."
(R.Cattaneo, Councilor for the Environment and Climate)

The Protocol of the Lombardy Region aims to promote the application of the principle of Sustainable Development in public and private decision-making, during the transition towards an economy and lifestyles that are more sustainable and compatible with an efficient management

of the planet’s non-renewable resources. The ambition is to make Lombardy the “sustainable locomotive” of the country and a cornerstone of sustainability on the international scene.

The Protocol promotes actions in the following fields:

the transition to a low-carbon circular economy, the improvement of air quality through integrated measures, the improvement of the quality of the transport system, the development of regional green infrastructures and initiatives for nature and biodiversity, integration of urban/territorial policies with water quality and risk defense policies hydrogeological, the containment of land consumption and promotion of territorial and urban regeneration, the promotion of Green Public Procurement, the transition to a fully sustainable agricultural sector and the promotion of rural areas, the strengthening of inclusion and social cohesion, such as strong commitment to tackling all forms of inequality.

The Protocol is also opened to gather further areas of commitment and extended collaboration.

The Protocol introduces several **tools**:

the Regional Strategy for Sustainable Development, the Development of long-term scenarios, the technological innovation and research in the various areas of sustainability, information, communication, environmental education, and involvement of the school system, the Lombard Forum for Sustainable Development and sharing of best practices, monitoring for sustainability.

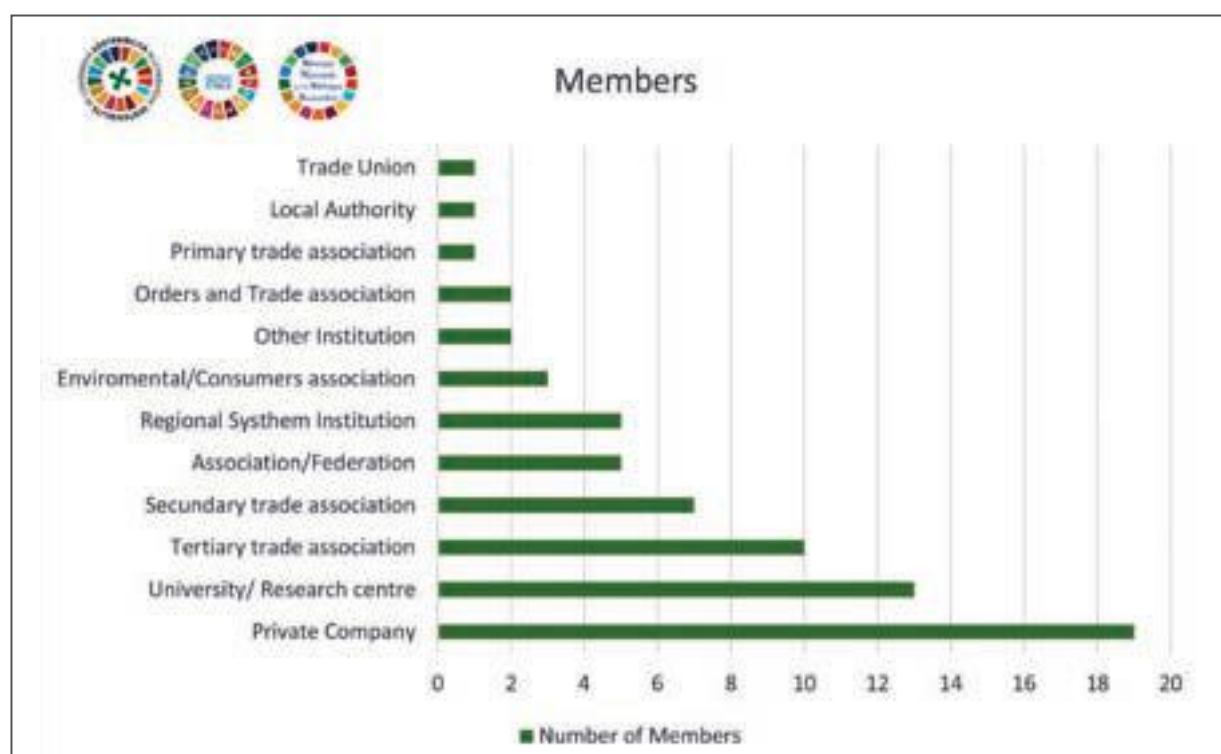
The members

The protocol is open to the subscription of all the subjects interested in giving an impulse towards sustainability in Lombardy.

Lombardy Region intends to cooperate with companies and associations, with economic and trade union representatives, with local authorities and with the world of universities and research, by investing in different measures and initiatives.

The members of the Protocol commit to:

- applying the principle of Sustainable Development within their sphere of activity, in the economic, social and environmental dimensions.
- contributing to the definition of the regional strategy.



- establishing its own program of commitments, to be implemented with its own resources, defining times and methods.
- participating in the annual Forum, informing about the progress in the implementation of their program.

The Protocol was signed on 18 September 2019, by the President of the Lombardy Region, Attilio Fontana and by the Councilor for the Environment and Climate, Raffaele Cattaneo, with the first 54 members, including associations, social partners, universities, and representatives of institutions locals.

These first 54 members of the Protocol are above all "associative representatives", who, in turn, have sensitized further members operating in Lombardy and have proposed commitments and initiatives consistent with the aims of the Protocol itself.

As of April 2022, the members are 94, belonging to different categories (see graph).

The actions of the Protocol

Each member has identified its own program of commitments to be implemented through concrete actions with an impact on the Lombard territory, described on the regional platform www.svilupposostenibile.regione.lombardia.it, in the "Protocol" section.

As of the end of March 2022, 283 actions were launched by 69 entities, relating to different types:

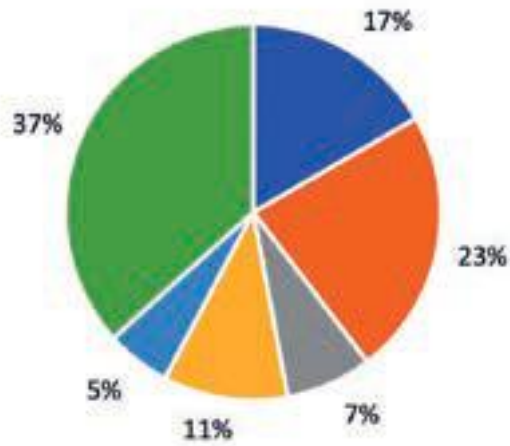
- training, education and awareness raising activities,
- activation of support or incentive tools, such as calls for tenders or other
- construction of structures or infrastructures intended to minimize environmental impacts
- management measures
- planning or programming activities

For each action, one or more specific areas of intervention have been identified: most of the actions operate within the Environment and energy (37%), Training and work (23%) and Low carbon economy (17%).





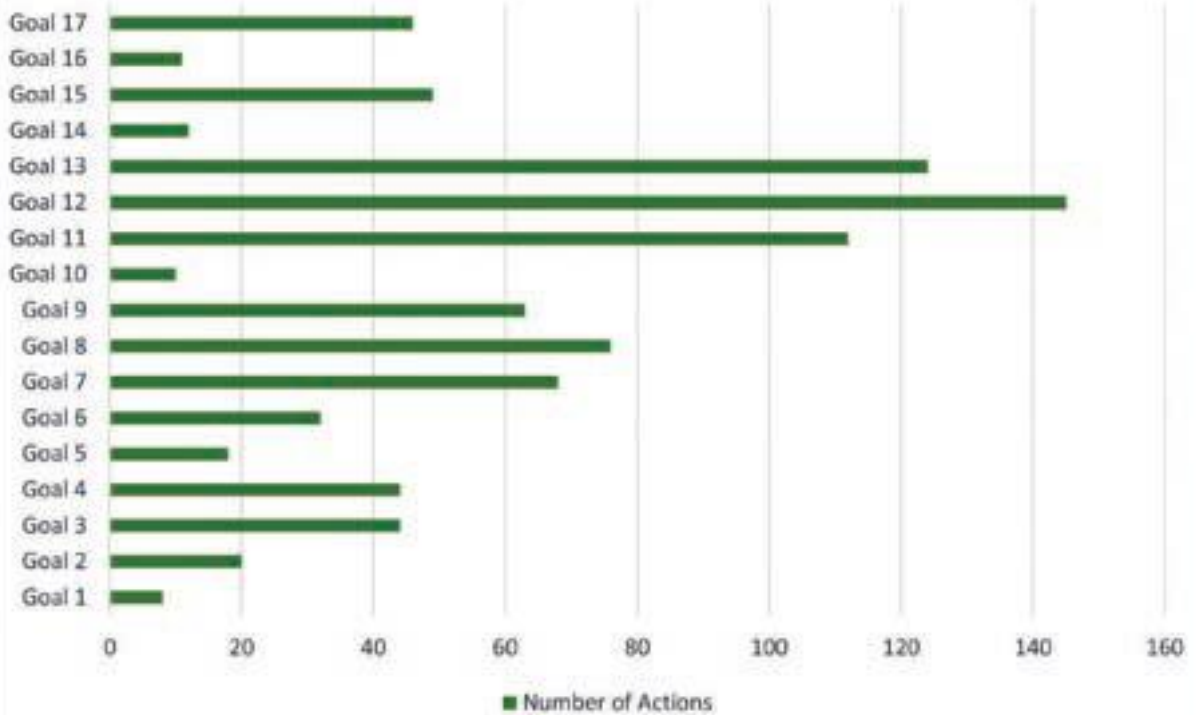
Actions field



- Low carbon economy
- Training and Work
- Health
- Mobility
- Culture and Tourism
- Energy and Enviroment



SDGs Categorization





The actions are directly related to the SDGs, the 5Ps of the National Strategy for Sustainable Development and the Strategic Macro-Areas (MAS) of the Regional Strategy for Sustainable Development.

MAS1: Health, equality, inclusion

MAS2: Education, training, work

MAS3: Development and innovation, city, territory and infrastructure

MAS4: Climate change mitigation, energy, production and consumption

MAS5: Environment, landscape, adaptation to climate change, agriculture

Members' actions

Here below, a list of the most significant actions carried out by the subscribers of the protocol.



MONTELLO S.P.A. It's a private company that operates: (i) in the recovery and recycling of 765,000 tons / year of organic waste (FORSU) from separate collection (r.d.) and (ii) in the selection, recovery, and recycling of 350,000 tons / year of waste from plastic packaging from r.d.

The proposed action consists in the recovery and recycling of the biogas generated by the anaerobic digestion of organic waste from waste sorting to Biomethane, which is put into the network and returned to the territory for its use as an advanced biofuel for transport, with simultaneous recovery of carbon dioxide. intended for industrial / food use. From the aerobic treatment of the digestate, downstream of the anaerobic process, a high-quality organic fertilizer is also produced.



ROELMI HPC is a company specialized in the research, development, and production of ingredients for the Health and Beauty market. The company goal is to improve the quality of life, combining science and environmental preservation.

ROELMI HPC offers its network of local partners and customers (for a total of about 900 units worldwide) the ethical alternative in the field of cosmetic ingredients developed through circular economy processes, with the goal of achieving the most efficient results in final formulas, offering a responsible choice thanks to sustainable innovation. Each action in terms of developing sustainable ingredients is shared through specific documentation which, in detail, sets out the characteristics, benefits and applications of use. The digital channels are used as an immediate showcase in communication and, during the participation in sector fairs at national and international level, a timely communication of the results obtained is adopted in terms of development of new ingredients, and certification of effectiveness/performance aimed at increasing the added value for customers. The publication of technical-scientific articles in sector magazines, on the other hand, enters communication on classic channels to complete the dissemination of news.

Through its offer of cosmetic ingredients, ROELMI HPC intends to pursue the improvement of its footprint on the planet with innovations capable of acting positively on the ecosystem, understood as the union of several communities, which work in unison to improve the environment and human life.



FONDAZIONE CARIPLO is a foundation from banking origin committed to supporting, promoting, and innovating projects of social utility linked to art and culture, environment, social issues, and scientific research. The calls and projects of the Cariplo Foundation in the environmental area, involve the main actors of the territory, in particular public administrations, the third

sector and schools. They are encouraged to operate on the network, thus involving the local community. For initiatives in the field of sustainable agriculture, environmental education, the fight against climate change and protection of natural resources, the budget invested in 2021 was approximately 10 million Euro. The F2C – Fondazione Cariplo for climate project has been active since 2019 with the following objectives: The F2C – Fondazione Cariplo for climate project

has been active since 2019 with the following objectives: promoting mitigation and adaptation to climate change and increasing the knowledge and awareness of citizens, technicians, and policy makers about climate change.

These objectives are mainly pursued through the Climate Strategy call, aimed at supporting large territorial areas in the definition of a Climate Transition Strategy (STC) and in the implementation of some of the actions envisaged therein, including interventions for the reduction of climate change emissions, "mitigation of the impacts of extreme weather phenomena and an increase in natural capital. Thanks to two editions of the call for proposals, six initiatives have been supported and are currently underway.



REGIONAL AGENCY FOR THE PROTECTION OF THE ENVIRONMENT LOMBARDY

The main actions adopted in line with the principles of Sustainable Development include:

1. Set up of a specific Organizational Unit for Sustainable Development has been set up.
2. Promotion of smart working beyond the emergency phase, with the support of Bocconi University, to define the best organizational methods.
3. Establishment of the Network of Representatives for Sustainable Development which has proposed three further commitments for the Protocol (2021). The Network is developing actions on sustainable mobility (focus "Niguarda"), and has contributed to the drafting of the Home-Work Travel Plan (2021); an internal asynchronous distance learning course is being released for training on Sustainable Development issues; thanks to the Network, the "bicycle day" 2021 was promoted and implemented. The Network of Referents made it possible to systematize specific skills both at the territorial level (Departments) and at the central level (Thematic Sectors) to highlight the strong transversal nature of the theme of Sustainable Development that can only be tackled with a "multisolving" approach, that is, one that maximizes the effects of a single action on several themes.
4. To reduce the use of plastic, 800 water bottles with the ARPA logo were purchased to facilitate the supply of non-bottled water, and a water dispenser was installed in the Brescia office; a further 300 water bottles and another dispenser for the Varese office are in the process of being acquired; created the manifesto of the initiative: "We protect the environment. Always."
5. Participation in the Green School project; organization of a side-event of Forum for Sustainable Development 2020 and of an event in the Sustainability Education Fair (2021) in collaboration with FLA.
6. Regular participation in the coordination cabinet for sustainable development of Lombardy Region and in the Circular Economy and Ecological Transition Observatory.
7. Seminar dedicated to climate change for administrators and municipal technicians within the School for the Environment (06/2022).



ENI, an integrated company in the energy sector, is committed to the environmental sustainability of its products and has an interest in providing circular, innovative, and diversified solutions. As part of the training activities proposed for the Lombardy region, from January 2020 until March 2022, a total of 44 teaching hours were provided within the Medea, HSEQ,

Postmaster, Master Energy Innovation masters. The lessons addressed the principles of circular economy, the energy transition path at an international and European level and sustainable mobility initiatives in the context of the new corporate strategy.

The training activity in the school sector carried out with the Municipality of San Donato Milanese which sees the implementation of educational projects on the circular economy is of

particular importance. Within the initiative, there is an action to raise awareness on the correct management of waste.



FONDAZIONE SODALITAS is the reference partner for companies that consider sustainability a distinctive factor. It brings together 93 leading companies in the main sectors, representing an economic value equal to 20% of Italian PIL. It builds partnerships with associated companies for community growth.



Main projects:

- YOUNG PEOPLE AND WORK: 2,000 male and female students trained each year in employability skills in Italian schools.
- DIVERSITY: 800 companies and organizations adhering to the Charter for Equal Opportunities and Equality at Work.
- COMMUNITY: 200 organizations formed each year by companies to skills for social entrepreneurship.
- 20 corporate volunteering programs carried out every year.
- TERRITORY: 322 Italian municipalities participating in the CRESCO Award created with ANCI to promote the sustainable development of the territories.
- 126 companies participating in the first research on the commitment of companies to urban regeneration of the suburbs.

CAMPAIGNS FOR UNITED NATION AGENDA 2030:

- 150 business actions for a sustainable future participating in the Sodalitas Call for Future campaign.
- 33 business leaders and over 400 SMEs involved in ESG LAB, the laboratory developed with SDA Bocconi.
- 140 participants in 7 meetings of the Sodalitas Value Academy, the managerial training course on Sustainability.

In particular, the CRESCO AWARD Sustainable Cities, promoted by the Sodalitas Foundation with the patronage and collaboration of ANCI and the partnership of advanced companies on the Sustainability front, aims to enhance the innovative drive of Italian Municipalities and to reward the most effective initiatives in promoting the sustainable development of the territories.



UNIONCAMERE LOMBARDIA is the regional associative structure that brings together and represents the 9 Lombard Chambers of Commerce at a regional level, spreads experiences and promotes common projects, enhancing the autonomy of the individual Chambers.

