

# Voluntary Subnational Review

## Localizing the SDGs in Italy



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# ABBREVIATIONS

AICCRE - Italian Association of the Council of Municipalities and European Regions  
ASviS - Italian Alliance for Sustainable Development  
BES - Benessere Equo e Sostenibile - Fair and Sustainable Well-being  
CEMR - Council of Municipalities and European Regions  
CIPE - Interministerial Committee for Economic Planning  
CNIT - National Inter-University Consortium for Telecommunications  
DG DEVCO - Directorate-General for International Cooperation and Development of the European Commission  
EDLS - European Days of Local Solidarity  
ERDF - European Regional Development Fund  
ESF - European Social Fund  
FEEM - Fondazione Eni Enrico Mattei  
HLPF - High Level Political Forum  
IAEG-SDGs - Inter-Agency and Expert Group on Sustainable Development Goals Indicators  
ISTAT - National Institute of Statistics  
KPIs - Key Performance Indicators  
LRGAs - Associations of Local and Regional Governments  
LRGs - Local and Regional Governments  
MATTM - Ministry of Environment, Land and Sea  
MiTE - Ministry for Ecological Transition  
NGO - Non-Governmental Organization  
NSDS - National Sustainable Development Strategy  
OECD - Organisation for Economic Co-operation and Development  
PCSD - Policy Coherence for Sustainable Development  
SDGs - Sustainable Development Goals  
UCLG - United Cities and Local Governments  
UN - United Nations  
UNDP - United Nations Development Programme  
UN-HABITAT - United Nations Human Settlements Programme  
VLR - Voluntary Local Review  
VNR - Voluntary National Review  
VSR - Voluntary Subnational Review

# OPENING STATEMENT

## **The key role of the Local Authorities in the Voluntary Local Review process**

“Let’s transform our world. The UN 2030 Agenda for Sustainable Development “ is the global action program that offers UN member countries a vision for changing the paradigm of growth and development to be based on sustainability, in the principles of universality, integration, participation and social inclusion, affirming the right of every inhabitant of the planet to demand concrete actions for social and environmental justice from every level of government.

The complexity that characterizes the current context, made even more fragile by the “humanitarian catastrophe” taking place in Ukraine, is faced with the involvement and a joint reaction of society in all its articulations, governments, regions, local institutions and the entire society, with decision, diplomacy and cooperation.

Each year, States can present the state of implementation of the 17 SDGs in their country through the elaboration of National Voluntary Reports – Voluntary National Reviews in the context of the High Level Political Forum – the global forum to monitor, evaluate and guide the implementation of the SDGs, and this year Italy is one of the countries.

Regions can also be protagonists of innovative and experimental VNRs through Voluntary Local Reviews, as cities can present voluntary exams also at local level. An opportunity to give international visibility to the progress achieved by each country with their territories, relaunching the global partnership for sustainable development, a necessary condition to take care of the protection of the planet together, to overcome economic, social and environmental fractures and achieve full gender equality, as well as building peace, peaceful and secure coexistence.

AICCRE has prepared the VSR with FEEM with the aim of representing a cooperation infrastructure that favors shared decision-making processes, incentives for the territorial rooting of the 2030 Agenda and the forms of collaboration and participation of citizens, and fully grasping the value of the alliance between institutions and civil society.

Many European Regions are following the path of sustainability with a quick and decisive step to build a more just, equitable and resilient world and to leave no one behind.

Stefano Bonaccini

*President Emilia-Romagna Region,  
President AICCRE*

## HIGHLIGHTS

This publication aims to tell the path that Italian local authorities have taken in recent years and what results they have achieved by applying the principles of the UN 2030 Agenda and the National Sustainable Development Strategy (NSDS).

It was produced by the joint work of AICCRE and FEEM, which for years have worked together to analyze and study tools suitable for the local government level for achieving sustainable development.

These pages provide the current legislative framework of local governments and their degree of involvement in the localizing SDGs. The commitment of local authorities in the process of sustainable development and the importance of multi-stakeholder partnerships are highlighted.

A specific chapter is dedicated to studying the SDG indicators at the city level and how the data has been collected at the local level.

In particular, the level of achievement of the UN 2030 Agenda Goals by local authorities from a scientific point of view is analyzed for each Goal. The data is also accompanied by a qualitative narration of examples of local policies that seeks to represent the diversity of entities by size, geographical representation and on the basis of the documentation supporting the data collected.

At the end of the publication, the strengths and weaknesses of local governments are collected with respect to the localizing process, trying to present a series of final recommendations that are considered useful to ensure the improvement of results.

# 1 INTRODUCTION

## 1.1 This is FEEM, this is AICCRE

**Fondazione Eni Enrico Mattei (FEEM)**, founded in 1989, is a nonprofit, policy-oriented, international research center and a think-tank producing high quality, innovative, interdisciplinary and scientifically sound research on sustainable development. FEEM is a leading international institute providing cross-cutting rigorous analysis on Economy, Energy and Environment at a global and local scale. It carries out independent high-quality research addressing the world's greatest challenges to foster a widespread understanding of global issues among stakeholders and to contribute to policy engagement. It contributes to the quality of decision-making in public and private spheres through analytical studies, policy advice, scientific dissemination and high-level education. Thanks to its international network, FEEM integrates its research and dissemination activities with those of the best academic institutions and think tanks around the world.

Its six main research programs are:

- *"2030 Agenda and Sustainable Development (ASD)"* that aims at supporting the new strategic direction of sustainable development defined by the UN 2030 Agenda on September 15, 2015;
- *"Climate Change Adaptation (ADAPT@VE)"* that aims to deepen the understanding of adaptation mechanisms, focusing in particular on the development of innovative integrated modeling tools, especially at the micro-level;
- *"Labour in the Low-carbon Transition (LILT)"* that studies topics related to the effect of climate policies, green subsidies and broad green deal plans on the structure of the economy;
- *"Econometrics of the Energy Transition (EET)"* that develops along three, intertwined research lines, namely, climate econometrics, energy finance econometrics, and oil market econometrics;
- *"Modelling the Energy Transition (MET)"* that studies the energy transition in dynamic settings and under uncertainty by developing economic models with both a micro and macro approach;
- *"Technologies for the Energy Transition (TET)"* that aims to analyze the social and economic aspects of technological innovation in the energy sector.

It is the *"2030 Agenda and Sustainable Development"* research program, in particular, that aims at developing innovative research and assessment tools and models to implement sustainable development at international, and through SDGs localization, at the national and local levels.

In particular, the *"2030 Agenda and Sustainable Development"* research area includes three main projects:

- *"Policies and Sustainable Development"*, that aims at developing models and analyses useful for the 2030 Agenda localization at local and national scale, in order to increase the awareness of social society concerning sustainability-related topics.
- *"SDGs' Interconnections"*, that aims at providing a literature review concerning existing indicators and index-building processes for sustainable development, in order to proceed with the identification, construction and application of quantitative methods of analysis on



the topic of SDGs' interconnections.

- “*Solutions and Tools for Sustainability*”, that aims to develop ideas and tools to promote the 2030 Agenda, capable of not only disseminating the culture of sustainable development and raising institutional and civil society awareness of current challenges, but also and most importantly, assisting public and private bodies in achieving the Sustainable Development Goals on an empirical and practical level.

### **The Italian Association for the European Council of Municipalities and Regions (AICCIRE)**

is the national, federal association of the territorial institutional subjects constituting the system of regional and local powers together with which it operates in a unified manner for the recognition, strengthening and enhancement of regional and local autonomies, through their representation in supranational fora.

AICCIRE is the Italian Section of the Council of European Municipalities and Regions (CEMR-CCRE), and the Italian Section of United Cities and Local Governments (UCLG). AICCIRE works in coordination with national, European and international institutions for issues concerning local and regional authorities and acts as the Secretariat of the Italian delegation of local and regional authorities to European institutions, liaising with permanent representatives at international organizations.

Since 2018, through the global platform “*Venice City Solutions 2030*”<sup>1</sup>, AICCIRE has encouraged the exchange between local and international bodies on the topics of the UN Agenda 2030 and the Sustainable Development Goals (SDGs). The main message of the 2030 Agenda is clear and strong. The common goals of sustainable development can only be achieved through the construction of international cooperation relations at all levels. Local authorities, governments, citizens, the third sector, academia and the private sector must jointly build local strategies for the implementation of the SDGs. Working in Partnership is one of the founding principles of the Agenda’s proposition “*to leave no one behind*”.

The 2030 Agenda and its 17 SDGs were instrumental in accelerating the birth and development of the Italian dialogue platform Venice City Solutions 2030 between the various actors. The global nature of the laboratory unifies everyone in terms of objectives and language, thus manifesting itself as concretely local. A sharing process that starts from the bottom is required to allow municipalities to build common decentralized cooperation projects. At the same time, the Agenda has strengthened the concept of multi-level governance, favoring dialogue between cities and regions, the national government and the European Union. In this regard, it was essential to highlight to the Mayors the link between the National Strategy for the Voluntary National Review that each State submits to the UN, the regional funds allocated to pursue the strategy’s objectives and the implementation plans at the local level.

Venice City Solutions teaches that the comparison between different territories creates innovative synergies, and that the best experiences always become examples to be repeated. The Venice platform is a collector of initiatives based on SDGs that arise from cities, regions, businesses, universities, NGOs from all over the world. These are case stories that become a source of inspiration for many others, so that through everyone’s “good deeds” we can all write together a story that embraces the whole world.

<sup>1</sup> <https://venicecitysolutions.com>

## 1.2 About Italian municipalities and regions

The Italian Constitution states in Title V, Article 114 that “the Republic is composed of the Municipalities, the Provinces, the Metropolitan Cities, the Regions and the State”.

According to article 131, 20 regions are constituted; composed today (March 2022) in total of 107 supra-municipal territorial entities denominated provinces, autonomous provinces, metropolitan cities, free consortium of municipalities or non-administrative units (former provinces of Friuli-Venezia Giulia).

Article 117 <sup>2</sup> defines the spheres of state legislative competence (exclusive legislative powers) and regional legislative competence (concurrent legislation). Art. 119 affirms instead that “Municipalities, Provinces, Metropolitan Cities and Regions shall have revenue and expenditure autonomy. Municipalities, Provinces, Metropolitan Cities and Regions shall have independent financial resources. They set and levy taxes and collect revenues of their own, in compliance with the Constitution and according to the principles of coordination of State finances and the tax system”.

Law no. 56 of 7 April 2014 (i.e. “Delrio law”) (OG, 2014) has dictated a broad reform in the field of local authorities, providing for the establishment and discipline of metropolitan cities and the redefinition of the system of provinces, as well as a new discipline on unions and mergers of municipalities. In doing so, the law defines both metropolitan cities and provinces as “large-area territorial entities” (Chamber of Deputies, 2021).

The Italian territory is divided into 107 supra-municipal territorial areas, of which:

- 100 second-level administrative bodies (80 provinces, 14 metropolitan cities and 6 free municipal consortia in Sicily);
- 2 autonomous provinces in Trentino-Alto Adige: the autonomous province of Bolzano and the autonomous province of Trento;
- 5 suppressed provinces in Friuli Venezia Giulia <sup>3</sup> and Aosta Valley <sup>4</sup>;

These territorial units will be called here “provinces” for statistical purposes and information organization.

Further specification takes place in Regional Law no. 2 of 4 February 2016 (Autonomous Region of Sardinia, 2016), on the reorganization of the system of local autonomies, for which the Sardinia Region has canceled the province of Cagliari and the four provinces established in 2001. The new administrative subdivision has redesigned the historical boundaries of the provinces of Nuoro, Oristano and Sassari and established the new province of Southern Sardinia and the metropolitan city of Cagliari. The province of South Sardinia has inherited

<sup>2</sup> “Concurring legislation applies to the following subject matters: international and EU relations of the Regions; foreign trade; job protection and safety; education, subject to the autonomy of educational institutions and with the exception of vocational education and training; professions; scientific and technological research and innovation support for productive sectors; health protection; nutrition; sports; disaster relief; land-use planning; civil ports and airports; large transport and navigation networks; communications; national production, transport and distribution of energy; complementary and supplementary social security; harmonisation of public accounts and coordination of public finance and the taxation system; enhancement of cultural and environmental assets, including the promotion and organization of cultural activities; savings banks, rural banks, regional credit institutions; regional land and agricultural credit institutions. In the subject matters covered by concurring legislation legislative powers are vested in the Regions, except for the determination of the fundamental principles, which are laid down in State legislation”.

<sup>3</sup> The provinces of Trieste, Gorizia and Pordenone were administratively abolished on 30 September 2017 (Autonomous Region of Friuli-Venezia Giulia, 2016). The procedure for the suppression of the province of Udine ended on 1 January 2019, in implementation of the reorganization plan of the local autonomies of the Friuli-Venezia Giulia region, launched by Regional Law no. 20 of 9 December 2016.

<sup>4</sup> The province of Aosta was suppressed with the Lieutenantcy Legislative Decree no. 545 of 07/09/1945 (OG, 1945) by Umberto di Savoia and transformed into an Autonomous Region. Here it is reported as a Province for statistical purposes only and organization of information, but each data is to be referred to the Autonomous Region with special statute of Valle d'Aosta.

the municipalities of the province of Carbonia-Iglesias, of the Medio Campidano, those of the province of Cagliari not belonging to the metropolitan city.

Finally, ISTAT in its most updated publication (ISTAT, 2022) concerning Italian territorial entities, confirms that the municipalities are 7,904. This number has decreased compared to 2017 (ISTAT, 2022: on January 1st, 2017, the number was 7,983). This reduction is due to the incorporation of territorial entities and territorial divisions. According to ISTAT data, from 2011 to 2021 there were more than 700 administrative and territorial variations in Italian municipalities <sup>5</sup>.

Table 1 shows the number of municipalities and provinces for each region.

<i>Regions</i>	<i>Municipalities</i>	<i>Provinces</i>
<i>Lombardy</i>	<b>1,506</b>	<b>12</b>
<i>Piedmont</i>	<b>1,181</b>	<b>8</b>
<i>Veneto</i>	<b>563</b>	<b>7</b>
<i>Campania</i>	<b>550</b>	<b>5</b>
<i>Calabria</i>	<b>404</b>	<b>5</b>
<i>Sicily</i>	<b>391</b>	<b>9</b>
<i>Lazio</i>	<b>378</b>	<b>5</b>
<i>Sardinia</i>	<b>377</b>	<b>5</b>
<i>Emilia-Romagna</i>	<b>330</b>	<b>9</b>
<i>Abruzzo</i>	<b>305</b>	<b>4</b>
<i>Trentino-Alto Adige/Südtirol</i>	<b>282</b>	<b>2</b>
<i>Tuscany</i>	<b>273</b>	<b>10</b>
<i>Apulia</i>	<b>257</b>	<b>6</b>
<i>Liguria</i>	<b>234</b>	<b>4</b>
<i>Marche</i>	<b>225</b>	<b>5</b>
<i>Friuli-Venezia Giulia</i>	<b>215</b>	<b>4</b>
<i>Molise</i>	<b>136</b>	<b>2</b>
<i>Basilicata</i>	<b>131</b>	<b>2</b>
<i>Umbria</i>	<b>92</b>	<b>2</b>
<i>Aosta Valley/Vallée d'Aoste</i>	<b>74</b>	<b>1</b>
<b>Total</b>	<b>7,904</b>	<b>107</b>

Table 1 *Number of Municipalities and Provinces by Region*

### 1.3 What is VSR?

Since 2016, AICCRE has been promoting issues related to the 2030 Agenda and, thanks to the work with UCLG, and the Venice City Solutions 2030 platform, from 2018 it has started to train local and regional governments on the localization of SDGs. On the other hand, FEEM has produced many studies around the local implementation of the Agenda, and it has developed instruments capable of capturing how investments go towards the different 2030 Agenda SDGs.

Globalization has clearly highlighted that the cities of the world are called to face global challenges that affect their territories. The pandemic has also recently shown that no territory is completely cut off from the rest of the world.

Local and regional administrators are convinced that the 2030 Agenda is an adequate framework not only for the recovery after COVID-19, but also to ensure an equitable, inclusive and sustainable future for their citizens.

Sustainable urbanization and a more balanced territorial development, together with social inclusion, become priority objectives for local governments to ensure the well-being of

<sup>5</sup> Istat, Municipalities by type of variation-years 1991-2021, Table 3

communities and territories, being small municipalities, metropolitan cities, provinces or regions.

The very structure of the 2030 Agenda and its 17 SDGs helps local authorities to build local strategic plans that do not only hold together the holistic vision of the Agenda and its direct impact on sustainable economic, social and environmental development, but also do guarantee the implementation of a multi-level and multi-actor governance model. The localizing SDG action marks the adoption of a participatory approach that leaves no one behind and that includes the civil society, the private sector, universities, international institutions, NGOs, national and local governments.

The SDGs promote synergies between institutions and within administrations for the pursuit of concrete actions, activating international cooperation activities, promoting environmental sustainability and social cohesion and strengthening inclusive governance mechanisms.

The contribution of local and regional authorities to the 2030 Agenda have grown in importance, as has their ability to monitor and report on the SDGs. Voluntary Local Reviews (VLRs) are becoming an essential tool to describe how local and regional governments (LRGs) are leading the way in the implementation and innovation of the SDGs.

Between 2020 and 2021, the number of VLRs increased from 40 to over 100, indicating that municipalities' technical capabilities in planning strategic actions have improved. However, it remains clear that cities that are not provincial capitals or metropolitan cities cannot use the same indicators contained in the national and regional strategies: preparing indicators that are adaptable to the urban context becomes more and more a necessity and a pressing demand on the part of local authorities for disaggregated data.

Voluntary Subnational Reviews (VSRs) are developed by Associations of Local and Regional Governments (LRGAs), reporting on the SDGs implementation achieved by LRGs nationwide. VSRs are developed by LRGAs on a voluntary basis usually in countries whose national governments are reporting to the UN High-Level Political Forum (HLPF) through a Voluntary National Review (VNR).

The activities of the VSRs, which in 2021 encompassed 14 countries around the world, with the support of the national associations of local authorities, are rising in popularity, but in the face of a scarce involvement of local authorities in the definition of national strategies.

VSRs are bottom-up subnational reports that provide comprehensive and in-depth analysis of the corresponding national environments for SDGs localization. The representation of the subnational levels in global SDGs reporting has grown exponentially over the last years (although in some world regions more than others). Through Voluntary Local Reviews (VLRs), 110 LRGs have contributed up to now to their countries' Voluntary National Reviews (VNRs) presented yearly at the United Nations' yearly HLPF (UCLG and UN-HABITAT, 2020; 2021).

According to the VNR reporting to HLPF, the VSRs provided by LRG Associations in 2021 were:

1. Cape Verde – ANMCV – Associação Nacional dos Municípios Caboverdianos
2. Germany – DS – Deutsche Städtetag
3. Indonesia – APEKSI, ADEKSI, APPSI – Association of Municipalities in Indonesia, Association of Indonesian City Councils, Association of Provincial Governments in Indonesia
4. Mexico – CONAMM – Conferencia Nacional de Municipios de México

5. Norway – KS – Norwegian Association of Local and Regional Authorities
6. Sweden – SALAR – Swedish Association of Local Authorities and Regions
7. Tunisia – FNCT – Fédération Nationale des Communes Tunisiennes
8. Zimbabwe – ARDCZ, UCAZ – Association of Rural District Councils of Zimbabwe, Urban Councils Association of Zimbabwe.

And those of the LRGAs that have developed VSRs in 2020:

1. Benin, ANCB, Association Nationale des Communes du Bénin
2. Costa Rica, UNGL, Unión Nacional de Gobiernos Locales
3. Ecuador, CONGOPE, Consorcio de Gobiernos Autónomos Provinciales de Ecuador
4. Kenya, COG and CAF, Council of Governors and Counties Assembly Forum
5. Mozambique, ANAMM. Associação Nacional dos Municípios do Moçambique
6. Nepal, MuAn, NARMIN and ADCCN, Municipality Association of Nepal, National Association of Rural Municipality in Nepal and Association of District Coordination Committees of Nepal.

According to UCLG studies (UCLG and UN-HABITAT, forthcoming), national governments in the countries where VSRs were produced have taken over the reviews by including them in the VNR and have begun to take more account of local authorities and their Associations for the development of the National Strategies, facilitating dialogue and sharing participatory processes in which they had a defined role.



## 2 METHODOLOGY AND THE PROCESS

### 2.1 The development process of the VSR

AICCRE and FEEM have initiated and produced the first Italian Voluntary Subnational Review (VSR).

In Figure 1, there can be seen the different steps that led to the creation of the report. In the next section, the third and final phases of the process will be explained in detail.

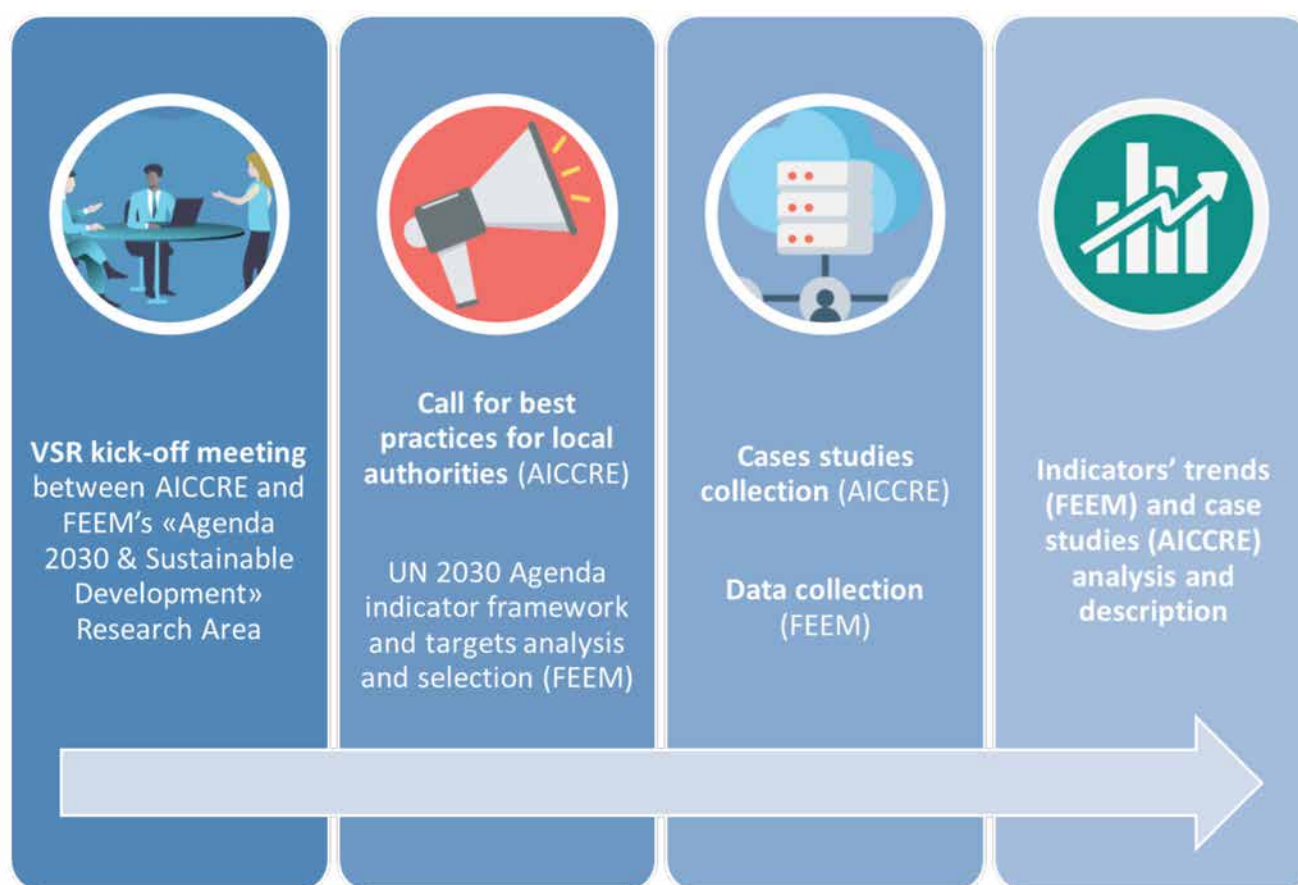


Figure 1 The development process of the VSR

### 2.2 Data collection

In Italy, AICCRE is collecting good practices at the local level to promote the cities' efforts to implement SDGs to improve the quality of life of their citizens. These experiences, published under the name of *“Good Practices of local and regional authorities on SDGs”*<sup>6</sup>, are based on a periodic consultation with Italian local authorities. In order to be included in the publication, the activities described by the Italian cities are checked and selected considering specific criteria: consistency with the SDGs and their targets, feasibility, financial plan, time schedule, local partnership, reporting and monitoring of planned actions. Every six months/one year

<sup>6</sup> <https://venicecitysolutions.com/it/best-practice/>

AICCRE checks the progress of the activities and remains available to provide support to the Municipalities in aligning local actions with the SDGs. It was also decided not to select cases on the basis of the population size of the local entities, to give a voice also to the smaller municipalities, which in Italy represent the majority of local authorities and which are often not included in the studies; this is done to demonstrate that at every level of government there is a commitment to monitor and report on the activities related to the 2030 Agenda.

Qualitative data in general must be included in the analysis, especially in those cases where quantitative data are not present at the local level.

The work of integrating quantitative and qualitative data aims at expressing the complexity, variety and heterogeneity of Italian local governments. In this work, case studies for each Goal were selected considering greater and smaller municipalities/entities to show that in Italy even the smallest municipality produces interesting activities and projects related to the 2030 Agenda SDGs.

In many cases, as it can be seen in the boxes dedicated to the case studies in section 4.1, local actions of small municipalities demonstrate greater flexibility and adaptability to the territorial context, greater innovative capacity to use resources, greater involvement with economic partners such as businesses and greater involvement of citizens in participatory processes of definition of activities.

Moving on to the quantitative aspect, it is clear that studying SDGs achievement across all Italian administrative levels with relevant urban-context selected indicators is a key factor to realize the 2030 Agenda. In this regard, the Italian Voluntary Subnational Review analyzes Italian subnational and local context depending on 48 indicators related to 16 out of 17 UN 2030 Agenda SDGs, with the exclusion of Goal 14 *"Life below water"* for comparability issues.

The identification of statistical indicators capable of measuring a sub-national performance in terms of SDGs included different steps.

Firstly, to identify subnational-relevant SDGs measures, potential indicators have been evaluated and selected based on the analysis of the United Nations' framework (UN, 2021).

The evaluation and selection refer to objective criteria: validity, availability and quality of the data.

Data has been gathered with an administrative level priority: firstly, Municipal indicators have been considered; if not available, Provincial, and, eventually, Regional ones have been included.

According to reliability criteria, only national and/or scientifically recognized sources providing public and consolidated data have been consulted as valid.

For their special relevance in data collection, it is necessary to mention the following documents:

- The global indicator framework for the SDGs and targets of the 2030 Agenda for Sustainable Development;
- ICity Rate. La classifica delle città intelligenti italiane 2017 e 2018;
- Legambiente, Ecosistema Urbano (2015-2021);
- Sustainable development in the EU. Monitoring report on progress towards the SDGs in an EU context;
- Sole 24 Ore, Qualità della vita nelle province italiane (2015-2020);
- ISTAT SDGs Reports and BES Reports.

A list of quantitative indicators, associated with the appropriate target, has been finalized (Annex 1).

Finally, to analyze the trends of the selected indicators, the average and/or median values have been calculated.

## 3 POLICY AND ENABLING ENVIRONMENT

### 3.1 The national context and the institutional environment for LRGs

Over the last years, Italian national, regional and urban governments have taken significant steps to monitor, implement and achieve the 2030 Agenda.

The definition of a strategic framework is crucial to institute the basis for a sustainable future. To this purpose, Italy engaged in integrating the 2030 Agenda Sustainable Development Goals (SDGs) into economic, social and environmental planning, by approving the National Sustainable Development Strategy (NSDS) in 2017 (Ministry of Environment, Land and Sea, 2017). Also regions followed this way contributing to the NSDS and constructing their own Sustainable Development Strategies. The following chapters will present and describe the different strategies developed to achieve the SDGs by national, regional and local governments.

#### 3.1.1 The National Sustainable Development Strategy

With the Interministerial Committee on Economic Programming (CIPE) Resolution n. 108 of 22 December 2017 Italy has approved its National Sustainable Development Strategy (NSDS) providing a long-term vision for SDGs implementation. The elaboration of the 2017 Strategy has included three main steps (Ministry of Environment, Land and Sea, 2017):

1. the compilation of a “Positioning” of Italy on the 2030 Agenda (i.e. an assessment in terms of performances referred to the 17 SDGs and their 169 targets);
2. the identification and analysis of Strengths and Weaknesses on which to build national priorities;
3. the elaboration of 52 national strategic goals organized around the 5Ps of the 2030 Agenda - People, Planet, Prosperity, Peace and Partnership - and of a set of transversal and cross-cutting “sustainability vectors” relevant for the integration of the SDGs in national policies and projects.

Specifically, each aforementioned Area - People, Planet, Prosperity, Peace, and Partnership - consists of a system of Strategic Choices specified in National Strategic Goals relevant for the Italian context and territory. Each goal has a corresponding set of 2030 Agenda targets and presents its degree of consistency with the Agenda (high, medium or low).

