

BOLZANO-BOZEN, ITALY

A Territorial Approach to the Sustainable Development Goals in Bolzano-Bozen, Italy



OECD Regional Development Papers

A Territorial Approach to the Sustainable Development Goals in Bolzano-Bozen, Italy



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Foreword

The OECD and the Autonomous Province of Bolzano-Bozen, Italy, are delighted to introduce the results of the policy dialogue that we conducted to strengthen a territorial approach to the United Nations (UN) Sustainable Development Goals (SDGs) in the Autonomous Province of Bolzano-Bozen.

To foster the UN 2030 Agenda, the Autonomous Province of Bolzano-Bozen established a sustainability pact, including the sustainable development strategy *Everyday for Future – Together for Sustainability*. *Everyday for Future* defines seven fields of action that were derived from the SDG framework to promote sustainability across policy areas, such as the conservation of the natural environment, the reduction of greenhouse gas emissions, competitiveness and social justice. In order to achieve these objectives through concrete policies and measures, the province put in place several sectoral strategies, notably a cross-departmental climate plan, a strategy for the agricultural sector as well as a tourism development concept and a sustainable mobility and logistics plan.

In today's highly uncertain policy environment marked by the fallout from the COVID-19 crisis, Russia's war of aggression against Ukraine and the climate emergency, among other challenges, the SDGs offer a clear, stable and effective framework to address the main challenges the province is confronted with, such as climate change, the transition to sustainable agriculture, sustainable mobility and tourism, and affordable housing. This report provides guidance on how to harness the implementation of the SDGs to respond to these challenges in a holistic and effective manner and, in turn, help the region implement its sustainable development vision *Everyday for Future*.

Throughout the policy dialogue underlying this report, we shared our experience with a wide variety of stakeholders in the Autonomous Province of Bolzano-Bozen and learned from peer policy makers from the State of Paraná (Brazil), the Rhine-Neckar Metropolitan Region (Germany) and the Basque Country (Spain). The OECD and the Autonomous Province of Bolzano-Bozen also benefited from the experiences and insights of numerous municipalities and institutions from public, private and non-profit sectors in developing the policy recommendations included in this report.

Both our institutions are proud of this journey and the results achieved. We now look forward to continued collaboration to translate the policy recommendations into action in the future.



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The report was drafted by Lorenz Gross (Chapters 1, 2 and 4) and Mattia Corbetta (Chapters 3 and 4), Policy Analysts, and co-ordinated by Lorenz Gross and Stefano Marta, Head of the Smart and Sustainable Cities Unit, under the supervision of Aziza Akhmouch, Head of the Cities, Urban Policies and Sustainable Development Division in the CFE, and Soo-Jin Kim, Deputy Head. The report benefitted from the statistical guidance of Marcos Díaz Ramírez, who helped analyse the local SDG data. Gaia Anselmi and Gian Maria Mallarino, interns at the OECD Trento Centre for Local Development, provided background research and editorial support for Chapter 3.

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Abbreviations and acronyms

ASTAT	<i>Amt für Statistik</i> , Provincial Statistics Institute
CFE	OECD Centre for Entrepreneurship, SMEs, Regions and Cities
CISIS	<i>Centro Interregionale per I Sistemi Informatici Geografici e Statistici</i> , Interregional Centre for Geographic and Statistical Information Systems
CLLD	Community-led local development
CNR	<i>Consiglio Nazionale delle Ricerche</i> , National Research Centre
CO₂	Carbon dioxide
CSO	Civil society organisation
CSR	Corporate social responsibility
DDC	Decentralised development co-operation
EGTC	European Grouping of Territorial Cooperation
ENEA	<i>Agenzia Nazionale per le Nuove Tecnologie, l'Energia e lo Sviluppo economico sostenibile</i> , National Agency for New Technologies, Energy and Sustainable Economic Development
ESG	Environmental, social and governance
EU	European Union
EUSALP	EU-Strategy for the Alpine Region
GDP	Gross domestic product
GSTC	Global Sustainable Tourism Council
HGV	<i>Hotellers- und Gastwirteverband Südtirol</i> , Hoteliers and Innkeepers Association South Tyrol
KPI	Key performance indicator
IDM	Innovators, Developers and Marketers
INSTO	United Nations International Network of Sustainable Tourism Observatories
ISPRA	<i>Istituto Superiore per la Protezione e la Ricerca Ambientale</i> , Italian Institute for Environmental Protection and Research
ISTAT	<i>Istituto nazionale di statistica</i> , Italian National Institute of Statistics
MITE	<i>Ministero dell'Ambiente e della Sicurezza Energetica</i> , Ministry of Ecological Transition
NSDS	National Sustainable Development Strategy
NGO	Non-governmental organisation
NEET	Not in education, employment or training
ODA	Official development assistance
OECD	Organisation for Economic Co-operation and Development
PCT	Patent Cooperation Treaty
PIAO	<i>Piano integrato di attività e organizzazione</i> , Integrated Activity and Organisation Plan
PM	Particulate matter
PP	Percentage point
PPP	Power purchasing parity
R&D	Research and development
RDPC	Regional Development Policy Committee
RIS3	Research and innovation strategies for smart specialisation
SDG	United Nations Sustainable Development Goals
SMEs	Small and medium-sized enterprises
STOST	Sustainable Tourism Observatory of South Tyrol
UN	United Nations
USD	United States Dollar
WDPA	World Database on Protected Areas
WHO	World Health Organization

Executive summary

The Autonomous Province of Bolzano-Bozen is Italy's northernmost and second-largest province, with a population of around 530 000 people and a special statute that grants specific forms and conditions of autonomy. Due to its topography (80% of the provincial territory is considered mountainous), only 6% of the province is habitable. The services and public sectors generate close to 70% of employment and value-added. The province is also a popular tourist destination, which helps drive the local economy but puts pressure on the housing market and transport infrastructure.