ACTIONS IN ORDER TO PROMOTE CIRCULAR ECONOMY:

All the activities foreseen in the design phase were carried out with a final investment of € 143,000:

1. data analysis of waste production in Lombardy from MUD and Business Register sources, on a regional and provincial basis, to identify the sector of companies most involved and possible solutions to optimize the reuse of secondary raw materials within the production chains;
2. creation of 3 territorial focus groups, involving trade associations, public bodies, research bodies and universities to identify the environmental issues of greatest interest for the Lombardy Region;
3. realization of 19 webinars on Waste Management and Environmental Compliance and Circular Economy;
4. Specialized support: personalized technical support for the improvement of the project idea aimed at companies in the context of the tender "Innovation of the Circular Economy chains

- in Lombardy”; telematic helpdesk for questions on the administrative management of waste;
 n. 2 training cycles for professionals in the various areas of waste management;
 5. communication made through institutional sites, the Ecocamere portal, social communication, newsletters, and press releases.



ENERGETIC RESEARCH CENTER. Through the research activity of RSE and its support to initiatives that share a focus on energy efficiency and innovation towards increasingly performing systems and compatible with the decarbonisation objectives, the actions presented are having on citizens, on the territory, as well as in

the industrial world, in companies and institutions, economic, social, and environmental benefits of great significance. A meaning consistent with the Sustainable Development Strategy promoted by the Lombardy Region. In fact, the spectrum of action of the initiatives presented by RSE and focused on sustainability is broad. The following are reported here: the development and dissemination of sustainable mobility, in its various forms and meanings, and of an experimental area at the RSE headquarters in Milan; experiences of energy communities; analyses on the correlation between energy poverty and health; the evaluation of the cost-effectiveness and impact of the infrastructure policies and measures that can be implemented to improve the efficiency of buildings (positive energy districts). The conversion of company fleets into electricity and the construction of an experimental area at its headquarters in Milan for the recharging of its electric vehicles, which integrates charging systems from different manufacturers, and which can be managed through a centralized system that optimizes its operation, allows RSE to analyse the main opportunities and criticalities, as well as to develop and test innovative infrastructure management solutions in the field.



CISL LOMBARDY represents workers and retirees with the aim of defending their interests and raising their economic and social conditions in a logic of solidarity and is divided into 8 territorial trade unions and 19 trade union federations. The management of the social / occupational risks connected to the transition processes imply an updating of the contractual skills of the trade unionists. On 20-21 February 2020, a Visit Study was organized at the EU Commission in Brussels to deepen the programming tools for the implementation of the European Sustainable Development Strategy, which involved 25 trade unionists. (Project funded by the EU Commission Representation in Milan).

From July to October 2020, in collaboration with ASVIS, a path of 8 meetings was carried out, attended by 25 union leaders of regional federations (of each product sector) and of the territorial trade unions of the Lombard provinces on the objectives of the UN Agenda 2030. (3200 euros the cost of the investment).

Since 2018 we have participated in the national festival organized by ASVIS, offering an annual seminar with which the themes of the trade union agenda in relation to the promotion of the SDGs are explored.

In collaboration with European trade union organizations in Italy, Spain, Bulgaria, and Romania, and with the support of the European trade union, the CAE project, the European pillar of social dialogue, was implemented from 2019 to 2021. The 48 hours of training (+ 8000 indirect users of the website www.lescee.eu) had the objective of strengthening transnational bargaining on the issue of environmental sustainability. The total cost of the action was € 223,750.97.

The CAE project, carried out in partnership with CGIL UIL Lombardia, UGT and CCOO of Catalonia,

Podkrepa (BG), CSDR (RO) and the CES, involved delegates, workers of multinational companies and citizens, who met and exchanged experiences to increase knowledge about EWC tools. A final guide was prepared (200 printed copies), the creation of a website for the dissemination of the results (www.lescee.eu), 60 documents produced, with over 1000 downloads.



EFAR EUROPEAN FEDERATION FOR AGRICULTURAL RECYCLING, Association that brings together the major European operators in the agricultural recovery of organic biomass.

Actions implemented:

Use of 4.0 agriculture equipment for the agricultural use of biomass from waste in agriculture

- Recipients: EFAR and Farmers; Investment: € 70,000
- Communication: Press releases, demonstrations in the field
- Employ tractors and distributor wagons equipped with automations that apply robotics concepts and other technologies useful for the proposed objectives.

Scientific studies for the evaluation of the impacts generated by the recovery of biomass from waste in agriculture

- Recipients: EFAR, Bodies, Scientific world, Farmers, Public; Investment: € 300,000.
- Communication: Conferences and transmission of documents
- Completed all studies.

Evaluation of the environmental impact and potential eco-toxicity of "fertilizer matrices" and soils treated with such matrices

- Recipients: EFAR, Bodies, Scientific world, Farmers, Public; Investment: € 110,000
- Communication: Report, Conference
- The experimentation involved the eco-toxicological characterization not only of different fertilizer matrices such as Urea, Compost, Zootechnical digestate, Pork Waste, Sludge digestate, R10 Mud and Sludge defecation gypsum, but also of soil samples treated with the same. A scientific report collects the results of the tests carried out on the different matrices and on the treated soils, before distribution, after 15 days and 1 month after its execution.

Development of a technology for the use of CO₂ starting from sludge and digestates to obtain a corrective for soils

- Recipients: EFAR, Farmers, Authorities; Investment: € 2,000,000
- Product the corrective proposed at an industrial level, even if the technology is awaiting further regulatory clarifications.

Integrated digital platform for the enhancement of biosolids and corrective agents

- Recipients: EFAR, Farmers, Authorities, Scientific world, Public; Investment: € 500,000
- Communication: Presentations to Bodies, Demonstrations in the field, Conferences
- The first integrated digital platform for the traceability of the agricultural recovery chain was created and made operational. The tool will also be accessible to control institution.



INTEGRATED IENERGY COMPANY involved in the energy transition with concrete actions to achieve total decarbonisation of products and processes by 2050. In mid-July 2019 the Oilà project landed at the Eni site (refinery) in Sannazzaro de 'Burgondi, for the recovery of used cooking oils and of frying (so-called UCO, Used Cooking Oil) produced by employees in their homes. Yellow containers have been allocated inside the refinery, in which Eni employees will deliver the used cooking oils. Thanks to the agreement signed by Eni with CLIR, a public company that also carries out the activities relating to the management of the municipal solid waste cycle for the Municipality of Sannazzaro, the latter will deal

with the periodic emptying of the containers, through an operator adhering to the CONOE (National consortium for the collection and treatment of used vegetable and animal oils and fats) with which Eni has signed a collaboration agreement.

1200 people have been involved since July 2019 for a collection of about 1000L of used oil to be sent for recovery. The intent of the project is to give value to a waste, transforming it from a material that is potentially harmful to the environment into a new energy resource, applying the principles of the circular economy. Waste edible oils represent a valid raw material for the processing process of Eni's biorefineries, which use proprietary Ecofining™ technology to produce biofuels, with a reduction in the environmental impacts linked to both the biorefinery process and the raw material.



GI GROUP HOLDING is a global ecosystem of HR services and consultancy that supports the development of the job market by creating sustainable economic and social value, promoting a positive work culture, and helping to change people's lives. The project created by the Group

to help make Work Sustainable took the form of a series of initiatives dedicated to people, companies, and institutions.

Academy 100% Employability: we have started a training project - through Academy - which ensures the participants a permanent job. Find out more: <https://academy100.gigroup.it/>.

Women4: We promote the employability of women in sectors considered typically male. We are committed to debunking false myths and stereotypes: there are no jobs for men or women, but only opportunities to be caught Site visits from December 2021 to March 2022: over 22,000. Find out more: <https://women4.gigroup.it/>.

Gi Group Training Hub: professional and managerial training as well as the qualification and re-qualification of people has become a key element for the survival and evolution of every organization and must be pursued and supported with specific processes and tools capable of motivating and facilitating learning continuous not only on a personal level but also on an organizational level. Over 50 companies and interested partners and over 500 candidates have received or are receiving guidance services and "tailor-made" courses. All the initiatives implemented are communicated to the Gi Group Holding stakeholders through e-mails, social media, websites, and ad events *ad hoc*. Find out more: <https://traininghub.gigroup.it/>.



In **ELMEC SOLAR** we work with renewable energy, design, and installation of photovoltaic solar systems. We have chosen to dedicate ourselves to alternative energies because we are convinced that they are a necessary and conscious choice for the future. In 2021 we concretely supported companies in the province of Varese in the

construction of photovoltaic systems serving their production sites. 35 companies decided to cover their energy consumption with renewable sources. Total installed power of 4 MWp (average power 114 KW). Our company has decided to invest heavily in the internal training of its employees, in communication and in the creation of specific skills to achieve a common goal.



CONFCOOPERATIVE OF LOMBARDY is the regional structure of the Confederation of Italian Cooperatives, the main organization of representation, assistance and protection of the cooperative movement and social enterprises. It associates about 2,700 cooperatives. In the first phase, data collection (assessment) and related reprocessing actions were initiated, which made it possible to identify the sustainable "health" of

our offices and to have an eye on the project KPIs. The sustainability actions then contributed to implementing the guidelines identified during the planning stage:

WASTE MANAGEMENT: oriented towards an overall reorganization of the separate collection of offices (with guidelines, information signs, meaning of these actions, reflection on environmental sustainability).

PURCHASING POLICY: particular attention was paid to the choice of materials and their characteristics, including by way of example the type of paper to be purchased, snacks and drinks, the virtuous management of water use, the reduction the use of plastic and its recycling.

GOOD PRACTICES POLICY: training and awareness-raising policies have been implemented on the correct way to proceed with document printing, on energy saving on consumption attentive to contrasting waste in water management in meetings and offices. There were no training moments in the "traditional" sense, also given the pandemic context, but sharing in specific moments of coordination was important to follow up on what was planned. The main actions were monitored approximately every four months.



TOURIST CONSORTIUM OF MIDDLE VALTELLINA is a public body for tourism promotion that carries out actions in the sports, food and wine, trade fair and hotel sectors aimed at safeguarding and developing the territory in all

its aspects. We are achieving the first results with interventions on accommodation facilities, on the eco-mobility holiday proposal and on the distribution of green energy in strategic points of the area for the supply of electric cars, bicycles and means of transport.



INSTM is a consortium of 50 Italian universities in which research on advanced materials and related technologies is carried out. It promotes the research activity of the consortium universities by providing adequate organizational, technical, and financial support.

As regards the two proposed actions, the recipients were the industrial, production and research system and civil society. The

following indicators were chosen to quantify the effectiveness of the activities carried out in the last year aimed at the academic and industrial world: n. of projects managed: 95 (13 European, 9 national, 73 INSTM); n. of publications: 245; n. of scientific events sponsored or supported: 11; n. of prizes for young researchers: 5; n. of industrial orders and contracts: 138; n. of patents filed: 13. The Consortium organized, in January 2022, the conference "Advanced Materials and Green Processes for a Sustainable Society". Among the dissemination initiatives we recall the event "CIG-2020: catalysis at stake", the participation in the "2nd Regional Forum for Sustainable Development" and the Bioeconomy Day. On that occasion, a Digital Talk for research was broadcast and the Italian industrial development in the circular economy sector during which some of our projects were presented. INSTM gives visibility to its activities thanks to the INSTM website, which is registered, as a newspaper, in the Register of Communication Operators, on LinkedIn and with a bimonthly newsletter addressed to about 2000 subscribers. INSTM carried out press office activities in case of events / results (eg GASIFORMING patent). Lastly, work has begun for the preparation of a Sustainability Report for INSTM activities.



UIL MILANO E LOMBARDIA: reduction of consumption and CO₂ emissions through maintenance and installation of LED lighting systems, elimination of single-use plastics, installation of water dispensers connected to the water network for employees, operators and users of services, activation of training courses on sustainable development and sustainability for its employees and operators.

Actions which are intended to be promoted in all the offices in Lombardy by 2025.



FINLOMBARDA S.P.A. is a financial company of the Lombardy Region and a financial intermediary supervised by the Bank of Italy. Its institutional task is to contribute to implementation of Lombardy's economic development programs.

Finlombarda participates in the thematic working groups of the European Association of Public Banks and the National Association of Regional Financials. It supports the Lombardy Region in the selection of local projects in response to the Sustainable Development Goals of the UN Agenda 2030 for the Lombardy 2030 section (Open Innovation): in 2021, 54 initiatives were published, 12 of which on the education goal. It also coordinates the Simpler consortium (EEN - Enterprise Europe Network) which offers free support services to improve the level of maturity in the management of innovation and sustainability of SMEs. Finlombarda has reserved a plafond of 50 million euros to finance companies that adopt sustainable action as part of the "Minibond" initiative under management. It signed an agreement with SACE for the financial support of Lombard companies in strategic areas, including green investments: energy transition, pollution reduction emissions, freight transport efficiency, circular economy.

It promotes the culture of sustainability with publications of studies and insights. In 2021, around 80 sustainability-themed posts were published on the company's digital channels.



COLDIRETTI LOMBARDIA is a trade union organization representing people and companies operating in agriculture. It represents the rural world by enhancing agriculture as an economic, human, social and environmental resource. Coldiretti Lombardia is committed to the regional, political, and administrative authorities in the preparation of proposals oriented towards actions that intend to improve the economic and social conditions of the member companies in compliance with the objectives of the 2030 Agenda. It carried out actions of information and training for companies through the Lombard territorial structures on technologies for the containment of atmospheric emissions in the ordinary activities

of distributing effluents on agricultural surfaces, accompanying companies to new technological approaches, also supported by public funding. The aspects of circular economy also apply to the agronomic use of the maintenance of public and private green areas. In addition, to enhance the enterprises run by young entrepreneurs, an exhibition is promoted in which the enterprises that work and produce in an eco-sustainable way are rewarded in a specific category dedicated to "energy for the future and sustainability". Alongside its activity of a strategic-political-technical nature, Coldiretti has supported actions aimed at the consumer to transfer the technological and entrepreneurial choices adopted. It has done so through the education project for "Campagna Amica" and a publication dedicated to workshops inspired by the 17 objectives of the 2030 agenda by companies offering educational farm services. Information and dissemination of environmental impact improvement actions related to the distribution and burying strategies of livestock manure for proper agronomic management.



NORDCOM is a Digital Company with customized solutions that has been operating for more than 15 years alongside Transport Companies and Public Administration Bodies to win the challenge of digitization. The "Acqua in Borraccia"

project aimed at company employees, launched in December 2019, is aimed at discouraging the consumption and purchase of disposable plastic water bottles. An opportunity for everyone to adopt virtuous, responsible, and sustainable behaviour daily that has led to savings in a year of 26,000 bottles, equal to 242 kg of PET and more than 1.5 tons of CO2. The project was made public to employees with a personal internal communication, together with the distribution of the water bottles with the name and the company logo, to everyone.



The **NATIONAL CONFEDERATION OF CRAFT TRADE** of Small and Medium companies is a trade association. The CNA (National Confederation of Crafts and Small and Medium Enterprises) is an autonomous and democratic association.

Qualification, professional growth, and business development: training to compete. ACCADEMIA DEGLI IMPIANTISTI CNA / TTR Institute Busto Arsizio - VA - In a single laboratory all the best plant technologies available for practical corporate and individual courses.

The CNA project aims to give value to the professionalism of operators to increase their competitiveness on the market and equip them with the tools necessary to address new critical issues and consequently guarantee quality, efficiency, and safety to their customers. The legislative choices related to the environmental emergency, energy saving, and safety and the continuous technological evolution require an ever higher and above all diversified level of skills and professionalism. The progressive use of systems powered by renewable energy sources and the overall rethinking around the building / envelope represent a real technological and cultural revolution. However, the actual construction of the system remains crucial, which - if of quality - returns standards of comfort, eco-compatibility, and efficiency. Considering two years of restrictions due to the pandemic period linked to Covid, 49 courses were held, involving 321 participants employed by plant installation companies for a total of 640 course hours provided.



CONFCOMMERCIO OF LOMBARDY created, through the 10 Lombard territorial associations that compose it, the regional representation of the associations of enterprises of the Lombardy service sector. Already in 2019, Confcommercio Lombardia has started a process for raising awareness and disseminating good practices in the field of environmental sustainability of tertiary companies, called "Obiettivo Sostenibilità". This project integrates with the actions

planned by our Organization in partnership with A2A Energia, which provide for an approach to green issues with a first questionnaire of 20 questions, to be completed independently to assess one's level of sustainability, at the address www.cresciamosostenibili.it . One of the scopes of "Obiettivo Sostenibilità" is the improvement of available energy costs, which can be achieved through the favourable agreement stipulated by Confcommercio Lombardia with A2A. Coherently, Confcommercio created the "Imprendigreen" entrepreneurial initiative, which is divided into a set of actions aimed both at raising awareness, training, and guide companies in the transition from a linear-economy model to a circular one, while seizing all the opportunities that European and national programs and funds will introduce in the coming years to innovate production, distribution and service offer models. The provided self-assessment tool, made up of 20 simple questions, allows entrepreneurs to evaluate the sustainability of their businesses and to obtain useful advice to improve the environmental impact.