The NSDS is the result of an extensive participatory process conducted by the Ministry of the Environment in close collaboration with the Presidency of the Council of Ministers, the Ministry of Foreign Affairs and the Ministry of Economy and involved different regional and local authorities, research institutions, universities and the civil society. In particular, the Strategy



openly calls on regional and local authorities to take part in its implementation and support is given, following the Legislative Decree n. 152/2006 and subsequent amendments, to Regions, Autonomous Provinces and Metropolitan Cities in drafting their own sustainable development strategies, in the frame of the NSDS. In addition, in 2019, a national forum for sustainable development was created to ensure stakeholders' and experts' active participation in decision making processes on the implementation of the NSDS.

For what concerns NSDS' monitoring and assessment, the Government provides an annual review about the Strategy's implementation together with an estimation of the achieved results. To this purpose, since 2016, the National Institute of Statistics (ISTAT), together with the National Statistical System (SISTAN), has been releasing a set of indicators to monitor progress towards the SDGs. The selected indicators take into account the measures proposed by the UN Inter Agency Expert Group on SDGs (UN-IAEG-SDGs) (UN, 2021) with some specific national context data derived from the BES project (ISTAT, 2021), launched in 2010 to measure Equitable and Sustainable Well-being. In total, there are 354 statistical measures for 135 out of 231 UN-IAEG-SDGs indicators.

Currently the NSDS is under revision - to be published in the next months - and, since March 2020, the OECD has been providing support to the Italian Government to revise and implement the Strategy by developing an Action Plan for Policy Coherence for Sustainable Development (PCSD) that effectively supports the implementation of the NSDS. In particular, as affirmed by OECD (2021), the current revision process conducted by the Ministry for Ecological Transition (MiTE) represents an opportunity to set quantitative targets - missing in the first version - towards 2030 for each goal of the NSDS, to be aligned to the SDGs indicators, and link them with the strategies currently being formulated and/or updated.

### 3.1.2 The Regional Sustainable Development Strategies

Since 2017, the Ministry of Ecological Transition (MiTE) - formerly the Ministry of Environment, Land and Sea (MATTM) - has been working on sharing, disseminating and now revising the NSDS, promoting its territorialization, and consolidating multi-level governance for greater coherence between policies for sustainable development.

Italy is characterized by very different economic and socio-demographic determinants within its territory: it therefore appears evident that the definition of the National Strategy alone cannot be the only step forward necessary to address all the different sub-national, regional and local peculiarities towards a sustainable future.

Local and regional authorities have contributed to the construction of the NSDS, but should also develop a strategy that is consistent both with the national one and with the directives coming from the different levels of governance aimed at achieving the Sustainable Development Goals.

Specifically, in paragraph 3 of article 34 of the Legislative Decree 152/2006 (OG, 2006) it is envisaged that within one year from the approval (or revision) of the National Strategy, Regions must adopt a Sustainable Development Strategy, passing through the appropriate information and participatory processes, which includes a definition of their contribution to the achievement of the goals of the National Strategy. In particular, "the regional strategies indicate together with the contribution of the region to the national objectives, the instruments, the priorities, the actions to be undertaken" (OG, 2006).

To date, ten Regions and the Autonomous Provinces (Abruzzo, Emilia-Romagna<sup>7</sup>, Lazio, Liguria,

<sup>7</sup> Emilia-Romagna Region will also participate in the Voluntary Local Review process within the VNR, with the aim of representing a

Lombardy, Marche, Piedmont, Sardinia, Tuscany, Veneto and the Autonomous Provinces of Trento and Bolzano) have issued a Regional/Provincial Sustainable Development Strategy. The remaining nine Regions (Apulia, Basilicata, Calabria, Campania, Friuli-Venezia Giulia, Molise, Sicily, Umbria, Aosta Valley) are still in the process of defining a Strategy (MiTE, 2021c).

### 3.1.3 Efforts towards Italian Urban Sustainable Development Strategies

As already mentioned above, the universal nature of the 17 Sustainable Development Goals does not preclude the need to contextualize their content at the territorial level, rather, it recognizes the peculiarities of very different local situations.

In this sense, a global development that is not declined in individual realities is insufficient to achieve the much desired paradigm shift (Cavalli, 2018): local administrations and urban and rural communities play a crucial role in achieving not only Goal 11 “*Sustainable cities and communities*”, but all SDGs and targets, and in overcoming obstacles at the local level.

Cities play a fundamental role in the path towards achieving sustainable development, and it is necessary to analyze all their dimensions, priorities and criticalities, to define and promote strategies capable of making them more sustainable. In particular, focusing on Italian reality, the Urban Agenda (ASviS and urban@it, 2019) shows how mayors can take inspiration from the 2030 Agenda to deal in a coordinated way with crucial problems of cities, from the fight against poverty to energy efficiency, from sustainable mobility to social inclusion.

In this regard, for an effective implementation of the strategic objectives of the NSDS, the Ministry considered the involvement and coordinated action of all territorial levels to be essential. The Ministry of the Environment, in 2019, has launched a path of collaboration and support to Metropolitan Cities (MiTE, 2021b), through the different financial and technical support already operational with the Regions and Autonomous Provinces, aimed at defining and implementing Metropolitan Agendas for Sustainable Development (MASD): collaboration agreements; the establishment of an institutional discussion table; the support activities within the CReAMO PA Project, funded by the 2014-2020 Governance and Institutional Capacity National Operational Programme (NOP).

The Ministry has signed a collaboration agreement with all 14 Metropolitan Cities <sup>8</sup> for the definition and implementation of the Metropolitan Agenda for Sustainable Development. The Agenda constitutes an evolution of the Bologna Charter, signed by all metropolitan mayors in June 2017, expanding its scope to involve all dimensions of sustainability.

To date, the Metropolitan City of Bologna published its “Agenda 2.0 for Sustainable Development” (Metropolitan City of Bologna, 2021). The Metropolitan Cities of Florence <sup>9</sup>, Genoa, Messina, Milan, Reggio Calabria, Rome, Turin and Venice are working on their Metropolitan Agendas for Sustainable Development as can be seen on the online portal “Agende Metropolitane per lo Sviluppo Sostenibile” (MiTE, 2021a).

Going beyond Metropolitan Agendas, the Ministry of Environment has financed a project, coordinated by GREEN Bocconi with urban@it, ASviS, and Roma Tre University, that aims at constructing a National Urban Agenda for Sustainable Development (urban@it, 2020). The project intends to provide support to the Ministry in defining a National Urban Agenda

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cooperation infrastructure that favors shared decision-making processes, incentives for the territorial rooting of the 2030 Agenda and the forms of collaboration and participation of citizens, and fully grasping the value of the alliance between institutions and civil society.

<sup>8</sup> The 14 Metropolitan Cities present in Italy are: Bari, Bologna, Cagliari, Catania, Firenze, Genoa, Messina, Milan, Naples, Palermo, Reggio Calabria, Rome, Turin, Venice.

<sup>9</sup> The Metropolitan City of Florence is the only one that has published a VLR (Metropolitan City of Florence, 2021).

for Sustainable Development in line with the 2030 Agenda as an articulation of the NSDS. It also aims to develop a replicable and adaptable approach to different local and territorial specificities and wants to construct tools aimed at supporting Municipalities and Cities in planning, monitoring and reporting of actions that they can take to implement the Sustainable Development Goals at an urban level.

In the meanwhile, at international level, cities are moving towards sustainable development through other strategic documents, alliances and networks - here are some examples:

- the Cities of Milan and Rome are part of the C40 network whose aim is to halve the collective carbon emissions of the member cities within a decade, while improving equity, and building resilience for everyone everywhere;
- more than 100 local and regional Italian governments are actively working to combat climate change through the Climate Alliance;
- the City of Rome, Municipality of Vicenza, the City of Bologna, the Metropolitan City of Florence, the Municipality of Ancona, the Municipality of Assisi and the Municipality of San Giuseppe Vesuviano have joined the ICLEI – Local Governments for Sustainability, a global network of more than 1,750 local and regional governments committed to sustainable urban development;
- in 2014 the Mayor of Milan launched an international protocol, the Milan Urban Food Policy Pact, aimed at tackling food-related issues at the urban level, and signed on 15th October 2015 in Milan by more than 100 cities from all over the world;
- Italian cities are among the main participants of the URBACT programme, a European exchange and learning programme co-financed by the European Union, which promotes sustainable urban development from an economic, environmental and social point of view.

## 3.2 Commitment and engagement

### 3.2.1 The principle of leaving no-one behind

When we talk about “leaving no one behind”, we refer to the need for local governments to apply the multi-governance approach and the multi-stakeholder approach. It is in fact essential that dialogue and coordination between the different levels of government are not neglected, as well as the active participation of all stakeholders at the local level in the implementation of the SDG strategies, whether they are representatives of the public or private sector, third sector or NGOs, civil society or universities.

#### Multi-governance approach

The 2030 Agenda and the 17 Sustainable Development Goals (SDGs), the new Urban Agenda, the Paris Agreement on Climate Change, the Sendai Framework on Disaster Risk Reduction and the Addis Ababa Agenda for Action on Financing for Development, represent a global response to current challenges and a first approach to a common international strategy. Climate change, social and economic inequalities, poverty, migration flows, are just some examples of problems that cannot be tackled by a single country, but which require the joint work of Member States and local authorities around the world.

As also reiterated in the Bucharest Declaration on Fostering Partnerships for Sustainable

Development of 19 April 2019 <sup>10</sup> (AICCRE, 2020), local and regional governments have a key role to play in the implementation of global agendas, just as their National Associations have become fundamental to facilitating the process of accompanying cities in the Sustainable Development Goals' implementation. AICCRE works in partnership with CEMR and the "Platforma" network to train local and regional authorities and lead them to taking international cooperation actions, while the 2030 Agenda has become for many countries, including Italy, a tool to accompany cities and regions to decentralized cooperation. The European Commission has also recognized the value of local authorities and their Associations, and since 2015 DG DEVCO <sup>11</sup> has established a successful partnership with "Platforma" to improve decentralized cooperation between European local authorities. Talking about 2030 Agenda means referring to a global context, not only in terms of objectives and targets, but also in terms of cooperative partnerships and multi-level governance.

In this chapter, we will try to summarize the process undertaken by AICCRE in implementing and placing SDGs at the international, national, regional and local levels. AICCRE's strategy started in 2015, and it took three years of work to reach the Venice City Solutions 2030 objective: a platform for international meeting and exchange on SDGs addressed to local authorities, whose participation in the governance of the Agenda represented the starting point of the reflections started by AICCRE. Local, regional, national and European institutions, in fact, must interact not only at the level of actions and at the sharing of objectives, but also in the planning of the Agenda.

A first contact has been established with the Italian Municipalities and Regions. Italian local authorities have never been the main players of cooperation at national level, with some exceptions. This is because the competencies and resources needed to undertake exchange actions with third countries are mostly regional. In a country of more than 7,900 small and medium sized municipalities, with 107 supra-municipal territorial areas, the competencies of local governments have changed over time, but adequate training in development cooperation has not always been associated with the new responsibilities; or insufficient resources have been allocated to the assigned competencies.

For this reason, the culture of cooperation has not taken root among Italian municipalities yet and for AICCRE it has been necessary to undertake a path of accompaniment and training on the subject. It began with a series of territorial meetings (at least 10, involving 360 representatives) about cooperation, where it emerged that, the territories, non-governmental organizations and many 'Third Sector' players had already been active for years without the support of local authorities and they had also managed cooperation projects with several developing countries. However, the lack of dialogue between institutional players and Third Sector players did not allow for the promotion of good practices on a large scale, nor did it involve municipalities and citizens. It is important to underline how the 2030 Agenda and its 17 SDGs have been instrumental in accelerating the Italian discussion platform. Additionally, objectives and language of the Agenda have been crucial in raising awareness among municipalities on the meaning and importance of building joint decentralized cooperation projects. At the same time, the Agenda has strengthened the concept of multi-level governance, encouraging the beginning of a dialogue between cities and regions, the State and the European Union.

The efforts to inform Mayors about the link between the 2017 National Sustainable Development Strategy, the regional funds allocated for this strategy, and the implementation plans at the

<sup>10</sup> The Declaration was adopted at the International Conference 2030 Agenda: Partnerships for Sustainable Development, organized during the Romanian Presidency of the European Council

<sup>11</sup> DG DEVCO - Directorate-General for International Cooperation and Development of the European Commission today DG INTPA - DG for International Partnerships.

local level, have been proved to be crucial bringing municipalities to undertake actions aligned to the SDGs. This gave AICCRE the possibility to understand that the training activity on SDGs dedicated to the municipalities, thanks to the UCLG Learning models, was useful and had to be adapted to the national forum. The discussions on the Sustainable Development Goals began in 2016 from the bottom-up, at local and regional level <sup>12</sup>, and continued in 2017 at the national and European levels.

## Multi-stakeholder approach

AICCRE has moved from discussions with the institutions to discussions with the various stakeholders in society, seeking to create new inclusive forms of partnership with the private sector, universities, the Third Sector, associations and civil society. Dialogue with NGOs, the most active and professional players in the panorama of Italian international cooperation, was considered a priority, given the need to establish contacts with cities and municipalities that have not developed cooperation projects yet. The approach with Third Sector players came about slowly, due to the need to build new points of contact between players who did not use the same language. The 2030 Agenda, which represents global objectives and a common language to the different souls of society, was the key to creating new relationships and new partnerships.

The first major challenge was to make the Third Sector understand that the principle of sustainability, which has always been a priority for the players of cooperation, does not concern only some goals, but all 17 SDGs; the Agenda itself requires that each goal is approached according to an overall and non-fragmentary vision. Environmental sustainability issues have always been a focal point for NGOs and fair-trade stakeholders; the dialogue with AICCRE has made explicit the need to approach these issues by adopting a holistic vision that interconnects with all the SDGs. The Third Sector has an innate sensitivity to issues relating to people, planet and prosperity. Peace is the common link between these players and local authorities. Goal 11 "*Sustainable cities and communities*" is transversal to many actions that go beyond local sustainable development. The approach to realities working with different perspectives also finds a point of contact with the need to plan new urban models.

The second challenge has involved the adoption of a new common language between local authorities and the Third Sector. It is not easy to create mutual trust, but it is possible to find consensus on perspectives, and the Agenda supports us in this exercise because it clearly defines objectives and targets recognized at all levels. At the same time, it is clear the need to create a broader partnership, which must involve both NGOs and local authorities. It can be said that the local approach to SDGs has brought the Third Sector closer to local governments, requiring now their active participation <sup>13</sup>.

The same approach has concerned the world of research and universities, which have always been very responsive to sustainability. They have set the study work mainly on goals related to environmental issues, favoring contacts at national level, directly with the Government and large companies. In order to get in touch with some representatives of the academic world, AICCRE has become a partner of ASviS, bringing to the National Sustainable Development Festival good practices from different local authorities and contributing to the drafting of urban reports related to the National Strategy for the Voluntary National Report 2019 (ASviS and urban@it, 2019). The dialogue has also been extended to universities that are pursuing the 2030 Agenda, first the University of Ca' Foscari of Venice, partner of Venice City Solutions

<sup>12</sup> For more information, see the 'Platforma' National Multi-Stakeholder Dialogues on Development Summary report, 2018, p. 15.

<sup>13</sup> Ibid p. 13



2030, and the University of San Marino (Varini, 2016).

Finally, the private sector was also involved in AICCRE's dialogues. The public-private partnership is an essential element for achieving SDGs. These players have shown their interest and commitment to sustainability. There is still much to do, but it is the beginning of a worthwhile path that leads to the sharing of common goals. On the other hand, to create this new alliance between the two sectors, we cannot neglect medium and small businesses and their economic activities, as the latter have a greater impact on the local context of the municipalities. A first series of AICCRE research, in collaboration with the municipalities, has shown examples of innovative approaches to SDGs precisely by small local companies.

Civil society has been invited to participate in collective meetings: the European Days of Local Solidarity (EDLS) <sup>14</sup>, an initiative of "Platforma", was an excellent opportunity to inform citizens on what the territories were doing in terms of decentralized cooperation, together with schools, research institutes, NGOs and companies.

Having successively built the levels of dialogue with different players and having consolidated these relations, this has allowed AICCRE members to establish a national exchange platform. For this reason, it was necessary to create a dedicated discussion area, fed by the entrance of new subjects and by the continuous learning of the Agenda issues.

To understand the long training course on the 2030 Agenda issues carried out by AICCRE, it is necessary to remember the opening context: as reported in the Unipolis Foundation survey, in January 2017, 77% of Italians did not know what the Sustainable Development Goals were. Such a change of cultural approach by local governments and stakeholders could not have been completed in a shorter time. Even today there are still some issues that need to be addressed and that can represent a weak point for the SDGs' achievement. The main one, in Italy and mostly at national level, which concerns not only the public sector but often also the private sector and the world of research, is the tendency to consider sustainability as a purely environmental issue, risking paying inadequate attention to the other 4 Ps of the Agenda (People, Prosperity, Partnership and Peace). The leading role of the Ministry of the Environment was fundamental for the development of the Italian National Strategy, the subsequent passage to the Presidency of the Council of Ministers for the coordination of implementation policies provided the assurance that certain issues were not favored over the global approach required by 2030 Agenda. The "Benessere Italia" control room of the Presidency of the Council is responsible for "coordinating, monitoring, measuring and improving the policies of all the Ministries in the name of citizens' well-being".

### 3.2.2 Innovation and partnership

#### VENICE CITY SOLUTIONS 2030

AICCRE national activities for local authorities on SDGs can be summarized in the Venice City Solutions lab. VENICE CITY SOLUTIONS 2030 is a worldwide laboratory on the Sustainable Development Goals of the UN 2030 Agenda, created in Venice by AICCRE with the cooperation of UCLG, UN-Habitat, UNDP, UN SDGs Action Campaign, and which, since 2018, has brought together in Venice the governments and cities from all around the world, together with

<sup>14</sup> More information in the section of the 'Platforma' website dedicated to European Days of Local Solidarity

universities, businesses, NGOs and civil society.

Venice City Solutions was conceived as a place in which to meet and make, build, shape cities solutions, but mostly it was created to develop useful strategies for achieving the Sustainable Development Goals at the city level, sharing experiences and every step towards the common goal. Venice City Solutions 2030, in line with its laboratory philosophy, is an open shop that intends to carry out widespread action, involving every citizen, awakening their civic sense and promoting respect for the environment in which they live.

Dialogue and cooperation: the main message of the UN 2030 Agenda is clear and strong. The common goals of sustainable development can only be achieved through the construction of international cooperation relations at all levels. Working in Partnership is one of the founding principles of the 2030 Agenda's proposition *"to leave no one behind"*. In Venice every year we bring together local and national governments, companies, NGOs, universities and schools, citizens to dialogue on concrete innovative models of sustainable development for cities: not just ideas, but local solutions in line with the 17 Goals; a strategic role, which has fielded a "world laboratory" in Venice, concretizing concepts expressed several times by the UN such as active partnership, integrated approach, multilateral and multilevel solutions. Only by exchanging experiences and knowledge we can create common and concrete actions to achieve a sustainable, inclusive and supportive world that guarantees a future for the new generations.

Venice City Solutions teaches that the comparison between different worlds creates innovative synergies. These are examples that become a source of inspiration for many others, so through everyone's "good deeds" we can all write together a story that embraces the whole world.

As every year, the recommendations drawn from the works of Venice City Solutions 2030 will be presented at the High-Level Political Forum of the United Nations, a formal moment of discussion on the SDGs which is organized in July in New York, giving the opportunity to transfer innovative ideas and solutions identified by the Venetian laboratory.

## LOCAL4ACTION HUB

Venice City Solutions became in 2020 the Hub of all Local4Action HUBs worldwide: places of excellence in which to share, accelerate and replicate the best solutions around the world to make the cities more sustainable, inclusive and resilient.

Venice City Solutions 2030 is the Italian Local4Action Hub of UCLG and is the Hub of all the Local4Action Hubs because it is focused on SDG 17, the Goal representing partnership, which in a certain sense includes all the SDGs and/or better defines their community system, which is the ecosystem of HUBs. The ecosystem is a community of subjects that interact with each other in association with their physical environment: an osmotic system between local governments and all the actors of the SDGs.

The Local4Action Hubs help local and regional governments to:

1. share and learn from each other;
2. synchronize the actions that arise from the exchange between local authorities;
3. replicate the effect of the actions on a larger scale, from the local level to the global level;
4. accelerate the goal of creating a sustainable environment worldwide.

The HUBs produce experiences, solutions or good practices that are evaluated according to

two types of approach: a) a technical, scientific approach; b) a humanistic, social approach.

The technical approach adopts HUBs selection criteria or selects the experiences that the HUBs tell according to: 1. the adaptability of their proposals in different environments, different sectors, departments; 2. the functionality of the advanced proposal concerning the reference SDG; 3. the innovation of the idea; 4. concreteness in terms of results; 5. the replicability of excellence in other geographical contexts; 6. the non-overlap with other solutions, but the complementarity of the same; 7. the ability to scale up, i.e., to achieve results at the national and international levels, from the local to the global.

Therefore, the technical methodology of defining the HUBs includes other approaches, which are the humanistic, social, anthropological ones, namely related to the HUB's ability to: 1. stimulate good behavior in citizens; 2. develop a culture of SDGs; 3. be applied to everyday life; 4. push the collective towards a sense of the common good, using the emotional thrust of individuals; 5. to become an integral part of a community story, within the ecosystem of the HUBs.

Local4Action HUB ecosystem succeeds because the local approach is very different from the national one and has more possibilities to produce immediate results. This does not depend on the skills of local authorities, or on the inability of central governments, but on their approach to problems and the structure they have. Local governments, unlike central governments: 1. have a more integrated view of the policies to be adopted, while ministries work sectorally; 2. the local approach is more flexible, while the national approach is more rigid, given the less ability to react to changes; 3. bureaucracy has an even stronger impact on large organizations dimensions, while it can be more easily demolished locally, also thanks to the contribution of local stakeholders; 4. the speed of implementation of innovative solutions such as those of HUBs is significantly greater locally.

In conclusion, the purpose of the Local4Action HUBs is to accelerate the achievement of the 2030 Agenda SDGs. Local authorities have a fundamental role in this, with the solutions adopted at the local level. On a global level, dialogue and exchange become the cornerstones of change thanks and through the Local4Action Hub.

## GLOBAL SDG CITIES PORTAL

The laboratory Venice City Solutions collaborates with scientific foundations to create useful tools for local authorities for localizing SDGs such as the GLOBAL SDG CITIES PORTAL.

The SDG Portal for Italian cities shows where the cities are positioned, to date, on their journey towards the achievement of the international Sustainable Development Goals (Figure 2 shows an example for the City of Rome).



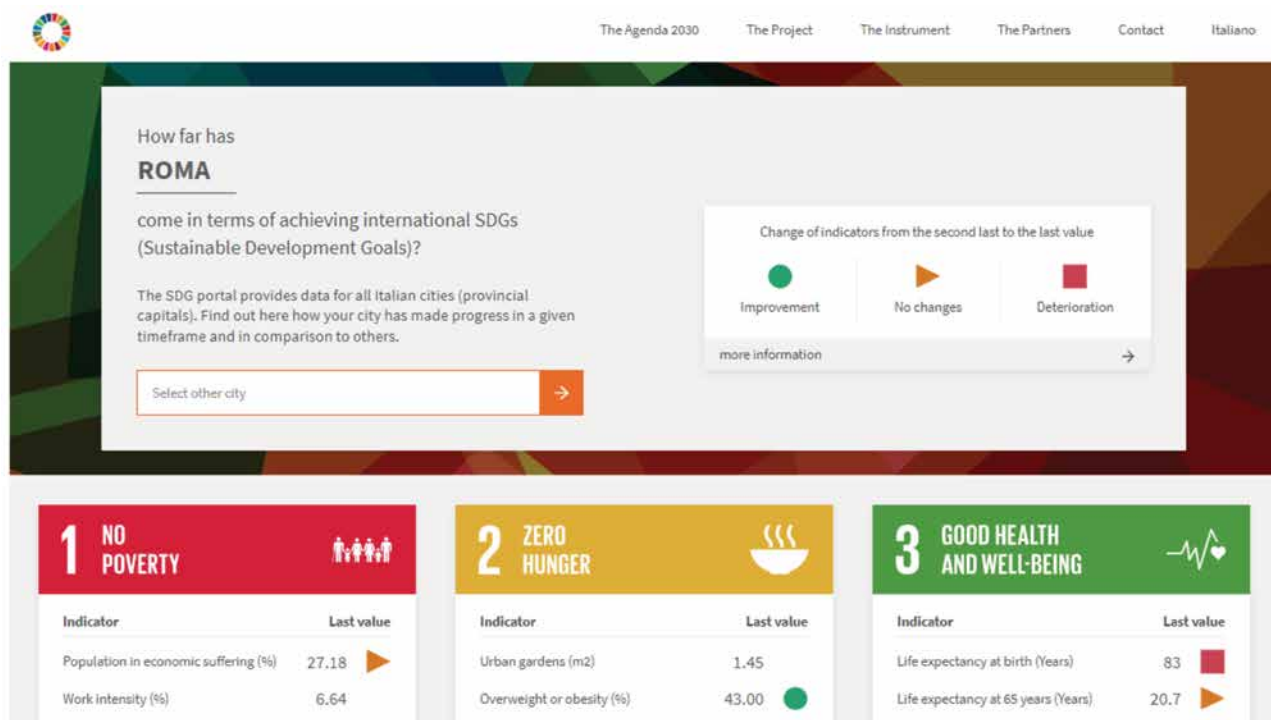


Figure 2 The SDG Portal for Italy

The Italian Portal of the SDGs indicators for the municipalities-capitals of provinces was created with the collaboration of the German section of the CEMR and two international research foundations specialized in the study of the localization of the SDGs, the Eni Enrico Mattei Foundation (FEEM) and the Bertelsmann Foundation.

The Portal is based on the data contained in the FEEM SDSN SDGs City Index (Cavalli & Farnia, 2018; Cavalli et al., 2020). Indicators for 16 out of 17 SDGs are included, with the exclusion of Goal 14 (Life below water) due to comparability reasons. In particular, the development of the Index has seen different steps:

1. Recognition of the municipality indicators (international and national level): as a starting point, international and national sources using various approaches for evaluating urban policies were investigated, both of which were based on urban indicators and had any link to the Sustainable Development Goals.
2. Identification of a set of elementary indicators (environmental, economic and social ones), data collection and elaboration of the information: Potential indicators have been collected, reviewed, and chosen in order to identify relevant SDG indicators. Individual factors, such as data validity, availability, and quality, are considered in the evaluation. The selection of those variables that are more relevant for urban ecosystems in terms of sustainability was the initial filter.
3. Collection of the elementary indicators: Selected SDG indicators were gathered from centralized sources (e. g. national statistical offices, national employment agencies, national research centres, and national ministries). If feasible, data was obtained from all municipalities-capitals of our country's provinces. A final set of quantitative indicators has been compiled and linked to the correct target.
4. Normalization and aggregation: The indicators that were found to be the most appropriate for the representation were chosen and normalized to ensure the same unit of measurement; finally, data was aggregated by SDGs using a special function.

5. Presentation of the results: The findings have been presented without aggregations, neither territorial, nor by macro-area (economic, social, political or environmental).

The SDG Portal appears to be a useful tool at the national level to check the implementation status of the SDGs at the local level and to examine if local strategies are aligned with the national one. At the same time, the portal emphasizes the key role of local authorities in defining the national strategy.

This tool has the advantage of not relying on a self-evaluation produced by the cities themselves, as it guarantees a given scientific homogeneous approach on the whole national territory, and whose evaluation process is the same as that used in Germany and soon also for the Kingdom of Morocco. The Global SDG Portal will be open to every country in the world that wants to participate, and it will be the starting point of decentralized cooperation activities between Italian cities and those of the countries.

## **NATIONAL SCHOOL for UN 2030 AGENDA**

Venice City Solutions organizes every year an innovative training course to prepare public administrations for the implementation of strategic plans on the Sustainable Development Goals (SDGs).

The aim of the school is to develop the knowledge and skills necessary to carry out projects capable of contributing to the 2030 Agenda and to European policies in the regional, national and international context. The “SDG Design Lab” course allows local authorities to acquire the fundamental notions and methodologies essential for aligning strategic plans with the SDGs. It combines the experience of Venice City Solutions 2030 and the experience in European project design. It is no longer sufficient to know the 2030 Agenda and define actions aimed at its achievement; today public bodies and institutions, but also civil, cultural and economic society organizations, must be able to: 1. integrate knowledge on European policies with the ability to approach European funding programs and with the skills of strategic planning, European and international planning; 2. rethink and redefine the Agenda evaluation systems, adopting multidimensional indicator systems capable of capturing impacts on the Agenda, European policies, and National and regional strategies; 3. redesign local policies aligned with the National and European strategic ones, around which to incentivize specific projects consistent with the SDGs and European policies.

### **THE PORT OF THE FUTURE**

The impact of technical improvements on the sector’s competitiveness, efficiency, and growth can be measured using a variety of approaches. In Cavalli et al. (2021d), innovation technologies enabled by 5G transformation have shown to serve as a junction point between the UN Sustainable Development Goals (SDGs) and the port’s Key Performance Indicators (KPIs). The 17 SDGs and its 169 associated targets serve as an official global framework for attaining sustainability across all sectors. Many of the Goals of the Agenda are directly or indirectly related to port operations. Among them, there are ecosystem conservation and management, as well as infrastructure and the circular economy, sustainable cities and communities, strong corporate governance standards, data transmissibility, and partnership

relations management.