Key findings

The Autonomous Province of Bolzano-Bozen performs better than the average of OECD regions on SDGs related to poverty, unemployment, health and energy

- In 2021, 7.7% of the population lived in households with a net equivalent income below 60% of the national median, compared to an average 20.4% across OECD regions (SDG 1).
- In 2021, the province ranked among the bottom 20% of OECD regions regarding the unemployment rate, which stood at 3.9%, i.e. almost half of the OECD regional average (7.6%) (SDG 8).
- Infant mortality in 2017 was 2.8 deaths compared to the OECD average of 5.9, and child mortality was 7.0 deaths compared to 11.8. The rate of active physicians per 1 000 people (3.2 in 2019) exceeded the average of OECD regions, while the rate of hospital beds (35.0 per 1 000 people in 2019) was higher than in 55% of OECD regions, although it remained slightly below the average of 41.4 (SDG 3).
- In 2021, the share of renewable sources in the province's gross final energy consumption was 69.2% in 2021, more than 3 times the Italian average (20.4%) according to data from the Provincial Statistics Institute ASTAT. Furthermore, in 2019, all the electricity produced in the province came exclusively from renewable sources, in particular hydropower (SDG 7).

Challenges exist with regard to sustainable mobility, the impact of tourism and agriculture on the environment as well as affordable housing

- In 2019, 93.4 motor road vehicles were registered per 100 inhabitants compared to an average of less than 40 in OECD regions. Road transport accounts for 44% of total greenhouse gas (GHG) emissions and the population's exposure to particulate matter 2.5 (9.5 micrograms per cubic meter [$\mu\text{g}/\text{m}^3$] in 2020) is almost twice the World Health Organization air quality guideline of 5 $\mu\text{g}/\text{m}^3$ average annual exposure (SDGs 11, 12).
- The Autonomous Province is the most tourist-intensive region in Italy, with around 65 000 overnight stays per 1 000 inhabitants in 2022. Between 1990 and 2022, the number of tourists staying in the province increased by almost 50%, from 23 million to 34 million. Over 90% of tourists arrive by

private car, contributing to traffic congestion and the above-mentioned air pollution (SDG 11). Additional challenges include the dependence on labour from abroad, seasonality and impacts on the natural landscape.

- The agricultural sector is an important contributor to GHG emissions, accounting for 76% of methane and 17% of carbon dioxide (CO₂) emitted in the province. Furthermore, in 2021, the amount of fertilisers used in agriculture reached 863 kilograms per hectare (kg/ha) compared to a national average of 632 kg/ha. The high consumption of water resources and fossil fuels in food production (mainly apples, livestock and viticulture) adds to the challenges (SDGs 2, 15).
- In the province, 35% of household expenditure is devoted to housing costs, compared to 24% in OECD regions on average. In part driven up by tourism, the province registered the highest property values per square metre among all Italian regions in 2021. Accordingly, only 46% of the population were satisfied with housing affordability between 2008 and 2018 (vs. 53% in OECD regions on average) (SDG 11).

The autonomous province has developed a cross-cutting vision for sustainable development but the implementation of concrete measures is still at an initial stage

- Everyday for Future is the province's overarching vision for sustainable development. It defines seven fields of action to promote sustainability: i) reduction of GHG emissions; ii) competitiveness; iii) social justice and equal opportunities; iv) conservation of the natural environment; v) changing consumer behaviour and awareness; vi) high-quality public services; and vii) transparency and justice. The vision also sets out several sustainability objectives to achieve by 2030 (e.g. reduction of annual energy-related CO₂ emissions, increase in cycling journeys), albeit without providing details on possible measures to achieve the objectives.
- To define more concrete measures, the province has established a suite of sectoral strategies, notably a cross-departmental climate plan, a strategy for the agricultural sector and a sustainable mobility and logistics plan. The Climate Plan, for example, contains more than 150 measures (e.g. banning oil heating systems, expanding organic agriculture, developing a provincial resilience plan), 109 of which have already been initiated.
- To support the journey towards sustainable development, the Provincial Statistics Institute ASTAT has developed an interactive SDG Tracker with 81 indicators across 16 SDGs to measure progress towards the 2030 Agenda. However, its indicators are not yet reflected as key performance indicators (KPIs) in Everyday for Future and the sectoral strategies, making it difficult to monitor their implementation.

There is room for improvement in the alignment of sustainable development policies with the national government

- Synergies could be further exploited between the province and the national government for implementing the National Sustainable Development Strategy, Italy's overarching strategic framework to guide the implementation of the 2030 Agenda. In contrast to other Italian regions, the province has no formal agreement with the national government to advance a common vision and identify areas of co-operation, which could help avoid inconsistencies across objectives and facilitate knowledge sharing with other Italian regions.