LOMBARDY ENERGY CLEANTECH CLUSTER (LE2C) was founded in 2009 to support growth, innovation and regional competitiveness in the Energy and Environment sector. A "place" in which to develop research, innovation and business projects: www.energycluster.it

1. The project VIDA, which ended in September 2021, financed 62 innovative projects of European SMEs; of these, 9 Italian projects were financed, for a total of approximately € 440,000. Project ideas and impacts were disseminated in an event that saw the participation of 60 stakeholders, companies and policymakers from the regions involved.
2. As part of the R-ACES project, 3 IT tools have been developed to facilitate energy cooperation

between energy-intensive industries, which promote the Lombard Ecoregion that reduces CO₂ by at least 10%. In the Bergamo area, a paper mill was put in contact with A2A for the recovery of excess heat and to feed it into the current district heating network. In 2021 the results of the project were disseminated in 7 European conferences, reaching 590 stakeholders from 13 countries.

3. "Emerging and priority micropollutants" Working Group (GdL-MIE) was set up by the LE2C Cluster in 2018, with the support of the Region. In 2020 LE2C publishes the "Emerging Pollutants" Report (over 700 downloads) which contributes to strategies for water protection and is aimed at public administration, integrated water service managers, companies to get to citizenship. The results were presented in 3 international fairs, 3 sector conferences and dozens of dissemination events. Furthermore, the work of the WG-MIE was collected in the "Emerging Pollutants" Report (2020) <https://tinyurl.com/bdezdpfb>. Today the GdL-MIE has started the second phase of the project to address in more detail the problem of the diffusion of micropollutants and microplastics in Lombard waters.



CONFINDUSTRIA OF LOMBARDY is the regional representation of Confindustria which brings together the 9 Lombard territorial associations, 13 thousand companies and about 700 thousand employees. Confindustria Lombardia, together with the local

associations, the Digital Innovation Hub Lombardia (DIH), the Enterprise Europe Network (EEN) has achieved the objectives of the "Confindustria Lombardia for Sustainable Development" program of commitments:

- Collecting over 50 sustainability best practices, with reference to the SDGs, with specific projects, such as: Confindustria Lombardia for sustainable development, EEN, AlplinkBioeco, DIH Experience Blog 4.0, World Manufacturing Forum.
- Proposing, in collaboration with institutional entities, formal agreements, scientific research, in-depth and training meetings in support of the Lombard industrial system, such as: the collaboration agreement with banks; the research "Climate change and business strategies" with the Bank of Italy; seminars on topics related to the environment (*e.g.* on waste management and cycle, on ESG - Sustainability and Finance), training, internationalization, innovation, projects related to PNRR.
- Supporting Lombard companies in the scouting and pre-feasibility analysis with respect to European, national and regional tenders, calls and funding projects through a) awareness actions (*eg* webinars on the LIFE program); b) participation in supply-demand matching platforms; c) assistance in over 200 *ad hoc* assessment paths proposed by the EEN network and the Lombardy DIH, on the subject of innovation, sustainability and digitization.

Despite the difficulty due to the emergency period due to the pandemic, the most relevant and significant action was the communication campaign on YOUTUBE "#GlobalGoals - Confindustria Lombardia for the UN Agenda 2030 - Sustainable Development" which saw the testimony of 12 companies, one or more representing the Global Goals identified by the program of commitments (3-4-5-6-7-8-9-11-12), as best practices of the 360-degree sustainability process of the Lombard Confindustria system, which have made it possible to highlight the competitive advantages deriving from the adoption of sustainable practices and to sensitize companies to adopt practices that meet the needs of the present while protecting future generations.



UNINSUBRIA: Public university founded in 1998 with headquarters in Varese, Como and Busto Arsizio, 7 departments in various subject areas, 12,000 students, 38 bachelor's and master's degree courses, 20 medical specialization schools, 8 doctoral schools and 10 masters. Uninsubria has included the pursuit of the Sustainable Development Goals (SVS) among the most relevant missions indicated in the University Strategic Plan 2019-2024. This mission is carried out in four different areas: making the university more sustainable as a structure, that is, decreasing its carbon footprint (eg, energy consumption, sustainable mobility, etc.), doing interdisciplinary research on the issues of sustainable development and climate change; innovating the training offer and with the Third Mission, organizing cycles of seminars, events and applied projects and involving local stakeholders and schools. Starting from 2019, a specific Rectoral Delegation was created on these issues and an office dedicated to sustainability was set up; an Antarctic office was created for scientific research on global climate change. The aforementioned are only examples of the work carried out, which, depending on the specific area of reference, involved different subjects and investments. For communication, the dedicated page "Sustainable Uninsubria", social networks and news on the site are used. Regarding reporting, some qualitative / quantitative indicators have been created for monitoring the objectives defined by the University Strategic Plan, which are periodically updated. We actively participate in the RUS (Sustainable Development University Network), also in the indicators table. Of particular relevance is the Green School Project (GS), aimed at education and awareness of schools and citizenship in schools and citizenship with good CO₂ reduction practices; born in VA in 2009, it was extended to Lombardy in the school year 2019-20, thanks to the 2-year funding from AICS. The project is still active in 8 Lombard provinces with its own resources. Uninsubria is its founder and member of the Technical Scientific Committee (with the Varese Province, CAST, Agenda 21 Laghi, JRC Ispra).



ALTROCONSUMO: is an independent consumer organization, whose mission is to inform, assist, defend and represent consumers and their rights in dialogue with institutions and businesses. The actions to implement the commitments undertaken with the Sustainable Development Protocol, in part aimed at making the association's activity more sustainable, reducing its environmental impact and the use of resources, and in part were aimed at raising public awareness of its own affiliates and more. Covid obviously influenced the results estimated at the beginning, at least in some of the actions described, while it was irrelevant on others, which provided the expected results. Thus, the reduction in water consumption, resulting from the renovations and innovations introduced, counts 12,000 m³ / year of H₂O saved in the 3 years preceding Covid. Then smart working was introduced, and the offices remained practically empty. The "green commitment" to produce magazines sent exclusively by subscription has instead made it possible to save the equivalent of 6 t / year of plastic even during the years of Covid, for a total of 17 tons of plastic from June 2019 to the end April 2022. The Altroconsumo Forest has exceeded 10,000 trees for a total avoided CO₂, in the first 10 years of plant life, equal to 1,605 t (calculated with the GlobAllomeTree database). Less Plastic in the Municipality was affected by the Covid lock-down, but still reached students and citizens of the 5 municipalities involved. The project produced information materials available to all and a handbook to reproduce the initiative in other territories.



LOMBARDY FOUNDATION FOR THE ENVIRONMENT (FLA) s(FLA) supports governmental and all other kinds of local actors in taking care the environment.

It offers scientific and projecting skills useful for activating sustainability choices and policies. Reported actions:

A Restoration project of a green belt in Viale Fulvio Testi in Milan, within the scope of making cities and human settlements inclusive, safe, durable, and sustainable by adopting urgent measures to combat climate change and its consequences.

Preparation of the adaptation plan of the Municipality of Varese, as part of the Action Plan for Sustainable Energy and Climate (SECAP) of the Municipality of Varese.

REC – Rete Ecologica Ca' Granda: the project's goal is creating a system of ecological connections in a West-East direction in the south of Milan, connecting the main natural reservoirs linked to the major waterways (Ticino, Southern Lambro). ERMES- Educational Remote Multi-Experiential Science Flabs @ home, a new and creative way to bring the educational scientific laboratories of the Lombardia per l'Ambiente Foundation directly into the classroom.

CLIMADA Project - The climatic and environmental reconstruction of the Adamello area and the Central Alps. The activity consists in the reconstruction of the climatic evolution of the last centuries with reference to the effects of climate change in high mountain areas.

Of prominent importance is the "PIANTALI" project: THE NEW REGIONAL ECOLOGICAL NETWORK STARTS FROM CORMANO TO JOIN THE TRENORD RAILWAY NETWORK. With over 1200 essences planted in Cormano, the project created for Trenord by the Lombardy Foundation for the Environment in the broader "FILI" context of FNM enters into operation. A green area of 41 thousand hectares that will grow along the Lombard railway network, making the railway ecosystem even more sustainable. This is the heart of the "Piantalali" initiative, born and implemented thanks to the collaboration of FNM, Trenord and the Lombardy Foundation for the Environment as part of the FILI urban and extra-urban regeneration project. The first seed of the project - which will bring thousands of new trees and shrubs in 24 municipalities crossed by the FERROVIENORD network - was sown in Cormano, where reforestation and cleaning of uncultivated green areas were started in March.



POLITECNICO
MILANO 1863

POLYTECHNIC OF MILAN is a public science-technology university that trains engineers, architects, and designers. It has an innovative vocation in teaching and research, with a strong link with industries and the international context.

Reported actions:

Drafting of programmatic documents and action plans on the most urgent issues (Gender Equality Plan, CO₂ Emissions Mitigation Plan, Home-Work Travel Plan). Development of reports for monitoring and communication purposes (Environmental

Sustainability Report, SDGs Report @Polimi). Implementation of communication and awareness raising initiatives and events, within the Sustainable Campus project. Financing and development of over 50 responsible research projects over the 8 editions of the Polisocial Award. Opening of two Off Campus spaces in the city of Milan, where services were provided to the public and educational initiatives for the inhabitants. Implementation of innovative building interventions characterized by attention to energy saving, sustainability and liveability of spaces as part of the VIVIPOLIMI. The project recipients of the actions of the Politecnico di Milano for Sustainable Development are primarily the University community (students, professors, researchers, administrative staff); to these are added the inhabitants of the city of Milan (Campus and Off Campus), and of the Municipalities that host the Territorial Poles. The training and dissemination events are open to everyone. The communication of the activities and the results took place through the institutional website of the University, the sites dedicated to the various initiatives and the respective social channels.

The most important action is the Sustainable Campus project, due to the variety of activities and projects proposed on the relevant issues and in particular water, mobility, and circular

economy, which have made it possible to reach a very large number of recipients; for the large number of communication and awareness-raising initiatives (social channels, Sustainability Days, participation in all the reviews of the ASVIS Sustainable Development Festival, Weeks European Mobility).



ENEA: national agency for new technologies, energy, and sustainable economic development, is a public law body aimed at research, technological innovation, and the provision of advanced services to businesses, public administrations and citizens: <https://www.enea.it/en>. Working with Lombard stakeholders, the actions have allowed the transfer and dissemination of technologies and knowledge to the Lombardy production system (ATELIER - Technical and training activities for the development of entrepreneurship on the circular economy; CREIAMO - Circular economy of the olive and wine supply chains), to the PA (PECC - Point for Energy and the Climate for Municipalities), to citizens (Construction of a metropolitan One Stop Shop to support energy redevelopment of buildings) as well as to doctoral students (Collaboration agreement for the development and strengthening of laboratories of ENEA research and for the enhancement of human capital) in the general framework of the transition towards sustainable production and consumption models. Actions took the form of 10 webinars for SMEs, 6 training meetings in municipalities, creation of the "Energy Wall", opening of 1 Energy Desk (Monza) and 3 ENEA Laboratories, co-financing with infrastructures in the advanced R&D sectors, as well as co-tutoring of 20 doctorates and 60 scientific publications. All actions were promoted through the ENEA information channels (news, website, social network) as well as on the Open Innovation platform of the Lombardy Region, during the Ecomondo Fair and during the Forum for Sustainable Development as well as in national and international conferences.



Founded 40 years ago, the **UNIVERSITY OF BRESCIA** is a "free learning community" that expresses its social responsibility through inclusion and integration. The purpose of the University Plan for Sustainable Development is to transversally promote the application of the principle of sustainability in the processes, functions, and activities of the University, from teaching to research and the third mission. At the same time, the University promotes social cohesion and inclusion, the reduction of inequalities, the promotion of cultural growth and sustainable economic progress of the society. The University Plan makes the 17 Sustainable Development Goals of the 2030 Agenda its own, declining them into six thematic areas. For each area, a specific long-term strategy and an annual action plan are defined, as well as a manager within the University Commission, articulated on four levels. The working and analysis method applied with the Plan then inspired other relevant initiatives for the sustainable development of the territory, such as the elaboration of the Sustainable Development Strategy for the province of Brescia.



ANCE LOMBARDY is the regional representative body of building contractors. It examines, deals with, and coordinates the issues of interest in the sector in agreement with the Lombard Territorial Associations, maintaining a constant relationship with the National ANCE.

1-ANCE internal communication: numerous webinars were organized on various topics concerning sustainability: urban regeneration (30), energy efficiency (40), environment (60), technology and innovation (30), safety (50+). Numerous updates disseminated through websites and associative magazines. Organized continuous and professional training activities for professionals and promoted digitization initiatives (eg "Check").

2-ANCE external communication: dedicated columns were launched in the context of local television programs, newspapers / magazines and industry websites. Taken part in local work and discussion tables (eg "There is Milan to be done" and "Restructuring Como") and entered into agreements with the Chamber of Commerce. Two competitions aimed at lower secondary schools were organized.

3-Collaboration with credit institutions: agreements have been signed that provide support branches for access to credit and observers for analysing the sustainability of the real estate market.

4-Home value +: agreement to promote energy efficiency (beneficiaries to date about 50 condominiums). Agreements signed for the use of energy from renewable sources on site.

5-Aggregate Market: project launched and available throughout Italy through the O.R.So.

6-Research activities: five Lombard universities research activities on circular economy, C&D waste recovery and digitalisation have been funded; participation in: two university researches, three international projects and numerous working groups.

The "Market Inerti" is a project promoted by ANCE Lombardy and Lombardy region. It concerns a platform for the dissemination of information on the availability of recycled aggregates on the market (with CE, DOP, transfer test and other possible certifications) to be used in place of the natural quarry material. The use of the platform is free and voluntary for all users (producers and users) of the Regions who use the O.R.So.



ACQUE BRESCIANE is the company that deals with the integrated water cycle in the province of Brescia and manages the service in 95 municipalities.

1. Reduction of water losses, with the aim of reducing current network losses by 50%. In 2021 Acque Bresciane reached and exceeded the target relating to its annual KPI linked to this action, replacing 28 km of obsolete networks (KPI 2021 equal to 23 km).
2. Improvement of water quality, with the aim of reducing non-potability to 0%. To act on this problem, Acque Bresciane undertakes to implement the Water Safety Plan (PSA) for each drinking water system managed. In 2021, the reference KPI for this action and relative to the percentage of the population involved in PSAs grew to 15% of the total users, reaching 81,807 citizens.
3. Reuse of water and purification, with the aim of eliminating infringements. In 2021 Acque Bresciane resolved 4 out of 15 remaining infringements, moving towards the resolution of all of them.
4. Promotion of sustainability, with the aim of further integrating sustainability into one's business. In 2021, in Acque Bresciane, sustainable purchases increased from 50% to 80% of the total value of orders and contracts entered by the company, exceeding the annual growth target linked to the KPI of 70% overall.
5. Reduction of emissions, with the aim of achieving 100% green vehicles. In 2021, Acque Bresciane's fleet of green vehicles increased from 14% to 18% of the total company fleet, reaching the annual growth target linked to the KPI.

Among the actions developed by Acque Bresciane, the improvement of water quality (objective 2, *see above*) has a role of primary importance, aimed at reducing the purchase of plastic bottles and encouraging the consumption of water for food use. In fact, Italy, while relying on high quality water from the water supply network, remains the first country in the world for consumption of bottled mineral water.

Acque Bresciane considers the PSA a fundamental tool, as it not only allows to improve the safety and quality of the water, but also to predict risks in the long term.

Deloitte.

DELOITTE is one of the largest companies in professional services for businesses, settled in over 150 countries and territories. The Deloitte network brings high quality knowledge and services to its customers and today employs over 9,000 people in Italy. Deloitte has launched a training and awareness program on the environment and climate change globally, which is mandatory for all its employees. The course developed together with WWF is delivered online and is an opportunity to learn about the risks deriving from climate change and a guide for adopting responsible behaviour, at work and at home. This initiative is part of the World Climate environmental strategy, aimed at addressing sustainable choices inside and outside the organization.

Deloitte people also could join Smart Working, a useful facility for their well-being and the reduction of the environmental impact of local mobility, with the same objective a 100% green company car list (hybrid and electrical cars).

Thanks to the Volunteer Hub, the volunteer program of the companies of the Deloitte network in Italy and the Deloitte Foundation, the Deloitte people can also personally engage in social responsibility and environmental sustainability activities to contribute to a better future for all. The activity is carried out in collaboration with Third Mission entities such as Worldrise (raising awareness on environmental issues), Recup (recovery of food surpluses) and Equoevento (support for organizational processes).

In addition, Deloitte distributed company smartphones that are linked to a charity initiative that supports the healthcare system. The climate change course was attended by over 4,500 Deloitte people in Lombardy, more informed and aware citizens who live and work in the Region and can raise awareness of other people inside and outside the organization. Smart Working is open to around 5,000 Deloitte employees in Lombardy. The company mobile phones listed above are approximately 2,000 units.



TERCHIMICA S.P.A. is a company based in Bergamo's province, leader in the production of high-tech additives for asphalts and technologies with reduced environmental impact. For every km of road built with Gipave® we recover 20 tons of recycled plastic, we save 70% of CO₂eq and we do not release microplastics. Furthermore, the floors made with Gipave® are 100% recyclable, limiting the waste of non-renewable natural resources and eliminating energy consumption. We contribute to developing an infrastructural system that guarantees environmental, social, and economic benefits.



WAY2GLOBAL is a woman start-up born as a Benefit Company that helps companies to enter in the international market throughout translation services.