The piloted technology model, developed by the Port of Livorno, Ericsson Telecommunications (Ericsson), Fondazione Eni Enrico Mattei (FEEM) and the National Inter-University Consortium for Telecommunications (CNIT), has been constructed with the goal of designing new models of port management and operational planning, as well as implementing sustainable port growth policies, in order to measure the economic, social, and financial benefits derived from 5G networks and digital transformation. Such an assessment is an important tool for improving port competitiveness and efficiency, as well as boosting sustainability performance by supporting public policies and commercial decisions, contributing to the development of the port. Partnerships between the public and business sectors are also required to achieve the SDGs. Port community actors operate as change agents in this scenario. They are not only points of dialogue with urban stakeholders and port cities, but they also help to reduce emissions, enable energy transition, and boost the circular economy.

## 4 PROGRESS ON THE GOALS AND TARGETS IN THE MUNICIPALITIES

### 4.1 Key trends and practices per Goal

This section presents an analysis of key trends and practices for the 2030 Agenda Sustainable Development Goals, based on data analysis and specific case studies.

A quantitative analysis with descriptive statistics for each Goal and related indicators is firstly presented. Then, a sample of case studies for each SDG is utilized to illustrate efforts, paying particular attention to innovative practices, made by different types of sub-national and local governments (small towns or big cities, provinces or regions).

For the quantitative analysis, 48 indicators have been selected; they cover 16 out of 17 SDGs, as Goal 14 “*Life below water*” has not been included for comparability issues. In particular, 20 indicators are provided at municipal level, 25 at provincial level and 3 at regional level. In most of the cases, the values of these indicators are illustrated in a 5-year time period from 2015 to 2019. The values related to the years 2020-2021 have not been included due to potential COVID-19 implications and lack of data; they have been considered only in cases where the authors have not reported an influence related to the current pandemic.

For what concerns the indicators including the variable “population” – per capita indicators or ratios with hundreds or thousands inhabitants – the 2011 National Institute of Italian Statistics census has been taken into account.

Below, in Table 2, there are all the indicators classified by their Goal and territorial level; “R” is regional, “P” is provincial and “M” is municipal.

#	Administrative Level	Indicator name
1.1	M	Population in economic suffering
1.2	M	Social welfare home assistance (per capita expenditure)
1.3	P	Average annual pension income
1.4	M	Pro-poor public social spending (per capita expenditure)
2.1	P	Endocrine, nutritional and metabolic diseases (number of deaths per 10,000 inhabitants)
2.2	M	Community urban gardens (m2 per 100 inhabitants)
3.1	P	Life expectancy at birth
3.2	P	Deaths in road accidents (aged 15-34 years)
3.3	P	Hospital emigration in other regions
3.4	P	Bed places (per 10,000 inhabitants)
3.5	P	Mortality from cancer, aged 20-64 years (per 10,000 residents)
4.1	P	Schools provided of ramps
4.2	P	People with at least a diploma
4.3	P	Children who have used municipal childcare services
4.4	P	Graduates and other tertiary qualifications, aged 25-39 years
5.1	P	Gender employment gap
5.2	P	Female municipal administrators
5.3	R	Calls to 1522 (every 10,000 women)
6.1	M	Water loss
6.2	M	Domestic water consumption (lt per inhabitant per day)
7.1	M	Solar thermal and photovoltaic on public buildings (kW every 1,000 inhabitants)
7.2	P	Electricity from renewable sources
7.3	P	Power (MW) of the installed photovoltaic systems
8.1	M	Average disposable total income per capita
8.2	P	Youth not in employment, education or training (NEET), aged 18-25 years
8.3	P	Rate of fatal injuries and permanent disability (per 10,000 employed)
8.4	P	Employment rate, aged 20-64 years
9.1	M	Mobility provided by public transportation (km-transport/inhabitant)
9.2	P	Start-ups (per 1,000 joint stock companies)
10.1	R	Gini Coefficient
10.2	M	Vouchers, care allowances and social health vouchers (per capita municipal expenses)
11.1	M	Cycle paths (equivalent meters per 1,000 inhabitants)
11.2	M	PM2.5 levels
11.3	M	PM 10 levels
11.4	M	Road surface for pedestrians (m2 per 100 inhabitants)
12.1	M	Separate waste collection
12.2	M	Residential waste collection
13.1	R	CO2 emissions
13.2	M	Flood risk
15.1	M	Urban green areas (m2 per inhabitant)
15.2	M	Trees every 100 inhabitants
15.3	M	Land consumption
16.1	P	Cases pending for 3+ years
16.2	P	Overcrowding of penal institutions
16.3	P	Voluntary homicides (per 100,000 inhabitants)
16.4	P	Thefts (number of crimes reported to the authorities, per 1,000 inhabitants)
17.1	P	Population covered by FTTH (Fiber To The House)
17.2	P	Non-profit organizations (per 10,000 inhabitants)

Table 2 List of indicators per Goal and administrative level



## Goal 1 – End poverty in all its forms everywhere

### Key targets:

1.2 By 2030, reduce at least by half the proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions

1.3 Implement nationally appropriate social protection systems and measures for all, including floors, and by 2030 achieve substantial coverage of the poor and the vulnerable

1.b Create sound policy frameworks at the national, regional and international levels, based on pro-poor and gender-sensitive development strategies, to support accelerated investment in poverty eradication actions

### Indicator 1.1 “Population in economic suffering (percentage)”

#### Municipal level

Figure 3 shows the median values of the indicator “Population in economic suffering (percentage)”. There has been a decreasing trend in 5 years (specifically for 97 municipalities out of 111), with an almost one percentage point reduction from 2015 to 2019.

In particular, the highest values have been reported in Italy’s Southern municipalities, namely: Andria – which leads the group with 42.65% of the population in economic suffering in 2019 –, Barletta, Caltanissetta, Catania, Crotone, Foggia, Naples, Ragusa, Trani, and Trapani; all of them had values higher than 34% in each year. The lowest values in 2019 are localized in the Central and Northern sides of Italy – in descending order: Belluno, Lodi, Modena, Parma, Siena, Novara, Monza, Cremona, Bologna; all of these municipalities had percentages lower than 21%.

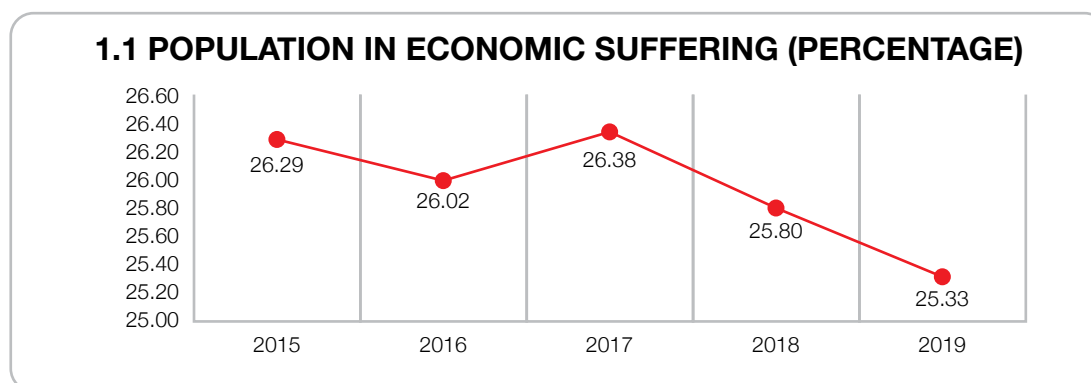


Figure 3 Median values of the indicator 1.1 “Population in economic suffering (percentage)”, 2015-2019

## Indicator 1.2 “Social welfare home assistance (per capita expenditure in euros)”

### Municipal level

Figure 4 reveals a slight decline in “Social welfare home assistance (per capita expenditure in euros)” median values. However, it must be highlighted that 48 municipalities have still an increasing trend in the time series considered.

The 10 municipalities with the lowest levels of expenditure are: Asti, Avellino, Benevento, Carbonia, Catanzaro, Cesena, Livorno, Pisa, Reggio nell’Emilia, and Trieste. On the other hand, the top 10 in terms of expenditure are: Aosta, Bolzano, L’Aquila, Macerata, Nuoro, Oristano, Ravenna, Rome, Salerno, Trento.

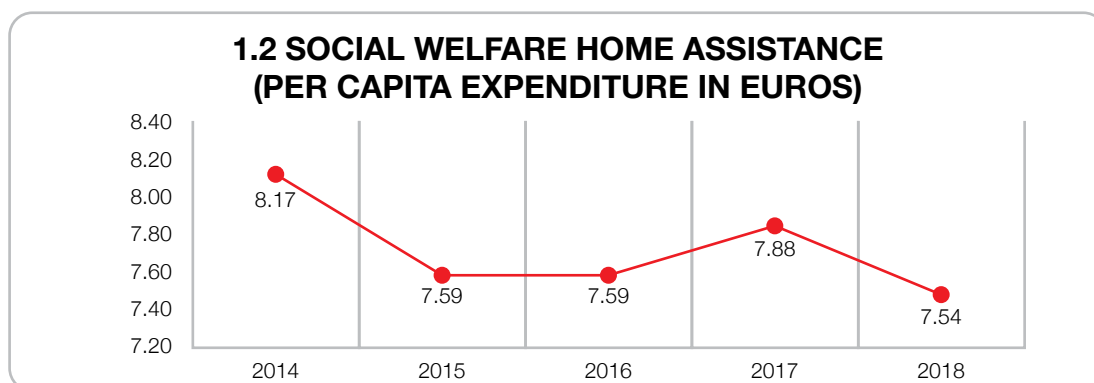


Figure 4 Median values of the indicator 1.2 “Social welfare home assistance (per capita expenditure in euros)”, 2014-2018

## Indicator 1.3 “Average annual pension income (EUR)”

### Provincial level

Moving now to Figure 5, all the provinces have disclosed an increase in the average pension incomes. None of them had a value in 2019 lower than the one in 2015.

Milan is at the top of the list with an average annual pension income of € 23,127.50 (2019); on the contrary, Crotone ranks last with an average annual pension income of € 14,422.70. In general, there is a clear gap between the North and the South of Italy. The highest values are registered in Bologna, Genova, Gorizia, L’Aquila, Milan, Parma, Rome, Turin, and Trieste and the lowest ones are in Crotone, Agrigento, Vibo Valentia, Enna, Cosenza, Trapani, Ragusa, Foggia, Potenza and Caltanissetta.

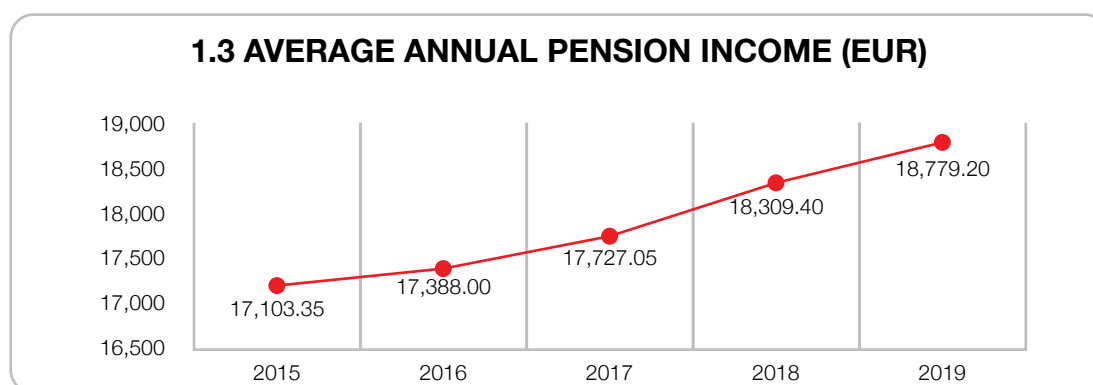


Figure 5 Median values of the indicator 1.3 “Average annual pension income (EUR)”, 2015-2019



## Indicator 1.4 “Pro poor public social spending (per capita expenditure in euros)”

### Municipal level

Figure 6 shows the trend in the median values of the indicator “Pro-poor public social spending (per capita expenditure in euros)”. 60 municipalities have seen increasing trends in these 5 years. Nevertheless, the median value decreased from 10.49 to 10.34. Just 43 municipalities have a declining trend, and 7 municipalities had the same values of the first year analyzed.

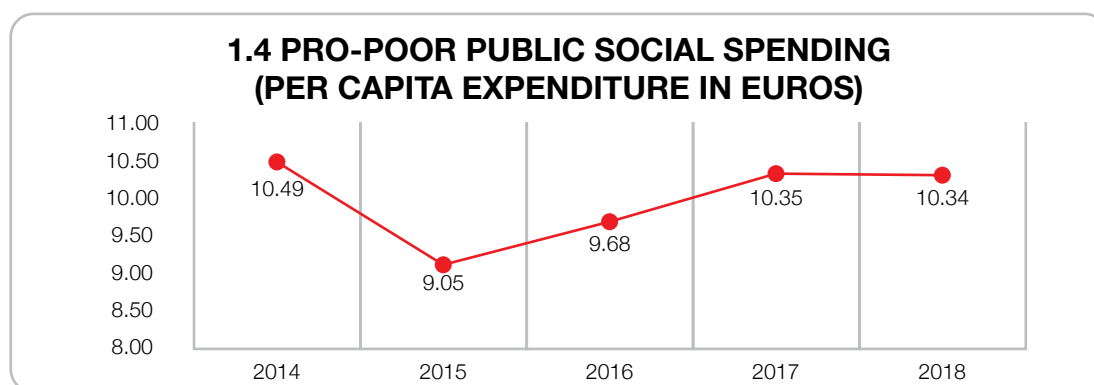


Figure 6 Median values of the indicator 1.4 “Pro poor public social spending (per capita expenditure in euros)”, 2014-2018

### Best practices

#### RE.S.I.L. PROJECT – NETWORK OF SERVICES FOR EMPLOYMENT AND SOCIAL INCLUSION

Municipality of Città di Sant’Angelo (Province of Pescara)

Inhabitants: 15,034

The general strategy: creation of a stable connection between the productive sectors of the territory and the territorial services (social, health, training) by creating personalized paths of social and working inclusion aimed at people at risk of exclusion; full implementation of a synergy formalized in agreements to be signed between public, private, third sector bodies, associations etc. for the socio-labor inclusion of disadvantaged groups and the creation of a local community based on solidarity; stimulation of creativity, conscious choice, self-entrepreneurship and active participation of all citizens in the social, working and productive life of the community, eliminating as much as possible the inequalities and causes of exclusion; integration of the services/interventions envisaged by the RE.S.I.L. Project with other territorial plans (provincial, regional, etc.). A desk with training and information functions, managed by the social assistant with the support of a specialized team for the preparation of personalized training and rehabilitation projects.

#### HELP DESK FOR THE INCLUSION INCOME SUPPORT AND FOR THE CITIZENS’ INCOME OF THE MARCHE REGION

Municipality of Fano (Province of Pesaro-Urbino)

Inhabitants: 102,460

Social and work inclusion of the most vulnerable groups through the provision of services: R.e.I. and R.d.C. help desk, Social Services, Socio-Health Services and through social inclusion processes where it is important to build a network project with all the social actors

of the territory, especially thanks to the collaboration with the third sector. Furthermore, it is essential to collaborate with the Employment Center, to activate the Wage Integration Treatment and the tutors who support users in the active search for work. Through the ESF funds, seven social assistants have been recruited to cover the 9 Municipalities belonging to the Social Territorial Area 6 (ATS), whose leading Municipality is Fano. This choice was made to respond to the national Legislative Decree 147/17, and to respond more efficiently to the needs of citizens, avoiding them from their place of residence.



## 2 ZERO HUNGER



## Goal 2 – End hunger, achieve food security and improved nutrition and promote sustainable agriculture

### Key targets:

2.2 By 2030, end all forms of malnutrition, including achieving, by 2025, the internationally agreed targets on stunting and wasting in children under 5 years of age, and address the nutritional needs of adolescent girls, pregnant and lactating women and older persons

2.3 By 2030, double the agricultural productivity and incomes of small-scale food producers, in particular women, indigenous peoples, family farmers, pastoralists and fishers, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets and opportunities for value addition and non-farm employment

2.4 By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality

### Indicator 2.1 “Endocrine, nutritional and metabolic diseases (number of deaths per 10,000 inhabitants)”

#### Provincial level

Figure 7 shows that there has been a rising trend in the median values of the indicator “Endocrine, nutritional and metabolic diseases (number of deaths per 10,000 inhabitants)” from 2014 to 2018. Specifically, 82 provinces (out of 107) have seen a significant increase in deaths related to nutritional diseases that slows down the progress towards the achievement of Goal 2.

The minimum value is 2.68 (Bergamo) and the maximum is 7.95 (Agrigento).

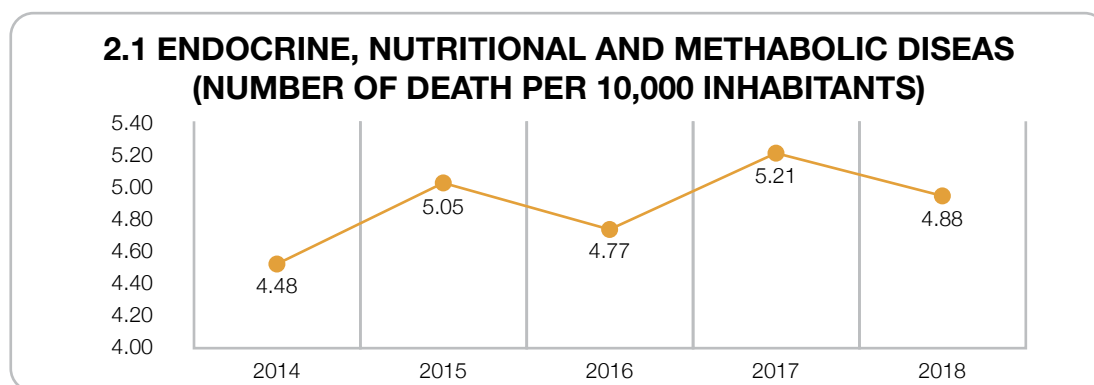


Figure 7 Median values of the indicator 2.1 “Endocrine, nutritional and metabolic diseases (number of cases per 10,000 inhabitants)”, 2014-2018

## Indicator 2.2 “Community urban gardens (m2 per 100 inhabitants)”

### Municipal level

In average terms, there has been an increase in terms of community urban gardens (m2 per 100 inhabitants) in the Italian municipalities (Figure 8). Going into details, it is relevant to notice that 74 municipalities have had same values from 2015 to 2019, 33 entities have had an increased one and 29 still declare 0 m2 per 100 inhabitants of urban gardens. At the top of the list, Fermo, a municipality in Central Italy, leads the group with its 92.45 m2 per 100 inhabitants of community urban gardens.

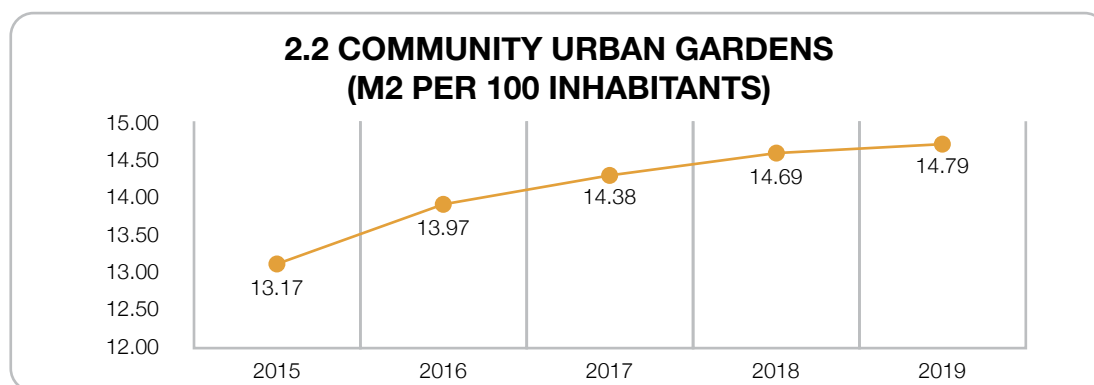


Figure 8 Average values of the indicator 2.2 “Community urban gardens (m2 per 100 inhabitants)”, 2015-2019

### Best practices

#### GREAT LIFE – Growing Resilience Agriculture

Municipality of Cento (Province of Ferrara)

Inhabitants: 36,000

Great Life is a project that aims to test new resilient organic cultures to reduce the impact of climate change on agricultural activities by proposing a vision of agriculture as a practice capable of acting on the territories taking into consideration all aspects in an integrated and resilient way: from the biodiversity to the care of relationships, from the protection of resources to the economy, to generate well-being for people and to plan a collective future. Organic crops are produced with sustainable techniques by replacing traditional crops, such as corn, with resilient plantations such as African sorghum and millet, cereals that reduce water consumption and, therefore, the impacts on the territories, increasing biodiversity and supporting the farmers' income. In this holistic vision, one of the roles of the Municipality of Cento is to make school canteens available to experiment with foods based on sorghum and millet prepared by chefs, then reworked by the cooks of the schools of the Emilian municipality. Targets: Reduction of water consumption for irrigation by adopting more resistant summer crops (millet and sorghum) instead of corn; Changing consumer behavior by stimulating the purchase of resilient products. Increased general soil fertility, the content of organic substance, through the adoption of resilient agricultural practices (organic matter should increase from 0.4 to 0.8% in three years); At least four resistant products tested, developing recipes, raising awareness among consumers and public authorities on the

advantages of more responsible food consumption; Promotion of a change in the approach to green public procurement through the inclusion of the “resilience factor” in the minimum Italian environmental requirements.

## **AYLLUS - Biodiversity and agroforestry vocation as means to face poverty, intensive exploitation of natural resources and climate change.**

Veneto Region

Inhabitants: 4,905,854

Starting from the sustainability risk factors of the of the Bolivian Amazon Departments of Beni and Pando (the poverty of the indigenous communities and the lack of employment opportunities, the intensive exploitation of natural resources that poses a serious risk to biodiversity, the climate changes that increases temperatures and the drought associated with forest fires), the project aims to invest in the area’s potential, biodiversity and agroforestry vocation, through forest products such as wild cocoa, asai, majo and tamarind. These productions, because of their nutritional capacity, favor the food security of the local populations. These are relatively new production sectors in the context of the Bolivian Amazon, which require integrated intervention to ensure that the benefits are shared equally among all the actors involved, primarily the indigenous peasant communities. One of the project actions is to increase production volumes and productivity, while maintaining family-level agriculture through the promotion of Agro-Forestry Systems (SAF). The SAFs allow, in fact, the sustainable management of natural resources and land, maximizing their potential and contributing to food security and improving people’s living conditions, through diversification of production and the generation of a tradable production surplus. The focus of the project is young people and women, who play an active role in the SAFs and who are key actors in the change.



## Goal 3 – Ensure healthy lives and promote well-being for all at all ages

### Key targets:

3.4 By 2030, reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being

3.6 By 2020, halve the number of global deaths and injuries from road traffic accidents

3.8 Achieve universal health coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all

3.9 By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination

### Indicator 3.1 “Life expectancy at birth (years)”

#### Provincial level

Figure 9 shows the trend related to the indicator “Life expectancy at birth (years)” that has registered an increasing number in its median values. Specifically, there has been a one-year increase in life expectancy from 2015 to 2019.

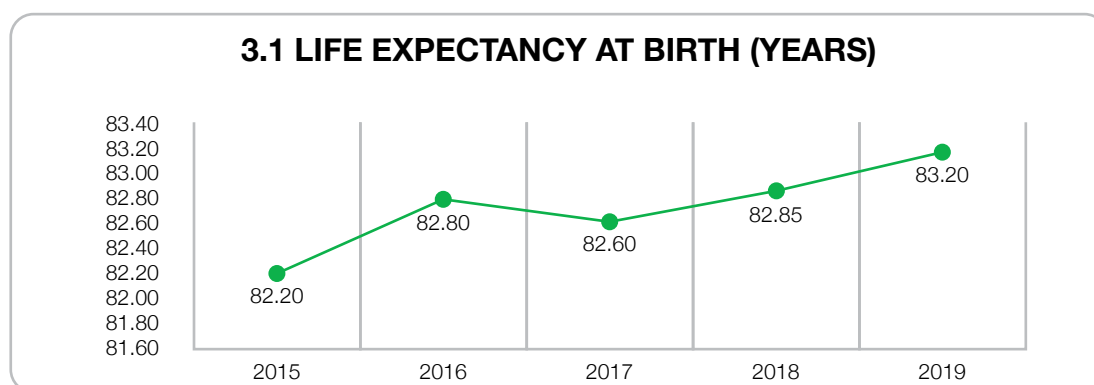


Figure 9 Median values of the indicator 3.1 “Life expectancy at birth (years)”, 2015-2019

## Indicator 3.2 “Deaths in road accidents (aged 15-34 years)”

### Provincial level

The indicator “Deaths in road accidents (aged 15-34 years)” trend remains steady in its median values from 2016 to 2019 (Figure 10); nevertheless, 42 provinces have seen an increasing trend.

The highest values have been enumerated in Ravenna (2.00), Ragusa (1.90), Nuoro (1.70) and Belluno (1.60).

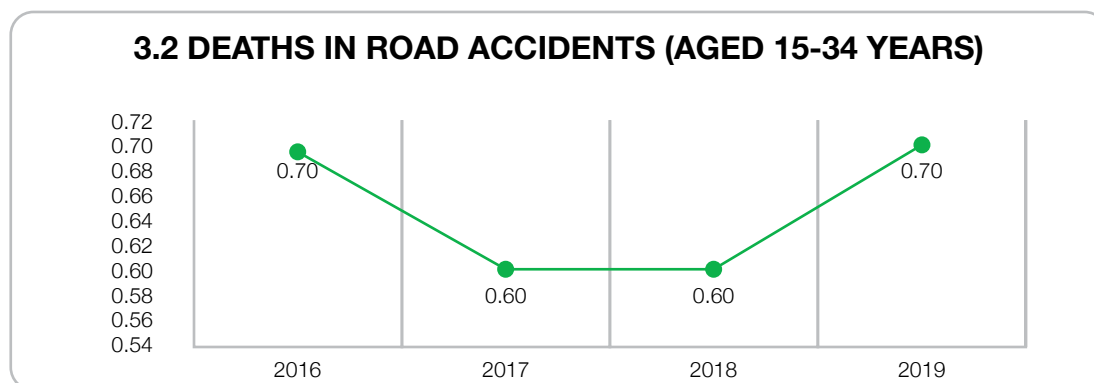


Figure 10 Median values of the indicator 3.2 “Deaths in road accidents (aged 15-34 years)”, 2016-2019

## Indicator 3.3 “Hospital emigration in other regions (percentage)”

### Provincial level

The hospital emigration indicator has a very important implication linked to the current health crisis. Figure 11 shows a marked increase from 2015 to 2019 in hospital emigration in other regions in many provinces of the nation. Particularly, 69 provinces have recorded an increasing trend and the highest values have been registered in Central and Southern provinces, namely, Rieti (32.5), Isernia (30.4), Campobasso (27.9), Matera (27.3), Potenza (23.4), Cosenza (23.4), Viterbo (22.8), Teramo (22.40), L’Aquila (21.8) and Reggio di Calabria (21.5).

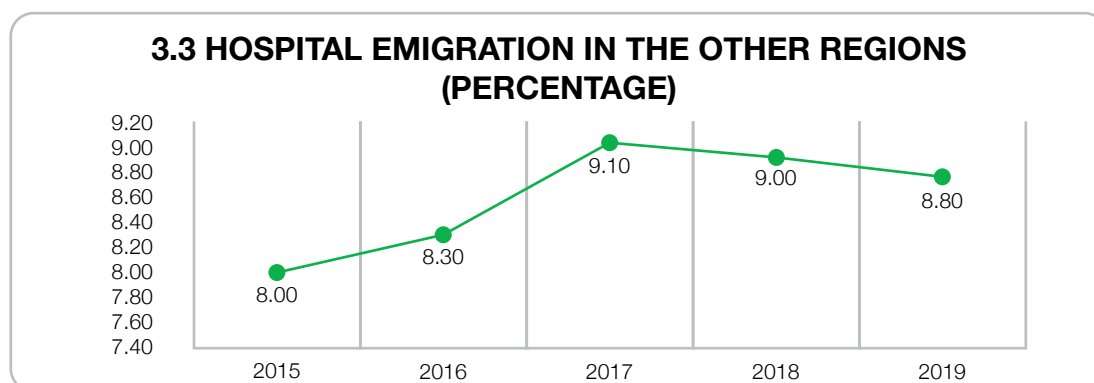


Figure 11 Median values of the indicator 3.3 “Hospital emigration in other regions (percentage)”, 2015-2019

## Indicator 3.4 “Bed places in hospitals (per 10,000 inhabitants)”

### Provincial level

Figure 12 reveals a slight fall in bed places in hospitals (per 10,000 inhabitants) at the provincial level. The lowest values are found in Vibo Valentia (14.1), Barletta-Andria-Trani (16.3), Trapani (18), Agrigento (19.9), Viterbo (20.3), Rieti (21.5) and Ragusa (21.6).