Civil society and academia promote sustainable development through different networks but connecting sustainability practices within the private sector to the SDGs remains challenging

- The province has supported the setup of the South Tyrol Network for Sustainability, a platform for civil society organisations to enhance their advocacy efforts for sustainable development. In addition, the Research Alliance for Sustainability brings together the main provincial research institutions to raise awareness of the SDGs and provide policy advice to the public and private sectors.
- Several private companies have engaged in sustainable business models but there is a lack of established criteria to assess their sustainability performance, especially among small and medium-sized enterprises. Although the financial sector has started funding sustainable development projects, these initiatives often remain disconnected from the SDGs. This misalignment can impede their integration into the broader sustainability discourse and lead to missed opportunities for synergies, notably due to the varying terminologies and approaches employed.

Key recommendations

Policies, strategies and indicators

- **Define concrete measures across the seven fields of action of Everyday for Future to respond to the province's challenges related to sustainable mobility, tourism, agriculture and housing.** Everyday for Future offers a good starting point for advancing sustainable development through targets and commitments, but more specific actions on how to achieve the targets have yet to be defined in relation to dependence on private cars (SDG 12) and related GHG (SDG 11), housing affordability (SDG 11) as well as the impacts of agriculture (SDGs 2, 15) and tourism (SDGs 11, 12). As a next step, the province could consider implementing the following measures while managing competing demands for related funding by engaging different departments and stakeholders:
 - *Sustainable mobility*: Expand low-carbon mobility options (SDG 11) to mitigate the dependence on private cars and reduce GHG (SDG 13), e.g. by further promoting the annual South Tyrol Pass that incentivises public transport usage through a degressive price structure that makes public transportation more cost-effective as the distance travelled increases; extending the commuter cycling network in the valleys between municipalities; creating additional public e-bike rental sharing services in collaboration with municipalities; and further increasing the share of electric and green hydrogen buses in the public transport fleet.
 - *Tourism*: Promote the sustainable transformation of tourism (SDGs 8, 9, 12, 13), e.g. by monitoring the carbon footprint across the tourism value chain to identify the areas where measures to reduce GHG emissions can be most effective; prioritising local and organic products in accommodation facilities to reduce the carbon footprint of the tourism sector; and integrating the needs and demands of the local communities into tourism management and planning to preserve natural landscapes, maintain affordable cost of living and avoid overcrowding of tourist destinations.
 - *Agriculture*: Support the transition to sustainable agriculture (SDGs 2, 13) to minimise its impact on biodiversity and climate, e.g. by further investing in research and development to reduce energy and water consumption and increase the use of renewable sources, for example through the Laimburg Research Centre, the province's main research centre for agriculture

and food processing; and moving towards a circular economy approach by re-using agricultural byproducts and waste in building materials and products.

- *Affordable housing*: Promoting access to affordable and quality housing for all, particularly the most vulnerable (SDG 11), e.g. by providing incentives for social housing such as requiring a certain proportion of housing units to be affordable renting units in the design of development proposals; regulating short-term rentals in city centres of Bolzano-Bozen and Merano-Meran (e.g. Airbnb); and repurposing existing space for housing, such as vacant or underutilised buildings.
- **Identify and manage the synergies and trade-offs between measures foreseen in the different sectoral plans to: i) address housing affordability while adapting buildings to climate change; ii) foster sustainable mobility while managing the influx of tourists; and iii) maintain the competitiveness of the agricultural sector while reducing GHG emissions.** The autonomous province should not only use the SDGs in *Everyday for Future* but also integrate them into sectoral plans to align them with a common framework. For example, the Climate Plan defines 16 fields of action that require managing synergies and trade-offs, both within the plan (e.g. trade-offs between construction and CO₂ emission reduction) and with other provincial strategies such as *Everyday for Future*, which could be facilitated through the framework of the SDGs. Such analysis could be included in the current provincial performance plan, which was first put in place in 2018 and already systematises the contribution of different actions to specific SDGs.
- **Assess the implementation of *Everyday for Future* and the Climate Plan by integrating KPIs into the SDG Tracker.** The autonomous province should define quantitative KPIs, i.e. measurable target values for *Everyday for Future* and the Climate Plan, the two main cross-cutting plans. In particular, KPIs should be assigned to the different fields of action of the plans to monitor their implementation. While the SDG Tracker provides a good overview of the province's progress on the SDGs, including in comparison with Italian regions, it should be increasingly used to conduct analysis for policy-making purposes and to assess the strengths and weaknesses of the province.

Multi-level governance and stakeholder engagement

- **Strengthen collaboration with the national government for a shared commitment to achieve the SDGs.** Greater engagement by the Autonomous Province of Bolzano-Bozen in the National Sustainable Development Strategy could be achieved through active participation in national fora like the State-Regions Conference, which helps assess alignment between national and provincial sustainable development strategies.
- **Use *Everyday for Future* and the SDGs as a framework to strengthen strategic alignment between public and private actors in their efforts to promote sustainable development.** The provincial government should continue its efforts to improve co-ordination with stakeholders through the South Tyrol Network for Sustainability and the Research Alliance for Sustainability. Going forward, it should also aim to facilitate collaboration between private and public actors to promote sustainability through a joint platform for representatives from the provincial government, civil society organisations and the private sector. This platform should serve as a space for dialogue, information sharing and co-ordination of sustainable development initiatives and should encourage partnerships between public and private actors to pool expertise required to collectively advance the province's vision.