"Sustainable reborn" after 30 years of traditional business, we combine social impact and profit by generating inclusive prosperity.

Below are the main results of the various actions taken:

Way2Academy

- Results: 60+ retrained translators with digital skills.
- Investment: 5200 euros (platform and video).
- Recipients: translators who have lost their jobs with the pandemic.
- Communication: Way2Global online channels, STEM in the City Municipality of Milan, STEAMiamoci di AssoLombarda / Confindustria, Constructive Journalism (Italy) and Constructive Network (USA).

Made in B Italy

- Results: Co-founding of AssoBenefit, launch of the Made in B Italy book on the Italian Stock Exchange for Bookcity, mission to EXPO Dubai to export Benefit Companies as sustainable

companies, viaticum of female empowerment.

- **Investment:** 8000 euros (book and events organization).
- **Recipients:** Entrepreneurs to convert businesses into Benefit Companies and do business with a social impact.
- **Communication:** Way2Global and AssoBenefit online channels, Bookcity review, media. Reporting: DNF Way2Global.

Green Translations

- **Results:** Decarbonisation of our business 30 years ahead of EU targets, a Climate Positive company from December 2021.
- **Investment:** € 8500 (emissions inventory, certification, forestation, and carbon credit)
- **Recipients:** Environmental capital and the supply chain we involve in good green practices.
- **Communication:** Online channels Way2Global, interview, conferences and testimonials.



PLENITUDE is the company 100% owned by Eni SpA. The company is involved in the renewable energy production; it provides the sale of gas, electricity and energy services and integrates a network of charging points for electric vehicles.

Plenitude is also a Benefit Company. With reference to the residential customer segment, Plenitude offers solutions for the energy and anti-seismic requalification of both condominiums and single-family buildings and villas, through the product called "CappottoMio". This solution, which can benefit from the current tax incentives related to energy class improvements (Superbonus 110%, Ecobonus and Sismabonus), provides for the implementation of different types of intervention, such as: thermal insulation of facades and roofs with "external insulation" systems", In particular compliance with the CAM requirements, that is the certification that requires the use of materials containing a minimum percentage of recycled materials, and the insulation of the walls; the requalification or replacement of heating systems with "hybrid" systems consisting of a heat pump integrated with a condensing thermal module or only with centralized and autonomous condensing boilers; replacement of fixtures; the anti-seismic consolidation. The interventions carried out in 2020 and 2021 made it possible to redevelop the buildings making them more performing by significantly reducing primary energy consumption, even over 30% -40%.

Acronyms used in the document

ANCI – Associazione Nazionale dei Comuni Italiani (National Municipalities Associations in Italy)

AQST – Accordo quadro di sviluppo territoriale (Framework Agreement for Territorial Development)

ARPA – Agenzia Regionale per la Protezione dell’Ambiente (Regional Environmental Protection Agency)

ATS – Agenzia di Tutela della Salute (Healthcare Protection Agency)

CAM – Criteri ambientali minimi (Minimum Environmental Criteria, the environmental requirements applied to public purchases)

CER – Comunità dell’energia rinnovabile (Renewable Energy Community)

CERL – Comunità Energetica Regionale Lombarda (Lombard Electrical Community, a tool for promotion and coordination of CERs in the region)

CIP – Comitato Italiano Paralimpico (Italian Paralympic Committee)

DASU – Dipartimento di Architettura e Studi Urbani presso il Politecnico di Milano (Architecture and Urban Studies Department of Milan’s Technical School)

DEFER – Documento di economia e finanza regionale (Regional financial-economic document, which contains the guidelines for annual planning of the Region’s expenses)

ERSAF – Ente regionale per i servizi all’agricoltura e alle foreste (Regional body for agricultural and forestry services)

ESG – Environmental, Social and Governance

FLA – Fondazione Lombardia per l’ambiente (Lombardy’s Foundation for the Environment)

GPP – Green Public Procurement

leFP – istruzione e formazione professionale (Education and vocational training)

ISPRA - Istituto superiore per la protezione e la ricerca ambientale (Higher institute for environmental protection and research)

ISTAT – Istituto nazionale di statistica (National Statistics Institute)

ITS – Istituti Tecnici Superiori (Technical high schools)

MiTE – Ministero della Transizione Ecologica (Ministry of the Ecological Transition)

MiSE – Ministero dello Sviluppo Economico (Ministry of Economic Development)

Move-In – Monitoraggio dei veicoli inquinanti (Monitoring of polluting vehicles, an experimental project for controlling vehicles’ emissions)

NADEFER – Nota di aggiornamento al documento di economia e finanza regionale (Update draft of the regional financial-economic document)

NEET – Neither employed nor in education or training

OCSE – Organizzazione per la cooperazione e lo sviluppo economico (OECD)

OSN – Obiettivi strategici nazionali (National strategic goals, the goals of the National SD Strategy)

OSR – Obiettivi strategici regionali (Regional strategic goals, the goals of the Regional SD Strategy)

P_I, P_II... – Reference to the e 5 Ps of Agenda 2030: Planet, People, Prosperity, Partnership

PA – Pubblica Amministrazione (Public Administration)

PAR – Piano d’Azione Regionale (Regional action plan)

PLIS – Parco locale di interesse sovracomunale (Local plan of multi-municipal interest)
PNRR – Piano Nazionale di Ripresa e Resilienza (National Recovery and Resilience Plan)
POR FESR – Regional Operative Plan for the European Regional Development Fund, defining the guidelines for allocation of the European resources assigned to regions for the local development
PRIA – Piano Regionale degli Interventi per la qualità dell’Aria (Regional plan for air-quality measures)
PRS – Programma Regionale di Sviluppo (Regional Development Plan, the main tool for regional policy programming)
RUS – Rete delle Università per lo sviluppo sostenibile (Network of universities for SD)
SDG – Sustainable Development Goal
SILC – Statistiche su reddito e condizioni di vita (Statistics on Income and Living Conditions)
SNSvS - Strategia nazionale per lo sviluppo sostenibile (National Strategy for Sustainable Development)
SRSvS - Strategia regionale per lo sviluppo sostenibile (Regional Strategy for Sustainable Development)
UPL – Unione delle Province Lombarde (Union of Lombard Provinces)
VAS – Valutazione Ambientale Strategica (Strategic Environmental Assessment – SEA)

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Città
metropolitana
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Sostenibilità
in Lombardia



Regione
Lombardia



VOLUNTARY LOCAL REVIEW 2022

Regione Piemonte
Città metropolitana di Torino





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PREFACE

The development process of the Regional Sustainable Development Strategy (RSDS) and of the Metropolitan Sustainable Development Agenda (MSDA) started within the framework of the activities implemented by the Italian Ministry for Ecological Transition (MET), and involving all the Italian Regions and Metropolitan Cities, to ensure the territorialization of the National Sustainable Development Strategy (NSDS). MET is supporting the work for the preparation of the regional and metropolitan documents through a process that, at the regional level, guarantees the coherence of sustainability policies among the different territorial levels, within the framework of the different competences.

The processes started at the regional and metropolitan scale are not fully paired in terms of time: the Piemonte Region started its activities in the last quarter of 2018, while the Metropolitan City of Turin at the beginning of June 2020. From an operational point of view, this allowed the Metropolitan City to start its work when the main elements of the Regional Strategy were already available to be used as reference points.

Both Bodies concretely work with the Piedmontese research system in order to support the territories and local communities in the transition path towards sustainable development. For the elaboration of strategic documents, IRES Piemonte (Institute for Economic and Social Research) was involved from the outset with specific collaboration agreements. In addition to IRES, the Regional Agency for the Environment (ARPA Piemonte) and the Piedmontese University system are involved; other important stakeholders in the research sector will be involved in the future.

The Voluntary Local Review was designed and drafted jointly by the Piemonte Region and the Metropolitan City of Turin to highlight and develop connections for guaranteeing the coherence necessary to successfully territorialize, at all levels, the objectives of the 2030 Agenda for sustainable development.

1

The Piemonte Region and the Metropolitan City of Turin: the context

1.1 Territorial context

The Piedmontese landscape is very heterogeneous not only from morphological point of view (43,2% of the territorial surface is covered by mountains, 30,3% by hills and 26,5% by plain), but also in relation to its socio-economic traits and its environmental features. It is a diversified territory, including urban (with medium and large cities), mountain and rural areas. To allow the analysis of such a complex reality, the main regional territorial features are synthetically described in the picture below, showing a partition of the regional territory in Quarters.

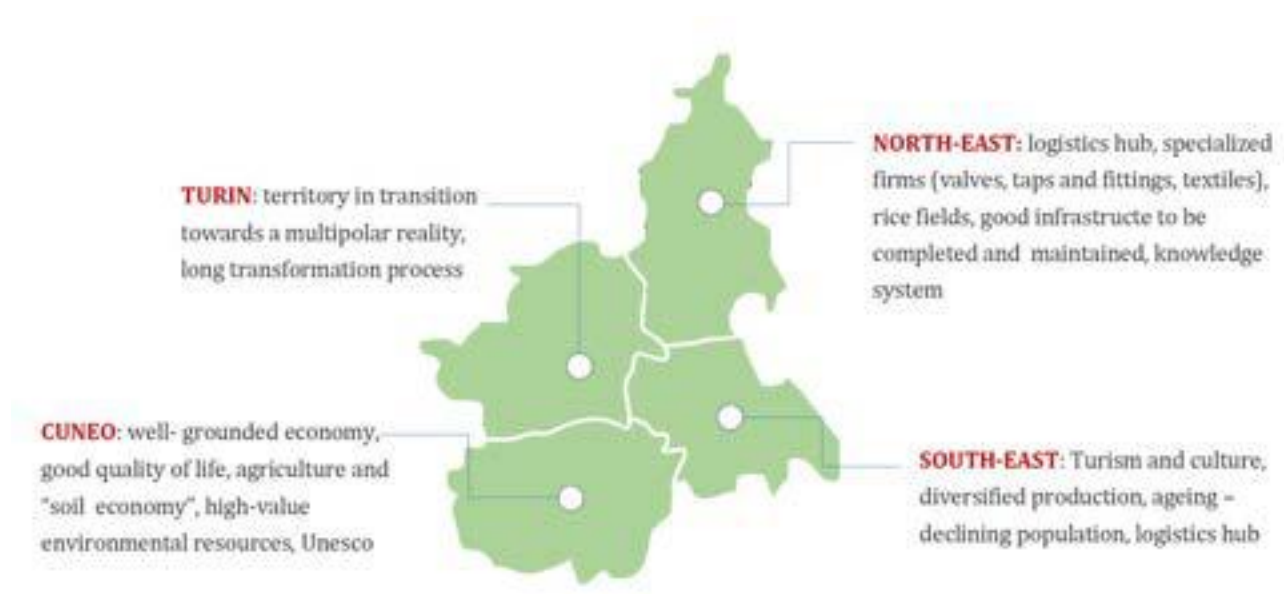


FIG. 1 - The Piedmontese Quarters

Source: IRES Piemonte¹, Progetto Antenne

The **Turin Quarter** (corresponding to the territory of the Metropolitan area of Turin) is a territory in transition which is strongly characterised by the presence of Turin, its capital city. The long transformation, which started in Turin at the beginning of the '80s (in relation to means of transport and consumption, lifestyle, demography), created the preconditions for the cultural transformation policies of the '90s and 2000s. However, it appears that these transformations have reached a turning point, in which positive results and the achievement of a high point in the "product cycle" need a new phase in the implementation of strategies. It is necessary to consider not only the polycentrism typical of the metropolitan area (including Turin as a central point, where services and "rare" and specialized activities such as universities, research, health services concentrate, and small and medium towns organised in two rings - the valley floor one and the medium-valley one), but also the territorial differences between the capital city, the metropolitan area, and the mountain, hill and plain/rural

¹ [Piemonte Institute for Socio-Economic Research](#)

areas. The territory and its development therefore need to be reconsidered in relation to the possible exchanges between the metropolitan area and the mountain/rural areas, without forgetting the periurban contexts which surround cities and merge with the rural landscape.

The **Cuneo Quarter** (corresponding to the Province of Cuneo) features a high quality of life; the productive system is among the most solid at the regional level, with high territorial, sectorial and dimensional diversification. Within the productive system, the tourism-agricultural-food value chain stands out. The development process underwent by the Quarter suggests that a new “soil economy” is growing: it is a value chain which starts from agriculture and expands into other fields, behind what has been defined as the “taste economy”, linking the primary sector to the industrial one (in relation not only to food) and the tertiary one, with clear benefits in terms of local development processes. The Quarter plays an important role as a binder between two main routes: the South of France and the Ligurian port system.

The **North-East Quarter** (corresponding to the Provinces of Verbania, Vercelli, Biella and Novara) has a polycentric nature. Its strong manufacturing legacy (household, taps and fittings, textile districts) with high international profile has recently started to undergo a process of productive reorganization looking for new opportunities for its market, penalised by an inadequate development of the business service sector. The knowledge system is strong and shows a good development potential: from Città Studi in Biella to the medical-pharmaceutical hub in Novara and Vercelli. A strategic element of the territory linked to its location is its role as a logistics hub (on the Suez-Genoa-Rotterdam axis, well-connected to Genoa port and to Alessandria dry port, close to Malpensa International hub and to the high-speed train station).

The **South-East Quarter** (corresponding to the Provinces of Asti and Alessandria) shows strong agricultural features and a substantial development of the manufacturing sector, penalised by the small size of the firms. While the Alessandria area is still partly dealing with her manufacturing past, undergoing a process of gradual decline/transformation, the Asti territory is more projected towards a development model based on tourism and environment, joining efforts with other initiatives in the Langhe and Roero area which has been recognised as Unesco site. There are development opportunities in relation to the large European and trans-continental transport lines, via the Genoa port; moreover, there is a good potential for the setting up of a logistics hub at the European level, which could be strategically linked to the Novara logistics hub².

² The analysis done for the Quarters derives from the studies carried out by IRES Piemonte within the framework of [Progetto Antenne](#) (Rapporti di Quadrante Sud-Est, Sud-Ovest, Nord-Est e Nord-Ovest, IRES Piemonte 2018-2021)

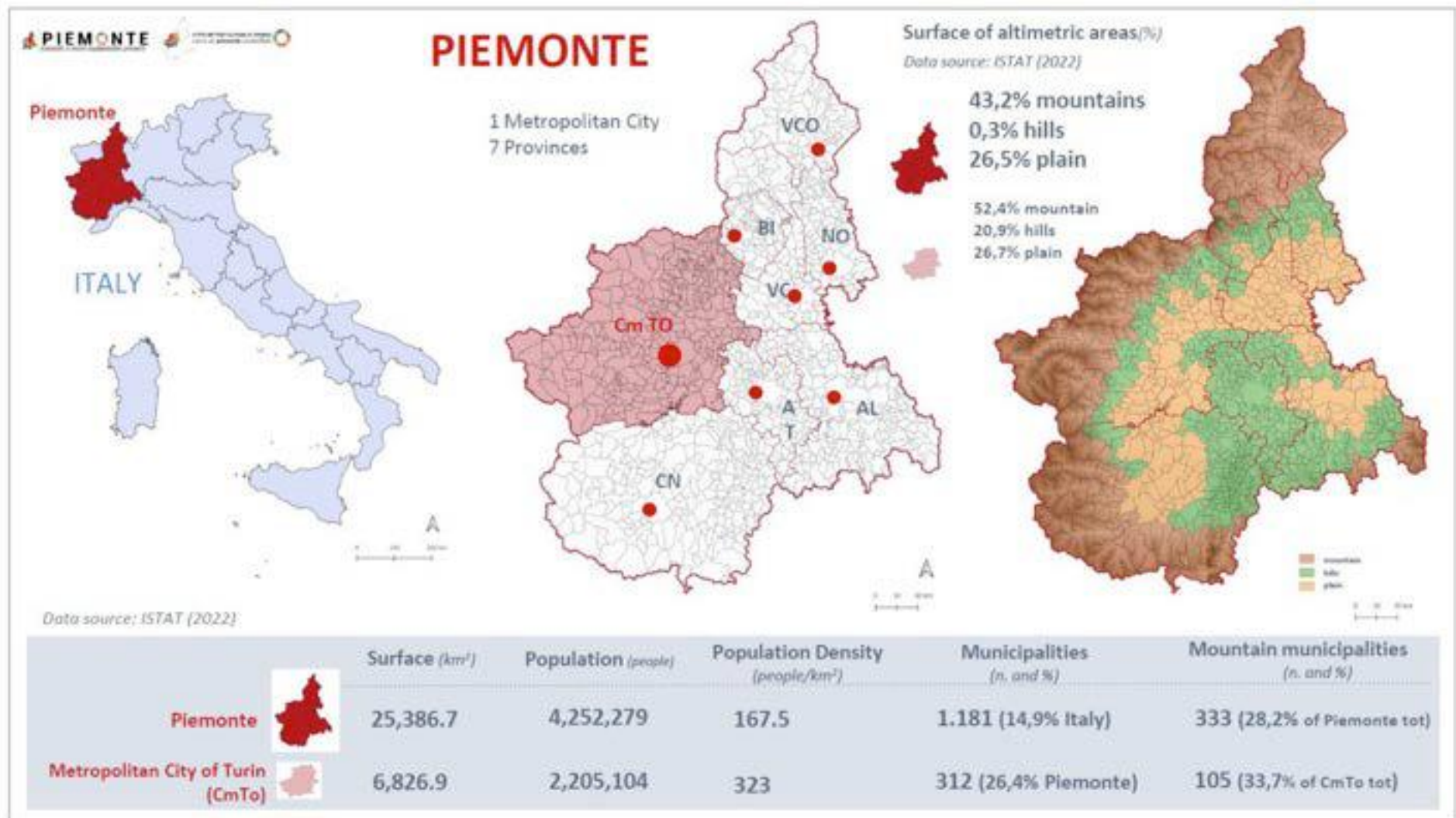


FIG. 2 - The territorial context of the Piemonte Region and of the Metropolitan City of Turin

1.2 The processes to set up the Regional Sustainable Development Strategy and the Metropolitan Sustainable Development Agenda

The development process of the Regional Sustainable Development Strategy (RSDS) and of the Metropolitan Sustainable Development Agenda (MSDA) started within the framework of the activities implemented by the Italian Ministry for Ecological Transition (MET), and involving all the Italian Regions and Metropolitan Cities, to ensure the territorialization of the National Sustainable Development Strategy (NSDS). MET is supporting the work for the preparation of the regional and metropolitan documents through the subscription of Collaboration Agreements.