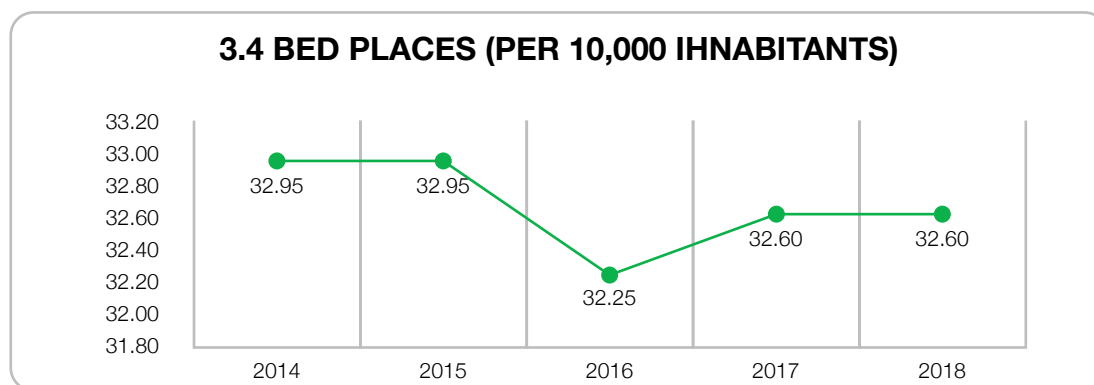


Figure 12 Median values of the indicator 3.4 “Bed places in hospitals (per 10,000 inhabitants)”, 2014-2018

## Indicator 3.5 “Mortality from cancer, aged 20-64 years (per 10,000 residents)”

### Provincial level

“Mortality from cancer, aged 20-64 years old (per 10,000 residents)” has gradually dropped until 2018 (Figure 13). The decreasing trend has been recorded in many provinces (80). In opposition, 22 provinces have reported an increasing number of deaths from cancer and 5 out of 22 had 2018 values under the median of the distribution.

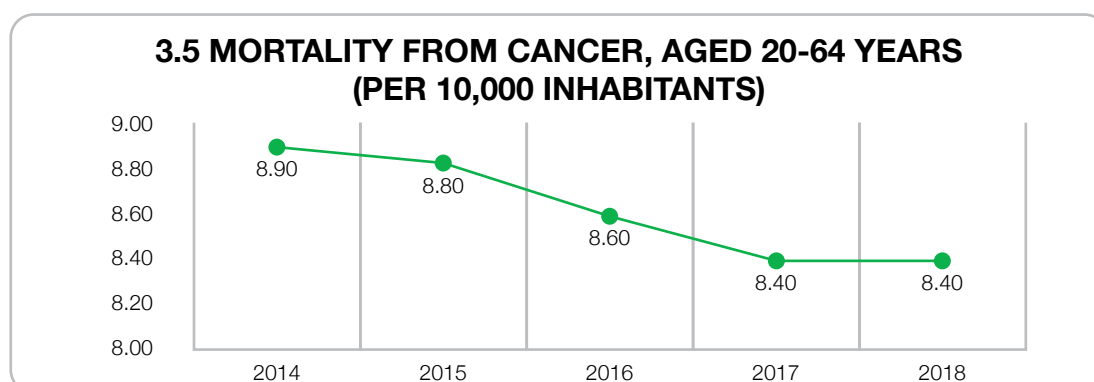


Figure 13 Median values of the indicator 3.5 “Mortality from cancer, aged 20-64 years (per 10,000 residents)”, 2014-2018

## Best practices

### BAULADU ZERO ASBESTOS

Municipality of Bauladu (Province of Oristano)

Inhabitants: 662

The Municipality of Bauladu, through the grant of 95% of the costs to private citizens and businesses, intends to completely eliminate asbestos from the municipal territory in three years and make the small town of the Alto Campidano the first common “zero asbestos” in Sardinia. In 2019, a mapping and census activity carried out by the Regional Association ex Exposed Asbestos Sardegna, had certified the presence of 11,772 sqm of asbestos products in the country. Of these, 682 square meters are in high priority areas (i.e. close to places of public interest) and 3,813 sqm (one third of the total) in the village countryside. In 2020, the local authority published the ranking list for the first year of the call, for a total of € 167,000.00 in resources from the municipal budget, which will enable the first 3,000 sqm of detrimental fiber to be removed from the environment.

### BORGIO ‘TUTTO È VITA’ (‘EVERYTHING IS LIFE’ HAMLET)

Municipality of Cantagallo (Province of Prato)

Inhabitants: 3,167

The project is reviving the Borgo, almost completely destroyed and abandoned for 50 years, through the reconstruction of all its buildings, the building of a Hospice, the settlement of families and a community of monks who is repopulating it, and revitalizing the mountain territory by reintroducing traditional subsistence practices with a view to environmental sustainability, taking care of every person who, for different reasons may pass by or stay at the Borgo in a spirit of total hospitality, sharing, respect for human rights, and the promotion of a peaceful and non-violent culture.

Eco-sustainability: recovery of construction materials from demolitions or from materials considered to be production waste.

Energy supply: a study group has been set up among our skilled volunteers and experts to find the most suitable energy supply sources for the place. Photovoltaic panels will be installed, within the limits allowed by landscape constraints, and geothermal will be used to heat some rooms.

Phytodepuration: a natural way of purifying wastewater that takes advantage of the principle of water-based self-purification and a rainwater collection system for irrigation use and for sanitary drains. Self-sustenance of the resident community. Planting an organic orchard and olive trees using native tree species that do not require chemical treatments; an organic garden for self-sustenance and a medicinal herb garden have been created. An oven has been built for the production of bread and other products ground directly from organic and ancient grains with a mill installed in our facilities.

Integral care of every human being until the end: in the context of the Borgo, a number of facilities (including a Hospice and the “Casa del Grano”) will be set up to accommodate people suffering from diseases considered to be incurable and their family members (even

after the death of a loved one). This is intended to contribute to the humanization of end-of-life care and to improve its quality. Each person will be cared for in integrated paths - based on an essential and direct relationship with nature - taking care of the physical, social, emotional, and spiritual needs in the different phases of the disease until death. Offering an innovative vision of death and dying, the sick person and his family will be welcomed and cared for in a context of life: they will be able to participate actively in the activities of the Borgo as long as their stamina allows it and then be assisted in the Hospice when this fails.



## 4 QUALITY EDUCATION



# Goal 4 – Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

### Key targets:

4.1 By 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes

4.2 By 2030, ensure that all girls and boys have access to quality early childhood development, care and pre-primary education so that they are ready for primary education

4.3 By 2030, ensure equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university

4.5 By 2030, eliminate gender disparities in education and ensure equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities, indigenous peoples and children in vulnerable situations

4.a Build and upgrade education facilities that are child, disability and gender sensitive and provide safe, non-violent, inclusive and effective learning environments for all

4.c By 2030, substantially increase the supply of qualified teachers, including through international cooperation for teacher training in developing countries, especially least developed countries and small island developing States

### Indicator 4.1 “Schools provided of ramps (percentage)”

#### Provincial level

For what concerns indicator 4.1 “Schools provided of ramps (percentage)”, there has been reported a sharp drop in terms of median values in the provincial distribution (Figure 14). Precisely, all the provinces have had a negative trend from 2015 to 2019.

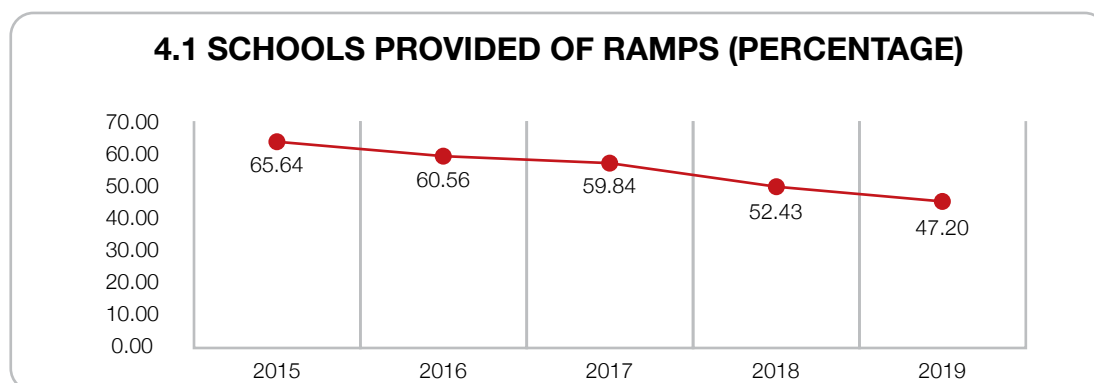


Figure 14 Median values of the indicator 4.1 “Schools provided of ramps (percentage)”, 2015-2019

## Indicator 4.2 “People with at least a diploma (percentage)”

### Provincial level

What stands out in Figure 15 is the continual growth of people with at least a diploma, which presents an increase of around 3 percentage points in 5 years; most of the provinces (82) have a positive trend. There is still a lot of work to do, as there have been 23 negative trends.

The geographic dimension related to the negative trends is heterogeneous: Piedmont, Lombardy, Marche, Campania and Sicily.

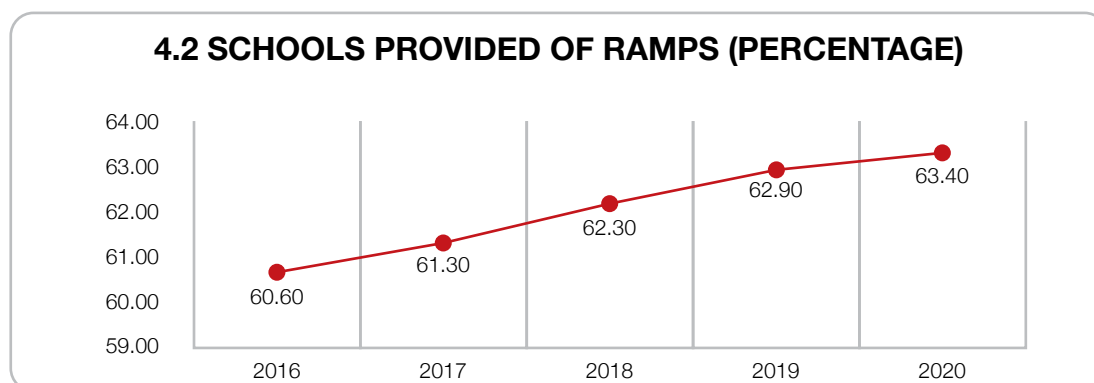


Figure 15 Median values of the indicator 4.2 “People with at least a diploma (percentage)”, 2016-2020

## Indicator 4.3 “Children who have used municipal childcare services (percentage)”

### Provincial level

The indicator 4.3 “Children who have used municipal childcare services (percentage)” has reported an increase in its median values, from 11.1% to 13.7% (Figure 16).

Nevertheless, there have been 98 provinces with positive trends, but only 4 provinces have had a value that is more than 33% in 2019 (Bologna, Florence, Gorizia, Trieste). The 10 provinces with values lower than 6% are in Southern Italy – mostly in Sicily, Campania and Calabria.

Considering the “Barcelona target” set in 2002 by the European Council about childcare education, Italy should have provided childcare by 2010 to 33% of children under 3 years of age, a goal that, as it clearly emerged here, has not been reached yet.

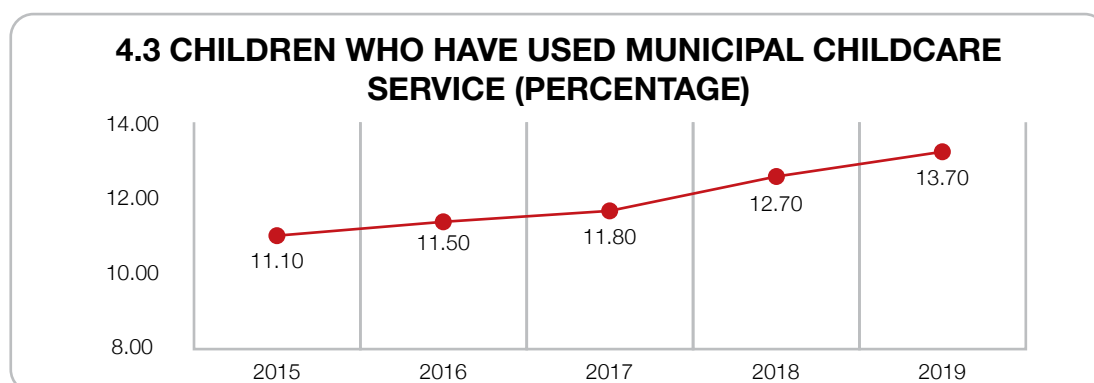


Figure 16 Median values of the indicator 4.3 “Children who have used municipal childcare services (percentage)”, 2015-2019

## Indicator 4.4 “Graduates and other tertiary qualifications, aged 25-39 years (percentage)”

### Provincial level

The provincial indicator 4.4 “*Graduates and other tertiary qualifications (25-39 years) (percentage)*” presents, on the contrary, an increase in its median values (Figure 17): from 23.1% in 2016 to 26.1% in 2020.

There are provinces/metropolitan cities with values over 35%, namely: Ancona, Ascoli Piceno, Bologna, Florence, Isernia, Milan, Monza and Brianza, Padua, Rome and Trieste.

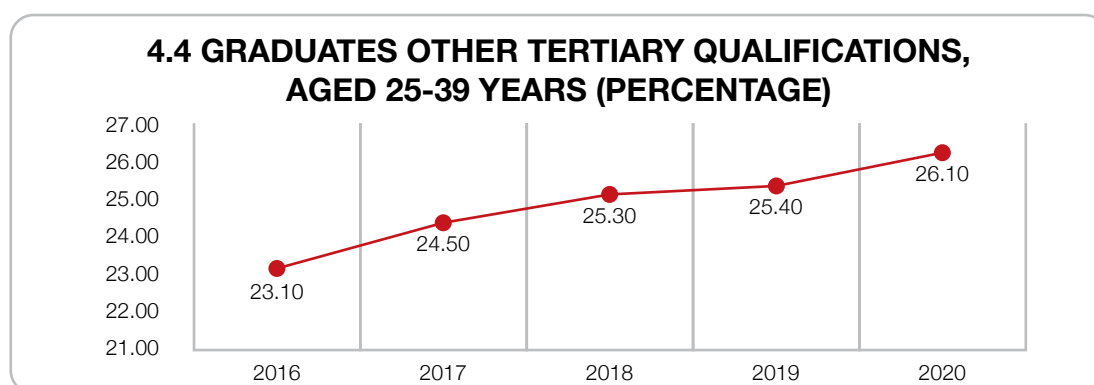


Figure 17 Median values of the indicator 4.4 “*Graduates and other tertiary qualifications, aged 25-39 years (percentage)*”, 2016-2020

### Best practices

#### **A.P.P. VER – LEARNING TO PRODUCE GREEN - A TERRITORIAL MODEL TO BRING TRAINING CLOSER TO THE PRODUCTIVE WORLD**

Metropolitan City of Turin

Inhabitants: 2,256,108

The project aims to respond to the difficulties that the cross-border area presents in relation to the distance between education, professional training and changes in the production system: to the need of the territorial fabric to innovate (in economic models, in demand and working methods) in the direction of the green economy, does not match an appropriate training offer. With A.P.P. VER., the institutes of upper secondary schools and the professional training agencies, carry out curricular innovations and curvature of skill profiles that bring closer to the changes introduced by sustainable development and the green economy in the territory. Through the analysis of needs and demands of the schools and the local area, teachers and other professional figures were trained on many topics such as: energy transition, social innovation, catering and sustainable tourism, territorial resiliency design and new technologies, business models for sustainable development in agriculture, etc. The

A.P.P. model VER. has favored the creation of a collective players which will promote and guide the processes of change of the territory, of reading and interpretation and which will be able to innovate educational tools and practices. Through the use of the “Green Book”, a tool to learn about the green economy and sustainable development, the “green” actors of the territory have been selected. The Green Book has facilitated the interaction between institutional, educational, associative and productive actors in the territory.

## **A SHEEP’S WOOL COAT FOR THE ELEMENTARY SCHOOL**

Municipality of Malegno (Province of Brescia)

Inhabitants: 2,000

Reference principle: until a few years ago, sheep farming was one of the traditional breeding farms in the Val Camonica area. In recent years the few remaining breeders have to dispose of the sheep’s wool as special waste, as there is no longer a demand. This step makes breeding even more inconvenient. In the logic of the circular economy, the project was based on the idea of making from a special waste an economic opportunity for the restructuring of the school: the wool has gone from special waste to construction material, giving it a new possibility also of economic use.

Project: the contract documents, with a total value of € 520,000, the obligation to supply sheep wool as an insulation material was included.

Quality of sheep’s wool: material of natural origin; low environmental impact; ecological and recyclable; wasted resource recovered; non-toxic and bactericidal.

Building benefits: thermal insulation; acoustic reduction of external noise with the overcoat system (sheep wool thermal insulation panels, located on the entire surface of the outer walls of the elementary school); ventilated facade: protection and coating with interspaces that allows natural air circulation.

Economic recovery: to improve the performance of the building, a triple layer of sheep’s wool panels was inserted allowing for energy recovery of the building.

## 5 GENDER EQUALITY



## Goal 5 – Achieve gender equality and empower all women and girls

### Key targets:

5.1 End all forms of discrimination against all women and girls everywhere

5.4 Recognize and value unpaid care and domestic work through the provision of public services, infrastructure and social protection policies and the promotion of shared responsibility within the household and the family as nationally appropriate

5.5 Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic and public life

### Indicator 5.1 “Gender employment gap (percentage)”

#### Provincial level

The Gender employment gap, an indicator elaborated using the absolute difference between the employment rate of men and the employment rate of women aged 15-64 years, sees a decreasing trend in its overall median values in the last five years with around a 0.3 percentage point reduction (Figure 18).

Even if there has been an overall decreasing trend, this does not symbolize enough efforts about inclusive and equal employment policies, as there have been 59 provinces with a rising trend in the last 5 years.

The highest values in terms of percentage – more than 30% – are in the South of Italy, with Enna (30.01), Taranto (31.56), and Caltanissetta (34.84); on the other hand, the lowest Gender Employment Gaps – from 7 to 10% – are found to be in Central-Northern Italy, namely in Arezzo (9.98), Biella (7.76), Cagliari (9.31), Milan (8.96), Nuoro (8.56), Trieste (6.77) and Aosta Valley (7.64).

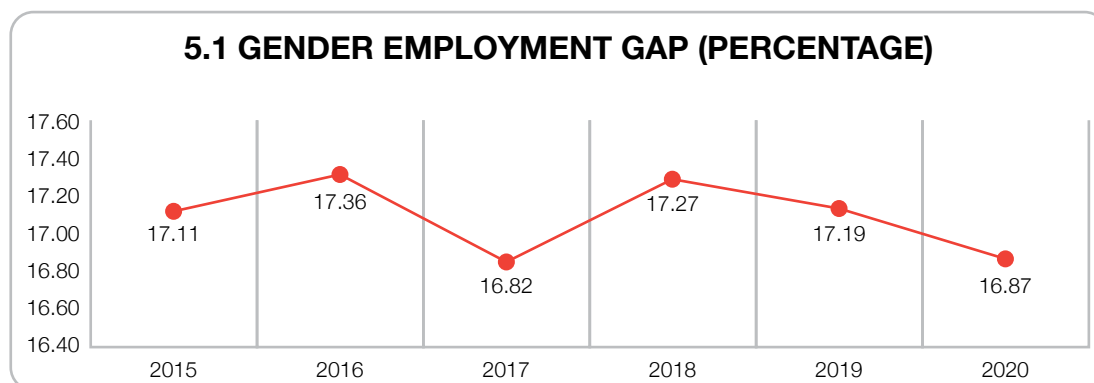


Figure 18 Median values of the indicator 5.1 “Gender employment gap (percentage)”, 2015-2020

## Indicator 5.2 “Female municipal administrators (percentage)”

### Provincial level

The last 5-year trends denoted a continuous increase in female representation in municipal administrations (Figure 19). Nevertheless, there is still not an equal presence of men and women as the median value of the total distribution is 34%. There have been wide positive trends within almost all provinces (102), with only 3 provinces in 2020 with values higher than 40%: Ravenna (42.6%); Cagliari (41.8%); Bologna (40.9%).

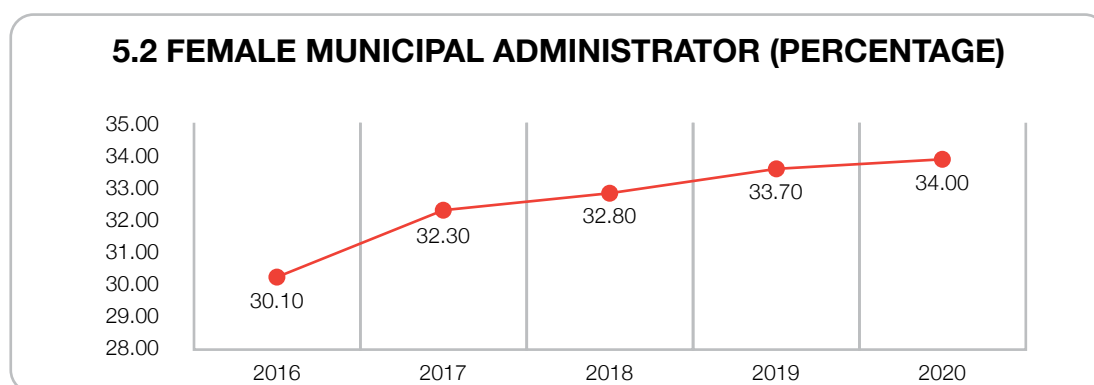


Figure 19 Median values of the indicator 5.2 “Female municipal administrators (percentage)”, 2016-2020

## Indicator 5.3 “Calls to 1522 (every 10,000 women)”

### Regional level

The indicator 5.3 “Calls to 1522 (every 10,000 women)” refers to the national number to contact in case of violence, abuse or stalking, activated by the Presidency of the Council of Ministers and the Department for Equal Opportunities. It is active 24 hours a day, every day.

As can be seen in Figure 20, the number of calls to the emergency line for violence against women has increased in all regions: in 2016 there have been around 45 calls every 10,000 women, while in 2020 it has reached the value of 74.91.

Moreover, the highest value is registered in Lazio and the lowest in Trentino Alto Adige.

In conclusion, it can be estimated that in 2016 there have been 20.4 calls to 1522 a day, and in 2020 around 35 calls a day.

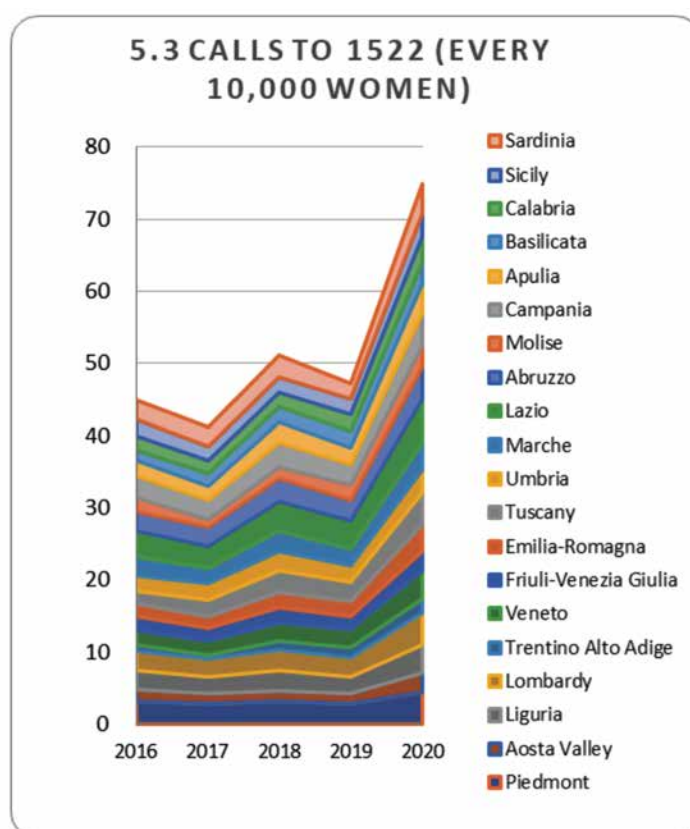


Figure 20 Median values of the indicator 5.3 “Calls to 1522 (every 10,000 women)”, 2016-2020

## Best practices

### WORK-LIFE BALANCE

Lazio Region

Inhabitants: 5,730,399

The INTESA Program has allocated regional funds to 2 work-life balance measures:

1. Smart working for regional employees to cope with the many requests for flexibility;
2. Financing of 5 work-life balance plans and 70 employees for the testing of flexible organizational models in SMEs.

INTESA for Micro-Enterprise for Women: funding for the creation or consolidation of female micro-enterprises, individual or cooperative, to be established or already established for not more than 36 months;

“LIFETIME” relocation contract: launched in 2016, an ongoing measure in favor of unemployed women with children. Women, adhering to the relocation Contract, were taken in charge by the accredited occupational institute. With their support they could start an active and personalized path for their job reintegration, both employment and self-employment. To facilitate mothers, the measure provides, in addition to work mentoring, an employment bonus for companies that will hire women who have signed a relocation contract and a conciliation bonus for the purchase of services for children (nursery, baby-sitting, and playroom).

### NAPOLI FOR EQUAL OPPORTUNITIES

Municipality of Naples

Inhabitants: 2,967,117

Implementation of the Strategic Plan “*Municipal Plan for Equal Opportunities 2020*” that promotes a real cultural change, opposing the stereotypes and prejudices that hinder the entry of women and LGBT people into the workplace, discrimination in the workplace and in society in general and any form of exclusion from active life and decision-making processes.

Following meetings between the Municipality and the social partners, the following Macro areas of action were decided:

“Napoli for LGBT people”: contrast to homophobia, family violence and in the workplace; contrast to the spread of sexually transmitted diseases (STD) with attention to HIV-positive people. Training/awareness courses to law enforcement, public administration employees, prison staff, doctors and paramedics, professors, students;

“Education to emotions”: aimed at middle and high school students, parents and teachers, on how to relate to the other, and how the action affects citizenship at various levels: participation, mutual respect and recognition of difference;

“The Bank of Time 2.0”: the innovation is creating a digital and social time bank: the exchange is managed through an IT platform able to meet the demand and supply of the requested services and to manage the hours spent and offered by the users through the activation of personal and digital current accounts;



“Women network for women”: strengthen the networks of services for women already existing in the territory through new ways of connection (physical and virtual) that promote the opportunities offered by the territory and trigger new processes of sharing and knowledge for the women of the city;

“Women’s opportunities: new professional skills”: new training paths for job opportunities for women and LGBT communities, young and adult for job placement and reintegration into regional strategic production systems;

“Urban Security”: reduce the phenomena of urban violence and stimulate female participation in decision-making processes; to promote the gender approach in urban planning and planning processes; pursuing the goal of equal opportunities between men and women considering the different needs related to living, working, moving and enjoying the territory, aware that the territorial planning is neutral with respect to gender.

## 6 CLEAN WATER AND SANITATION



### Goal 6 – Ensure availability and sustainable management of water and sanitation for all

#### Key targets:

6.4 By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity

6.5 By 2030, implement integrated water resources management at all levels, including through transboundary cooperation as appropriate

6.6 By 2020, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes

#### Indicator 6.1 “Water loss (percentage)”

##### Municipal level

The indicator 6.1 “*Water loss (percentage)*” trend from 2015 to 2019 is decreasing in overall median values (Figure 21). Only 44 out of 111 municipalities have recorded an increasing trend. The worst situation has been recorded in Central and Southern Italy, with water losses percentages higher than 65 (i.e. Frosinone, 77.8%; Vibo Valentia, 71.9%; Latina, 70.3%; Campobasso, 68.2%; Trapani, 67.9%; Nuoro 65.5%).

On the contrary, the lowest value monitored is in Pordenone where only 11.3% of the water put into the water distribution network was lost.

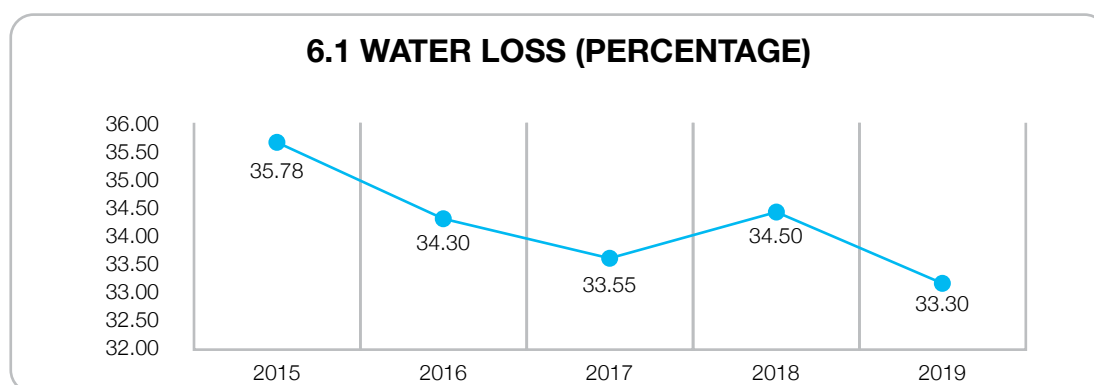


Figure 21 Median values of the indicator 6.1 “*Water loss (percentage)*”, 2015-2019

## Indicator 6.2 “Domestic water consumption (liters per inhabitant per day)”

### Municipal level

Considering the domestic water distribution, it has been recorded a decrease in water consumption median values, from 146.75 to 144 liter per day per inhabitant (Figure 22). Despite this trend, there are still 28 municipalities that account for an increase in their values in 2019 with respect to year 2015.

There are 6 municipalities with values over 200 liters per day per inhabitant (2019): Pavia (209.4); Monza (220.2); Chieti (217.4); Brescia (217.1); Milan (269.1); Reggio di Calabria (240).