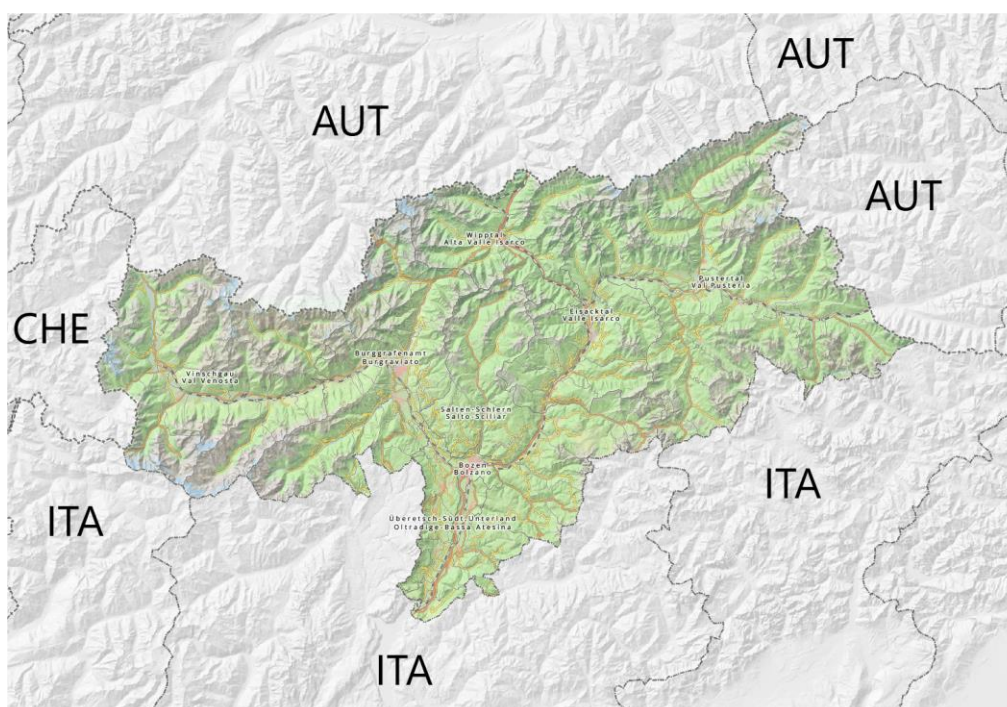
1 Policies and strategies for sustainable development

The Autonomous Province of Bolzano-Bozen, Italy, started working on the United Nations Sustainable Development Goals (SDGs) in 2019 through the establishment of a sustainability pact, which led to the development of Everyday for Future, the provincial sustainable development vision. Everyday for Future defines seven fields of action derived from the SDG framework and adapted to the specific characteristics of the province. It is complemented by several sectoral strategies, notably in the areas of climate, agriculture, tourism and mobility. While the province's various strategies present ambitious targets, concrete actions for their achievement remain to be defined or have been initiated only recently; key performance indicators (KPIs) to monitor progress need to be further elaborated.

Key facts about the Autonomous Province of Bolzano-Bozen, Italy

The Autonomous Province of Bolzano-Bozen is characterised by a mountainous topography and low population density. It is Italy's northernmost province, bordering Austria and Switzerland (Figure 1.1). While it is Italy's second largest province, with an area encompassing around 7 400 km², 80% of the province's territory is considered mountainous. Indeed, 86% is located more than 1 000 metres above sea level and about 37% even lies in areas at an altitude of more than 2 000 metres. As a result, only 6% of the province's area is habitable. In addition, forests cover 60% of the province's land area, which is often difficult to access and, therefore, hardly economically used. In 2022, the province was home to a population of around 530 000 people living in 116 municipalities and representing less than 1% of the Italian population, i.e. a low population density of about 72.6 inhabitants per km². The province's main economic, social and cultural centre is the city of Bolzano, with a population of around 107 000 people in 2021 (City of Bolzano, 2022^[1]).

Figure 1.1. Location of the Autonomous Province of Bolzano-Bozen



Source: Map provided by the Autonomous Province of Bolzano-Bozen.

The Autonomous Province of Bolzano-Bozen has a statute of autonomy, which came into force in 1972 and transferred a range of legislative and administrative competencies to the province (see Box 1.1). Due to the special status, the province has the right to enact laws with a significant degree of autonomy from national laws, if they comply with the Italian constitution and the European Union (EU) legal framework (Autonomous Province of Bolzano-Bozen, 2023^[2]). The province's autonomous statute is the result of historical ties with Austria, a strong regional culture and multilingualism, one of the province's defining characteristics. Most of the autonomous province's population (69.5%) is German-speaking, followed by Italian (26.0%) and Ladin (4.5%), a Romance language belonging to the Rhaeto-Romance subgroup. To account for the different language families, the province applies the principle of proportional representation of all provincial language groups in terms of political representation and public services, including culture and social housing.

Box 1.1. The Autonomous Province of Bolzano-Bozen

The Autonomous Province of Bolzano-Bozen has strong delegated powers. Historically, the autonomy of the province is based on three main institutional agreements: i) the Treaty of Paris, signed by Austria and Italy in 1946, which secures special provisions for the province; ii) the Second Autonomy Statute introduced in 1972, which transferred legislative and administrative powers to the provinces, leaving mainly organising and co-ordinating functions to the province; and iii) Constitutional Law 3/2001, which extended the province's primary legislative competencies and introduced the official term "Südtirol" (South Tyrol) in the Italian constitution.