The processes started at the regional and metropolitan scale are not fully paired in terms of time: the Piemonte Region started its activities in the last quarter of 2018, while the Metropolitan City of Turin at the beginning of June 2020. From an operational point of view, this allowed the Metropolitan City to start its work when the main elements of the Regional Strategy were already available to be used as reference points.

The **Regional Sustainable Development Strategy** (RSDS) was prepared after a long and complex process, which involved all the Departments of the Piemonte Region authority –the implementation of multiple tools, context analyses and survey methods - and the engagement of several stakeholders from the institutional context, the production system and more generally civil society. The document is therefore the result of a “collective” work.

Looking ahead, the engagement of the production system and of civil society for the RSDS will take place in a formal way through the Pact for Sustainable Development of Piemonte. The Pact is voluntarily subscribed by those stakeholders who intend to contribute with their commitment to the sustainable transition of Piemonte.

The **Metropolitan Sustainable Development Agenda** (MSDA) is being defined through an articulated process that is transversally involving not only the structures of the Metropolitan City authority, but also the territory (through the engagement of institutional stakeholders, actors from the goods and services production sector, organized associations and local stakeholders involved in the transition processes of the metropolitan territory).

The governance for the preparation of the Agenda is internal to the structures Metropolitan City authority, but features important and functional external relations, including the involvement of the Piemonte Region, universities and research actors. It is a type of flexible governance, which is continuously re-defined and will functionally evolve in relation to the implementation of the MSDA.

Figures 3 to 6 outline the process carried out to understand the complexity of the work carried out by integrating different levels and approaches.

In particular, the work undertaken is presented and analyzed from the points of view of:

- the reference contexts – at the national, international and regional level (Fig. 3 State - Regions and International contexts; Fig. 4 The Piemonte Region context; Fig. 5 State - Metropolitan City and International contexts; Fig. 6 The Metropolitan City of Turin context);
- the methods for implementing the institutional process, which combined in an innovative way paired formal processes (with the subscription of official agreements by the authorities involved) with participatory processes;
- the timing (from 2018 to 2022).

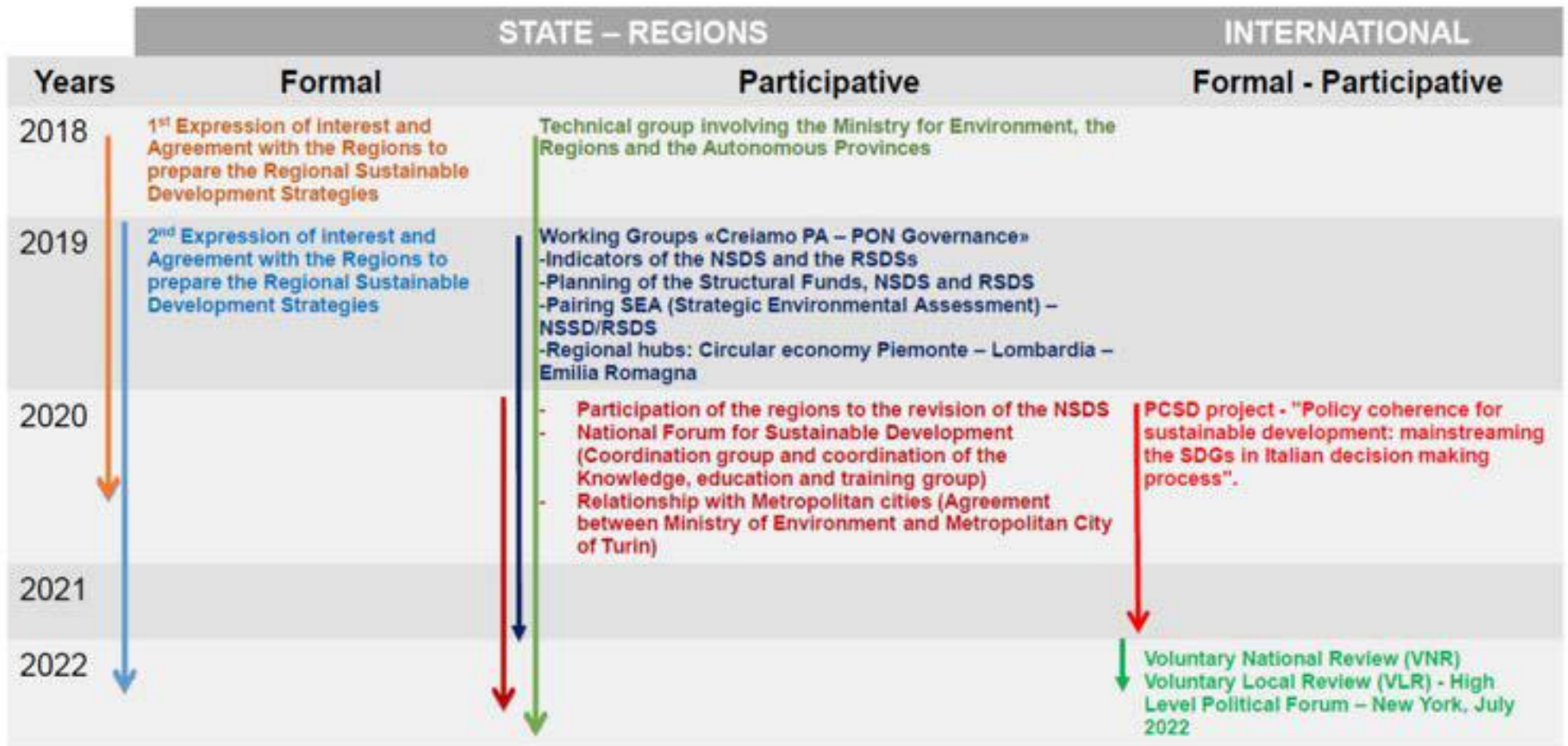


FIG. 3 – The institutional process – State-Regions and international level

years	Participative, Internal to the Region	Participative with other Stakeholders	Formal
2018	<ul style="list-style-type: none"> - Preparation of the Piemonte Region project to start collaborating with the Ministry for Environment and the other regions 		Decree of the Regional Council n. 3-7576, 09/28/2018
2019	<ul style="list-style-type: none"> - Skills Analysis within Departments /NSDS - Interviews with directors (or directors' delegates) - Preparation and submission of the Technical document with initial guidelines for the setting up of the RSDS of the Piemonte Region - Positioning analysis of Piemonte in relation to the Agenda 2030 goals 	<ul style="list-style-type: none"> - The Protocol «Piemonte Region for Green education» supports RSDS – Strategic Macro-Areas n. 4 and 5 (workshops and questionnaires) 	<ul style="list-style-type: none"> - Decree of the Managing Director n. 443, 12/04/2018 - Agreement with the Ministry for Environment n. 11952, 12/05/2018 - Decree of the Regional Council n. 98-9007.05/16/2019 - Decree of the Managing Director n. 597, 12/04/2019 - Agreement with the Ministry for Environment n.11382, 12/06/2019
2020	<ul style="list-style-type: none"> - n. 2 questionnaires for the Directors: review of the Strategic Macro-Areas and identification of strategic goals - Co-designing with officers and managers to fine-tune the RSDS's structure - Drafting and submission of the Draft of the Regional Sustainable Development Strategy of the Piemonte Region 	<ul style="list-style-type: none"> - Sharing guidelines with Stakeholders located in the Quarters of the Piedmontese territory (webinars and questionnaires) - Role and function of the utilities for the territorialization of the RSDS (interviews and workshops) - Networks in the governance of the RSDS. The role of the Innovation hubs (Social Network analysis, workshop and inter-sectoral working group) - Project "Piemonte and Academia for Sustainable Development" – Ministry for Environment– University Network for Sustainable Development – Piemonte Region 	2020 Inter-departmental goal "Coordinator of the drafting of the RSDS"
2021	<ul style="list-style-type: none"> - Sectoral Focus with officers and managers of the Departments - Co-designing guidelines with officers and managers - Co-designing with IRES Departments and database Observatories - Drafting of the Monitoring and Assessment Dashboard for the RSDS - Drafting and submission of the RSDS draft of the Piemonte Region - Inter-sectoral Focus groups for the Strategic Macro-Areas and interaction with the Departments to modify/integrate the draft - Fine-tuning of the RSDS structure in relation to national and EU documents - Drafting and submission of the the Regional Sustainable Development Strategy of the Piemonte Region 	<ul style="list-style-type: none"> - The point of view of Young People - age18-35 (collective brainstorming) 	<ul style="list-style-type: none"> - European funds and Strategic Document - Decree of the Regional Council n. 41-1814 07/31/2020 - Reporting of the activities included in the Collaboration Agreement dated 12/05/2018 to the Ministry for Environment - Presenting the RSDS document to the Regional President and to all the Directors with doc. n 153473, 12/29/2021
2022	<ul style="list-style-type: none"> - Pairing the document with the Regional Financial Economic Document - Starting the setting up of the Sustainability Observatory of Piemonte 		

FIG. 4 – The institutional process – Piemonte Region

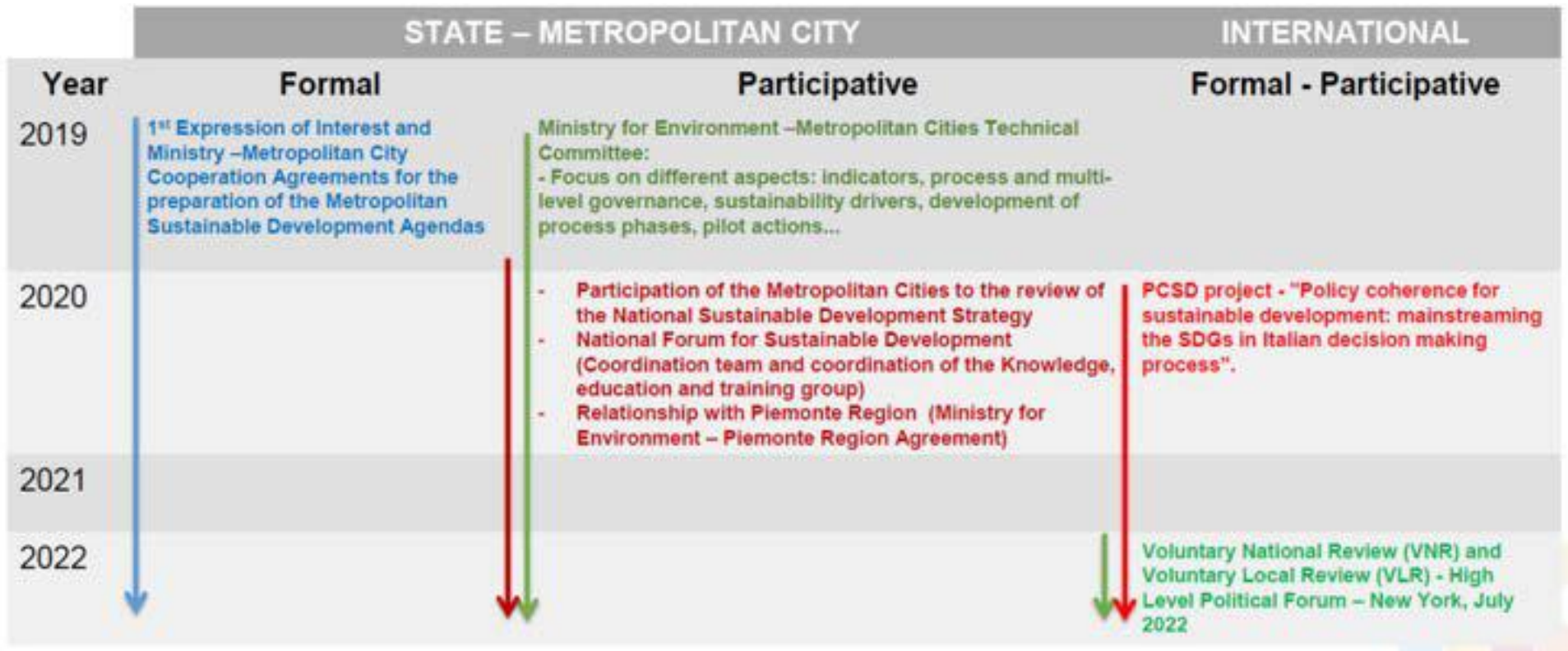


FIG. 5- The institutional process –State – Metropolitan Cities and International level

Year	Participative within the Metropolitan City of Turin	Participative with other stakeholders	Formal
2019	<ul style="list-style-type: none"> - Drafting of the Metropolitan City of Turin project within the framework of the collaboration with the Ministry for Environment and through cooperation with other Metropolitan Cities and Piemonte Region 	<ul style="list-style-type: none"> - Collaboration with Piemonte Region for the Protocol "Piemonte Region for Green education" (workshop and questionnaires) 	
2020	<ul style="list-style-type: none"> - Signing of the Cooperation Agreement with the Ministry for Environment - Drafting of the Guidelines for the setting up of the Sustainable Development Agenda of the Metropolitan City of Turin and its territory - Planning of the Metropolitan City of Turin (first of all the Metropolitan Strategic Plan) - Internal governance - Competence analysis and Departmental priority areas in relation to the National Strategy for Sustainable Development (documents and interviews) - Pilot actions - Intranet 	<ul style="list-style-type: none"> - Identification of functional relationships to "open up" governance: - Scientific Technical Support Group (Universities, Research bodies, National associations) - Piemonte Region - Pilot Actions - Collaboration with the Metropolitan Cities of Milano-Venice-Genoa - Participation into the activities of Piemonte Region in relation to the territorialisation of the Regional Sustainable Development Strategy (utilities and innovation hubs) - Communication 	<ul style="list-style-type: none"> - Decree of the Managing Director n. 29 dated 03.25.2020 (Agreement with the Ministry for Environment) - Deliberation of the Metropolitan Council n.30/2020 (guidelines) - Agreement for collaboration with the Metropolitan Cities dated 09.01.2020 - Start of internal activities, 04.11.20
2021	<ul style="list-style-type: none"> - Plenary Workshop and 4 Intersectoral Thematic Focus groups for the identification of the main features of the Agenda (structure, themes, stakeholder involvement models) - Main lines of the Sustainable Development Agenda of the Metropolitan City of Turin and its territory: themes, tools, structure, governance, stakeholders - Better focus on internal – external governance 	<ul style="list-style-type: none"> - 4 Intersectoral Thematic Focus groups to identify the main lines of the Agenda (structure, themes, stakeholder involvement models) – Piemonte Region and Universities - Setting up of a territorial stakeholder involvement model - 10 Intersectoral Thematic Focus groups with the Stakeholders of the area for the identification of the Missions 	<ul style="list-style-type: none"> - Formal setting up of the Intersectoral Thematic Focus groups (03.22.021) - Session of the Metropolitan Council 07.28.2021 (Approval of the main lines)
2022	<ul style="list-style-type: none"> - Identification of the Missions - Analysis of the Missions and identification of the Focus areas -of the Agenda (interviews, focus groups and internal working groups) - Relationship with the annual update of the Metropolitan Strategic Plan - Relationship with the planning activities of the Metropolitan City (Metropolitan General Territorial Plan and Urban Plan for Sustainable Mobility) - Preparation of the Sustainable Development Agenda of the Metropolitan City of Turin and its territory 	<ul style="list-style-type: none"> - Analysis of the Missions and identification of the Intervention Areas of the Agenda (Focus groups and working groups; interviews) - Relationships with the project "Piemonte and Academia for Sustainable Development" – Ministry for Environment– University Network for Sustainable Development –Piemonte Region - Pilot Actions: - Inter-institutional working group Metropolitan City of Turin-Piemonte Region- Piemonte Regional School Office - Involvement of 33 Upper Secondary Schools and Vocational training Agencies - Social Network Analysis - Collaboration with Academia - Events for the involvement of territories and for dissemination 	<ul style="list-style-type: none"> - Collaboration agreement with universities (12.16.2021)

FIG 6 – The institutional process –Metropolitan City of Turin

2

Multi-level and multi-actor governance

2.1 Tools and guidelines for the governance of the Sustainable Development Strategies of the Piemonte Region and the Metropolitan City of Turin

The two processes of preparation and implementation of the strategies are at a different level of evolution.