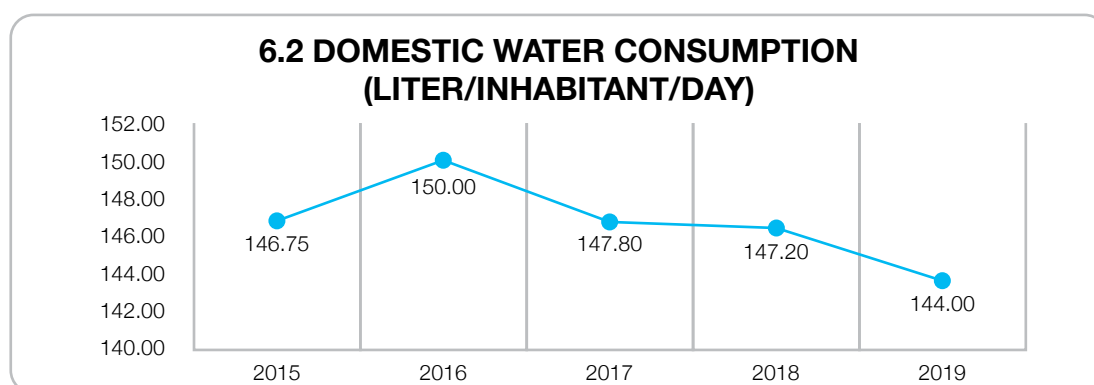


Figure 22 Median values of the indicator “Domestic water consumption (liters per inhabitant per day)”, 2015-2019

### Best practices

#### HIGH QUALITY WATER

Municipality of Collesalveti (Province of Livorno)

Inhabitants: 16,759

The Municipality of Collesalveti, in agreement with ASA Spa, took part in the “AQ” High Quality Water project for the construction of free public fountains equipped with a superior treatment system: the water is filtered, debacterized, refrigerated, dechlorinated and with the right salinity level. Citizens can thus drink superior quality water for free and avoid buying mineral water distributed in classic plastic bottles, protecting the environment by reducing the consumption of plastic packaging. The municipal administration strongly believed in this process which has been made even more sustainable thanks to the coverage of operating costs with the contributions deriving from renewable energy plants in the area.

## CONVERSION OF THE IRRIGATION PRACTICES

Friuli Venezia Giulia Region

Inhabitants: 1,201,510

The Pianura Isontina Reclamation Consortium is one of the three reclamation consortia of the Friuli Venezia Giulia Region and was created with Presidential Decree of the Regional Council (D.P.G.R. July 31, 1989 n. 0420 / Pres) through the merger of the four pre-existing Consortia of: Agro Cormonese Gradiscano (Gorizia), Bassa Pianura Isontina (Ronchi dei Legionari), Lisert (Monfalcone) e Paludi del Preval (Cormons). The Consortium is a public body that coordinates public interventions and private activities in the sector of hydraulic works and irrigation (<http://www.pianuraisontina.it>). Conversion of the irrigation practices from sliding overhead system to a more efficient use of water resource in agriculture with drip micro-irrigation system (Reservoir in Venco area -Dolegna del Collio Municipality). Creation of a natural reservoir with recovery of rainwater for emergency irrigation in case of particularly dry periods by exploiting a natural decline of the soil and reusing disused artifacts.

## 7 AFFORDABLE AND CLEAN ENERGY



### Goal 7 – Ensure access to affordable, reliable, sustainable and modern energy for all

#### Key targets:

7.2 By 2030, increase substantially the share of renewable energy in the global energy mix

#### Indicator 7.1 “Solar thermal and photovoltaic on public buildings (kW every 1,000 inhabitants)”

##### Municipal level

The indicator 7.1 measures kW of solar thermal and photovoltaic power installed on public buildings every 1,000 inhabitants. For this indicator, in Figure 23, the median values are represented and, in Figure 24, the total amounts at the national level are depicted.

Starting from the first figure (Figure 23), a slight reduction in the last two years (2018-2019) of installed power on public buildings at the municipal level is denoted. Considering the subnational level, the trend goes in the opposite direction: since 2015, 62 municipalities have registered an increase in the installation of these technologies on public buildings.

Coming to the total amounts of installations, Figure 24 shows that there has been a peak of kW installed on public buildings (around 666 kW).

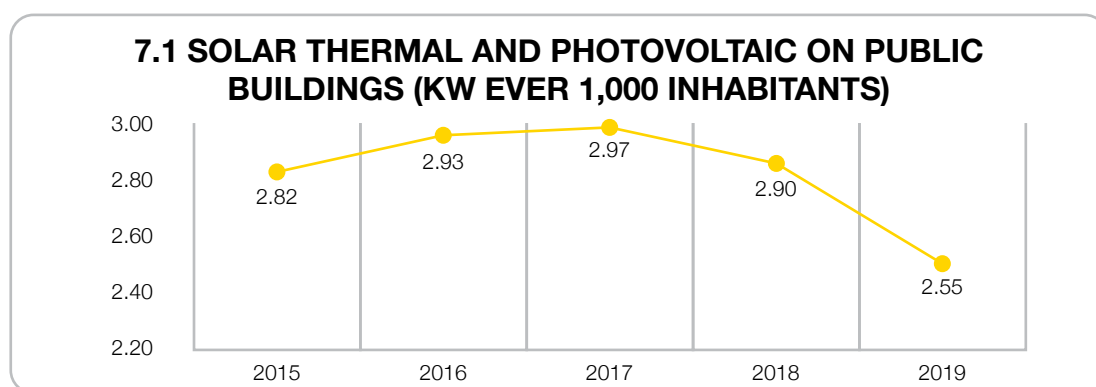


Figure 23 Median values of the indicator 7.1 “Solar thermal and photovoltaic on public buildings (kW every 1,000 inhabitants)”, 2015-2019

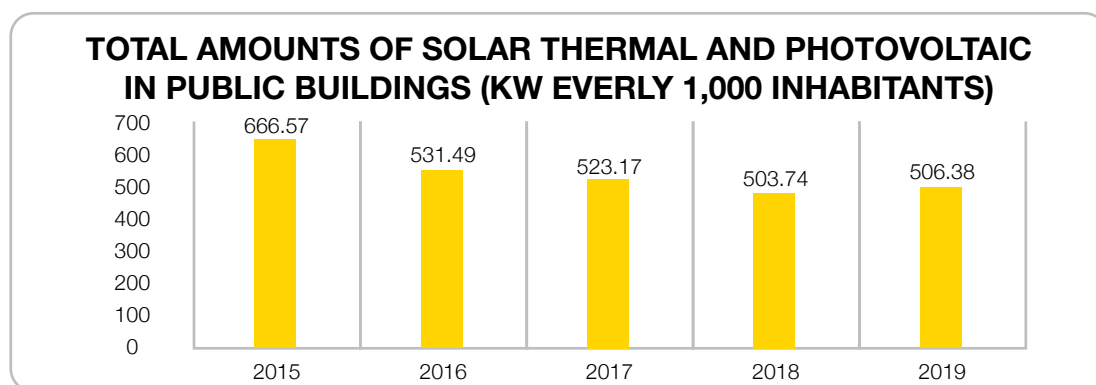


Figure 24 Total amounts of the indicator 7.1 “Solar thermal and photovoltaic on public buildings (kW every 1,000 inhabitants)”, 2015-2019

## Indicator 7.2 “Electricity from renewable sources (percentage)”

### Provincial indicator

The indicator 7.2 “*Electricity from renewable sources (percentage)*” revealed a positive trend in 74 provinces with a median value that rises from 25.35% in 2015 to 26.9% in 2019 (Figure 25). There have been 17 provinces in 2019 with more than 100% of electricity generated from renewable sources. Sondrio had the highest value with 503.2%.

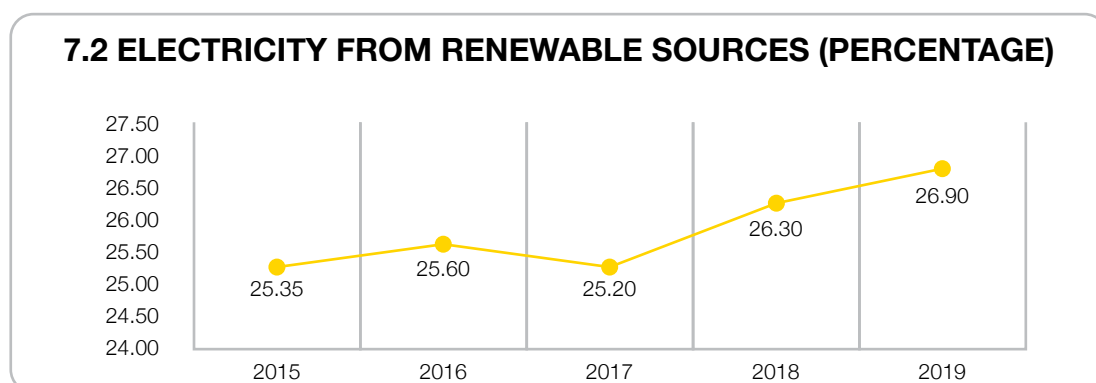


Figure 25 Median values of the indicator 7.2 “Electricity from renewable sources (percentage)”, 2015-2019

## Indicator 7.3 “Power (MW) of the installed photovoltaic systems”

### Provincial level

As the first two indicators, the indicator 7.3 “*Power (MW) of the installed photovoltaic systems*” trend goes in the same direction (Figure 26) confirming the general positive trend and progress towards target 7.2 of the 2030 Agenda. Considering the power generated by photovoltaic systems, all provinces have had installed more MW in 2020 than in the year 2016 (except for Isernia which had 41.5 MW in 2020 compared to the 42.8 MW in 2016).

### 7.3 POWER (MW) OF THE INSTALLED PHOTOVOLTAIC SYSTEMS

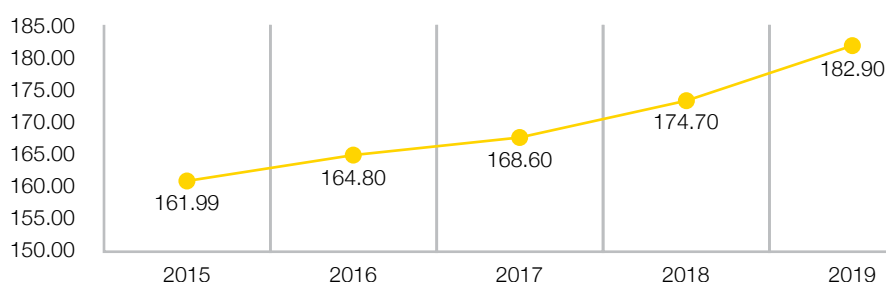


Figure 26 Median values of the indicator 7.3 "Power (MW) of the installed photovoltaic systems", 2016-2020

The top 6 provinces with values higher than 500 MW installed are: Lecce (707.7 MW); Foggia (623 MW); Cuneo (579.8 MW); Bari (512.1 MW); Brescia (510.3 MW); Brindisi (502.3 MW).

## Best practices

### ENERGY INCOME

Municipality of Porto Torres (Province of Sassari)

Inhabitants: 23,000

"Energy Income" is an innovative project with environmental, social and energy values, developed for the first time in Italy by the Municipality of Porto Torres. Eligible citizens – with lower incomes, have received a photovoltaic system free of charge in order to deeply transform the social dimension allowing savings on electricity bills and encouraging the use of green energy and sharing of resources. The procedures shall include the allocation of the photovoltaic system through a public assignment considering, among other things, requirements such as the ISEE value (Indicator of equivalent economic situation), the number of the household and the possible state of poverty, disabilities and also technical-housing factors such as solar exposure and geographic orientation of the roof. "Energy Income" then consists also of a second project line: the Photovoltaic revolving fund, which complements the virtuous circle of the project. The operation is simple. The panel installed on the beneficiary's roof does not store energy like a normal private system. The energy produced but not consumed is then returned to the market and resold. The sale price, thanks to an agreement, is slightly higher than the usual one proposed by the market. The proceeds from the sale of energy go to the Fund, managed by the Municipality, to finance the purchase and installation of new photovoltaic systems in other citizens' homes, thus exponentially increasing the audience of beneficiaries.

Targets: Reduction of energy poverty, improvement of environmental conditions, favoring the consumption of clean energy. The long-term goal is to make citizens energetically self-sufficient.



## BIOMETHANE FROM LANDFILL BIOGAS: A NEW BIOFUEL FOR PUBLIC TRANSPORT BUSES

Municipality of Ravenna

Inhabitants: 159,057

Planning, construction and implementation of a demonstrative biomethane plant for fueling public transport buses. The Demo Plant has been installed in the Herambiente non-hazardous waste landfill site in Ravenna and treats a biogas flow of 100 m<sup>3</sup>/hour produced by landfill sectors under post-operational management. Main objective of the demonstration plant is to test the technical and economic feasibility of biogas purification from landfill biogas. To maximize environmental sustainability, an otherwise unvalued biogas stream (burnt in torch) is used. The demo plants produce biomethane from waste for methane fueled buses. In particular, the produced biomethane is delivered via a gas cylinder truck to a methane fueling station supplying the bus fleet of START Romagna, the local public transport company.

Targets: Promote the production and use of biofuels (biomethane) for a more sustainable mobility and for lowering public transport emissions; Adapt and optimize biogas purification technologies to membranes for landfill biogas; Evaluate biomass waste availability in the Emilia-Romagna region including agricultural and agroindustrial byproducts, waste and organic waste, as well as the overall methanogenic potential in the region; Develop regional guidelines to support public administration for the elaboration of specific policies fostering the development of the biomethane value chain; Quantify the impacts of biomethane production by monitoring the characteristics of the biomass source, process efficiency, produced energy, avoided CO<sub>2</sub> emissions, with a LCA (Life Cycle Assessment) approach.

## 8 DECENT WORK AND ECONOMY GROWTH



## Goal 8 – Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all

### Key targets:

8.1 Sustain per capita economic growth in accordance with national circumstances and, in particular, at least 7 per cent gross domestic product growth per annum in the least developed countries

8.3 Promote development-oriented policies that support productive activities, decent job creation, entrepreneurship, creativity and innovation, and encourage the formalization and growth of micro-, small- and medium-sized enterprises, including through access to financial services

8.5 By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value

8.6 By 2020, substantially reduce the proportion of youth not in employment, education or training

8.8 Protect labour rights and promote safe and secure working environments for all workers, including migrant workers, in particular women migrants, and those in precarious employment

### Indicator 8.1 “Average disposable total income per capita (EUR)”

#### Municipal level

The indicator 8.1 “Average disposable total income per capita (EUR)” shows a consistent increase in 5 years considering its median values (Figure 27); in particular, there have been 104 municipalities (out of 111) with a growing trend from 2015 to 2019.

Andria (13,134), Barletta (14,513) and Trani (15,908) – all of them part of the same province, Barletta-Andria-Trani, in Apulia region – had the lowest values in 2019. On the opposite, the highest values have been measured in Lombardy: Bergamo (27,677), Monza (28,760), and Milan (32,330).

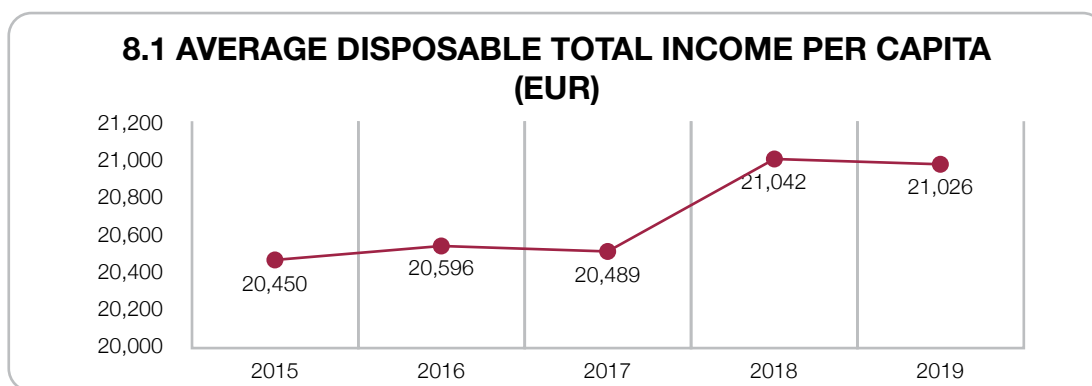


Figure 27 Median values of the indicator 8.1 "Average disposable total income per capita (EUR)", 2015-2019

## Indicator 8.2 "Youth not in employment, education or training (NEET), aged 18-25 years (percentage)"

### Provincial level

In terms of median values, there is a reduction in the percentage of NEET (aged 18-25 years), from 22 in 2015 to 18.8% in 2019 (Figure 28). Nevertheless, there are still 26 provinces with an increasing trend.

The highest values are registered in the Southern regions of Italy with the peak in the province of Crotone with a value of 44.9%. On the other hand, the lowest value is registered in the province of Bolzano with only 9.7%. The goal is to achieve "0%" and the country seems still so far from that target.

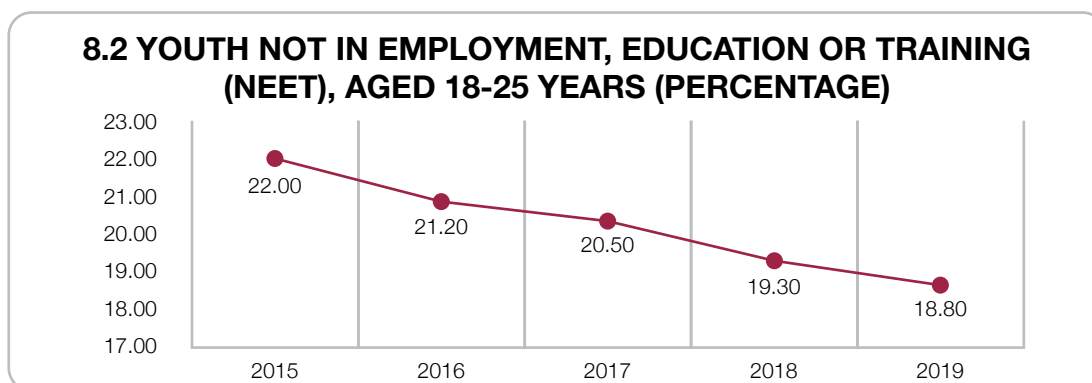


Figure 28 Median values of the indicator 8.2 "Youth not in employment, education or training (NEET), aged 18-25 years (percentage)", 2015-2019

## Indicator 8.3 "Rate of fatal injuries and permanent disability (per 10,000 employed)"

### Provincial level

The rate of fatal injuries and permanent disability at work has slightly decreased in the 2014-2018 time period (Figure 29). Nevertheless, there are still 17 provincial entities with rising trends

in 2018 with respect to year 2014.

The bottom side (<6.5%) of the distribution is composed by Northern provinces: Biella, Milan, Novara, Turin and Como. The highest values (>20.5%) are found in: La Spezia, Reggio di Calabria, Ascoli Piceno, Arezzo, Potenza.

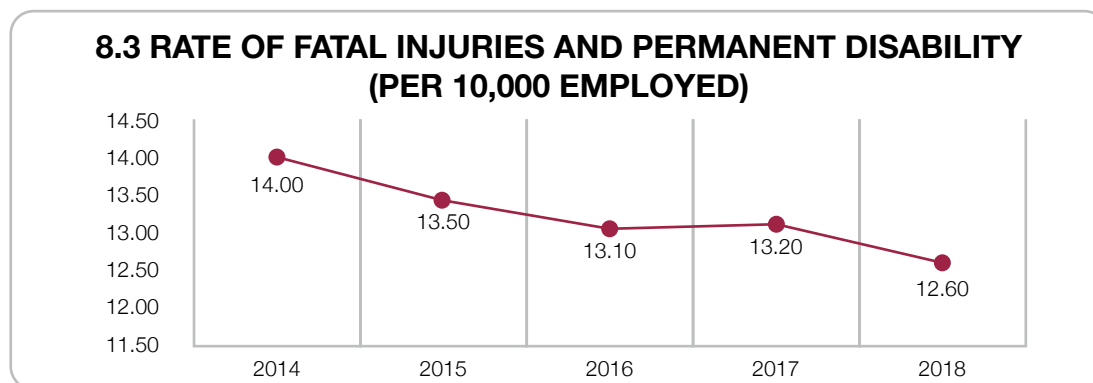


Figure 29 Median values of the indicator 8.3 "Rate of fatal injuries and permanent disability (per 10,000 employed)", 2014-2018

## Indicator 8.4 "Employment rate, aged 20-64 years (percentage)"

### Provincial level

As shown in Figure 30, the employment rate trend is positive: it goes from a median value of 66.35% in 2015 to 68.9% in 2019.

Only 12 provinces have registered a negative trend from 2015 to 2019: Enna, Messina, Trapani, Salerno, Frosinone, Potenza, Viterbo, Chieti, Imperia, Livorno, Verbano-Cusio-Ossola, Ancona. In particular, the first 4 abovementioned have an employment rate under the 50% and 3 out 4 are in Sicily.

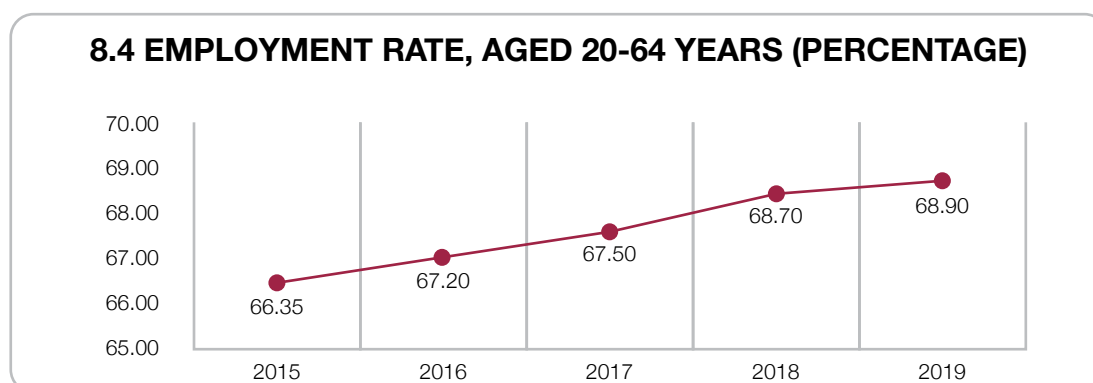


Figure 30 Median values of the indicator 8.4 "Employment rate, aged 20-64 years (percentage)", 2015-2019

## Best practices

### ECO-LAB: actions for the sustainability of work and business

Municipality of Argenta (Province of Ferrara)

Inhabitants: 21,265

The integrated project *“ECO-LAB: actions for the sustainability of work and business”* was proposed by the Municipality of Argenta in partnership with provincial authorities and entities, therefore with possible repercussions on the entire territory of the province of Ferrara: Municipality of Argenta, Municipality of Ferrara, Municipality of Tresignana, Inter-municipal CEAS (Sustainability Education Center) of the Valleys and Rivers established between the Municipalities of Argenta, Comacchio, Mesola, Ostellato and Portomaggiore, for a total of 343,742 inhabitants.

The general objective is to promote the sustainability of companies and labor by increasing the intensity and quantity of cohesive companies in the area. The actions have two objectives: to intervene on the agri-food supply chain in terms of its sustainability through the extension of the sector; to foster an ecosystem favorable to businesses and workers where the overall progress of the territory and businesses results from the implementation and accuracy of services.

The first objective also intercepts tourism and neighborhood trade in a rather homogeneous manner to the areas covered by the project; the second objective will be tested in Argenta to then disseminate the research results to other areas, not just provincial ones.

### ITS ACADEMY VENETO - THE REGIONAL TERTIARY PROFESSIONAL TRAINING OFFER

Veneto region

Inhabitants: 4,905,854

Highly specialized and high-tech tertiary training education as an alternative to university education, organized in 4 semesters (1,800/2,000 hours) of which 50% of the training course takes place in the company. 50% of the teachers come from the corporate world. The training path provides for the achievement of a Higher Technical Diploma (ITS – level 5 EQF). The distinctive features of the training path are: the strong link between the training system and the production sector; the co-planning of the training curriculum with the companies; compliance with the sectors with the highest growth potential in relation to the territorial capital of the region, the challenges to be faced and the prospects for development within a global economic framework; private public partnerships and the activation of multilevel networks and collaborations between different subjects of the territory for a common goal (Regional Government, local Authorities, Training Institutions, Financial Institutions, Private sector, Academic Institutions).

## 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE



### Goal 9 – Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation

#### Key targets:

9.1 Develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all

9.5 Enhance scientific research, upgrade the technological capabilities of industrial sectors in all countries, in particular developing countries, including, by 2030, encouraging innovation and substantially increasing the number of research and development workers per 1 million people and public and private research and development spending

9.c Significantly increase access to information and communications technology and strive to provide universal and affordable access to the Internet in least developed countries by 2020

#### Indicator 9.1 “Mobility provided by public transportation (km-transport/inhabitant)”

##### Municipal level

The indicator 9.1 “*Mobility provided by public transportation (km-transport/inhabitant)*” has been represented by its average values at a municipal level. Considering Figure 31, there is a reduction of 0.5 km offered for each resident.

An interesting data is that 34 municipalities have had the same value in 5 years revealing that they have not improved their public transportation infrastructure network. Only 35 have seen an increased value in 2019 with respect to year 2015.

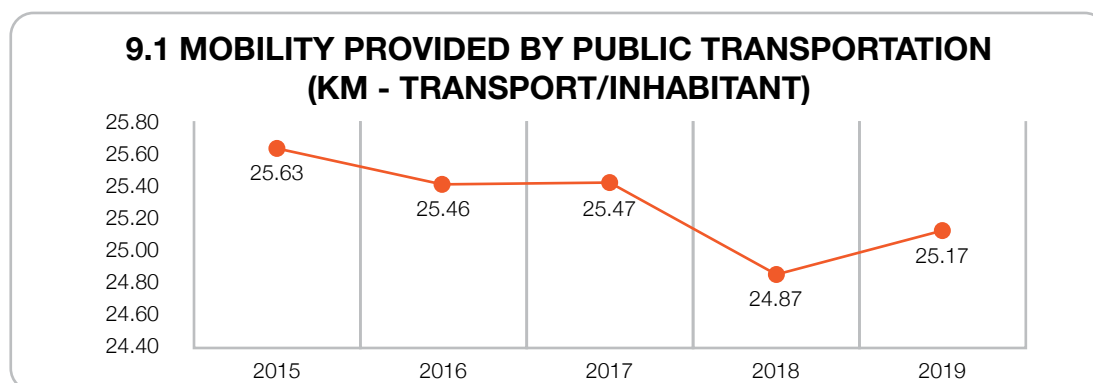


Figure 31 Average values of the indicator 9.1 “*Mobility provided by public transportation (km-transport/inhabitant)*”, 2015-2019

## Indicator 9.2 “Start-ups (per 1,000 joint-stock companies)”

### Provincial level

Figure 32 shows a significant increase in the number of start-ups (per 1,000 joint-stock companies).

All the provinces have had a positive trend; from a value of 0.81 in 2016, there have been registered 6.77 start-ups per 1,000 joint-stock companies in 2020. The peak of growth was from 2017 to 2018, when the number of start-ups quintupled.

The top 5 provinces, with values higher than 12.5, are Trento (15.98), Milan (14.39), Cuneo (13.44), Ascoli Piceno (12.91) and Trieste (12.76). The bottom is composed of Agrigento (1.55), Vercelli (1.81) and Vibo Valentia (2.35).

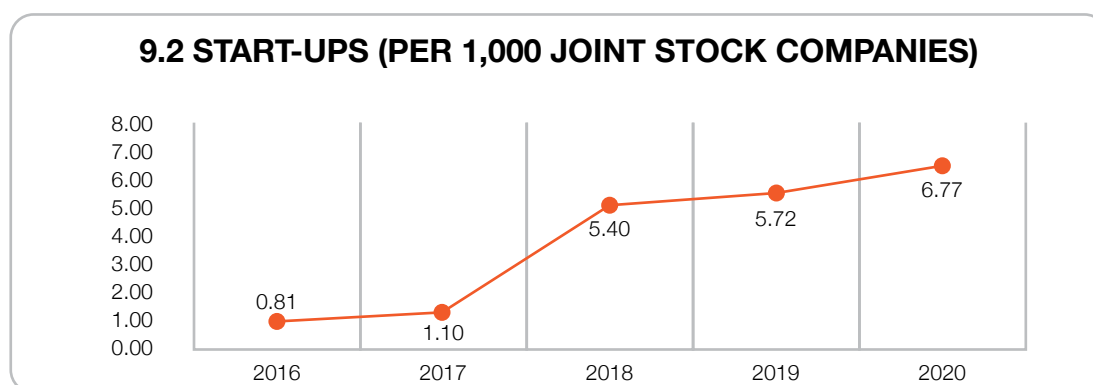


Figure 32 Median values of the indicator 9.2 “Start-ups (per 1,000 joint stock companies)”, 2015-2019

### Best practices

#### **DIGITIZATION OF SERVICES TO CITIZENS AND BUSINESSES AND INTERNET SERVICE VIA RADIO IN THE MOUNTAIN AREA**

Municipality of Seravezza (Province of Lucca)

Inhabitants: 13,074

The municipality of Seravezza is both implementing the plan for the improvement of the digital infrastructure of the administration and of the primary and secondary schools in the territory, and implementing the internet connectivity of its mountain territorial with systems that provide wireless internet connectivity. Development of IT/telematic improvement, the municipality of Seravezza has agreed to the proposal for public digitization by adhering to the framework contract SPC 2 (Public Connectivity System) which allowed the municipality to achieve the following benefits: creation of a simplified network on a highly performing MPLS platform; infranet multi-scope service configuration, internet intranet that allows the offices to communicate with each other and with other SPC administrations and navigate



internet; optimization of the number of devices, energy consumption and connectivity service charges. The offices of the municipality are connected to the fiber-optic network: the main offices of the municipality to pure optical fiber (FTTH), secondary offices and schools to fiber cabinets at 30 Megs as per specifications, guaranteed by minimum bandwidth and backup.