The Autonomous Provinces of Bolzano-Bozen and Trento are unique among the Italian autonomous regions. Autonomous regions in Italy have a higher degree of legislative and administrative freedom at various levels than the other regions. Unlike the other four autonomous regions, the Autonomous Provinces of Bolzano-Bozen and Trento, which form the Autonomous Region of Trentino-Alto Adige/Südtirol, are separate and autonomous entities. They are granted specific forms and conditions of autonomy according to law.

Their competencies can be divided into primary and secondary competencies. Primary competencies cover a wide range of topics, including culture, agriculture, natural parks, industry, tourism, local public transport, social affairs and housing. In these areas, the provinces can enact laws with a significant degree of autonomy from national laws, provided that the provincial laws abide by the general principles required by the Italian constitution and international obligations. Secondary competencies cover trade, health, education and sport. The province can still legislate in these areas but has a lower degree of legislative freedom. In particular, laws reflecting secondary competencies must abide by the principles contained in the national laws (*Legge Quadro*).

Sources: Autonomous Province of Bolzano-Bozen (2017^[3]), *The Struggle for Autonomy*, <https://www.provinz.bz.it/this-is-south-tyrol/the-struggle-for-autonomy.asp> (accessed on 5 February 2023); Autonomous Province of Bolzano-Bozen (2022^[4]), *Competenze e finanziamento dell'autonomia [Competencies and Funding of Autonomy]*, <https://autonomia.provincia.bz.it/it/competenze-e-finanziamento-dell-autonomia> (accessed on 5 February 2023); Autonomous Province of Bolzano-Bozen (2022^[5]), *Manuale dell'Alto Adige con lo Statuto di Autonomia [Handbook of South Tyrol with the Statute of Autonomy]*, <https://issuu.com/landsuedtirol-provinciabolzano/docs/manualealtoadige2021> (accessed on 5 February 2023).

The Autonomous Province of Bolzano-Bozen has the highest gross domestic product (GDP) per capita and the lowest unemployment rate of all Italian regions.¹ The province performs strongly on economic indicators. At around USD 60 770 (USD, constant prices, constant purchasing power parity, base year 2015), the average annual GDP per capita of the province between 2018 and 2020 was around 60% above the national average of USD 37 880 (OECD, 2023^[6]). This is more than USD 10 000 higher than the GDP per capita of the region of Lombardy (USD 50 000), which had the second-highest GDP per capita in Italy. The unemployment rate in the province (3.2% of unemployed over labour force aged 15-64 between 2018 and 2020) also stood well below the national average (10.2%) and that of other Italian regions (OECD, 2023^[6]).

Private sector services and the public sector account for more than 40% of employment and value-added, while the agricultural sector accounts for the largest share of companies. In 2021, more than 56 000 companies were active in the autonomous province. Most companies are micro-enterprises and small and medium-sized enterprises (SMEs), ranging from no employees (17%) to 1-9 employees (76%), 10-49 employees (6%) or 50-249 employees (1%). Only 75 companies had 250 or more employees (WIFO, 2022^[7]). The agricultural sector accounted for 29% of all enterprises in the province, followed by services (20%), trade (14%), hospitality (14%) and construction (12%). Nevertheless, agriculture accounted for only about 6.6% of employment and less than 5% of value-added. Private sector services and the public sector

(including education) account for the largest shares of employment (20.2% and 20.9% respectively) and value-added (27.1% and 19.1% respectively). Other important sectors in terms of value-added include trade (12%), manufacturing (11.9%) and hospitality (11.4%) (WIFO, 2022^[7]). The latter is linked to the province being a popular tourist destination. The province counts more than 10 000 tourist accommodation establishments, 230 000 beds and about 34 million overnight stays in 2022 (WIFO, 2022^[7]; IDM, 2022^[8]; ASTAT, 2023^[9]). The province is the most tourist-intensive region in Italy, with more than 65 000 overnight stays per 1 000 inhabitants in 2022 (ASTAT, 2023^[10]). Germany is the main trading partner of the Autonomous Province of Bolzano-Bozen, followed by Austria, Switzerland and France. Food and beverages are the province's most exported goods (18% of total exports), mainly stemming from fruit growing, especially apple cultivation and viticulture, as well as livestock (WIFO, 2021^[11]). Other important contributors to its exports are machinery (16%), transport (13%) and metal products (13%) (WIFO, 2021^[11]).

Universities and research activities are relatively recent in the Autonomous Province of Bolzano-Bozen. The Free University of Bozen-Bolzano was founded in 1997 and is the main higher education institution in the province. It offers multilingual programmes in German, Italian, English and Ladin and counts around 4 100 students (Free University of Bozen-Bolzano, 2023^[12]). The largest research institute is Eurac Research, a private research centre with around 600 employees, established in 1992. Eurac Research conducts activities in a variety of interdisciplinary topics ranging from regional development, renewable energy to biomedicine and applied linguistics (Eurac Research, 2023^[13]). The oldest specialised research institution located in the Autonomous Province of Bolzano-Bozen is the Laimburg Research Centre, which conducts applied research in the agricultural and horticultural sectors (Box 1.3). Another notable actor in the field of research and innovation is the NOI Techpark. Opened in 2017, it is a hub for businesses, start-ups, research institutes and technology-oriented organisations working in green technologies, food and health, digitalisation and the automotive sector and provides a space for collaboration, the exchange of ideas and technological innovation. However, overall, the Autonomous Province of Bolzano-Bozen is characterised by a low research intensity as reflected in an R&D expenditure rate below 1% of GDP compared to an OECD average of 1.5%.