The Piemonte Region is in the process of approving its own Strategy, has a formally recognised its internal governance, and has identified the need for a territorial governance covering also the strategies and actors of the Wide Area³. The Metropolitan City of Turin is currently sharing with the territorial actors its strategic orientation and hypothesized, in the Guidelines for the setting up of the Agenda (approved in July 2021), an internal governance allowing for a structured interaction with the Piemonte Region. This link is essential for both authorities: the Sustainable Development Agenda of the Metropolitan City of Turin and its territory is set to make a contribution to the achievement of the goals of the Regional Strategy.

There is a shared need to implement a **multi-level governance** of the strategic and operational processes. It should ensure the **consistency of sustainability policies** at the regional and metropolitan levels through the integration of skills.

In defining the implementation processes of the Regional Strategy, territorialization functions and tools that consider the relationship with the Metropolitan City are being set up. These tools support the dialogue among the Regional and Metropolitan Authorities and the territory in order to guarantee the coherence of policies and, at the same time, the promotion of a culture for sustainability.

The tools and methods of this joint effort are under elaboration and will ensure strategic and operational coherence between the regional and metropolitan level. This coherence will have to be built at both the political and technical level.

In the process of setting up the Regional Strategy and the Metropolitan Agenda, this coherence has been pursued only at the technical level through:

1. The creation of contacts between the offices of the two institutions in order to integrate processes and support the coordination of the strategies, with the collaboration of the [Piemonte Institute for Socio-Economic Research](#) (IRES Piemonte);
2. The mutual involvement - at a technical level - in the construction processes of the strategies in relation to specific topics of common interest (focus groups, seminars, conferences, participation in technical-scientific support groups).

³ In the Italian legal system, a Wide Area refers to the administrative level of the provinces and metropolitan cities, which is a level of management of the territory, the resources and the relations among local authorities; this level is intermediate between the municipalities and the region.

TAB 1			
TOOLS			
Piemonte Observatory for Sustainability	Pact for the sustainability of Piemonte	Online platform	#Vettoridisostenibilità Festival
GOAL			
Setting up a knowledge system to support sustainable development policies	Establish alliances among public and private stakeholders who commit to meet sustainability goals	Show an “evaluation” of the sustainability policies which are active on the regional territory	Support the establishment of sustainability culture
GOVERNANCE GUIDELINES			
Strengthening the relationship with the Metropolitan City of Turin to support the integration of knowledge useful to produce policies which are coherent at both the regional and metropolitan level	Managing alliances with the Metropolitan City of Turin according to territorial criteria	Including in the platform a section devoted to those policies which refer to the territory of the Metropolitan City of Turin	Implementing an annual programme of public events in agreement with the Metropolitan City of Turin

TAB. 1 - The tools of the multi-level governance

2.2 Territorial systems and networks

In order to implement a type of governance able to produce sustainable development effects on the territory, the regional and metropolitan strategies intended and intend to act:

1. through existing territorial socio-economic networks and subsystems, to be oriented in relation to new development objectives;
2. to guide the setting up of new networks and territorial systems which are functional to the transition towards sustainable development;
3. aligning regional and metropolitan tools.

The territorialization of the strategies requires understanding of which co-evolutionary have to be addressed in the regional and metropolitan territory, identifying subsystems that operate and that, with their dynamics, transform the context.

Territorialization takes place in a plurality of ways and with multiple tools, analysing and intervening on different organizational and territorial settings.

In the experience of the Piemonte Region and of the Metropolitan City of Turin, these settings concern:

TAB 2		
ORGANIZATIONAL AND TERRITORIAL SETTINGS, GUIDING ANALYSES AND INTERVENTIONS	PIEMONTE REGIONAL SUSTAINABLE DEVELOPMENT STRATEGY	SUSTAINABLE DEVELOPMENT AGENDA OF THE METROPOLITAN CITY OF TURIN AND ITS TERRITORY
TERRITORIAL PLANNING	Review of the Regional Territorial Plan (33 Areas of territorial integration); Preparation of the Socio-economic Plan of the Parks	Alignment/coherence: General Territorial Plan (11 Homogeneous Zones); Metropolitan Strategic Plan; Urban Plan for Sustainable Mobility
GEOGRAPHICAL DIFFERENCES / SOCIO-ECONOMIC- ENVIRONMENTAL CHARACTERISTICS	The Sustainable Development Strategy of the Mountains and their territories; the suburban area - Green infrastructures - Corona Verde project	Green infrastructures - Corona Verde project <i>(metropolis; cities working as a hinge between mountains, hills and plain; mountains; plains ...)</i>
SYSTEMS AND NETWORKS: PLACES/COMMUNITIES/LOCAL DEVELOPMENT	“Imprese rur@li” initiative: young entrepreneurs and sustainable rural development;	Food districts; 2030 AGENDA. The educational success of the territories for the transition (Educational and training

	Food districts	territorial agreements)
SYSTEMS AND NETWORKS: DEVELOPMENT «OBJECTIVES»	Circular economy in the Piedmontese agro-food system	
SYSTEMS AND NETWORK: FUNCTIONS	The role and functions of utilities in the territorialisation of the Regional Sustainable Development Strategy; the role of innovation hubs for the sustainable transition of Piemonte	2030 AGENDA. Education and training (E&T) in transition

TAB. 2 - The organizational and territorial areas as subjects of analysis and intervention

2.3 Relationship with the research system

In order to facilitate changes in the territorial socio-economic system, it is necessary to establish a permanent and structured relationship with the research bodies.

As highlighted in the following table, the Piemonte Region and the Metropolitan City of Turin, in the process of preparing both strategies, have addressed the establishment of this relationship in an articulated way, developing contacts and processes with public and private research bodies and with universities.

TAB 3	
FACILITATING THE SETTING UP AND IMPLEMENTATION OF THE STRATEGIES—CO-GENERATION OF KNOWLEDGE BY THE REGION, THE METROPOLITAN CITY, RESEARCH BODIES, UNIVERSITIES AND OTHER PUBLIC AND PRIVATE STAKEHOLDERS	RESEARCH – ACTION QUALITATIVE RESEARCH EMPOWERMENT EVALUATION COMMUNITY OF PRACTICE NETWORK ANALYSIS A mix of methodologies, methods and tools is used for the co-generation of knowledge to be transposed into policies and actions
MONITORING OF THE STRATEGIES—«QUANTITATIVE» KNOWLEDGE FOR THE SETTING UP AND IMPLEMENTATION OF THE STRATEGIES	1) POSITIONNING of Piemonte in relation to the 2030 Agenda Goals - IAEG-SDGs Istat-Sistan indicators 2) INTERPRETING Piemonte in relation to the RSDS strategic goals, the 2030 Agenda and the 2030/2050 European goals – specific indicators (IRES and ARPA Piemonte Observatories) 3) INTERPRETING THE METROPOLITAN CITY OF TURIN in relation to the Missions of the MSDA, the 2030 Agenda and the 2030/2050 European goals– specific indicators 4) INTERPRETING BY AREA OF TERRITORIAL DEVELOPMENT (regional and metropolitan) – specific indicators at the inter-municipality scale 5) INTERPRETING THE SUBSYSTEMS – specific indicators at the municipality level for mountain territories; local subsystems (Periurban; local rural systems; ...) Monitoring allows to place the Region and the Metropolitan City of Turin in the context of the National, European and global challenges. At the same time, it help sto understand local phenomena – Knowledge for the setting up of policies for the implementationof the Strategies

TAB. 3 – Relationship with research: a mix of methodologies and processes

From this experience we intend to develop a system in which the relationship with research institutions and universities is fundamental.

For this reason, within the Piemonte Region, a decision-making process is being carried out for the identification of an implementation tool – called "Observatory" in this first phase - which structures and settles relations with research.

With this tool we intend to:

- **organize, produce and disseminate knowledge** that takes into account **economic, social and environmental aspects** in the analysis of phenomena;
- **feed and support the regional system** in defining **sustainability policies** through the formulation of **development scenarios**.

The Observatory will have to be built between the following subjects, to answer to the needs of policy makers with knowledge responses, by understanding phenomena in terms of sustainability and building scenarios to support decisions.

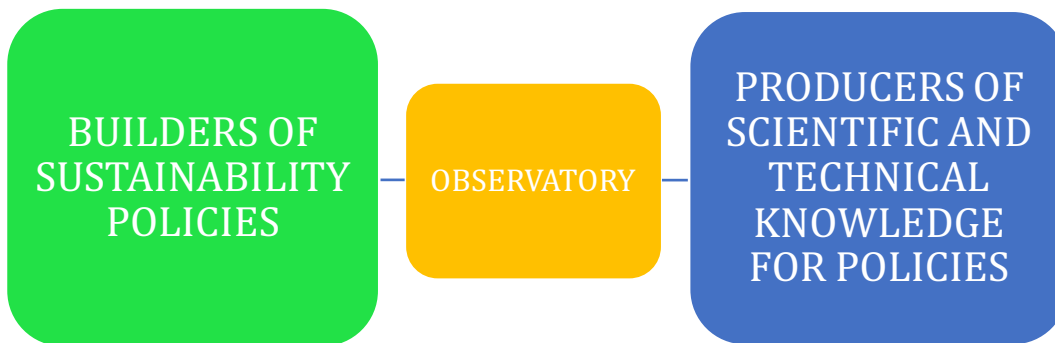


FIG. 7 - Positioning of the Observatory in the knowledge process

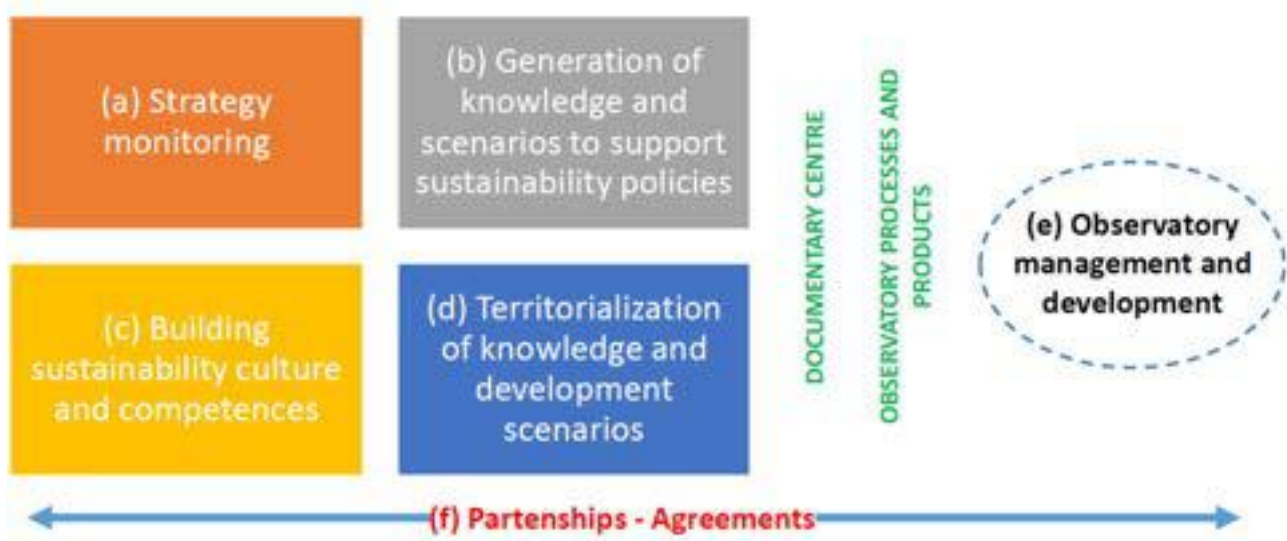


FIG. 8 - The functions and tools of the Observatory

The functions, tools and processes to be established concern:

a) Strategy monitoring

In the setting up of the Observatory, solutions (partnerships, work processes and tools, products) must be sought for meeting the following needs:

- Finalizing and **standardising the monitoring process** elaborated and tested during the preparation phase of the Strategy by IRES Piemonte and ARPA Piemonte in collaboration with the regional Observatories;
- **Making more dynamic the use of data**, in order to facilitate their consultation and use by decision makers;
- Producing, through multi-disciplinary contributions, **integrated interpretations** of economic, social and environmental realities, which allow to identify problems and possible scenarios of new development on an annual base and in view of three-year reviews of the Strategy;
- Making **public and private decision makers** aware of the monitoring results.

b) Production of knowledge and scenarios to support sustainability policies

In the setting up of the Observatory, solutions (partnerships, work processes and tools, products) must be sought for the following needs:

- **Identifying the research subjects** in Piemonte (universities and other research bodies) who are already producing knowledge (analysis of phenomena and scenarios) in terms of sustainability or can be oriented in this sense or can give contribution, even if sectoral, to be related to the other parts; verifying the effective contribution of these bodies and the added value that could be produced by making them active parts of the Observatory;
- **Identifying the knowledge needs** within the Piemonte Region and / or within other entities developing sustainability policies in Piemonte;
- **Facilitating interaction and exchange** between research bodies and public and private decision makers;
- **Systematizing and enhancing** those knowledge processes that link research bodies and public and private decision makers for sustainability policies;
- **Support the construction and evaluation** of policies;
- Guaranteeing **openness to other national and international knowledge subjects and systems**.

c) Building culture and skills for sustainability

In the setting up of the Observatory, solutions (partnerships, work processes and tools, products) must be sought for the following needs:

- Establishing a **permanent interaction with the formal systems** of Education and Vocational Training to encourage innovation processes for skills - professional and of active citizenship - in relation to the knowledge produced by the Observatory;
- **Identifying and systematizing the subjects** who carry out or who could carry out production / dissemination of knowledge and training actions related to the activities of the Observatory;
- Promoting, as Observatory, **training actions and production / dissemination of knowledge** (seminars, conferences,...);

- Developing / supporting **learning processes in multi-actor projects and processes.**

d) Territorialization of knowledge and development scenarios of wide and local area

In the setting up of the Observatory, solutions (partnerships, work processes and tools, products) must be sought for the following needs:

- Structuring the **relationship with the Metropolitan City of Turin** to facilitate the integration of knowledge useful for producing **coherent policies** between the regional and metropolitan levels;
- Structuring the relationship with the **Observatory for the mountains** so as to be able to understand **phenomena and development scenarios** for the mountains consistent with the dynamics that characterize the other parts and the whole of Piemonte;
- Identifying, while carrying out the activities, specific knowledge needs for **other types of processes** of this type.

3

Policy coherence

3.1 A Regional Strategy consistent with the National Strategy, with European guidelines and the 2030 Agenda

The setting up of the regional document was carried out within a clear and structured strategic framework, which refers to the **2030 Agenda** and its **European and national reach**.

From the regional point of view, the **National Sustainable Development Strategy** (NSDS) has represented and represents the translation at the Italian level of the objectives of the 2030 Agenda and, as such, is considered as the reference document.

The **Piemonte Region**, in undertaking the process to prepare the RSDS, has chosen to play an active role in the transition process towards more sustainable economies, operating to **territorialize the Strategic Choices** already made by the NSDS. This is done to guarantee not only the coherence of the local action towards national indications, but also and above all a strong coordination of the territorial policies.

In order to give substance to this vision, the Region was engaged at the institutional level to build a strategic document which, in its structure and contents, would allow **a real adaptation of the choices to the appropriate territorial scales**, with the **setting up of networks and systems** (geographical and relational) able to activate **concrete actions for the transition** of the territories.

The regional-scale structure identifies 7 **Strategic Macro-Areas** (SMA) and 6 **Transversal Areas** of intervention that orientate the processes of governance, knowledge, development of a sustainability culture and the setting up of collaborations and partnerships, which are necessary to make the implementation of the Strategy effective. It also operates in coherence with the European programming guidelines to ensure that resources are allocated in relation to the objectives set by the strategy.