Increasing access to information and communication technologies and providing universal internet access to the territory of the Seravezza mountain area (the municipal territory is made up of the capital Seravezza and 13 other hamlets). The company Eolo S.p.A (<https://www.eolo.it/>) specialized in Radio Bridge, makes possible to cover areas otherwise impossible to be reached via cable and unaffordable for work, tourism and school activities.

## VERTICAL FARMING

Veneto Region

Inhabitants: 4,905,854

Alternative project to intensive farming in which cultivation moves from the open field to industrial spaces where indoors production is performed on multiple levels to optimize space, in a controlled environment and where the plant growth cycle is followed and guided step by step. It is a model of re-imagine agriculture in a sustainable way. In the Veneto region this is a spontaneous trend that is emerging in the territory by companies located in the Padova, Treviso and Verona area. Worldwide, more and more arable land (33%) is being lost due to increased urbanization and, due to global warming, a greater water shortage. The agricultural sector is the largest consumers of water (70% of the accessible drinking water) with a use of pesticides that grows exponentially. In addition, about a third of agricultural products are wasted because they cannot reach the shelves in acceptable conditions due to transport times. So, agriculture as we know it today is no longer sustainable and must be rethought. Vertical farming can be one of the possible answers to the need to rethink agriculture, being a revolutionary circular economy approach applied to agriculture in a very high growth sector.

Goals: Redevelop abandoned warehouses and abandoned buildings such as barracks, warehouses and roadside houses by creating vertical greenhouses with hydroponic cultivation.

The project aims to achieve:

the best product, beyond organic: no pesticides are used and the use of fertilizers is reduced by 95%; the plants are grown in a clean and controlled environment without other soil contamination; plants are nourished with less use of water and with the combination of micro and macronutrients that plants would normally find in nature;

the lowest environmental impact: saving of 25% of water compared to traditional agriculture; zero soil consumption as it can take place in disused commercial and industrial buildings, regenerated and transformed into productive places; no type of pollutant is released into the environment and the production plants can be built near urban consumption centers, thus generating short-range logistics with less CO2 emissions and fewer trucks on the roads;

a technological approach which ensures predictability and efficiency: this technological approach to agriculture allows certain yields and production times, eliminating waste since production and demand are synchronized; production yields are very high and can be scaled according to demand.

# 10 REDUCED INEQUALITIES



## Goal 10 – Reduce inequality within and among countries

### Key targets:

10.3 Ensure equal opportunity and reduce inequalities of outcome, including by eliminating discriminatory laws, policies and practices and promoting appropriate legislation, policies and action in this regard

10.4 Adopt policies, especially fiscal, wage and social protection policies, and progressively achieve greater equality

### Indicator 10.1 “Gini coefficient”

#### Regional level

Considering the indicator 10.1 “Gini coefficient” for the time period 2014-2018, there have been 17 Italian regions with increasing trends and 3 with decreasing ones. As depicted in Figure 33, the highest values have been registered in the Central-Southern regions with, at the top of the ranking, Campania (0.34), followed by Sicily (0.33) and Lazio (0.32).

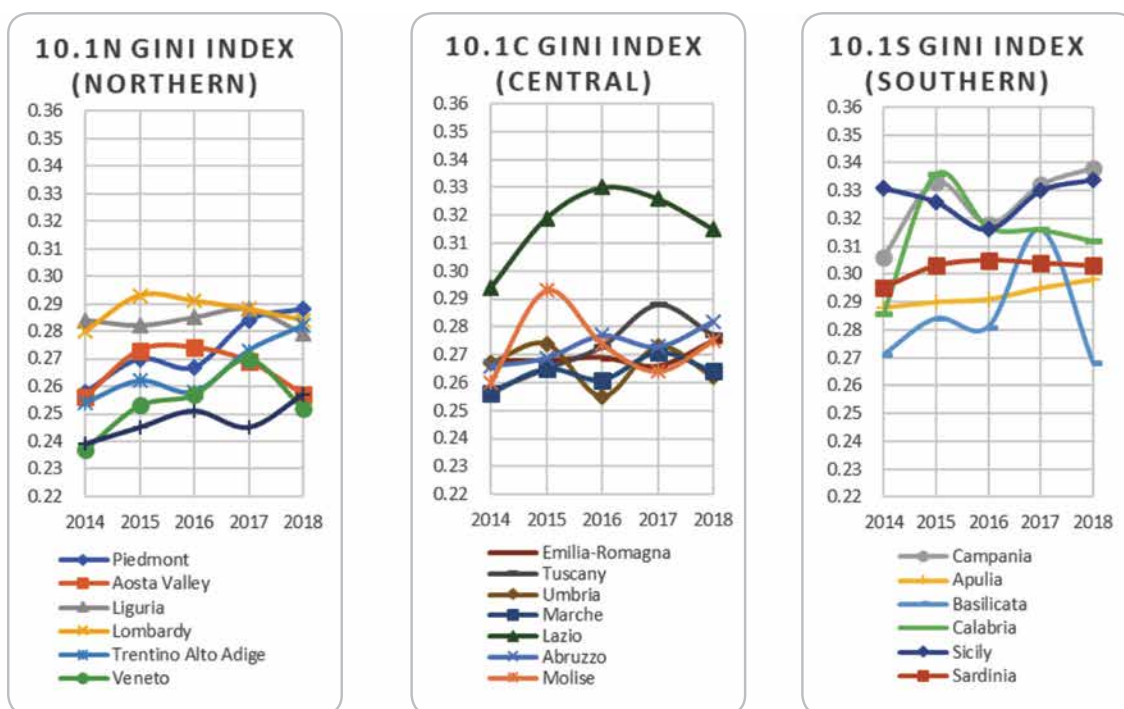


Figure 33 Indicator 10.1 “Gini coefficient”: n) Northern Italy; c) Central Italy; s) Southern Italy.

## Indicator 10.2 “Vouchers, care allowances and social health vouchers (per capita municipal expenses in euros)”

### Municipal level

The indicator “*Vouchers, care allowances and social health vouchers*” measures per capita expenditure for each municipality and aims to counteract social inequalities improving social protection.

A relevant aspect of indicator 10.2 is the number of municipalities spending “0”: there are 45 “zeros” distributed heterogeneously in the country.

The highest expenses are in 6 municipalities with values higher than 10 euros per capita: Cagliari (82.79); Gorizia (24.73); Rovigo (19.02); La Spezia (17.86); Varese (13.14); Venice (10.87). Considering the sum of the expenses, there is a decrease in total amounts of expenditure (the average of the first year (2014) was 3.76 and that of the last year (2018) was 3.71 as depicted in Figure 34).

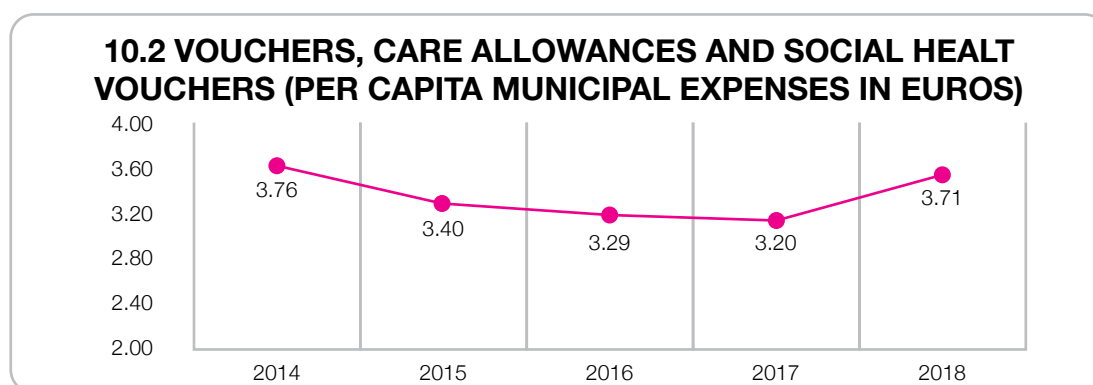


Figure 34 Average values of the indicator 10.2 “Vouchers, care allowances and social health vouchers (per capita municipal expenses in euros)”, 2014-2018

### Best practices

#### FREE GARDEN IN PRISON

Municipality of Brescia

Inhabitants: 196,670

The OrtoLibero project was born in 2014 as part of a conscious consumption education workshop held at the Verziano prison by an educator from the Pandora cooperative and a volunteer from Libera. Starting from the typical recipes of the prisoners’ countries of origin, an ecological framework was made of the plant essences placed at the base of the kitchen and with the creation of artistic workshops, creativity, dinners, events and exhibitions. Through the partnership network and the involvement of twenty inmates, men and women of different nationalities, the OrtoLibero Group was established with which an impressive work on the issues of legality, synergistic agriculture and environmental sustainability was started. To

date, the following activities have been carried out: “Words and signs of freedom: the story of OrtoLibero”, a book written with the prisoners; “Process with tomato”: theatrical piece born from numerous workshops in prison and staged in Piazza Mercato in Brescia; work-school alternation course of four students of the high school of human sciences Veronica Gambarà; “I met Marino, the last real punk - a street story compared to the myth of Philoctetes”. The book was born from the project “Autobiography, loyalty and redemption”: through lectures, artistic workshops of poetry, drawing and writing, the themes of destiny, vulnerability, loyalty and redemption were addressed with the prisoners and students. “Carme abecedario di OrtoLibero for an inimitable life”, a three-year project to break down cultural barriers and prejudices in society towards the prison population. OBJECTIVES: Through the protagonism of the inmates, self-esteem and conscience was stimulated for a possible social redemption in the most authentic spirit of restorative justice enshrined in art. 27 of the Constitution; Create a bridge with the community to promote social inclusion; Train students towards civic awareness and overcome prejudices.

## **SOCIAL SERVICE FOR INCLUSION**

Municipality of Albizzate (Province of Varese)

Inhabitants: 5,228

Allowing disabled citizens or in situations of particular need and/or social fragility who are unable to use normal public transport, to reach assistance/educational/training/work structures or treatment and rehabilitation centers. This service is inspired by the principles of law no. 104/1992 for assistance, social integration and the rights of disabled people. Until February 2020 (pre-covid-19 pandemic) the service was carried out both collectively and individually, depending on the needs, the nature of the service and the destination.

After the lockdown of spring 2020, the service resumed in individual mode with the necessary precautions indicated by the legislation in force. The transport of minors and adults with disabilities to assistance and educational-training structures and citizens with serious diseases that require continuous cycles of therapies are guaranteed.



## Goal 11 – Make cities and human settlements inclusive, safe, resilient and sustainable

### Key targets:

11.2 By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons

11.3 By 2030, enhance inclusive and sustainable urbanization and capacity for participatory, integrated and sustainable human settlement planning and management in all countries

11.5 By 2030, significantly reduce the number of deaths and the number of people affected and substantially decrease the direct economic losses relative to global gross domestic product caused by disasters, including water-related disasters, with a focus on protecting the poor and people in vulnerable situations

11.6 By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management

11.7 By 2030, provide universal access to safe, inclusive and accessible, green and public spaces, in particular for women and children, older persons and persons with disabilities

### Indicator 11.1 “Cycle paths (equivalent meters per 1,000 inhabitants)”

#### Municipal level

The indicator 11.1 “*Cycle paths*” has seen an increasing trend in median values, jumping up from 47.3 meters in 2015 to 59.35 meters per 1,000 inhabitants in 2019. Specifically, the trend is positive for 83 municipalities out of 111.

The highest values with more than 300 meters per 1,000 inhabitants are recorded in Reggio nell’Emilia (443.7), Cremona (330.2) and Mantua (316).

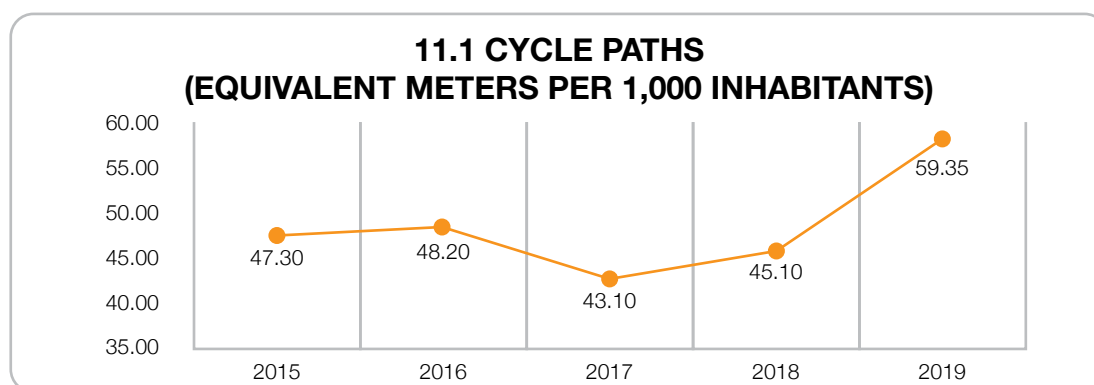


Figure 35 Median values of the indicator 11.1 “Cycle paths (equivalent meters per 1000 inhabitants)”, 2015-2019

## Indicator 11.2 “PM2.5 levels (mean of the average annual $\mu\text{g}/\text{m}^3$ )”

### Municipal level

The “PM2.5 levels” indicator measures the mean of the average annual  $\mu\text{g}/\text{m}^3$ . The indicator follows the UN SDG target 11.6: “By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management”.

As depicted in Figure 36, there is a decreasing trend from 2016 to 2019. Particularly, there are 60 municipalities which have registered declining trends.

The municipalities with increased PM2.5 levels are Catanzaro, Syracuse, Reggio di Calabria, Taranto, Ascoli Piceno – with a level lower or equal to the median value of the distribution in 2019 – and Modena, Ferrara, Ravenna, Udine and Piacenza – with higher values than the median of 2019, precisely in a range between 18-21.

The highest values have been recorded in Padua (24.5), Rovigo (24) and Monza (24).

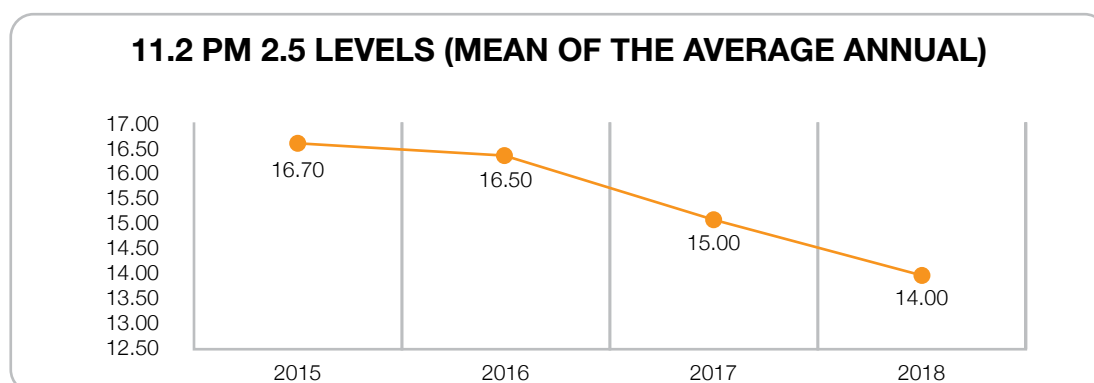


Figure 36 Median values of the indicator 11.2 “PM2.5 levels (mean of the average annual  $\mu\text{g}/\text{m}^3$ )”, 2015-2019

## Indicator 11.3 “PM10 levels (mean of the average annual $\mu\text{g}/\text{m}^3$ )”

### Municipal level

As for the previous indicator, the formula behind “PM10 levels” is “Mean of the average annual  $\mu\text{g}/\text{m}^3$ ”.

Figure 37 represents the median values of the municipality distribution. There are more municipalities with decreasing trends than those with diminishing trends in PM2.5 levels: 76 entities have reported decreased values from 2015 to 2016, 15 increased, and the others have had the same values or missing data.

The highest quantities that have been reported over “32  $\mu\text{g}/\text{m}^3$ ” are in Cremona (34), Padua (34), Monza (33), Pesaro (33), Rovigo (33), Ragusa (32.6), Pavia (32.5) and Venice (32.2).

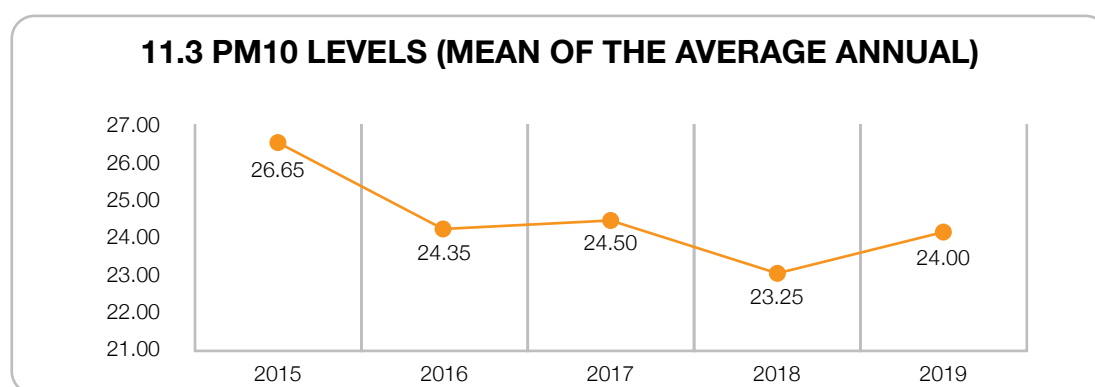


Figure 37 Median values of the indicator 11.3 “PM10 levels (mean of the average annual  $\mu\text{g}/\text{m}^3$ )”, 2015-2019

## Indicator 11.4 “Road surface for pedestrians (m2 per 100 inhabitants)”

### Municipal level

Figure 38 shows an increase in the median values of “Road surface for pedestrians” – from 23.4 in 2015 to 27.2 m2 for 100 inhabitants in 2019.

Only 25 municipalities have seen a decreasing trend.

The less pedestrianized cities are Rovigo (2.4), Taranto (2.6), Sassari (3), and Teramo (3). On the contrary, the most pedestrianized municipalities are Lucca (685.1), Venice (510) and Verbania (214.1).



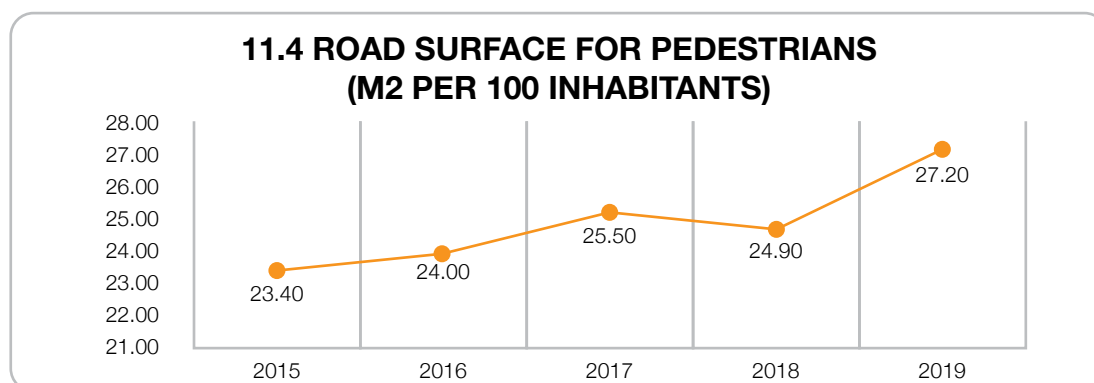


Figure 38 Median values of the indicator 11.4 "Road surface for pedestrians (m2 per 100 inhabitants)", 2015-2019

## Best practices

### PROSSIMA APERTURA – NEXT OPENING – INTEGRATED AND PARTICIPATORY URBAN REGENERATION PROJECT

Municipality of Aprilia (Province of Latina)

Inhabitants: 74,660

With the need to redevelop the area of Piazza della Comunità europea, in 2016 the Municipality of Aprilia participated in the contest for the redevelopment of 10 outlying urban areas announced by the Ministry of Cultural Heritage and Activities and Tourism, and the National Council of Architects, Planners, Landscape Architects and Conservators, where the "Prossima Apertura" project was the winner. "Prossima Apertura" is not limited to the physical requalification of the space, its aesthetic and functional aspects, but is an integrated urban regeneration process with the cooperation of architecture, psychosocial research, art and communication professionals, with the aim of building a collective sense of public space with citizens. Every activity, event and action is a 'new opening'. The work is divided into two macro themes, developed also with the support of the Security Coordinator: the public module and the construction site module.

The construction site module refers to the physical actions for the construction of the new public space. The public module includes all the activities integrated into the construction site which aim to bring people closer to the public space where each person involved in the project team participates through their professionalism in achieving it.

### MILANO OPEN AND GREEN

Municipality of Milano

Inhabitants: 3,218,201

The Open Streets plan integrates the many actions undertaken by the City of Milano to

implement the vision of a sustainable and livable city in line with the temporary needs of social distance and safety linked to the health emergency from Covid-19.

Open Streets aims to reduce the number of cars in circulation and congestion and limiting as much as possible the increase in city air pollution. To this end, the Municipality of Milano intends to strengthen cycle and pedestrian mobility through a diversified offering, complementary and alternative to public transport and private cars. Full Electric is ATM's plan to provide Milano with a full electric public transport service by 2030, gradually phasing out diesel-powered vehicles and promoting sustainable urban mobility. The plan involves, in addition to the creation of a new fleet of electric buses, the renewal of the warehouses through the restructuring of the existing ones and the construction of new technologically advanced structures, the realization of recharging infrastructures in the terminals for recharging the vehicles and the replacement of the old vehicle fleets with new electric ones.

Open Squares in each neighborhood is a bottom-up redesigning in the style of tactical urbanism of squares and streets. This project aims at the recovery of the squares as central places in the life of the neighborhood, no longer just parking or transit areas, but areas to live and in which to live. The main activities of the project are: closure to road traffic: recovery of 20,000 square meters of space; installation of benches (150) and picnic tables (10), ping pong (10), bicycle racks; placement of new potted plants (150); color the urban spaces (15 total interventions); neighborhood events organization.

## 12 RESPONSIBLE CONSUMPTION AND PRODUCTION



### Goal 12 – Ensure sustainable consumption and production patterns

#### Most touched targets:

12.5 By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse

12.7 Promote public procurement practices that are sustainable, in accordance with national policies and priorities

#### Indicator 12.1 “Separate waste collection (percentage)”

##### Municipal level

The continuous increase in the percentage of separate waste collection leads to progress towards Goal 12. Nevertheless, there is still a lot of work to do: the median value reveals that 63% of the population was covered by separate waste collection in 2019. Moreover, 16 municipalities have reported a decreased value in 2019 with respect to year 2015.

In this case, the lowest values can be found in: Catania (7.7%); Crotone (11%); Taranto (15.2%). Top 3 municipalities in terms of percentage are in: Ferrara (86.2%); Pordenone (86.1%); Mantua (85.6%).

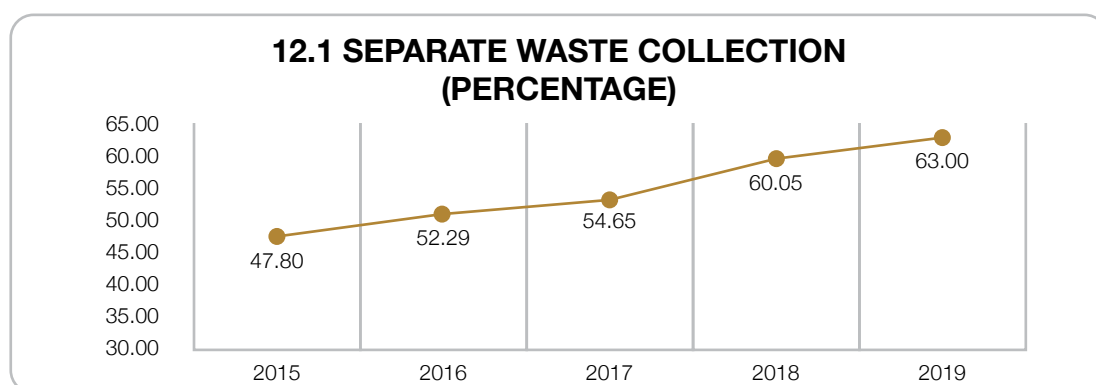


Figure 39 Median values of the indicator 12.1 “Separate waste collection (percentage)”, 2015-2019

## Indicator 12.2 “Residential waste collection (percentage)”

### Municipal level

What is interesting in Figure 40 is the median values of the indicator 12.2 “Residential waste collection (percentage)” close to 100%; this is due to the presence of more than 41 municipalities that reached all the residents.

Even in average terms (Figure 41) it has been reported an increasing trend in the previous years: from 70.33% to 73.73%. There are fewer municipalities with very low percentages, namely, Crotone (0), Massa (0), Savona (0), Pescara (0.1), Rieti (0.1), Ascoli Piceno (0.2), Foggia (1.4), Genoa (1.7) and Florence (2.1).

In 2019 there have been 26 municipalities with negative trends.

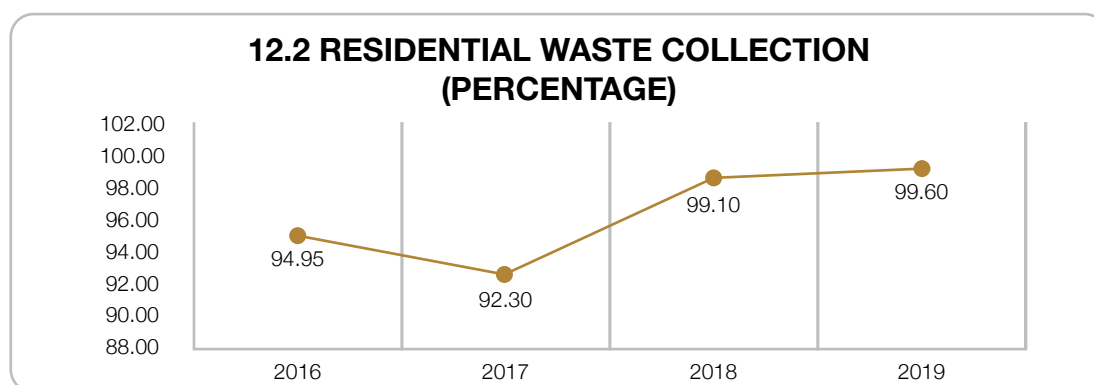


Figure 40 Median values of the indicator 12.2 “Residential waste collection (percentage)”, 2016-2019

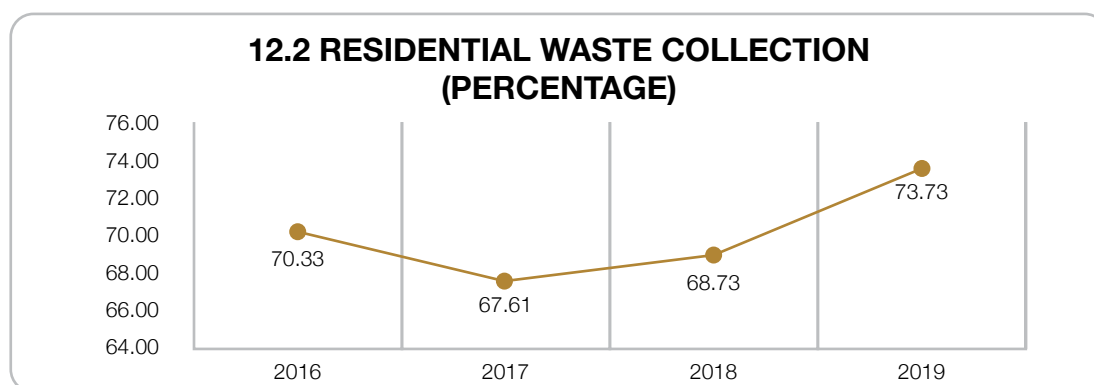


Figure 41 Average values of the indicator 12.2 “Residential waste collection (percentage)”, 2016-2019

## Best practices

### DEMOLITION AND CONSTRUCTION WASTE MANAGEMENT IN ACCORDANCE WITH THE PRINCIPLE OF CIRCULAR ECONOMY

Municipality of Pesaro (Province of Pesaro-Urbino)

Inhabitants: 94,969

The best practice stems from the application of the principles of the circular economy in a much larger process of a new school building's construction. The idea was to transfer into technical elements the environmental requirements necessary to reduce the environmental impact of the building from the construction phase to its use. These elements have been developed through the elaboration of 11 technical sheets as integral part of the call for tender criteria chosen to determine the most economically advantageous tender in order to obtain an NZEB building (Nearly Zero Energy

Building) with a low environmental impact certified by LEED certification. Since NZEB has a very low environmental impact – as attested by the LEED environmental certification required by the tender – the result has been an energy-efficient building. In particular, the application of the principles of the Circular Economy (CE) was carried out through the process of controlling, managing and monitoring of all materials entering and leaving the construction site during both the construction phase and the first demolition phase of the 3 buildings. The contribution of the environmental certification to which the design and construction of the building has been carried out was decisive in this process, enabling systematic monitoring and data acquisition. As part of the mandatory requirements of the call for tenders, it was mandatory to send all materials to the recycling plant and to submit the declarations proving the quantities sent and recycled. The practice is reflected in the MEC (Minimum Environmental Criteria) and can be clearly included in the requirements of the call for tenders as Green Public Procurement.

