

# The territorialisation of the 2030 Agenda: a multilevel approach

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## 1. Introduction

The concept of sustainable development has evolved over time, involving the international and global communities (Sachs, 2015). The 2030 Agenda for Sustainable Development, approved on 25 September 2015 by the General Assembly of the United Nations, has shaped the concept of sustainability in its most concrete definition, establishing the multidimensionality nature of sustainable development: the environmental dimension is associated with the economic, social and institutional ones (UN, 2015). It commits the governments of the 193 UN member States to work together to transform our world. However, the Agenda is divided into 17 Sustainable Development Goals (SDGs) which have a universal character, as long as they are aimed for all the countries in the world, without income nor geographical distinctions.

The monitoring process of sustainable development has acquired fundamental importance. At the international level, this process translates into an annual review at the UN Economic and Social Council, a four-year review at the General Assembly, and with the presentation of voluntary national reviews. Despite the leverage on the accountability of countries and the encouragement of initiatives aimed at raising awareness on issues related to sustainable development, the achievement of the 2030 Agenda still struggles to find concrete and rapid implementation. For example, Italy with its National Sustainable Development Strategy (SNSvS) has not yet defined quantitatively what its commitments are for achieving the 17 SDGs.

On this basis, the UN "Decade of Action" was launched in September 2019 to accelerate efforts to achieve the SDGs (UN, 2019). United Nations Secretary General António Guterres called on all components of society to mobilize for change: from world leaders to coordinate global action, to local leaders to define national, regional and city policies and strategies (Guterres, 2019).

If at national level the main common action of the member States is the definition of a national strategy for sustainable development, the international community has integrated the SDGs also in its supranational, regional or sectoral conformations. For example, the Organization for Economic Cooperation and Development (OECD) has adopted an action plan to contribute to the SDGs (OECD, 2016), while organizations such as the Security and Cooperation in Europe (OSCE) and the Council of Europe (CoE) have integrated the SDGs into their policies and activities.

In November 2016, the European Commission presented the EU strategic approach to the SDGs with the communication of "The sustainable future of Europe: next steps" (European Commission, 2016), which places sustainable development as the guiding principle of all political strategies and inaugurates a high-level multistakeholder platform level to support cross-sectoral exchange of best practice practices. To date, the SDGs are included in all six Commission priorities 2019-2024 (European Commission, 2019).

The transition process towards a more sustainable development model cannot ignore the contribution of local policies as stated by the European Commission for Economic Policy "Indeed, 65% of the 169 targets can only be reached through coordination and inclusion of local and regional governments" (Commission for Economic Policy, 2019). This is crucial for the development of the local context to contribute to the achievement of the SDGs on a global scale. The purpose of this paper is to present the methodological framework defined by the Italian Alliance for Sustainable Development (ASviS), based on the experiences developed with local administrations to support

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Referee List (DOI 10.36253/fup\_referee\_list)

FUP Best Practice in Scholarly Publishing (DOI 10.36253/fup\_best\_practice)

Raffaele Attanasio, Manlio Calzaroni, Alessandro Ciancio, Federico Olivieri, Giovanni Siciliano, *The territorialisation of the 2030 Agenda: a multilevel approach*, © Author(s), CC BY 4.0, DOI 10.36253/979-12-215-0106-3.16, in Enrico di Bella, Luigi Fabbris, Corrado Lagazio (edited by), *ASA 2022 Data-Driven Decision Making. Book of short papers*, pp. 89-94, 2023, published by Firenze University Press and Genova University Press, ISBN 979-12-215-0106-3, DOI 10.36253/979-12-215-0106-3

the implementation of a "Multi-level sustainable development strategy", which makes planning territorial coherent with the national one and with the European programming.

## **2. The territorialization of UN 2030 Agenda**

By “territorialization” of the UN 2030 Agenda we mean the process of defining, implementing, and monitoring sustainable development strategies at the local level created in order to contribute to the achievement of global, national, regional and provincial objectives and targets. The approach developed for the definition of the Territorial Strategies is based on the experiences that ASviS has developed in accompanying the Italian Regions and local institutions in the development of their sustainable development Strategies.

The model is carried out in four phases which will be explored in the following paragraphs:

1. Assessment of the positioning of the territory with respect to the UN 2030 Agenda SDGs;
2. Identification of the quantitative targets that the regional/territorial administration wants/must achieve;
3. Designing of policies that should favour the achievement of local quantitative targets;
4. Involvement and dialogue with all stakeholders in sharing "specific" objectives, actions and projects.

### *2.1 Regional and local positioning*

The positioning makes it possible to assess the level of sustainability of the territory with respect to the 17 Sustainable Development Goals of the UN 2030 Agenda. This territorial analysis is carried out through specific composite indices calculated for each SDG.