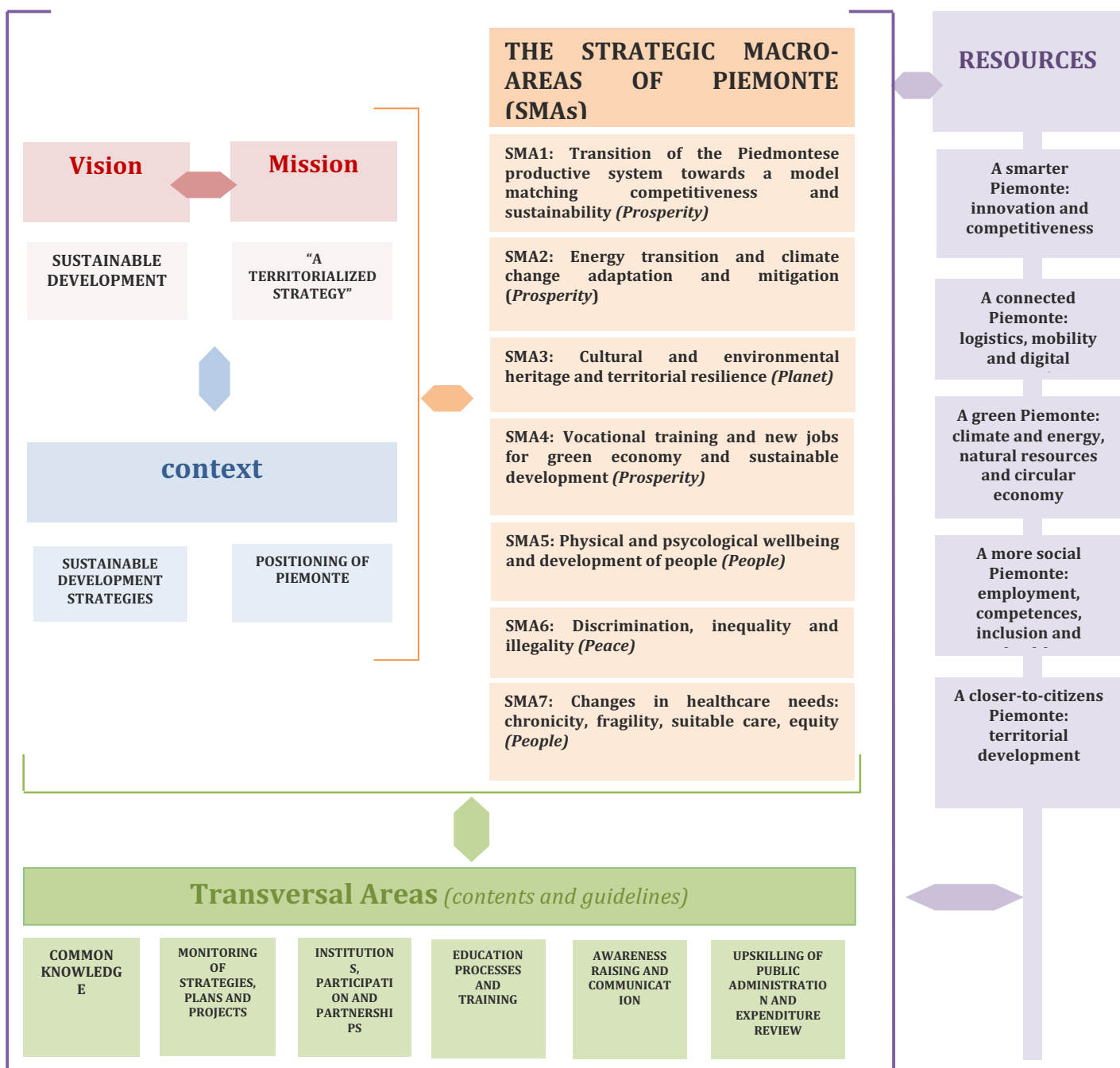














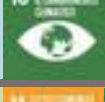

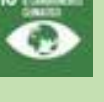


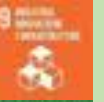















FIG. 9 – The structure of the Regional Sustainable Development Strategy

In the elaboration of the Strategy, **strategic Priorities and Objectives** were defined for each **Strategic Macro-Area** and constant reference was made to the **Areas, Choices and Objectives of the National Strategy**, which is in line with the Goals of the 2030 Agenda, as shown in the following table.

TAB 4			
RSDS - STRATEGIC MACRO-AREAS (SMAs)	RSDS STRATEGIC PRIORITIES	NSDS AREAS, CHOICES AND STRATEGIC OBJECTIVES	2030 AGENDA GOALS
SMA1: SUPPORTING THE TRANSITION OF THE PIEDMONTESE PRODUCTIVE SYSTEM TOWARDS A MODEL MATCHING COMPETITIVENESS AND SUSTAINABILITY	1.A. DEVELOPING ECONOMIC SKILLS/SUSTAINABILITY FIRMS	<p>PROSPERITY</p> <p>I. Funding and promoting sustainable research and innovation</p> <p>I.1 Increasing investment in research and development</p> <p>I.3 Adding novelty in processes and products and promoting technology transfer</p> <p>IV. Decarbonizing economy</p> <p>IV.3 Reducing greenhouse gas emissions in non-ETS sectors</p>	
	1.B. FINDING A BALANCE BETWEEN ECONOMIC SUSTAINABILITY, SAVING ENERGY AND MATERIALS, SUPPORTING THE CONVERSION OF THE PRODUCTIVE SYSTEM	<p>PROSPERITY</p> <p>III. Establishing sustainable production and consumption models</p> <p>III.1 Dematerializing the economy, improving efficiency in the use of resources and promoting circular economy mechanisms</p> <p>III.3 Ensuring fair access to financial resources</p> <p>III.5 Limiting waste production and promoting the market for secondary raw materials</p> <p>IV. Decarbonizing economy</p> <p>IV.3 Reducing greenhouse gas emissions in non-ETS sectors</p>	
	1.C. NURTURING AND SUPPORTING THE POTENTIAL OF TERRITORIES	<p>PROSPERITY</p> <p>III. Establishing sustainable production and consumption models</p> <p>III.6 Promoting demand and increasing the supply of sustainable tourism</p> <p>III.9 Promoting Italian excellence</p>	
	1.D. CONVERTING AGRICULTURAL PRACTICES THROUGH THE IMPROVEMENT OF ECONOMIC AND ENVIRONMENTAL PERFORMANCES OF FARMS AND ED AGRO-INDUSTRIAL FIRMS, SUPPORTING SUSTAINABLE COMPETITIVENESS	<p>PROSPERITY</p> <p>III. Establishing sustainable production and consumption models</p> <p>III.7 Ensuring the sustainability of agriculture and forestry along the entire supply chain</p> <p>IV. Decarbonizing economy</p> <p>IV.3 Reducing greenhouse gas emissions in non-ETS sectors</p>	

SMA2: ENERGY TRANSITION AND CLIMATE CHANGE ADAPTATION AND MITIGATION	2.A. PROMOTING ENERGY EFFICIENCY MEASURES	PROSPERITY IV. Decarbonizing economy IV.1 Increasing energy efficiency and the production of energy from renewable sources, avoiding or reducing impact on cultural heritage and the landscape	   
	2.B. PROMOTING RENEWABLE ENERGIES AND DEVELOPING INTELLIGENT ENERGY STORAGE SYSTEMS, NETWORKS AND PLANTS AT LOCAL LEVEL	PROSPERITY IV. Decarbonizing economy IV.1 Increasing energy efficiency and the production of energy from renewable sources, avoiding or reducing impact on cultural heritage and the landscape	   
	2.C. MAKING MOBILITY MORE SUSTAINABLE	PROSPERITY IV. Decarbonizing economy IV.2 Increasing the sustainable mobility of people and goods IV.3 Reducing greenhouse gas emissions in non-ETS sectors	  
MAS 3: CULTURAL AND ENVIRONMENTAL HERITAGE AND TERRITORIAL RESILIENCE	3.A. REDUCING HYDROGEOLOGICAL DAMAGE AND ENVIRONMENTAL DEGRADATION	PLANET II. Ensuring sustainable management of natural resources II.2 Stop land consumption and fight desertification II.6 Minimizing emissions and reducing concentrations of pollutants in the atmosphere	  
	3.B. REDUCING TERRITORIAL MARGINALITIES	PLANET III. Creating resilient communities and territories, preserving landscapes and cultural heritage III.1 Preventing natural and anthropogenic risks and strengthening the resilience capacities of communities and territories III.2 Ensuring high environmental performance of buildings, infrastructures and open spaces III.3 Regenerating cities, ensuring accessibility and the sustainability of connections	   
	3.C. ENHANCING THE CULTURAL AND ENVIRONMENTAL HERITAGE	PLANET III. Creating resilient communities and territories, preserving landscapes and cultural heritage III.5 Ensuring the development of potential, the sustainable management of territories, landscapes and cultural heritage	   
	3.D. PROTECTING WATER AND SOILS	PLANET II. Ensuring sustainable management of natural resources II.3 Minimizing pollutant loads in soils, water bodies and aquifers, taking into account the level of good ecological status of the natural	  

		<p>systems</p> <p>II.4 Implementing integrated water management at all planning levels</p> <p>II.5 Maximizing water efficiency and adapting withdrawals to water scarcity</p>	
	<p>3.E. PRESERVING BIODIVERSITY</p>	<p>PLANET</p> <p>I. Stopping the loss of biodiversity</p> <p>I.1 Safeguarding and improving the conservation status of species and habitats for terrestrial and aquatic ecosystems</p> <p>I.2 Stopping the spread of invasive alien species</p> <p>I.3 Increasing land and sea protected area and ensuring effective management</p> <p>I.4 Protecting and restoring genetic resources and natural ecosystems related to agriculture, forestry and aquaculture</p> <p>I.5 Integrating the value of natural capital (ecosystems and biodiversity) into plans, policies and accounting systems</p> <p>II. Ensuring sustainable management of natural resources</p> <p>II.7 Ensuring sustainable forestry management and fighting abandonment and degradation</p> <p>III. Creating resilient communities and territories, preserving landscapes and cultural heritage</p> <p>III.4 Ensuring the restoration and defragmentation of ecosystems and fostering urban / rural ecological connections</p>	
<p>MAS 4: VOCATIONAL TRAINING AND NEW JOBS FOR GREEN ECONOMY AND SUSTAINABLE DEVELOPMENT</p>	<p>4. DEVELOPING SUSTAINABLE DEVELOPMENT SKILLS</p>	<p>PROSPERITY</p> <p>II. Ensuring full employment and quality training</p> <p>II.1 Ensuring accessibility, quality and continuity of training</p>	
	<p>4.B SUPPORTING THE QUALIFICATION OF WORKERS AND STEERING THE PRODUCTION SYSTEM</p>	<p>PROSPERITY</p> <p>II. Ensuring full employment and quality training</p> <p>II.1 Ensuring accessibility, quality and continuity of training</p>	
	<p>4.C DEVELOPING NEW ENTREPRENEURSHIP IN EMPOWERMENT PROCESSES</p>	<p>PROSPERITY</p> <p>II. Ensuring full employment and quality training</p> <p>II.2 Increasing sustainable and quality employment</p>	
	<p>4.D IMPLEMENTING THE TRANSVERSALITY OF "CULTURE" TO INCREASE THE COMPETITIVENESS OF THE REGIONAL SYSTEM AND OF</p>		

	ENTERPRISES		
	4.E SUSTAINABILITY TRAINING WITHIN THE REGION		
MAS 5: SUPPORTING THE DEVELOPMENT AND THE PHYSICAL AND PSYCHOLOGICAL WELL-BEING OF PEOPLE	5.A. REDUCING POVERTY	<p>PEOPLE</p> <p>I. Tackling poverty and social exclusion by eliminating territorial gaps</p> <p>I.1 Reducing the intensity of poverty I.2 Fighting material and food deprivation I.3 Reducing housing discomfort</p>	
	5.B. FACING GROWING PSYCHOLOGICAL DISEASES	<p>PEOPLE</p> <p>II. Guaranteeing the conditions for the development of human potential</p> <p>II.1 Reducing unemployment for the weakest parts of the population II.2 Ensuring the full functionality of the social protection and welfare system II.4 Fighting deviance through prevention and social integration of those at risk</p>	
	5.C. IMPLEMENT PERMANENT EDUCATION IN SUSTAINABILITY AND PROMOTING HEALTHY LIFESTYLES	<p>PEOPLE</p> <p>II. Guaranteeing the conditions for the development of human potential</p> <p>II.3 Reducing the school dropout rate and improving the education system</p>	
MAS 6: REDUCING DISCRIMINATION, INEQUALITIES AND ILLEGALITY	6.A. REDUCING DEVIANCE AND CRIME	<p>PEACE</p> <p>I. Promoting a non-violent and inclusive society</p> <p>I.1 Preventing violence against women and children and ensuring appropriate assistance to victims I.2 Guaranteeing the reception of migrants seeking asylum and the inclusion of ethnic and religious minorities</p>	
	6.B. REDUCING DISCRIMINATION AND SOCIAL MARGINALIZATION	<p>PEACE</p> <p>II. Eliminating all forms of discrimination</p> <p>II.1 Eliminating all forms of labor exploitation and guarantee workers' rights II.2 Ensuring gender equality II.3 Fighting all discrimination and promoting respect for diversity</p>	

	6.C. FACILITATING ACCESS TO JUSTICE	PEACE III. Ensuring legality and justice III.3 Ensuring the efficiency and quality of the judicial system	
	6.D. DEVELOPING AND PROMOTING INTERNATIONAL COOPERATION		
MAS 7: ADDRESSING CHANGES IN HEALTHCARE DEMAND: CHRONICITY, FRAGILITY, APPROPRIATE PERFORMANCE, EQUITY OF DISTRIBUTION	7.A. DEVELOPING AN INTEGRATED APPROACH AND MULTI-SPECIALIST INTERACTION BETWEEN HOSPITAL AND TERRITORIAL STRUCTURES	PEOPLE III. Promoting health and well-being III.3 Ensuring access to effective health and care services, counteracting territorial gaps	 
	7.B. DEVELOPING AN APPROACH AIMED TO UNDERSTAND HOW DEMAND CHANGES	PEOPLE III. Promoting health and well-being III.2 Promoting healthy lifestyles and strengthening prevention systems	   
	7.C. CREATING A BALANCE BETWEEN INNOVATION, INCREASED DEMAND AND COSTS	PEOPLE III. Promoting health and well-being III.1 Decreasing population exposure to environmental and anthropogenic risk factors	      

TAB. 4 – Relationships among the Strategic Macro-Areas (SMAs), the RSDS priorities of Piemonte, the NSDS and the 2030 Agenda goals

3.2 Setting up of a coherent multi-level and multi-dimensional strategic orientation

In order to give substance to a vision that produces, when implemented, effects on the territory, the **Metropolitan Agenda** was designed as a tool to pursue the objectives of the Regional Strategy, which is in turn coherent with the national, European and worldwide approaches, as described in paragraph 3.1.

The methodology adopted, to achieve this consistency, involved a change in the way of operating: from addressing goals, we shifted to addressing (measurable) results to be achieved.

The metropolitan strategic approach is structured by **Missions**⁴, intended as a tool for socio-economic transformation aimed at **solving economic, social and environmental challenges**. It features achievable targets (the results), which must be identified with the help of public and private sectors, public institutions, social organizations (trade unions, trade associations, etc.) and citizens.

Adopting this approach as a reference framework for defining the contents of the Metropolitan Agenda means identifying, in relation to the global challenges posed by sustainability (de-carbonization, climate change, Common Agricultural Policy - CAP targets, CO₂ reduction, reduction of inequalities, ...), what are the Missions that the Metropolitan City of Turin and its territory intend to pursue, identifying for each of them the problems to be addressed and the results to aim for with respect to the targets set at national, European and global level, and transposed in the Regional Strategy.

The **multi-level governance** of the targeted processes and results is considered in the identification of the Missions, within the framework of the relationship with the Piemonte Region and with the territories of the metropolitan city. Multilevel governance will allow the Metropolitan City of Turin not to be limited by its own narrow competences, but to create synergies with the regional reference framework and to examine the needs of an extremely diverse area with specific problems to be addressed.

The Missions pursue the goals identified by the Piemonte Region in its Strategic Macro-Areas. Within each Mission, **specific Areas of intervention** are identified to **guide territorial policies**.

The structuring of the Strategy into Missions is under construction, as institutional participation processes and involvement of the civil society is ongoing. The following table shows the Missions identified to date, which are susceptible to changes, and some examples of Areas of intervention.

⁴ [Mazzucato_report_2018.pdf \(europa.eu\)](#)

GOALS → RESULTS

REGIONAL SUSTAINABLE DEVELOPMENT STRATEGY OF PIEMONTE		SUSTAINABLE DEVELOPMENT AGENDA OF THE METROPOLITAN CITY OF TURIN AND ITS TERRITORY		
STRATEGIC MACRO-AREAS		MISSIONS		AREAS OF INTERVENTION
1	SUPPORTING THE TRANSITION OF THE PIEDMONTESE PRODUCTIVE SYSTEM TOWARDS A MODEL MATCHING COMPETITIVENESS AND SUSTAINABILITY	1.1	CREATING NEW PRODUCTION CHAINS OR CONVERTING THE EXISTING ONES IN RELATION TO RECYCLING, REUSE AND REDUCTION OF WASTE	Construction supply chains WEEE supply chains Textile supply chains (...)
		1.2	CONVERTING PRODUCTION PROCESSES AND PRODUCTS FOR THE GREEN ECONOMY	Supply chains for energy efficiency Green public Procurement (...)
		1.3	MANAGING AND ENHANCING FORESTS FOR RURAL AND MOUNTAIN DEVELOPMENT	Wood-energy supply chain (...)
		1.4	IMPLEMENTING THE TRANSITION TOWARDS AN ENVIRONMENTALLY REGENERATIVE, HEALTHY, INCLUSIVE AND ACCESSIBLE FOOD SYSTEM FOR PEOPLE	Food districts Food community
		1.5	BUILDING A METROPOLITAN OUTDOOR TOURIST SYSTEM	
		1.6	DEVELOPING SUSTAINABLE DIGITAL INFRASTRUCTURE	
		1.7	IMPLEMENTING A TRADING SYSTEM SERVING PEOPLE AND THE COMMUNITY	Business districts Multiservice proximity shops (...)
2	ENERGY TRANSITION AND CLIMATE CHANGE ADAPTATION AND MITIGATION	2.1	INCREASING ENERGY PRODUCTION FROM RENEWABLE SOURCES AND ADAPTING ENERGY PRODUCTION AND CONSUMPTION SYSTEMS TO TERRITORIAL SPECIFICITIES	RES: bio-gas and green hydrogen from organic supply chains Energy communities (...)
		2.2	REDUCING ENERGY CONSUMPTION AND EMISSIONS RELATED TO BUILDING ASSETS AND INFRASTRUCTURE	Energy efficiency in the use of biomass School infrastructure (...)