### CIRCULAR ECONOMY

Municipality of Prato

Inhabitants: 194,913

Prato is famous throughout the world especially for its textile district which has a centuries-old tradition and represents about 3% of European textile production. Prato is ahead of time with the concept of what is being promoted today by "circular economy": Recovery, Recycling, Re-use in our district means acting on the textile supply chain to avoid or reduce landfill disposal; replace the raw material with second raw material; develop creativity and new business opportunities.

Within the European Urban Agenda, the Municipality of Prato takes part to the partnership on Circular Economy.

Among the many actions implemented in the city there are:

The regenerated wool technique (in Prato 22.000 tons of textile material per year are regenerated) to recycle natural fibers;

The reuse of industrial wastewater (both industrial and urban);

Urban reuse and regeneration;

Prato Central Park (disposal of the old city hospital for a 3 hectares urban park);

'PIU Prato': urban innovation project that foresees the recovery of former abandoned production buildings, the creation of squares and green spaces, interventions for sustainable mobility and services such as media library and co-working in an area of about 44 hectares;

The new River Park (wellness and health area with cycle paths).



## Goal 13 – Take urgent action to combat climate change and its impacts

### Key targets:

- 13.1 Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries
- 13.2 Integrate climate change measures into national policies, strategies and planning

### Indicator 13.1 “CO2 emissions (tons)”

#### Regional level

Due to a lack of data, the authors analyzed the trends of CO2 emissions only for two years (2015 and 2017). Essentially, there have been 9 regions out of 20 with decreasing trends (Figure 42). The median value registered a small decrease in quantities: from 7.61 tons in 2015 to 7.38 tons in 2017.

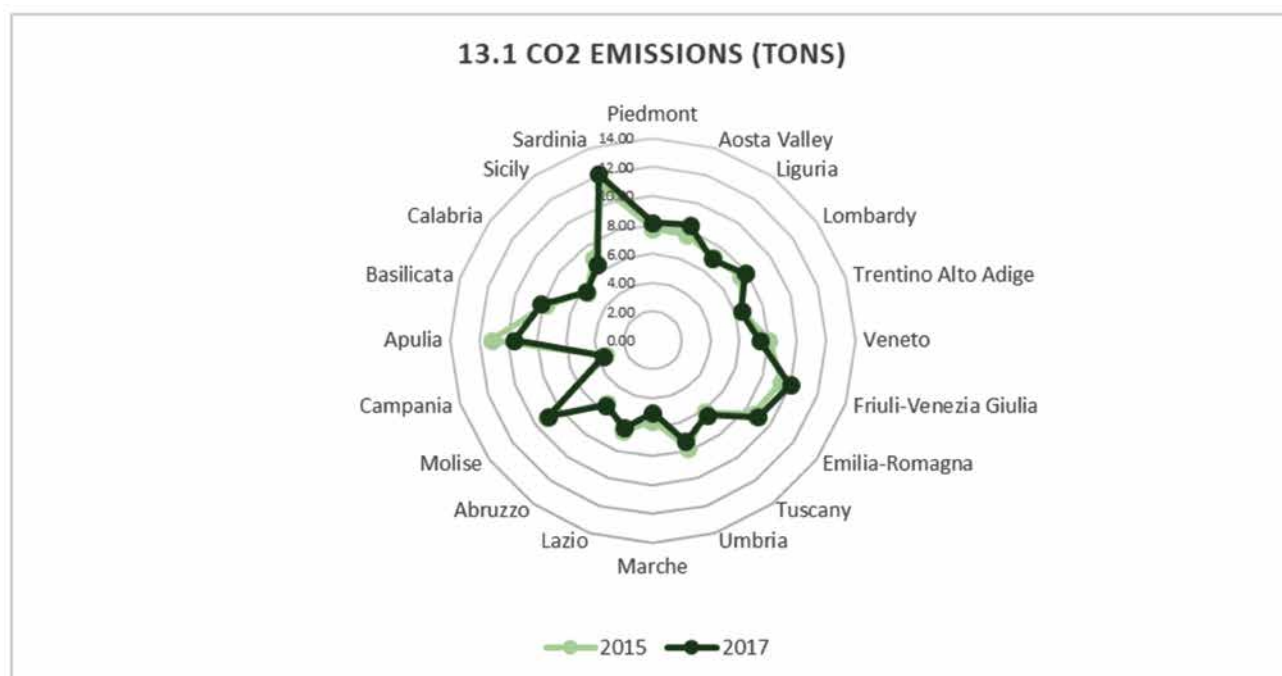


Figure 42 The indicator 13.1 “CO2 emissions (tons)” by region, 2015 and 2017



## Indicator 13.2 “Flood risk (percentage)”

### Municipal level

The indicator 13.2 “*Flood risk*” measures the percentage of the population exposed to flood risk. In 2020 the median value almost doubled: from 2.18% to 4.21% (Figure 43).

Since 2015, there have been 81 municipalities with a rising trend and only 22 with a decreasing one, the others remain stable or data were not available.

The municipalities with higher percentages are: Reggio nell’Emilia (100%), Ferrara (100%) and Ravenna (99.9%).

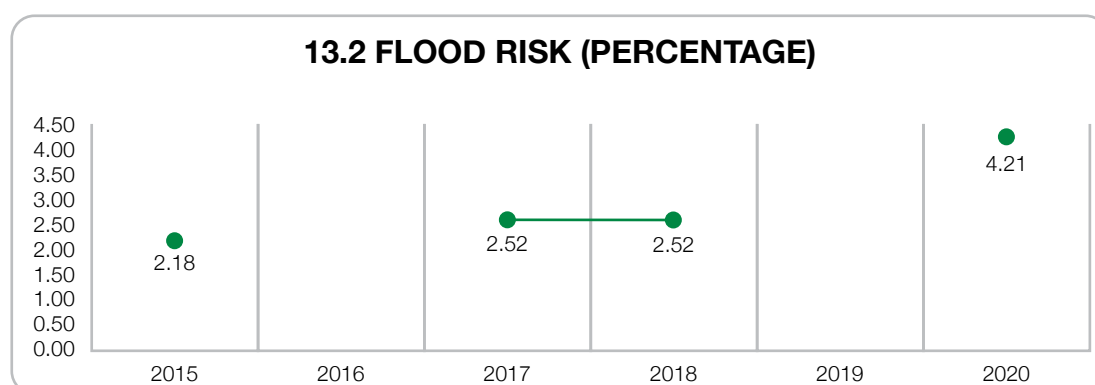


Figure 43 Median values of the indicator 13.2 “Flood risk (percentage)”, 2015-2020

### Best practices

#### URBAN PLAN FOR SUSTAINABLE MOBILITY (PUMS)

Metropolitan City of Bologna

Inhabitants: 1,018,685

The PUMS of the Metropolitan City of Bologna, currently being approved, concerns the entire metropolitan area. It is a strategic plan that aims to orient mobility in a sustainable way, with a medium-long term horizon and a two-year monitoring, developing a system vision of the mobility and correlating with sectoral and urban plans on a superordinate and municipal scale. The Plan is inspired by the themes of integration, participation, evaluation and monitoring. Synchronously, the Urban Plan for Sustainable Logistics (PULS) and the Metropolitan Biciplan are developed in synergy, as sectoral in-depth Plans. At the same time,

the General Urban Traffic Plan (PGTU) of the Municipality of Bologna – an instrument for the implementation of short-term measures in the urban area of Bologna – is also being drawn up in line with the strategies of the PUMS. The PUMS of the Bologna metropolitan City puts people at the center of the mobility system, developing solutions capable of solving critical issues, favoring new, conscious and active lifestyles, reducing climate-change emissions and pollution, improving urban quality and ensuring a sustainable and efficient mobility system. Through a wide multi-level participation process that includes the Scientific Committee, the Sustainable Mobility Forum, the Round Tables of over 130 stakeholders, meetings with Unions and a Planning Office, a mobility system has been outlined based on improving the services of public transport and their integration with cycling and pedestrian mobility networks more extensive and safer. This system aims to ensure widespread territorial cohesion and effective social inclusion, strengthening the territorial system understood as the capacity of the socio-economic and territorial system to present itself competitively in terms of quality of life and quality standards of the services provided to individuals and businesses.

## **PARTICIPATION IN THE COVENANT OF MAYORS FOR CLIMATE AND ENERGY**

Union of Romagna Faentina (Province of Ravenna)

Inhabitants: 89,000

The topic of environmental sustainability, the attention to and the fight against climate change, energy saving and CO2 reduction, are the key points of the Union of Romagna Faentina since its establishment. The six Municipalities of the Romagna Faentina Union (Brisighella, Casola Valsenio, Castel Bolognese, Faenza, Riolo Terme and Solarolo), in line with the sustainable development policies promoted by the European Union, joined the Covenant of Mayors in 2013 and renewed – in 2019 – their commitment in terms of reducing climate-changing emissions by adapting their SEAP (Sustainable Energy Action Plan) to the contents of the SECAP (Sustainable Energy and Climate Action Plan) with new goals for 2030. The Union – together with the six Municipalities that compose it – has joined both the SEAP and the SECAP jointly: a joint SECAP, a plan developed collectively by a group of neighboring local authorities. The group is committed to building a common vision, preparing an inventory of emissions, assessing the impacts of climate change and defining a series of actions to be implemented both individually and jointly in the area concerned. The joint SECAP aims to promote institutional cooperation and common approaches between local authorities operating in the same territorial area, with the shared commitment to reduce CO2 by at least 40% by 2030. For the preparation of the SECAP, a phase of institutional consultation for the verification of consistency with the planning activities in progress has started (for example with the new Urban Planning in progress – PUG and the Strategic Plan) to make the planning activities and the actions coherent and in synergy for the implementation of these tools.



## Goal 14 – Conserve and sustainably use the oceans, seas and marine resources for sustainable development

### Key targets:

14.1 By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution

Goal 14 “*Life below water*” was not considered in the data analysis for comparability issues.

### Best practices

#### PROHIBITION OF THE USE AND ABANDONMENT OF COLORED RIBBONS AND RUBBER BALLOONS

Municipality of Capaci (Province of Palermo)

Inhabitants: 11,482

According to an international study carried out, colored ribbons and balloons made of rubber or similar material filled with lighter gasses than air not connected to a support of sufficient weight to counteract the balloon’s raising capacity, are one of the most frequent waste found in the Italian seas. Therefore, to protect the marine area, the Mayor has prohibited its use with ordinance no. 14 of 25.03.2019.

Goals: Prevent that colored ribbons and balloons made of rubber or similar material, raised in the air fall on the sea surface in the form of waste and are ingested by marine animals, causing their death.



## Goal 15 – Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss

### Key targets:

15.1 By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements

15.2 By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally

15.a Mobilize and significantly increase financial resources from all sources to conserve and sustainably use biodiversity and ecosystems

### Indicator 15.1 “Urban green areas (m2 per inhabitant)”

#### Municipal level

The indicator 15.1 “*Urban green areas*” has been studied within its municipal distribution; the median value registered an increase of around a half square meter in 2019 with respect to 2015 (Figure 44). Precisely, there have been reported 88 positive trends.

The highest values are to be found in Matera <sup>15</sup> (995.06), Trento (399.50), Rieti (337.23) and Sondrio (298.16). The lowest values are in Crotone (3.74), Barletta (3.98), Isernia (4.87) and Trani (5.08).

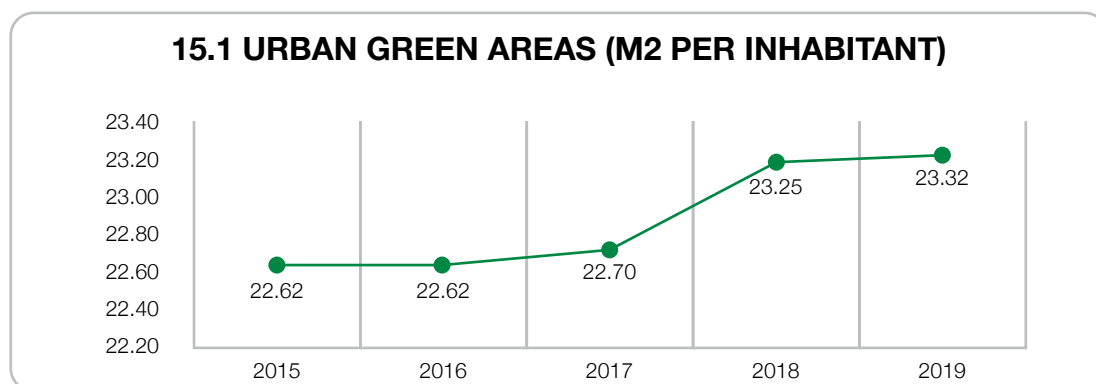


Figure 44 Median values of the indicator 15.1 “Urban green areas (m2 per inhabitant)”, 2015-2019

<sup>15</sup> The “Natural Historical Archaeological Park of the Matera Rupestrine Churches” is included in the municipality of Matera, incorporated in the landscape assets pursuant to Legislative Decree no. lgs. 42/2004 and subsequent amendments.

## Indicator 15.2 “Trees every 100 inhabitants”

### Municipal level

The indicator 15.2 “Trees every 100 inhabitants” has been analyzed from 2015 to 2019 skipping the year 2018 due to missing data.

In terms of median values, there is a reduction, from 17 trees every 100 inhabitants to 16.5 trees every 100 inhabitants (Figure 45).

It must be noted that the municipality of Cuneo increased substantially the presence of trees, from 1 tree every 100 inhabitants (2016) to 203 trees every 100 inhabitants (2019).

Moreover, it is important to highlight that the number of missing data started to decline substantially only after 2015 (Figure 46) – expect for the year 2018.

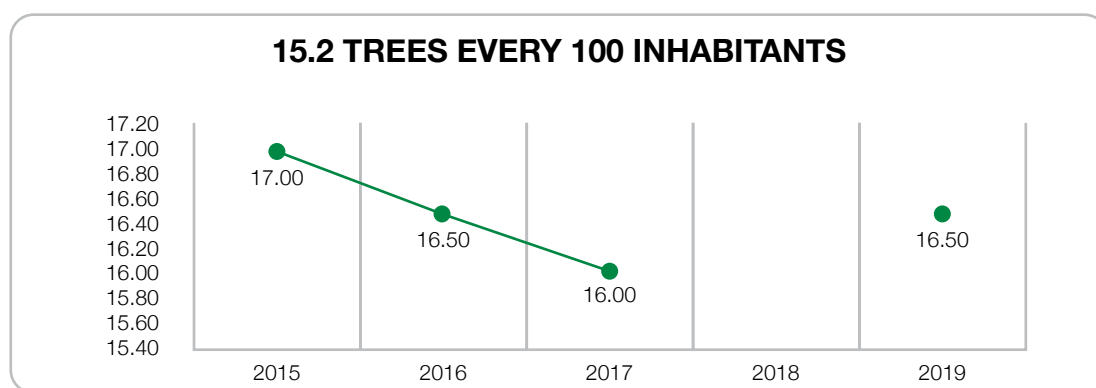


Figure 45 Median values of the indicator 15.2 “Trees every 100 inhabitants”, 2015-2019

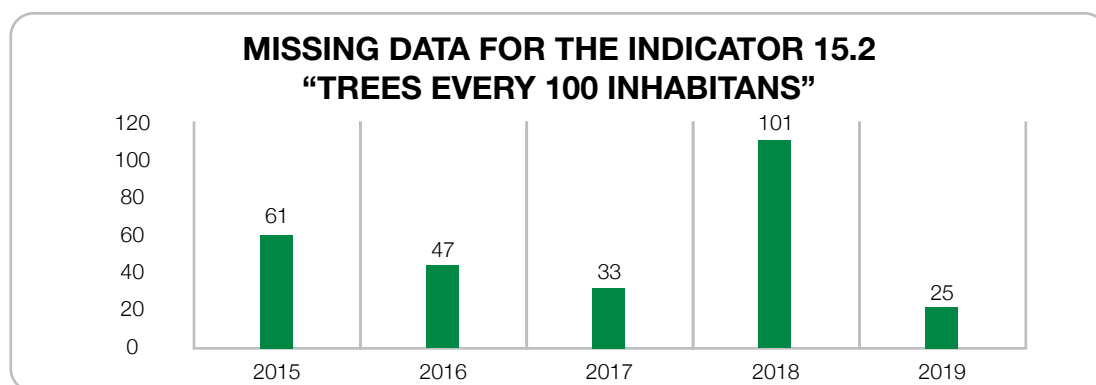


Figure 46 Missing data for the indicator 15.2 “Trees every 100 inhabitants”, 2015-2019

## Indicator 15.3 “Land consumption (percentage)”

### Municipal level

In average terms, there is a slight increase in land consumption. The highest values (>50%) can

be found in Turin (65.68), Naples (62.66), Milan (57.42) and Pescara (51.09). The lowest (<6%) are in Enna (4.26), Urbino (4.52), Matera (5.41), Carbonia (5.45), Nuoro (5.53) and L'Aquila (5.64).

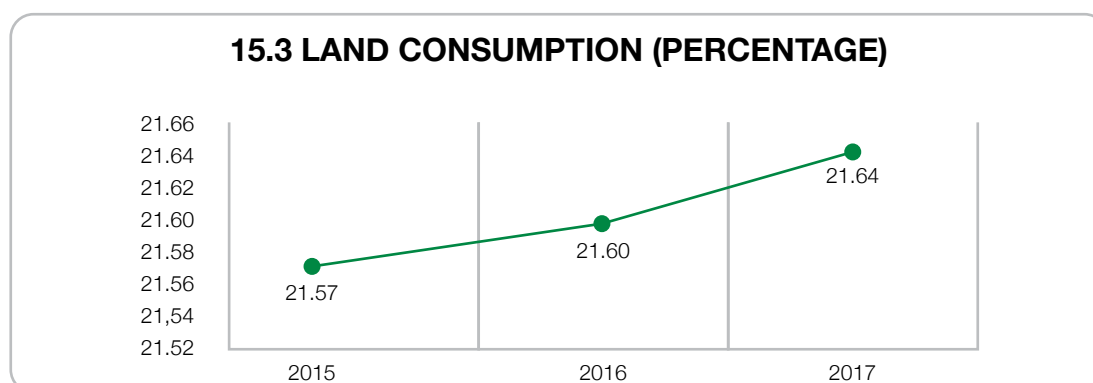


Figure 47 Average values for the indicator 15.3 "Land consumption (percentage)", 2015-2017

## Best practices

### "A TREE FOR EACH NEWBORN"

Municipality of Camerano (Province of Ancona)

Inhabitants: 7,218

Planting every year of a number of trees equal to the children born in the municipal area.

Goals: Increase of trees in the area. Raising public awareness for the importance of tree and forest heritage, the protection of biodiversity, for combating climate change and for the prevention of hydrogeological instability. Enhancing the environment, tree and tree-related traditions of the Italian culture.

### 'CARMIGNANO 2020' – AGRICULTURAL REGENERATION AND ENVIRONMENTAL PROTECTION

Municipality of Carmignano (Province of Prato)

Inhabitants: 14,541

After the approval of the municipal regulation for the management of public and private green areas and for environmental sustainability, a specific Regulation will soon be in force for the rational use of plant protection products, guaranteeing: best health protection for citizens; precise rules for farmers to be respected, so as to correctly apply the many laws in force to improve the quality of life and the environment; a constructive synergy between farmers, citizens, tourists, local administrators and associations involved in the area, in order

to regenerate agriculture and the landscape, favoring the development of a new common awareness. The Regulation for the rational use of phytosanitary products in the Municipality of Carmignano is based on the precautionary principle found in the treaties, directives and European regulations, always taken up by the many decree-laws with which the agricultural sector is regulated in Italy. Thanks to the 'Carmignano 2020' project, contents are explained to farmers through the Green helpdesk in the Town hall, organizing meetings, direct contacts and technical advices to organic farmers and to all farmers intending to convert to the organic farming method. The Green helpdesk support is also given for the management of the Participatory Guarantee Systems and for avoiding unnecessary bureaucracy for farmers. Creation of the Atlas of natural and traditional products, services and eco-tourism in Carmignano.

Goals: To gradually increase by 2030 the organic agricultural production of the Municipality of Carmignano up to more than 80% of organic certified agricultural area.





## Goal 16 – Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels

### Key targets:

- 16.1 Significantly reduce all forms of violence and related death rates everywhere
- 16.6 Develop effective, accountable and transparent institutions at all levels
- 16.10 Ensure public access to information and protect fundamental freedoms, in accordance with national legislation and international agreements

### Indicator 16.1 “Cases pending for 3+ years (percentage)”

#### Provincial level

Considering the median values of the indicator “*Cases pending for 3+ years (percentage)*” from 2015 to 2020 there has been reported a decrease of 7.34 percentage points.

In particular, 83 entities have seen a declining trend and only 23 still have had an increasing trend.

The lowest values are in Ravenna (3.38%), Savona (3.57%) and Turin (3.83%). The worst situations are in Vibo Valentia (54.37%), Potenza (49.29%) and Messina (46.75%).

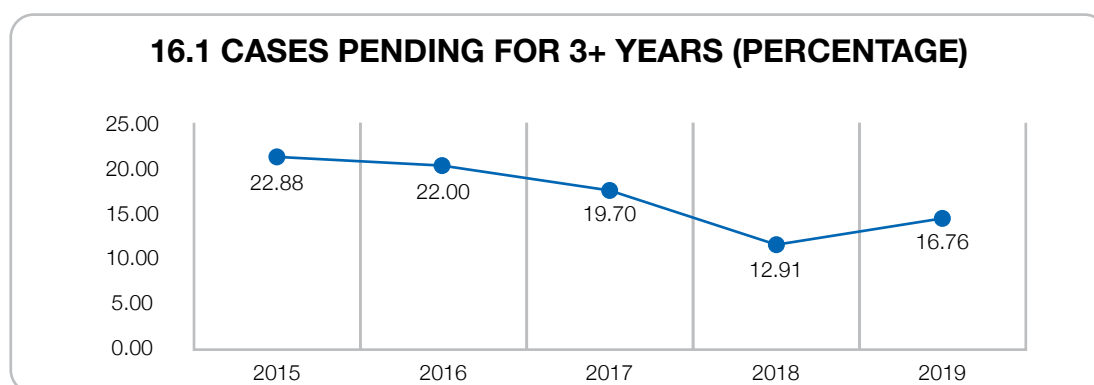


Figure 48 Median values of the indicator 16.1 “Cases pending for 3+ years (percentage)”, 2015-2020

## Indicator 16.2 “Overcrowding of penal institutions (percentage)”

### Provincial level

Italy’s prisons face serious overcrowding problems as can be seen in Figure 49, where percentages, at the provincial level, are – every year – over 100%. The most overcrowded prisons are in Taranto (198.7%), Lodi (195.6%), Lucca (182.3%), Latina (162.3%) and Brescia (157.6%).

Only 37 provinces have reported less than 100% in 2020 and, specifically, the less crowded situations have been registered in Arezzo (27.2%), Sud Sardegna (45.4%), Modena (55.1%) and Nuoro (58%).

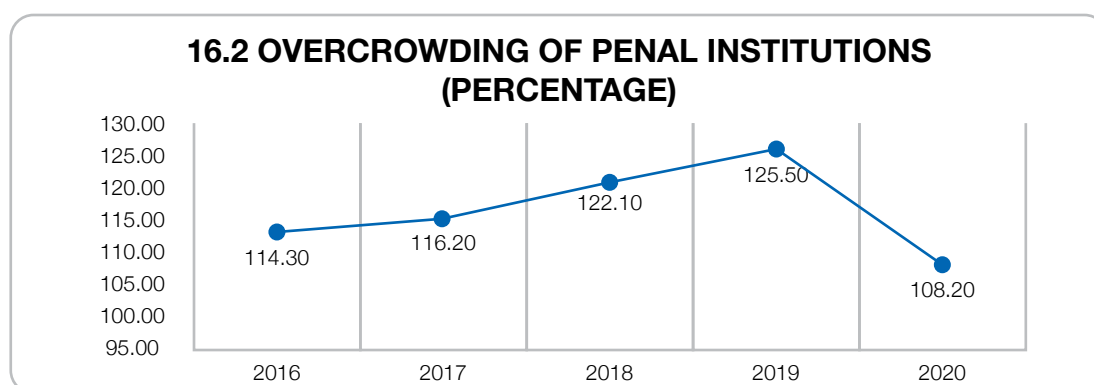


Figure 49 Median values of the indicator 16.2 “Overcrowding of penal institutions (percentage)”, 2016-2020

## Indicator 16.3 “Voluntary homicides (per 100,000 inhabitants)”

### Provincial level

The indicator 16.3 “Voluntary homicides (per 100,000 inhabitants)” median values have decreased from 2014 to 2018 as it is illustrated in Figure 50. Nevertheless, there has been still an increasing number of homicides in 35 provinces in 2018 with respect to year 2014 and there have been 16 provinces with values higher than 1.

The highest numbers have been reported in Vibo Valentia (6.2), Crotone (2.3), Reggio di Calabria (1.8), Foggia (1.8), Trieste (1.7) and Fermo (1.7).

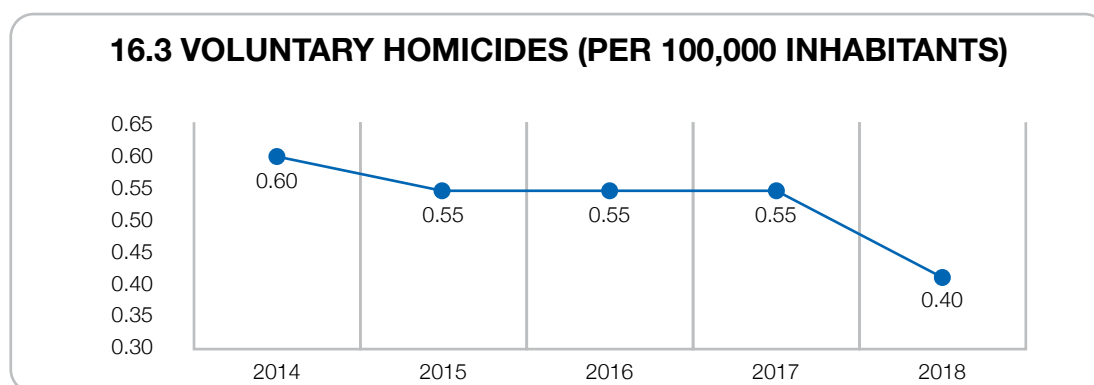


Figure 50 Median values of the indicator 16.3 “Voluntary homicides (per 100,000 inhabitants)”, 2014-2018

## Indicator 16.4 “Thefts (number of crimes reported to the authorities, per 1,000 inhabitants)”

### Provincial level

The indicator 16.4 “*Thefts (number of crimes reported to the authorities), per 1,000 inhabitants*” median values have had a clear decreasing trend (Figure 51). Precisely, 90 provinces (out of 107) have reported progress since 2015.

The lowest values have been found in Southern regions of Italy, namely in Caserta (0.8), Benevento (0.81), Barletta-Andria-Trani (0.87), Potenza (0.93) and Oristano (0.98). These provinces are the only ones with less than one crime reported to the authorities (per 1,000 inhabitants) in 2019.

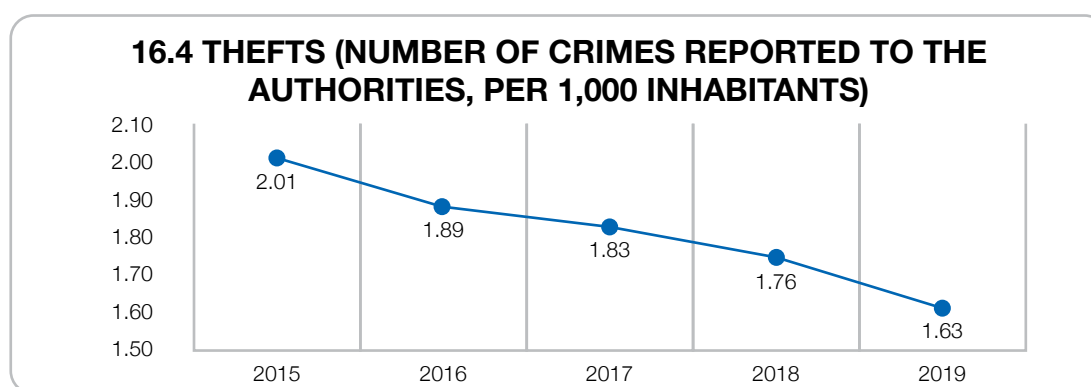


Figure 51 Median values of the indicator 16.4 “*Thefts (number of crimes reported to the authorities, per 1,000 inhabitants)*”, 2015-2019

### Best practices

#### THE CITY BUDGET – SOCIAL AND ENVIRONMENTAL REPORTING

Municipality of Formigine (Province of Modena)

Inhabitants: 34,716

Mandatory financial planning and reporting tools are often very technical and unreadable. For this reason, reporting documents are drawn up each year. Due to the crisis resulting from the epidemiological emergency from Covid-19, the Municipality of Formigine had to adapt the planning instruments, including the budget, to the new situation. However, a comprehensive redesign of the main public services and their methods of organization and use were already in place before the outbreak of the pandemic. The Municipality, by adhering to the principles of the UN 2030 Agenda and its main sustainability goals, established the Formigine Sustainable City 2030 Councilor. Based on these goals, therefore, the publication of the social budget that the Municipality of Formigine publishes each year has also changed

to disseminate and make comprehensive the data and the budgetary results, and to share in a transparent manner the choices made. For the first time, in 2019 the publication reports the activities carried out, declining them according to the 17 Goals of the UN 2030 Agenda. An “emergency communication” has been launched, reporting what the municipal administration has deployed to tackle the Covid-19 pandemic. In addition to the use of the traditional communication tools through the press and the institutional website, public assemblies (as soon as the anti-contagion measures allowed it) were organized in parks for presentation to citizens (district councils). The Instagram page “Città di Formigine” was also used to reach citizens through surveys and quizzes. In this way were involved and participated targets groups normally difficult to reach, such as young people. To increase a cross-media process between the many communication channels used by the Municipality of Formigine, the QR code has been included in the publication, which links to video content on Youtube.