Despite its overall strong economic performance, the Autonomous Province of Bolzano-Bozen faces several sustainability challenges linked to biodiversity, climate change, tourism and transport. While the large agricultural sector ensures the province's food security, it also contributes to global warming and affects biodiversity. Threats include farming-related methane emissions, high consumption of water resources and fossil fuels in food production and the widespread use of pesticides (despite recent technological improvements). Tourism has historically been a driver of wealth in the province. However, the province has reached its capacity limits in terms of overnight stays, which have also been capped by law at 2019 levels to avoid increasingly negative impacts on biodiversity and the environment through soil sealing, air pollution and environmental degradation. In terms of mobility, congestion on the motorway linking the province to Austria (A22) is a major challenge, as cars used by visitors add to the frequent use of individual cars – the province has one of the highest car ownership rates among OECD regions – and trucks circulating for freight transport. Public transport remains scarce in rural areas and the cycling infrastructure is largely tourist-oriented and constrained by the local mountainous topography. Furthermore, the province also faces labour shortages in several sectors, such as hospitality, health and social care as well as the public sector. The labour shortage results from several concurrent factors, including skills gaps and bottlenecks in attracting talent from other countries, including due to competition from neighbouring regions in Austria and Switzerland.

Policies and strategies for the SDGs

The provincial commitment to the SDGs

The Autonomous Province of Bolzano-Bozen started working on the United Nations Sustainable Development Goals (SDGs) in 2019 through the establishment of a sustainability pact. The province made the first political reference and commitment to the SDGs in its 2018-23 government programme, published in early 2019. In the same year, it established a sustainability pact (*NachhaltigkeitsPakt für unser Land*). The main objective of the pact was to identify provincial efforts and actions for sustainable development in Bolzano-Bozen, to make them more visible and connected to international agendas such as the SDGs and to complement sectoral efforts by developing a holistic sustainable development strategy (see below). In addition, the sustainability pact intended to promote collaboration between the provincial government and territorial stakeholders from the private, social, environmental and cultural sectors to enhance proposals on how to foster sustainable development in the Autonomous Province of Bolzano-Bozen. Furthermore, the province established the SDG Tracker, a monitoring tool to measure progress towards the SDGs (see Chapter 2) (Autonomous Province of Bolzano-Bozen, 2023^[14]).

Everyday for Future, the province's sustainable development vision

“Everyday for Future – Together for Sustainability” (hereafter Everyday for Future) is the province's overarching vision for sustainable development. The Autonomous Province of Bolzano-Bozen developed its sustainability strategy in the two years following the establishment of the sustainability pact. The strategy was developed on the basis of an internal consultation process within different departments of the provincial administration. Adopted by the government in July 2021, Everyday for Future is the province's overarching vision for sustainable development and intends to provide the framework within which the localisation of the SDGs in the province should take place (Box 1.2) (Autonomous Province of Bolzano-Bozen, 2023^[14]). Its name was inspired by the Fridays for Future movement² and calls for emphasising the importance of addressing sustainable development on a daily basis.

Box 1.2. Why a territorial approach to the SDGs?

The United Nations 2030 Agenda was not designed specifically for cities and regions but the latter play a crucial role in achieving the SDGs. The OECD estimates that at least 105 of the 169 targets underlying the 17 SDGs will not be reached without proper engagement and co-ordination with local and regional governments, as cities and regions hold core responsibilities that are central to sustainable development and well-being (e.g. water services, housing or transport). They also discharge a significant share of public investment (55% in OECD countries), which is critical to channel the required funding to meet the SDGs. Although the SDGs provide a global framework, the opportunities and challenges for sustainable development vary significantly across and within countries, regions and cities. However, the SDGs are also an integral part of the solution as the varying nature of sustainable development challenges calls for place-based solutions tailored to territorial specificities, needs and capacities (OECD, 2019^[15]).

The SDGs can help conceptually advance the shift towards a new regional development policy paradigm and provide a framework to implement it, as:

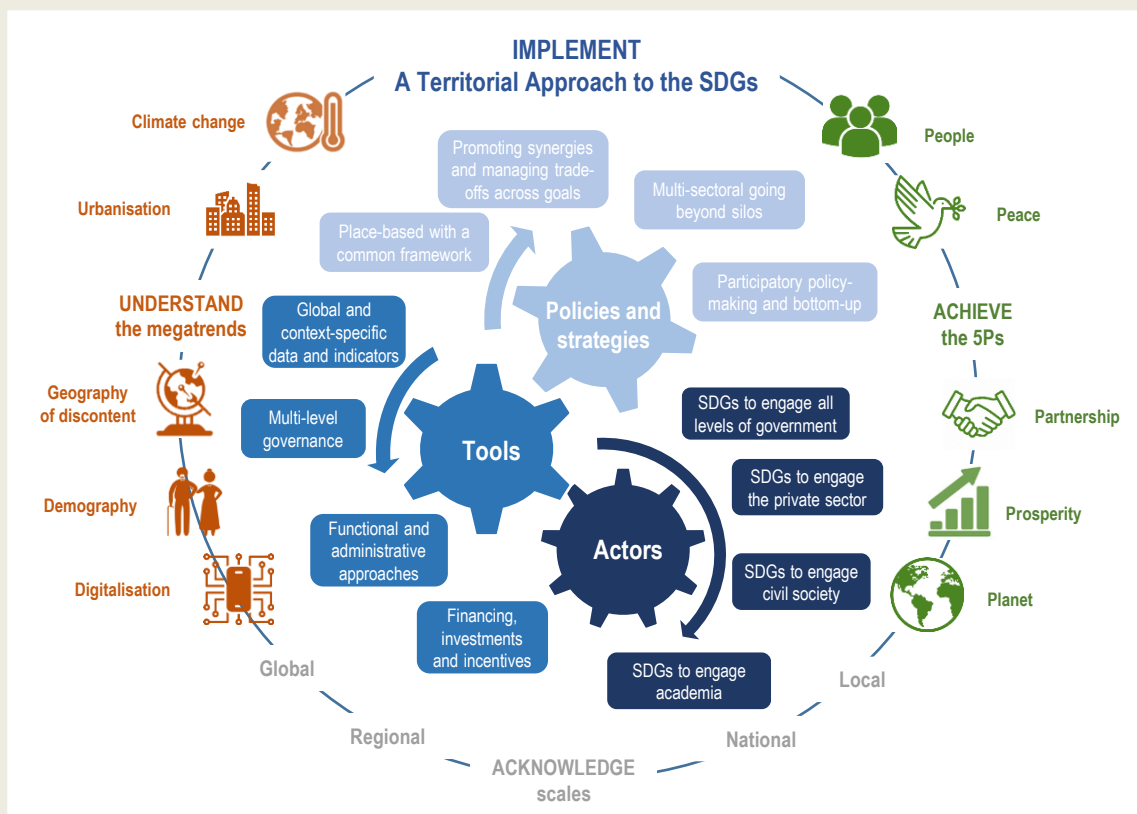
- The 2030 Agenda provides a long-term vision for strategies and policies with a common milestone in 2030 while acknowledging that targeted action is needed in different places since their exposure to challenges and risks varies widely, as does their capacity to cope with them.

- The interconnected SDG framework allows for promoting policy complementarities and managing trade-offs across goals. Indeed, the SDGs enable policy makers to address the social, economic and environmental dimensions of sustainable development concomitantly, building on the synergies and taking interlinkages into account.
- The SDGs allow for better implementation of the concept of functional territories, a common framework that neighbouring municipalities can use to strengthen collaboration and co-ordinate actions.
- The SDGs can be used to promote multi-level governance and partnerships, including the engagement of various stakeholders in the policy-making process.

The OECD analytical framework for A Territorial Approach to the SDGs

The OECD has identified four critical megatrends influencing the achievement of the SDGs in cities and regions: i) demographic changes, in particular, urbanisation, ageing and migration; ii) climate change and the need to transition to a low-carbon economy; iii) technological changes, such as digitalisation and the emergence of artificial intelligence; and iv) globalisation and the related “geography of discontent”. The SDGs provide a framework for cities and regions to respond systemically to such global megatrends. The OECD analytical framework helps cities and regions implement a territorial approach to the SDGs through: i) policies and strategies; ii) tools; and iii) actors – which will be discussed in further detail below in Figure 1.2.

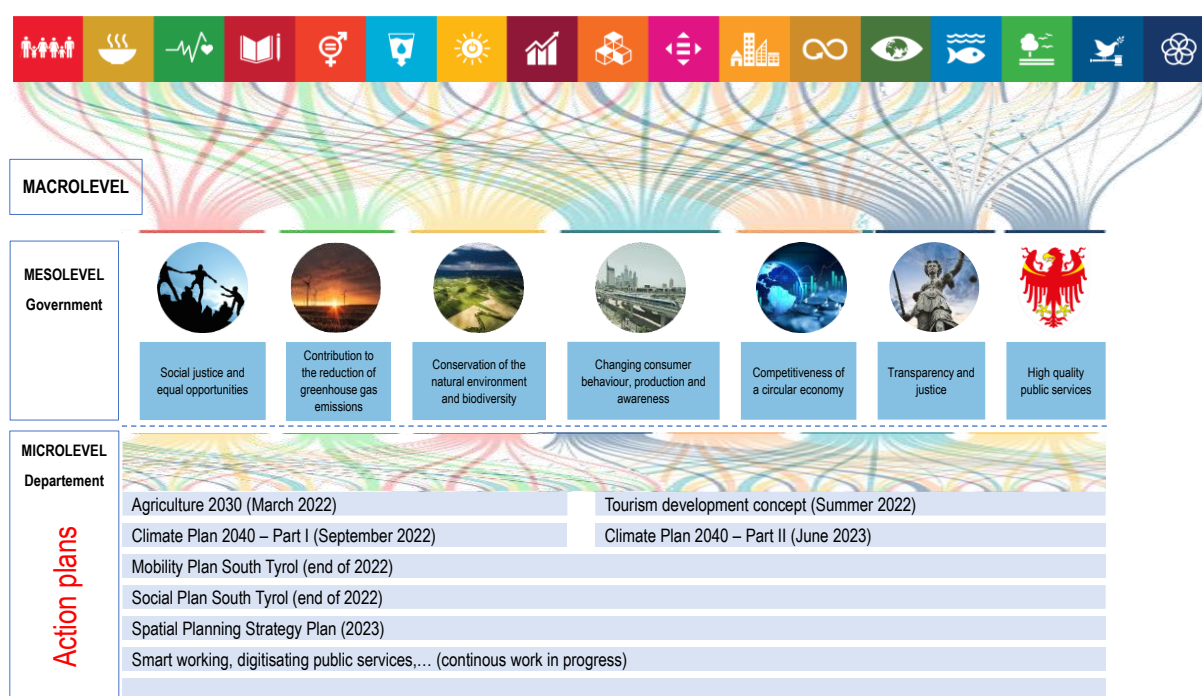
Figure 1.2. The OECD analytical framework for A Territorial Approach to the SDGs



Source: OECD (2020^[16]), *A Territorial Approach to the Sustainable Development Goals: Synthesis Report*, <https://doi.org/10.1787/e86fa715-en>.