The data source is the National Institute of Statistics (Istat), or institutions belonging to the National or European Statistical System. The indicators are for the monitoring of the Sustainable development and the sustainable well-being, following these criteria:

- Comparability that allows the comparison between the different territorial levels;
- Availability of information in time series;
- Polarity of the indicator. The meaning of the indicator must be clear, i.e. the interpretation in the case of its increase or decrease must be unambiguous: an increase/decrease in the value of the elementary indicator must correspond to a clear judgement, either positive or negative.

For the calculation of the composite index we have followed the systematic process proposed by (Nardo et al., 2005). Each SDG has been associated with a list of specific indicators, able to represent the characteristics of the Goal. The list of simple indicators, which form the basis of the 17 composite indices, is available on the ASviS website (*I Numeri Della Sostenibilità - Alleanza Italiana per Lo Sviluppo Sostenibile*, 2021). Subsequently, the chosen indicators were normalized using the methodology proposed by (Mazziotta & Pareto, 2015). Then, for the aggregation we have chosen the Adjusted Mazziotta - Pareto Index (AMPI), a composite index also used by Istat (Mazziotta & Pareto, 2017) deciding to attributes equal weight to all the basic indicators.

The indices show the improvement or worsening of the situation compared to the starting value recorded in the base year (for ASviS 2010). If a composite index shows an improvement, this does not necessarily mean that the Region is on a path that will allow it to meet the Goals in 2030, but simply that, on average, it is moving in the right direction, giving policy makers an assessment of where their territory stands in relation to the 17 Goals of the 2030 Agenda. Table 1 shows an example of analysis of the composite index for three SDGs calculated for the Emilia Romagna region. The SDGs chosen represent three of the four spheres in which the concept of sustainable development is articulated. Specifically, Goal 4 refers to the social sphere, Goal 8 to the economic sphere and Goal 15 to the environmental sphere. However, the calculation of the composite takes place for all the SDGs and for all the Italian regions.

**Table 1.** Values of the AMPI indices calculated for the Italian region of Emilia Romagna for SDGs 4 (quality education), 8 (economic growth) and 15 (life on earth). The values are given for 2010 and 2020.

Emilia Romagna	AMPI 2010	AMPI 2020
SDG 4	108.1	117.7
SDG 8	108.9	110.4
SDG 15	92.8	86.3

Table 1 shows that the Emilia Romagna region, between 2010 and 2021, improves in Goal 4, with an increase in the index value of 9.6 points, remains almost constant in Goal 8, showing an increase of 1.5 points and gets worse in Goal 15, highlighting low performances.

## 2.2 Identification of quantitative targets

Since the UN 2030 Agenda is an action plan for all the countries in the world, only in few cases it defines quantitative targets, delegating this task to national and local governments. It is therefore crucial for local sustainable development strategies to concretise quantitatively the targets of the 2030 Agenda. The quantitative targets values, associated with the UN 2030 Agenda, are defined according to the following hierarchy:

- A. Target values are defined by the higher institutional levels (UN, European Union and Italian government);
- B. In the absence of a defined value as in point A), the assessment of the target value is based on the judgment of the experts of the ASviS working groups;
- C. If the aforementioned methodologies are not applicable, a benchmark analysis is carried out defining the value recorded by the territorially most similar best performer as the target value.

If none of the above criteria allows to define the target values, the Eurostat methodology is used (EUROSTAT, 2021). This type of analysis allows to evaluate the performance of the regions, and, more generally, of the territory with respect to the achievement of the quantitative objectives of sustainable development defined at national and/or supranational level. This preliminary analysis attributes the same quantitative target between the different levels (national, regional and metropolitan) and within them (for example between the different Italian regions), without taking into consideration the geomorphological, social and economic characteristics of the territory. The assessment of the target is generally based on the ‘compound annual growth rate’ (CAGR) formula, which assesses the pace and direction of the evolution of an indicator (EUROSTAT, 2021). This formula uses the data from the first and the last years of the analysed time span and is used to calculate the average annual rate of change of the indicator (in %) between these two data points.

In the presence of a quantified political target (for example, the target in Table 2 which is defined by the circular economy package, published in the Official Journal of the European Union on 14 June 2018), the actual rate of change of the indicator is compared with the theoretical rate of change that would be required to meet the target in the target year.

If the actual rate is:

- 95 % or more of the required rate, the indicator shows a significant progress towards the EU target;
- Between 60 % and 95 %, the trend shows moderate progress towards the EU target;
- Between 0 % and 60 %, progress towards the EU target is insufficient;
- Below 0 % mean that the trend is moving away from the EU target.

As far as possible, indicator trends are assessed over the long-term trend, which is based on the evolution of the indicator over the past ten-year period, and the short-term trend, which is based on the evolution of the indicator during the past five-year period.