		2.3	REDUCE ENERGY POVERTY	
		2.4	IMPLEMENT MOBILITY TRANSITION AND TRANSPORT CONVERSION	
3	CULTURAL AND ENVIRONMENTAL HERITAGE AND TERRITORIAL RESILIENCE	3.1	SAFEGUARDING AND REGENERATING THE NATURAL CAPITAL OF THE METROPOLITAN TERRITORIAL SYSTEM	Ecological connections for biodiversity Nature-based green infrastructure (...)
		3.2	PRODUCING ADAPTATION FOR THE IMPACTS OF CLIMATE CHANGE	Urban and peri-urban forestation Re-allocation or conversion of crops (...)
		3.3	DECREASING THE EXPOSURE OF PEOPLE, ASSETS AND NATURAL CAPITAL TO HYDROGEOLOGICAL RISK	
		3.4	REDUCING THE CONSUMPTION AND DETERIORATION OF SOIL AND INCREASING ITS PRODUCTION CAPACITY	Conversion of abandoned buildings (...)
		3.5	IMPROVING THE COLLECTION OF MUNICIPAL WASTE AND REDUCING THE IMPACTS OF WASTE PRODUCTION	
		3.6	REGENERATING THE TERRITORY THROUGH THE SYNERGY BETWEEN NATURAL, HISTORICAL AND CULTURAL HERITAGE	
4	VOCATIONAL TRAINING AND NEW JOBS FOR THE GREEN ECONOMY AND SUSTAINABLE DEVELOPMENT	4.1	IMPLEMENTING / IMPROVING THE SCHOOL AND VOCATIONAL TRAINING INFRASTRUCTURE ACCORDING TO SUSTAINABILITY OBJECTIVES	Schools and vocational training agencies in "transition" (...)
		4.2	PROMOTING THE "TRAINING SUCCESS" FOR SUSTAINABILITY CHALLENGES	The educational success of the territories (...)
5	SUPPORTING THE DEVELOPMENT AND PHYSICAL AND PSYCHOLOGICAL WELL-BEING OF PEOPLE	5.1	GUARANTEEING SERVICES TO ALL CITIZENS	
		5.2	PROMOTING NEW LIFESTYLES AND INDIVIDUAL RESPONSIBILITY IN THE PROCESSES OF SOCIAL TRANSFORMATION	
6	REDUCING DISCRIMINATION, INEQUALITIES AND ILLEGALITY	6.1	ENABLING AND FAVORING INCLUSION AND REDUCING SOCIAL FRAGILITIES	
		6.2	IMPLEMENTING DECENTRALIZED AND INTERNATIONAL DEVELOPMENT	

			COOPERATION	
7	ADDRESSING CHANGES IN HEALTHCARE DEMAND: CHRONICITY, FRAGILITY, APPROPRIATE PERFORMANCE, EQUITY OF DISTRIBUTION	7.1	RESPONDING TO THE HEALTH NEEDS OF LOCAL COMMUNITIES	
		7.2	PROMOTING HEALTH IN EARLY CHILDHOOD	

TAB. 5 - The methodology providing coherence to policies

4

Sustainability culture: participation and awareness raising

4.1 Forum, Pact, Civic Social Network, Young People

To support the transition towards a Piedmontese economy which is both competitive and sustainable, the **involvement** and contribution of the various **components of the territorial socio-economic system** is necessary. The contribution of territorial stakeholders is essential, because they hold the necessary political, economic, organizational and cultural resources to transform the guidelines and objectives of the Regional Sustainable Development Strategy and of the Metropolitan Agenda into real processes and projects of change. The **Forum** is the virtual container that collects various tools and actions for sustainable development in Piemonte. The involvement process implemented by the Regional Forum is **part of the governance system** that **accompanies the development and implementation phases** of the Strategy.

Forum tools are:

- The **Pact for the Sustainable Development of Piemonte** is the tool for engaging and sharing objectives and commitments in relation to the transition to a new development model. The Pact, which can be subscribed by public and private organizations of the Piedmontese socio-economic system, is a valuable background context that feeds the social imaginary and the strategic framework guiding actions for concrete and effective challenges (not only mere "greenwashing") in which the actors can feel represented. The Pact systematizes the commitment (already active or to be started) of the subscribers not in relation to unrealistic goals but towards measurable and concrete challenges to be monitored over time.
- The **Civic Social Network**, which is the platform supporting the Pact, is useful for comparing results and for building a "balance sheet" of Piemonte's sustainability policies.

Given the value of the vision **Young** (age 18-35) and **Very Young People** (under 18) have about their future, a process to involve young generations has been initiated, with the use of suitable and dedicated tools and languages. The framework of events **Piemonte 2027 - NextGen for sustainability** is the first development element of the Youth Forum (1st event held on the 11th of December 2021 and involving more than 300 young people). It will support the implementation of the Strategy by providing regular occasions for consultation and discussion.

4.2 Educational success and schools in transition. A common experiment for policy coherence

The two pilot actions⁵ “2030 AGENDA. The educational success of the territories towards transition” and “2030 AGENDA. School and Vocational Training (VET) in transition”, which are closely interrelated, focus on the identification of strategic policies and organizational innovations enabling territories to cooperate and address the challenges set by the 2030 Agenda in relation to the establishment of a culture and skills for sustainability. They constitute a common testfield and an example of the territorialization of Strategic Macro-Area n. 4 “Supporting professional qualification and new professional skills for the green economy and sustainable development”.

Addressing these challenges - territorialized in the Regional Sustainable Development Strategy and in the Metropolitan Sustainable Development Agenda – does not only depend on the individual subjects but also on the relationships and forms of collaboration among the territorial stakeholders, in a view to implement a learning community of practice⁶ from which to draw knowledge, stimuli and resources to share in order to support change.

In this sense, upper secondary schools and Education and Vocational Training Agencies are strategic players on the territory; it is therefore fundamental that they:

- improve/increase relations with other territorial stakeholders, to link training subjects to the territorial needs and to the implementation of projects related to territorial sustainability policies,
- “equip themselves”, from a cultural and organizational point of view, to respond to change and re-locate in a new context.

Withing the framework of the coherence of policies and inter-institutional governance described above, the Metropolitan City of Turin, the Piemonte Region and IRES Piemonte, together with the Piemonte Regional School Office, universities, other research bodies and associations⁷, are therefore collaborating for the identification of **new forms of governance** (which **facilitate relationships** among the stakeholders of the territory) and of **tools** able to have an impact on the daily activities of **schools and professional training agencies**, while guiding investments for wide-ranging planning and project designing.

With the Action “**2030 AGENDA. The educational success of the territories towards transition**” we intend to equip ourselves with a territorial *governance* able to create “educational success”

⁵ The collaboration agreement between the Ministry for Environmental Transition and the Metropolitan City of Turin foresees the development of Pilot actions. They are both implemented at the local and metropolitan scale and will be then transposed at the regional scale as part of the territorialisation of the Strategic Macro-Area n. 4 “Supporting professional qualification and new professional skills for the green economy and sustainable development”.

⁶ The community of practice, as defined by Etienne Wenger, consists of “a group of people who share a concern or a passion for something they do and learn how to do it better as they interact regularly”. A community of practice is created and develops with constant attention towards thos processes which support its goals, action and results. E. Wenger, E. (1998). Communities of practice: Learning, meaning, and identity.

⁷ Turin Polytechnic University and University of Turin, School of Management of the University of Turin, Legambiente (NGO at the national level), [Avanzi- sustainability in action](#).

towards sustainability challenges⁸ and to accompany the transition to face them, focusing on education and training in the territorial system, with the aim of building skills for sustainable development.

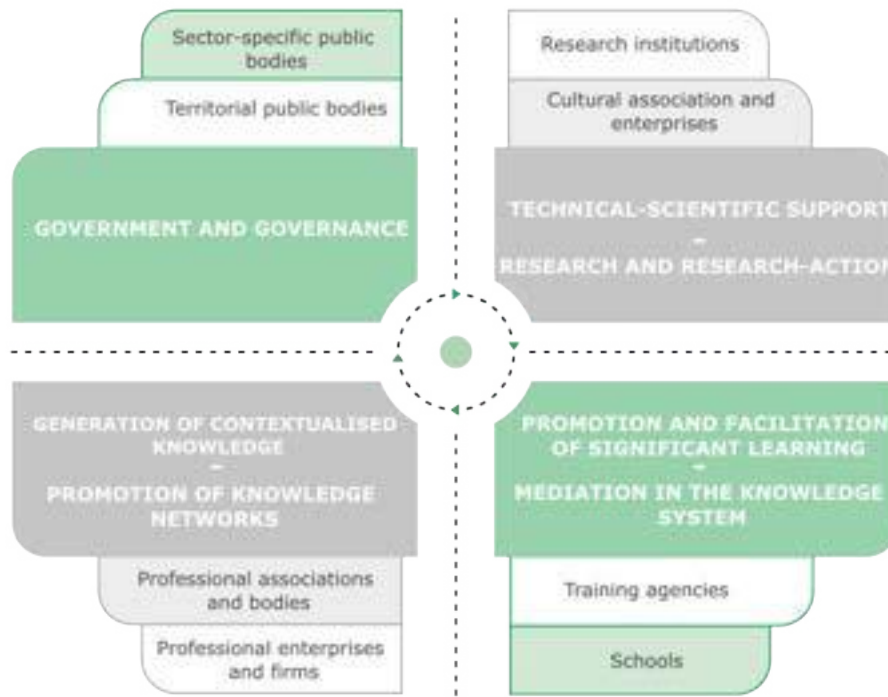


FIG. 10 - Main functions of the stakeholders involved in governance issues

Source: IRES Piemonte

The hypotheses on which our action is based are supported by previous cross-border cooperation project experiences (see Box 1) and show the need to adapt skills starting from the identification of **new training needs for the transition**. Experience has shown, however, that only little information is available on what are the tools, the territorial organizations and the existing processes supporting and promoting, in the area of the metropolitan city (at the "pilot" level), the flows of knowledge between ongoing changes and the educational and training offer available. For this reason, in the development of the Action, investigations are being carried out to understand the current dynamics among the territorial actors. We used innovative methodologies (such as the Social Network Analysis) that allow to describe the networks, to identify the typology of the relationships, nodes and dynamics, to be able to address the issue of professional qualification for sustainable development from a territorial point of view and in close relationship with the changes in production systems.

⁸ Educational success is not only an issue to be considered internally by formal education and training bodies, but a shared responsibility for all territorial stakeholders. It concerns the possibility for all Youth, without exclusion, to set up those culture and skills which will enable them to face a complex reality.

BOX 1 – The A.P.P. VER. Project



A.P.P. VER. - LEARNING TO PRODUCE GREEN is a project funded by the European Territorial Cooperation Program Interreg V-A Italy - France (ALCOTRA) 2014-2020, led by Metropolitan City of Turin, with Ires Piemonte as the Implementing body and the City of Pinerolo, the Consortium for Training, Innovation and Quality (CFIQ) and GIP FIPAN-Académie de Nice as partners. All information and materials from the project are available [here](#):

- The [Green Textbook](#) is the tool to learn about green economy and sustainable development in the cross-border territory and to encourage dialogue between the actors;
- The “[Green Spin](#)” is a set of guidelines, methods and contents to give a green direction to curricula and competence profiles;
- The [Green Education](#) contains guidelines, methods and content for adult education.

The cross-border project A.P.P.VER. directly involved hundreds of people including teachers, staff of territorial organizations and institutions, as well as researchers. It made possible, after almost four years of work, to understand that **the gap between ongoing changes in the socio-economic system and the offer of schools or vocational training agencies, can be addressed** by establishing:

- **Stakeholders’ networks** in the form of communities of practice featuring effective knowledge exchanges (networks generating social capital);
- **Dynamic skills**, grounded in a new way to conceive development, which enables people to understand complex and constantly changing realities and act accordingly;
- **Training needs**, through permanent interaction among stakeholders concerning **knowledge** about new dynamics and plans for new development objectives;
- Educational research processes promoting **methodological and content innovations** in curricula;
- **Learning processes for adults** in training experiences, workshops, educational research processes and organizations.



FIG. 11 - The six “dimensions” of the interaction among school, vocational training and territorial productive system (at the institutional, goods and services, public and private levels)

Source: IRES Piemonte

The "2030 AGENDA. School and Vocational Training (VET) in transition" Action is integrated into the governance constitution process described in the previous Pilot Action but focuses on the setting up of a tool that gives to the activities of **schools and vocational training agencies** a sustainability direction, in order to plan, guide, support and enhance experiences that contribute to the educational success at the local level.

In order to be active parts in the transition, schools and training agencies must indeed **understand** and be able to assess **how sustainable and green-oriented they are**. It is then necessary that they develop processes of change both as subjects in charge to deliver education and training, and from the point of view of the quality of learning environments (physical and relational). This will allow them to play an active and coherent role within the social stakeholder network and the territorial dynamics.

In this case as well, the results of the A.P.P.VER. project can provide some ideas for the actions to be undertaken, especially in relation to the Green Textbook and the model identified (see Box 2): the sustainability of a secondary school or a vocational training agency is measured in terms of consistency between the four dimensions of the model and refers to specific descriptive keys (see Box 2).

BOX 2 – The A.P.P. VER. Ideas



In A.P.P.VER., to foster dialogue among the parties - schools, training agencies, institutions, research bodies, businesses and professionals – we established a common approach to investigate changes in the goods and services production system. It allowed to highlight the three dimensions of sustainability (economic, social and environmental) **through the products and the productive, organizational and relational processes with the territory** of the organizations of the territorial system.

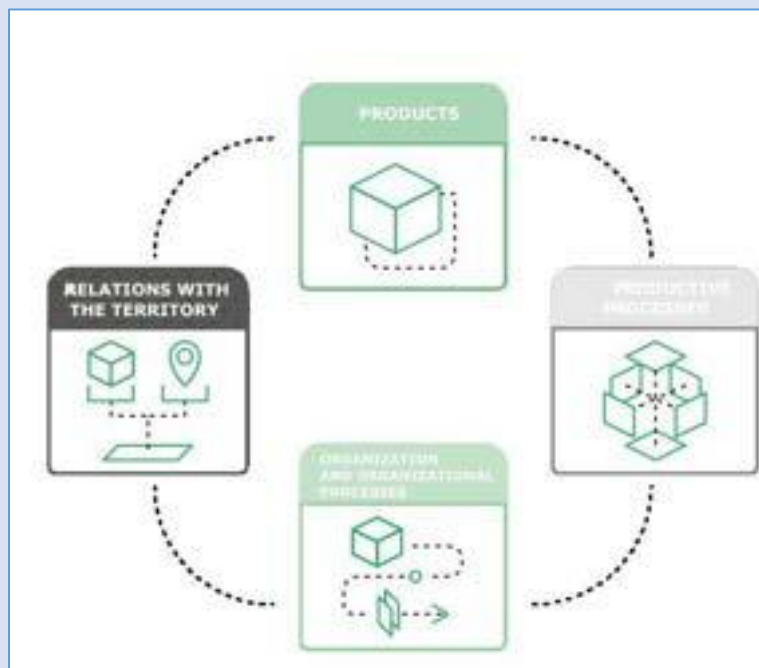


FIG. 12 – The four analysis dimensions of the organizations

Source: IRES Piemonte

According to the model, organizations of different nature can be analyzed through descriptive keys⁹ ("lenses" to read and interpret sustainability), identified for each of the four analysis dimensions, designed, with the help of trade associations and professional associations, on the basis of European national or regional indicators for green economy and sustainable development.

This knowledge model has been used for some production sectors to describe the work and innovations of some public and private organizations, case studies and good practices (even if only partial) in the fields of green economy and sustainable development (see [the "GREEN TEXTBOOK. A tool to learn about territorial green economy and sustainable development"](#)).

⁹ The descriptive keys help understanding organizations representing, at least for some aspects, the change towards a model of sustainable development and allow to study complex realities. They derive from indicators recognized at European and national level, as well as from knowledge produced by recent research activities. They must be modified in relation to the knowledge of each user, the gathering of new knowledge and the evolution of changes.

We are building on the results of the A.P.P.VER. Model, integrating them with the analysis of other "sustainable schools" models, the contribution of experts from Turin universities and a constant interaction with schools and vocational training agencies. Our goal is to identify **new ways** able to guide changes in the activities of schools and agencies located in the area of the metropolitan city (at the "pilot" level). Such changes will promote education and training effectiveness in relation to the development needs of the territory and, more generally, of society.