## HELPDESK TO SUPPORT FOREIGNERS

Municipality of Staranzano (Province of Gorizia)

Inhabitants: 7,257

The Municipality provides a space for the Murice Cooperative to give administrative and legal support to foreigners residing in the Province of Gorizia (Asylum Migration and Integration Fund – FAMI – project), opening 9 hours a week. So far, about 30 foreign people (including protection holders or asylum seekers) have been helped.

Goals: Support to the foreign population in completing practices for recognizing of educational qualifications, documents, accessing contributions and family reunions, activation of cultural mediation to facilitate interviews, mediation interventions with the educator and with the mediator for interviews between parents and teachers of the elementary school of the Municipality of Staranzano.

## 17 PARTNERSHIPS FOR THE GOALS



# Goal 17 – Strengthen the means of implementation and revitalize the global partnership for sustainable development

### Key targets:

17.6 Enhance North-South, South-South and triangular regional and international cooperation on and access to science, technology and innovation and enhance knowledge-sharing on mutually agreed terms, including through improved coordination among existing mechanisms, in particular at the United Nations level, and through a global technology facilitation mechanism

17.16 Enhance the global partnership for sustainable development, complemented by multi-stakeholder partnerships that mobilize and share knowledge, expertise, technology and financial resources, to support the achievement of the sustainable development goals in all countries, in particular developing countries

17.17 Encourage and promote effective public, public-private and civil society partnerships, building on the experience and resourcing strategies of partnerships

## Indicator 17.1 “Population covered by FTTH (Fiber To The House) (percentage)”

### Provincial level

Due to a lack of data, and considering the importance that digitization assumes today, it is presented here a state of the art for what concerns the buildings covered by fiber in 2020. As it is visible in Figure 52, the lowest provincial average values are found in Calabria (7.63), Marche (12.63), and Molise (14.50). The highest values are in Umbria (35.37), Campania (32.57) and Emilia-Romagna (30.29).



Figure 52 Average values of the indicator 17.1 "Population covered by FTTH (Fiber to The House) (percentage)" aggregated by region, 2020

## Indicator 17.2 "Non-profit organizations (per 10,000 inhabitants)"

### Provincial level

The last indicator of this analysis measures non-profit organizations' incidence. Its average value has increased in 2 years (Figure 53): from a mean value of 62.48 to 63.63 (per 10,000 inhabitants).

Data showed a growth of non-profit organizations in many areas of the country: there are 89 provinces that have registered an increasing trend.

The largest presence of non-profit organizations has been reported in the provinces of Trento (116), Aosta Valley (109.5), Bolzano (105.9), Gorizia (102) and Belluno (95.6).

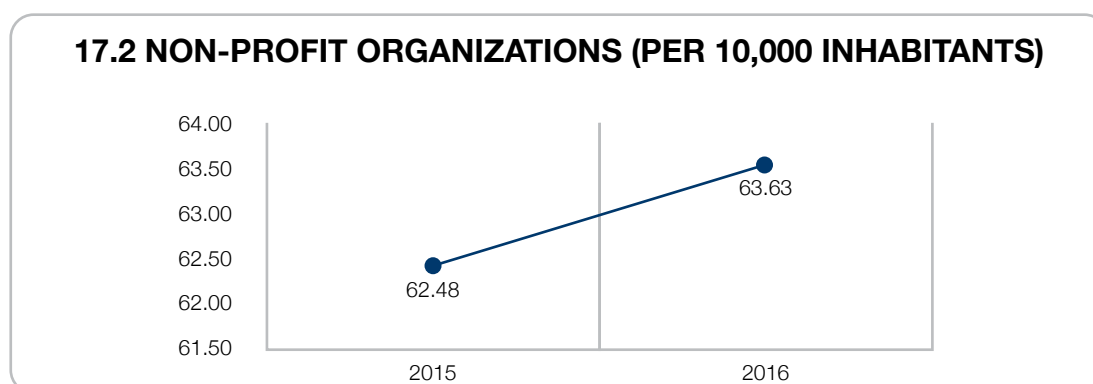


Figure 53 Average values of the indicator 17.2 "Non-profit organizations (per 10,000 inhabitants)", 2016-2017

## Best practices

### **SHAPING FAIR CITIES: Integrating Agenda 2030 within local policies in times of great migration and refugee flows.**

Emilia-Romagna Region

Inhabitants: 4,474,292

Thanks to a pan-European multi-stakeholder partnership, the action raises awareness and actively involves local decision makers, civil servants, grassroots organizations and citizens in localizing SDGs by promoting the crucial role of local governments in the implementation of the new set of goals and paving the way for a local 2030 Agenda in 8 European countries and 2 EU partners countries. The project mobilizes Local Authorities in implementing goals addressing the migration challenges and the related local policies with a strong gender approach (SDG5), promoting peaceful and inclusive societies (SDG16), making cities inclusive, safe, resilient and sustainable (SDG11) and acting to combat climate change and its impacts (SDG13).

Goals:

- Promote the crucial role of local governments in the implementation of the objectives, paving the way for the local plans of the 2030 Agenda;
- The local governments will improve concrete mechanisms, tools, innovations, platforms and processes to translate the Agenda 2030 into results at local level;
- After the trainings and consultations activities, each municipality and local government will draft and launch a Local Agenda 2030 plan including an implementation work-plan and roadmap.



## 4.2 Tools in support of the implementation

Monitoring of the SDGs through the use of indicators with specific reference to territorialized targets is extremely important to fully achieve the 2030 Agenda. In this regard, different Italian entities have been developing tools capable of monitoring the SDGs at the subnational level. The National Institute of Statistics (ISTAT) provides a list of indicators to monitor progress toward the SDGs at the regional level. These indicators, associated with the proposed UN-IAEG indicators, have been analyzed since 2018 in the ISTAT SDGs Reports (ISTAT, 2018; 2019; 2020; 2021a). In addition, since 2020 the Italian Alliance for Sustainable Development (ASviS) has been publishing its “Rapporto Territori” which analyzes the progress of different territories, namely regions, autonomous provinces, provinces and metropolitan cities, and urban areas (ASviS, 2020; 2021).

In January 2021, the Network of Sustainable Municipalities (RCS), a national association open to all Italian municipalities, was instituted on the initiative of the Association of Italian Local Autonomies - ALI, Città del Bio and Leganet. The Network, thanks to the work of the Scientific Committee, the collaboration of ASviS and the dialogue with the Joint Research Center (JRC) of the European Commission (EC), has produced a set of 101 municipal indicators related to the SDGs.

Moreover, Fondazione Eni Enrico Mattei, over the years, has developed different composite SDGs indices: the SDSN SDGs City Index, capable of measuring the level of sustainability of the Italian municipalities (Cavalli and Farnia, 2018; Cavalli *et al.*, 2020a), an index for provinces and metropolitan cities with reference to the SDGs (Cavalli *et al.*, 2020b), and a tool for the Italian regions capable of deriving the relative regional positioning, with respect to the regional average, in each of the 16 out of 17 Sustainable Development Goals (Cavalli *et al.*, 2019; 2021b), with the exclusion of Goal 14 “*Life below water*” for reasons of comparability.

Considering the importance of developing tools to support data-oriented monitoring of sustainable development at the local level, the data of the Report “SDSN Italia SDGs City Index” and its update “SDSN Italia SDGs City Index two years later” have converged, with the collaboration of AICCRE, in the online platform “SDG Portal <sup>16</sup>” of the Bertelsmann Stiftung. The Portal provides the community with a first and intuitive screenshot of the current level of the cities (municipalities, capitals of provinces) in their path towards the achievement of the Sustainable Development Goals as defined by the United Nations. Thanks to the visual representation of the results it is possible to make comparisons between different years and cities.

Monitoring SDG progress towards the SDG targets through quantitative indicators does not usually track funding and spending towards the various goals, nor provides a means for governments to indicate how much their budgets are oriented towards the SDGs (Pipa *et al.*, 2021). It is important to note that governments should bridge the SDGs with their national and subnational budget systems (UNDP, 2020). In this regard, as stated by Pipa *et al.* (2021), developing a complementary financial tracking system related to the 2030 Agenda is fundamental. In particular, the tool should assess *ex-ante* how much of the total spending goes towards the achievement of SDG targets, permitting also for *ex-post* monitoring of the impacts per unit of finance.

In this regard, Fondazione Eni Enrico Mattei has developed, taking advantage of the detailed budget categorization available in the European Structural and Investment Funds within the Cohesion Policy, a tool that identifies how those investments contribute to the various SDG

<sup>16</sup> <https://sdg-portal.it/en>

targets (Cavalli *et al.*, 2020c). By assigning each intervention field a coefficient, weighting how much it contributes to each of the SDGs' 169 targets, the researchers were able to assess whether and how the EU investment funds contribute to the SDGs. The methodology was then applied at different levels: the Sardinia ESF and ERDF Regional Operational Programmes (ROPs) (Cavalli *et al.*, 2021f; 2022); the Italian National Recovery and Resilience Plan (Cavalli *et al.*, 2021a); and the reconstruction and restoration interventions in the Central Italian regions affected by the 2016-2017 earthquake (Cavalli *et al.*, 2021c). Moreover, the same methodology has been used for the assessment of the sustainability of the ROPs with specific reference to the NSDS (Cavalli *et al.*, 2021e).

# 5 CONCLUSIONS

## 5.1 Structural barriers and key success factors

### The role of data for transformation

Data are key to be able to display progress and to assess, in year 2030, whether we achieve the targets that we have set in the 15 precedent years. Establishing a local baseline is therefore essential, and cities and local governments should start to create this standard. VLRs and VSRs need to be, above all, useful for the city, instruments to deliver better and to take better-informed decisions.

The information that this VSR tries to provide from the local governments perspective, concerns the capability of the Italian Municipalities, regardless of their geographical position or their size, to recognize the 2030 Agenda as a reference point for local and regional policies, but also to emphasize their will to recognize the importance of reporting and monitoring activities in the implementation of Sustainable Development Goals. Although not all UN indicators can be used locally, many Municipalities have nevertheless tried to measure the results of their activities based on regional, if any, or even national indicators. This desire to be measured and self-determined must be read as a request for a national work of setting up data collection mechanisms and defining evaluation processes equipped with indicators at the local level.

In this sense, the great impact that the AICCRE-FEEM Portal of SDG Indicators for cities has had in demonstrating that a greater collection of data can provide numerous advantages to the provincial capitals that we have been able to verify: in terms of greater awareness of political board with respect to the objectives undertaken; greater participation of citizens in the process of implementing the objectives in the medium to long term; greater involvement of municipal employees in the process of defining the mandate objectives linked to the SDGs; increasing inter-departmental work within Municipalities. The Italian SDG Portal could become the starting point for evaluating new data collection systems at a lower level than in the provincial capitals.

### SDGs as a new social contract

The kind of behavioral change required to achieve sustainability cannot happen without the commitment of citizens, civil society and private sector, but also from schools and families. The 2030 Agenda is increasingly used by local governments as a mechanism to renew the relation between institutions and the citizens they serve.

A second aspect that determines the potential success of the path started by local governments concerns the Italian ability to develop participatory paths with the territorial actors already present and those that, until now, had not been included in the dialogues with the municipalities. Goal 17 of the 2030 Agenda, the partnerships for the Goals, is a key aspect. The collection of AICCRE local examples on SDGs denotes the ability of Italian local and regional authorities to enhance the concept of partnership: by including partners from the private sector, schools, fair trade associations, NGOs, civil society, they guarantee that the initiatives promoted by Italian cities and regions fully involve their territories. Part of the activities envisaged by the Italian municipalities are often also based on the exceptional value that the volunteering network has in Italy. The NGOs sector, of the Associations of the social, of the care, makes an invaluable contribution to the work of the municipalities, often allowing to undertake actions that would not be possible with the lack of budget and the lack of capacity building at local level.

The 2030 Agenda teaches Italian cities that sharing common goals for the common good, requires a participatory process in which no one and no territory must be left behind: the cases of activation of participatory mechanisms are increasing among Municipalities, as well as their search for improvement the quality of life and the well-being of citizens.

The Venice City Solutions platform has become a useful tool for Italian LRGs to experience the advantages of an extended dialogue and exchange for the achievement of objectives. The Venice platform allows the actors to be able to feel part of a single osmotic environment in which the different levels of government can dialogue and share common objectives and priorities. Actors coming from different sectors such as the public and private sectors are able to find points of contact in the SDGs; different cultures and languages of cities and organizations around the world come together in the common language of the 2030 Agenda.

## The SDGs potential to break silos

The SDGs framework can help breaking traditional silos where public administration usually works: silos not only inside the public administration, but also between local, regional, central and other levels of government. Inter-connection between all levels of government becomes mandatory to succeed.

AICCRE's best practices collection of LRGs achieving the SDGs also reveals a third strength expressed by the Italian municipalities: the size of the implementing body or its financial capacity is not relevant, but it is fundamental the political will to improve the quality of life of citizens and the ability of its operational structure to translate objectives into activities.

In the cases cited relating to Italian cities, it is also highlighted the ability of the Mayors to integrate the structural funds with the objectives of the 2030 Agenda. This ability derives first and foremost from the central Government that has adopted the Agenda as a reference point for the country and which identifies the priorities of the regional level, which in turn defines the territorial priorities. This means that local authorities transform the serious need for funds dedicated to the 2030 Agenda into the virtue of being able to aggregate European resources with national funds and private sector investments. The political will and the commitment of the Mayors that instils a virtuous path is certainly a pillar for SDGs achievement in the country.

New funds must be aligned to wider 2030 Agenda at local level on localizing SDG targets and tracking local progress. The development of new tools to support LRGs for the alignment of budgets and contribution of the European structural and investment funds – ERDF and ESF – with the SDGs, are already in place. FEEM has constructed a model capable of assessing *ex ante* how much of the total spending would go towards the achievement of SDG targets and allowing for *ex post* monitoring the impact of the budget in the SDG results framework (Cavalli *et al.*, 2021). In particular, basing on the comprehensive budget classification contained in the Regulation (EU) 2021/1060, the researchers determined whether and to what extent each intervention field affects each of the 169 target of the 2030 Agenda. This was done by constructing a series of matrices: the first matrix assesses if there is none, an indirect or a direct impact; the second one takes into account the magnitude (very low, low, medium and high) and the orientation (positive or negative) of the impacts; and the third and final matrix is the multiplication between the first two matrices. Finally, synthetic measurements are used to determine the contribution of each intervention field to the single SDG and then to the entire 2030 Agenda.

## 5.2 Recommendations

### Concrete mechanism and Financial support

We need concrete mechanisms and tools of financial support for local and regional governments to achieve Agenda 2030. Central government commitment to Agenda 2030 still does not devise tools for local implementation. We need more specific tools if we want real action in the ground. Real action will require innovation in partnership, but also specific instruments. We need to map untapped financial instruments or practices to finance SDG at local level.

We still need to increase awareness about the necessity for local and regional governments to access the necessary financial resources to implement the 2030 Agenda. We want to strengthen the message about the need to fund the SDGs and to fund them through the local level. We should also publicly recognize the efforts that local governments are already doing. We need to further develop a joint narrative about the importance of cities and local governments in Agenda 2030.

What should be needed to improve local data measurement and recognition? We call for more data about municipal budgets dedicated to aligning to the SDGs. Data about financing and the impact of funds in the lives of people need to be developed. New methodologies have to be developed to integrate the different aspects of action included in Agenda 2030. It is not only finance, is about policies, institutions, and people. Start tracing finance by the specific indicators and areas included in the SDGs is of extreme importance. We should work to demonstrate how expenditures by SDG are already allocated to local governments. Change the debate from decentralization, is not a power struggle, is about “who is responsible for what” to achieve the SDGs.

There are tools such as the website <https://www.local2030.org/> that guarantee follow up actions, but it is important to continue to collect concrete local stories about the SDGs implementation activities by cities and communities, as is undertaken in Venice with Venice City Solutions.

### Partnerships for SDGs

The research world should work more closely with local governments to provide study and data support to help the SDGs implementation process. Similarly, the private sector should be included more and more decisively in the partnership to ensure its contribution to technological innovation and simplification. When reference is made to the private sector, small businesses are often forgotten, but they are key players in the economic and social fabric of communities.

We cannot forget that spatial planning and urban planning are two essential tools of local government public action. SDGs become a unique tool for local administrators who want to start planning their territory pursuing the objectives of economic, social and environmental development. Only in this perspective, local policy can guarantee the active participation of citizens, both in the consultation phase and in the choice of priorities, and in the monitoring of the actions undertaken.

At the same time, citizens, in addition to the right to participate in the definition of objectives, must take responsibility, because the actions that each person takes daily at local level have an impact on the community and its future. Citizenship must therefore be characterized by equal rights and duties. In this sense, it is appropriate to refer to the concept of co-creation of value in society, to indicate the contribution that economic and social players, as well as segments of civil society, can make to innovate our development model.

It is necessary to document the experiences of implementing SDGs at local level more and more accurately. To do this, civil society can be a valuable ally, stimulating local governments to map successful experiences and achievements. In order to ensure greater participation of citizens worldwide, it is necessary to promote the translation of documents and debates launched on these issues into as many local languages as possible, not just the official languages of the United Nations.

It is urgent to restore trust not only between citizens and institutions, but also between the institutions themselves. Transparency continues to be an important topic of discussion also in Venice City Solutions: excessive bureaucracy in the public sector remains one of the greatest causes of distrust on the part of citizens, and it is therefore urgent to make local governments increasingly open and transparent.

Mayors and local administrators remain key players in the implementation of Agenda 2030, both for the local strategies they adopt and their direct relationship with citizens, and for their ability to bring together the many stakeholders that need to be involved.

## Rethinking the cities

Localizing does not just mean transposing global goals into local actions but ensuring that local actions shape the transformation to change the world. The current challenge is to accelerate and synchronize the actions of different stakeholders, learning and working together, and recognizing local initiatives for their impact on international policy development. In an interconnected world, local issues become global, and the global ones require local collective commitments and actions.

Cities and territories have a unique position to identify vital needs and gaps to improve the delivery of public services and to involve all stakeholders in the design of development strategies. The experience and commitment of local authorities must be displayed and recognized for its key potential to drive transformation at all levels and for accelerating the implementation of the SDGs.

It is necessary to find common elements among urban actors to promote understanding and alignment to speak globally. The 2030 Agenda can provide a common language that connects the different territorial actors that have an impact both in the lives of citizens and in the global debate. Setting the SDGs as a common language will allow different stakeholders to understand each other, to connect the dots to go beyond silos, and make sure that individual policies impact collective policies and that the local reaches the global.

The 2030 Agenda is the right framework for functional partnerships. To achieve good local governance and to advance on the transformative changes outlined by the Agenda, functional horizontal and vertical partnerships, and those between different territories, must be promoted as a way to identify new correlations and new ways of working. The very nature of Venice City Solutions 2030 is showing how the relationship between the various stakeholders is fundamental to trigger the transformation we want: we need inclusive and participatory processes that involve all the society sectors.

The 2030 Agenda is a tool to identify individual actions with collective and global impact. The multiplier effect of actions based on the SDGs is not only valid for public action, but for individual actions in the local community that contribute to the achievement of global sustainability. The challenge now is to move from collective impact to global: a false dichotomy has been identified between nature sustainability and people well-being. Platforms and spaces such as Venice City



Solutions 2030 and UCLG's Local4Action HUBs can be unique catalysts, as leaders from all sectors work collaboratively, to define how to restart greener economies, how to redesign resilient societies and redefine democracy.

The 2030 Agenda must be seen as a local tool within a post-COVID 19 crisis scenario, to show how the SDGs are essential for rebuilding cities and rebuilding them better, with the aim of a more sustainable future. The SDGs offer visions and policies for resilient, fair local development, to combat the structural urban inequalities that have been more exposed than ever by the Covid-19 pandemic, and to build a new social contract.

The 2030 Agenda helps to build a community based on shared values: in cities and territories it is easy to identify the dimension of space and people, but often the immaterial aspect of the community, that connects them, is not even considered. In this perspective, it is urgent to redefine new models of consumption and production, to pay attention to the way in which efficiency and growth are defined, to truly understand the intangible and immaterial sense of the community, careful to leave no one behind. The community expresses key values such as social justice, cooperation, decentralization, gender equality, self-government and accountability, which are shared values of the 2030 Agenda, to co-create a sustainable future for cities and territories.



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# APPENDIX

## Annex 1: Indicators

GOAL 1	1.1	M	Population in economic suffering	Italian Department of Finance, MEF	%	2015-2019	By 2030, reduce at least by half the proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions
	1.2	M	Social welfare home assistance (per capita expenditure)	National Institute of Statistics, ISTAT	Euro (€)	2014-2018	Implement nationally appropriate social protection systems and measures for all, including floors, and by 2030 achieve substantial coverage of the poor and the vulnerable
	1.3	P	Average annual pension income	National Institute of Statistics, ISTAT	Euro (€)	2015-2019	Implement nationally appropriate social protection systems and measures for all, including floors, and by 2030 achieve substantial coverage of the poor and the vulnerable
	1.4	M	Pro-poor public social spending (per capita expenditure)	National Institute of Statistics, ISTAT	Euro (€)	2014-2018	Create sound policy frameworks at the national, regional and international levels, based on pro-poor and gender-sensitive development strategies, to support accelerated investment in poverty eradication actions
GOAL 2	2.1	P	Endocrine, nutritional and metabolic diseases (number of deaths per 10,000 inhabitants)	National Institute of Statistics, ISTAT	numerical	2014-2018	By 2030, end all forms of malnutrition, including achieving, by 2025, the internationally agreed targets on stunting and wasting in children under 5 years of age, and address the nutritional needs of adolescent girls, pregnant and lactating women and older persons
	2.2	M	Community urban gardens (m2 per 100 inhabitants)	National Institute of Statistics, ISTAT	m2	2015-2019	By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality
GOAL 3	3.1	P	Life expectancy at birth	National Institute of Statistics, ISTAT	years	2015-2019	By 2030, reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being
	3.2	P	Deaths in road accidents (aged 15-34 years)	National Institute of Statistics, ISTAT	%	2016-2019	By 2020, halve the number of global deaths and injuries from road traffic accidents
	3.3	P	Hospital emigration in other regions	National Institute of Statistics, ISTAT	%	2015-2019	Achieve universal health coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all
	3.4	P	Bed places (per 10,000 inhabitants)	National Institute of Statistics, ISTAT	numerical	2014-2018	Achieve universal health coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all
GOAL 4	3.5	P	Mortality from cancer, aged 20-64 years (per 10,000 residents)	National Institute of Statistics, ISTAT	numerical	2014-2018	By 2030, reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being
	4.1	P	Schools provided of ramps	National Institute of Statistics, ISTAT	%	2015-2019	By 2030, eliminate gender disparities in education and ensure equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities, indigenous peoples and children in vulnerable situations
	4.2	P	People with at least a diploma	National Institute of Statistics, ISTAT	%	2016-2020	By 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes
	4.3	P	Children who have used municipal childcare services	National Institute of Statistics, ISTAT	%	2015-2019	By 2030, ensure that all girls and boys have access to quality early childhood development, care and pre-primary education so that they are ready for primary education
GOAL 5	4.4	P	Graduates and other tertiary qualifications, aged 25-39 years	National Institute of Statistics, ISTAT	%	2016-2020	By 2030, ensure equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university
	5.1	P	Gender employment gap	National Institute of Statistics, ISTAT	%	2015-2020	Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic and public life
	5.2	P	Female municipal administrators	National Institute of Statistics, ISTAT	%	2016-2020	Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic and public life
	5.3	R	Calls to 1522 (every 10,000 women)	National Institute of Statistics, ISTAT	%	2016-2020	End all forms of discrimination against all women and girls everywhere
GOAL 6	6.1	M	Water loss	Legambiente elaboration	%	2015-2019	By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity
	6.2	M	Domestic water consumption (lt per inhabitant per day)	Legambiente elaboration	lt	2015-2019	By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity
GOAL 7	7.1	M	Solar thermal and photovoltaic on public buildings (kW every 1,000 inhabitants)	Legambiente elaboration	kW	2015-2019	By 2030, increase substantially the share of renewable energy in the global energy mix
	7.2	P	Electricity from renewable sources	Terna S.p.A.	%	2015-2019	By 2030, increase substantially the share of renewable energy in the global energy mix
	7.3	P	Power (MW) of the installed photovoltaic systems	GSE(Energy services manager)	MW	2016-2020	By 2030, increase substantially the share of renewable energy in the global energy mix
	8.1	M	Average disposable total income per capita	Italian Department of Finance, MEF	Euro (€)	2015-2019	Sustain per capita economic growth in accordance with national circumstances and, in particular, at least 7 per cent gross domestic product growth per annum in the least developed countries
GOAL 8	8.2	P	Youth not in employment, education or training (NEET) - aged 18-25 years	National Institute of Statistics, ISTAT	%	2015-2020	By 2020, substantially reduce the proportion of youth not in employment, education or training
	8.3	P	Rate of fatal injuries and permanent disability (per 10,000 employed)	National Institute of Statistics, ISTAT	numerical	2014-2018	Protect labour rights and promote safe and secure working environments for all workers, including migrant

			P	8.4	Employment rate, aged 20-64 years	National Institute of Statistics, ISTAT	%	2015-2019	workers, in particular women migrants, and those in precarious employment By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value
		M		9.1	Mobility provided by public transportation (km-transport/inhabitant)	Legambiente elaboration	km	2015-2019	Develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all
GOAL 9	P			9.2	Start-ups (per 1,000 joint stock companies)	Sole 24 Ore elaboration	numerical	2016-2020	Enhance scientific research, upgrade the technological capabilities of industrial sectors in all countries, in particular developing countries, including, by 2030, encouraging innovation and substantially increasing the number of research and development workers per 1 million people and public and private research and development spending
	R			10.1	Gini Coefficient	National Institute of Statistics, ISTAT	Value	2014-2018	Ensure equal opportunity and reduce inequalities of outcome, including by eliminating discriminatory laws, policies and practices and promoting appropriate legislation, policies and action in this regard
GOAL 10	M			10.2	Vouchers, care allowances and social health vouchers (per capita municipal expense)	National Institute of Statistics, ISTAT	Euro (€)	2014-2018	Adopt policies, especially fiscal, wage and social protection policies, and progressively achieve greater equality
	M			11.1	Cycle paths (equivalent meters per 1,000 inhabitants)	Legambiente elaboration	mt	2015-2019	By 2030, provide universal access to safe, inclusive and accessible, green and public spaces, in particular for women and children, older persons and persons with disabilities
	M			11.2	PM <sub>2.5</sub> levels	Legambiente elaboration	µg/m3	2016-2019	By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management
GOAL 11	M			11.3	PM <sub>10</sub> levels	Legambiente elaboration	µg/m3	2015-2019	By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management
	M			11.4	Road surface for pedestrians (m2 per 100 inhabitants)	Legambiente elaboration	m2	2015-2019	By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all; improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons
	M			12.1	Separate waste collection	Legambiente elaboration	%	2015-2019	By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse
GOAL 12	M			12.2	Residential waste collection	Legambiente elaboration	%	2016-2019	By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse
	R			13.1	CO2 emissions	Italian Institute for Environmental Protection and Research, ISPRA - openpolis elaboration on ISPRa & ISTAT data	tons	2015, 2017	Integrate climate change measures into national policies, strategies and planning
GOAL 13	M			13.2	Flood risk	Italian Institute for Environmental Protection and Research, ISPRA	%	2015, 2017, 2018, 2020	Integrate climate change measures into national policies, strategies and planning
	M			15.1	Urban green areas (m2 per inhabitant)	National Institute of Statistics, ISTAT	m2	2015-2019	By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements
GOAL 15	M			15.2	Trees every 100 inhabitants	Legambiente	numerical	2015-2019	By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements
	M			15.3	Land consumption	National Institute of Statistics, ISTAT	%	2015-2017	By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements
	P			16.1	Cases pending for 3+ years	Sole 24 Ore	%	2015-2020	Develop effective, accountable and transparent institutions at all levels
GOAL 16	P			16.2	Overcrowding of penal institutions	National Institute of Statistics, ISTAT	%	2016-2020	Develop effective, accountable and transparent institutions at all levels
	P			16.3	Voluntary homicides (per 100,000 inhabitants)	National Institute of Statistics, ISTAT	numerical	2014-2018	Significantly reduce all forms of violence and related death rates everywhere
	P			16.4	Thefts (number of crimes reported to the authorities, per 1,000 inhabitants)	National Institute of Statistics, ISTAT	numerical	2015-2019	Significantly reduce all forms of violence and related death rates everywhere
	P			17.1	Population covered by FTTH (Fiber To The House)	Sole 24 Ore	%	2020	Enhance North-South, South-South and triangular regional and international cooperation on and access to science, technology and innovation and enhance knowledge-sharing on mutually agreed terms, including through improved coordination among existing mechanisms, in particular at the United Nations level, and through a global technology facilitation mechanism
GOAL 17	P			17.2	Non-profit organisations (per 10,000 inhabitants)	National Institute of Statistics, ISTAT	numerical	2016-2017	Encourage and promote effective public, public-private and civil society partnerships, building on the experience and resourcing strategies of partnerships