**Table 2.** Example of territorialisation of a quantitative target. The target, the reference SDG, the most updated value of the indicator associated with the target and the short (S.T.) and long-term (L.T.) CAGRs are presented.

SDG	Target	Territory	Last value	CAGR. S.T.	CAGR. L.T.
12	By 2030, reduce the share of municipal waste produced per capita by 26% compared to 2004	Italia	488,5 kg/ab.*year (2020)	-5%	9%
		Emilia Romagna	639,9 kg/ab.*year (2020)	4%	21%
		Bologna	562,8 kg/ab.* year (2020)	-8%	16%
		Monte S. Pietro (BO)	439,9 kg/ab.* year (2020)	-159%	95%

Table 2 shows an example of a quantitative target applicable to different territories, which in this case are Italy, Emilia Romagna region, the Metropolitan city of Bologna and the small municipality of Monte San Pietro (inside the Metropolitan city of Bologna district). The study of the trends shows that in the short term (2015 - 2020), apart from the Emilia Romagna regione, all the territories considered increase the per capita production of waste, while in the long term (2010 - 2020), only the municipality of Monte San Pietro has a growth rate which, if maintained, would guarantee the achievement of the objective.

Beyond the targets defined at a higher institutional level, it is necessary to define a set of specific targets linked to the institutional activities of the local and regional governments and consistent with the SDGs, to generate an information and monitoring system useful for measuring any gaps and redirecting political actions for the concrete achievement of sustainability. Implementing territorial strategies for sustainable development means defining a programmatic document based on quantitative targets to be achieved, which take into account the peculiarities of the territory and the political will of the administration, and which are consistent with the SNSvS. These must always consider the objectives set at the higher level (national and international), but at the same time they must take into account the specificities and starting conditions of the territory identified through the positioning described in par. 2.1. Targets must make clear the expected change and be measurable. By way of example, the Emilia-Romagna region has indicated in its regional Strategy all the strategic targets it intends to achieve by 2026. Many are in line with national targets but, for some areas, the region has identified specific targets. In particular, the regional administration has proposed a different target regarding the maximum number of days in which it is possible to exceed the limit concentration of fine particles established by law (35 days / year for Emilia-Romagna vs. 3 days / year for Italy). Because the fact that - due to the morphological aspect of the Po Valley - the 3 days / year target is unrealistic for the region. At the same time it has set a more ambitious target than the national and European one for early exit from the training system (8.5% vs. 9% by 2030) (Emilia Romagna, 2020).

### *2.3 Individuation of the policies and actions associable to the specific targets*

The strategic targets must subsequently be included in the planning tools of the local authorities. In this way it is possible to plan the achievement of the quantitative objectives. In the Economic and Finance Document for the Regions (DEFR) and in the Single Programming Documents for the Local Authorities (DUP), it is necessary to specify the strategic objectives that the Government intends to achieve during the legislature, indicating, for each objective, the expected results annually. The aim is to embed the territorial Strategy into the programming and monitoring tools. The quantitative objectives implemented in the DEFR or in the DUP must be correlated with the national strategic areas and choices, and through them with the global objectives of the 2030 Agenda. Increasingly integrated monitoring and evaluation of regional and local policies, in order to create a coherent and effective multilevel system are necessary. To measure performance, it is necessary to introduce outcome and/or output objectives and consequently impact indicators that

are strictly related to the defined targets. For example, the Parma municipality is one of the first in Italy to implement a direct link between the quantitative targets, defined as in paragraph 2.2, and the Strategic and operational Objectives that define the policy action of the municipality (Comune di Parma, 2020).

#### *2.4 Involvement and dialogue with all stakeholders*

A change of impact requires bringing together the contribution of different actors: public, private and civil society. The achievement of the 2030 Agenda, in fact, strongly depends on the action and collaboration of all the players in the territorial, institutional and socio-economic system.

No public administration can be considered the *deus ex machina* of the implementation of policies and the response to needs in its reference territory. The role of territorial and regional governments has changed, passing from having a predominant function in the provision and direct management of services to having the function of "directing", guiding, and controlling local development. In fact, the subsidiarity network involves public and private entities, for profit and non-profit, who collaborate with the administration in achieving policies and objectives.

Public-private partnerships therefore bring together public bodies, private companies and the third sector, with the aim of contributing to the implementation of projects and initiatives capable of generating positive impacts for the community, often called upon to actively participate in dialogue between the parts.

Local authorities must therefore equip themselves with suitable tools for participatory activities, to obtain shared governance for the entire process. Failure to participate is the cause, in fact, of the inefficiency of choices and actions, which, without the support of the beating heart of the territories (citizenship, universities, third sector, private sector, etc.), struggle to function. As an example, in the Metropolitan city of Milan ASviS, with the contribution of the *Politecnico di Milano*, has organized a co-creation laboratory, involving public and private stakeholders in the discussion of the quantitative targets defined during the process, as well as the discussion of the policy action to achieve the quantitative targets.

### **3. Conclusions**

The rising need to measure and monitor sustainable development for subnational administrations urges the development of a shared framework of goals, targets, and indicators in a systemic way. Consistently with this reflection and with the multidimensional nature of the concept, ASviS developed a "Multilevel approach", which declines the national and supranational programmatic targets on the territorial scale.

According to ASviS, the basis for correct "Multilevel approach" programming provides for a mapping of the local context with respect to the 17 SDGs through the calculation of composite indices. This to summarize the degree of sustainability of the individual territories for each Goal and to compare the performance between the different realities belonging to higher or lower levels, and through the measurement of the distance from the international targets related to the UN 2030 Agenda.

Based on these results, the public and private stakeholders are involved in identifying quantitative territory-based targets, needed to define the commitments of the territories and to monitor the impact of policies with respect to the achievement of the SDGs.

The relevance of this innovative approach is to promote a new type of territorial programming based on quantitative targets and indicators, which can support local public decision-makers in their decision-making process.

## References

- Better Policies for 2030 An OECD Action Plan on the Sustainable Development Goals.* (n.d.). <http://oe.cd/sdg>
- Böhringer, C., & Jochem, P. E. P. (2007). Measuring the immeasurable — A survey of sustainability indices. *Ecological Economics*, 63(1), 1–8. <https://doi.org/10.1016/j.ecolecon.2007.03.008>
- Commission for Economic Policy.* (n.d.). <https://doi.org/10.2863/11396>
- Comune di Parma. (2020). *2021-2023 DUP Parma.*
- Decade of Action - United Nations Sustainable Development.* (n.d.). Retrieved July 15, 2022, from <https://www.un.org/sustainabledevelopment/decade-of-action/>
- Emilia Romagna. (2020). *We build the future together REGIONAL STRATEGY “2030 AGENDA FOR SUSTAINABLE DEVELOPMENT.”*
- European Commission. (2016). *Next steps for a sustainable European future European action for sustainability.*
- European Commission. (2019). *COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE EUROPEAN COUNCIL, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS The European Green Deal.* [https://eur-lex.europa.eu/resource.html?uri=cellar:b828d165-1c22-11ea-8c1f-01aa75ed71a1.0002.02/DOC\\_1&format=PDF](https://eur-lex.europa.eu/resource.html?uri=cellar:b828d165-1c22-11ea-8c1f-01aa75ed71a1.0002.02/DOC_1&format=PDF)
- EUROSTAT. (2021). *Assessment of indicator trends Assessment of indicator trends How are trends assessed? How are the assessment results presented?*
- Gan, X., Fernandez, I. C., Guo, J., Wilson, M., Zhao, Y., Zhou, B., & Wu, J. (2017). When to use what: Methods for weighting and aggregating sustainability indicators. *Ecological Indicators*, 81, 491–502. <https://doi.org/10.1016/J.ECOLIND.2017.05.068>
- I numeri della sostenibilità - Alleanza Italiana per lo Sviluppo Sostenibile.* (n.d.). Retrieved November 20, 2022, from <https://asvis.it/I-numeri-della-sostenibilita/>
- Mazziotta, M., & Pareto, A. (2015). *Comparing Two Non-Compensatory Composite Indices to Measure Changes over Time: a Case Study.*
- Mazziotta, M., & Pareto, A. (2018). Measuring Well-Being Over Time: The Adjusted Mazziotta-Pareto Index Versus Other Non-compensatory Indices. *Social Indicators Research*, 136. <https://doi.org/10.1007/s11205-017-1577-5>
- Nardo, M., Saisana, M., Saltelli, A., & Tarantola, S. (2005). *Tools for Composite Indicators Building.* <http://europa.eu.int>
- Nations, U. (2015). *70/1. Transforming our world: the 2030 Agenda for Sustainable Development Transforming our world: the 2030 Agenda for Sustainable Development Preamble.*
- Remarks to High-Level Political Forum on Sustainable Development | United Nations Secretary-General.* (n.d.). Retrieved July 15, 2022, from <https://www.un.org/sg/en/content/sg/speeches/2019-09-24/remarks-high-level-political-sustainable-development-forum>
- Sachs, J. D. (2015). *The Age of Sustainable Development.* Columbia University Press. <https://doi.org/10.7312/sach17314>
- Tarantola, S. (2016). *State-of-the-art report on current methodologies and practices for composite indicator development.* <https://doi.org/10.13140/RG.2.1.1505.1762>