Everyday for Future defines seven fields of action that were derived from the SDG framework (macro level) and adapted to the specific needs of the province. The provincial government has selected seven policy areas and related challenges that it considers to be the overarching priorities that have the greatest impact on sustainable development in the Autonomous Province of Bolzano-Bozen. The seven fields of action of Everyday for Future, which represent the meso level, are: i) reduction of greenhouse gas (GHG) emissions; ii) competitiveness; iii) social justice and equal opportunities; iv) conservation of the natural environment; v) changing consumer behaviour and awareness; vi) high-quality public services; and vii) transparency and justice (Figure 1.3). The implementation of Everyday for Future is complemented by various sectoral strategies, which represent the micro level (see below).

Figure 1.3. Everyday for Future’s seven fields of action and link to sectoral strategies



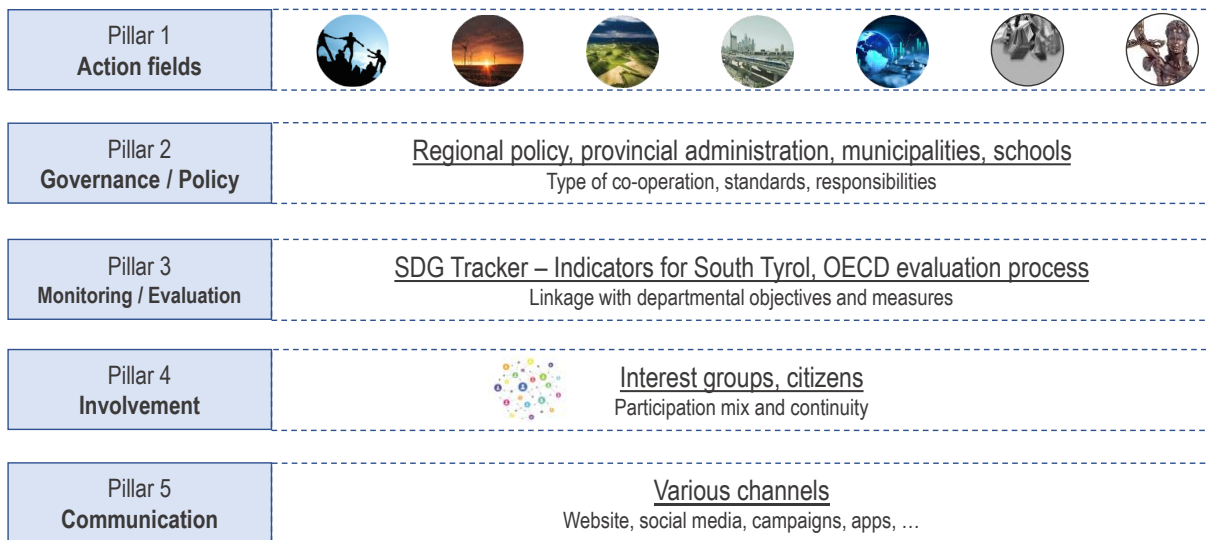
Source: Figure provided by the Autonomous Province of Bolzano-Bozen.

Everyday for Future is based on five pillars that are expected to respond to the province’s sustainable development challenges (Figure 1.4). The pillars: are i) the identification of the fields of action; ii) the definition of a governance/policy structure; iii) the establishment of monitoring and evaluation tools; iv) stakeholder involvement; and v) communication. The SDGs are used to link the seven different fields of action, break down departmental silos and manage interconnected challenges and trade-offs across sectors (e.g. agriculture and tourism). The sectoral departments of the provincial administration are responsible for implementing the fields of action through strategic and programmatic action plans for sustainability (e.g. provincial social plan, agricultural strategy).

Everyday for Future sets various targets for 2030 but the possible actions to achieve them have not yet been defined. To put sustainable development and the SDGs in the provincial context, Everyday for Future presents the political priorities and objectives of the different provincial departments. It also illustrates how they relate to sustainable development and which planning documents and strategies contribute to them, although mostly without going into the details of specific projects. It also sets out a number of sustainability objectives³ for the province to be achieved by 2030, which are seen as a starting point for promoting sustainable development. The objectives will be increasingly redefined through new sectoral plans in areas

such as mobility, agriculture and climate. Everyday for Future also contains more specific targets and commitments for the years between 2021 and 2026. However, no concrete actions and measures are mentioned to achieve the targets. Furthermore, the targets are not assigned to the different fields of action, mainly because they often span across different fields of action. As it stands, Everyday for Future does not include any key performance indicators (KPIs) that could be used to monitor the province’s progress on these targets, although it does contain a more general section on the development of the provincial SDG monitoring tool, the SDG Tracker (see Chapter 2). The integration of specific indicators and measurements linked to the objectives into the province’s SDG monitoring tool is mentioned in the strategy as a future priority, along with a stronger focus on stakeholder involvement through participatory processes.

Figure 1.4. The five pillars of Everyday for Future



Source: Figure provided by the Autonomous Province of Bolzano-Bozen.

Performance plan of the Autonomous Province of Bolzano-Bozen

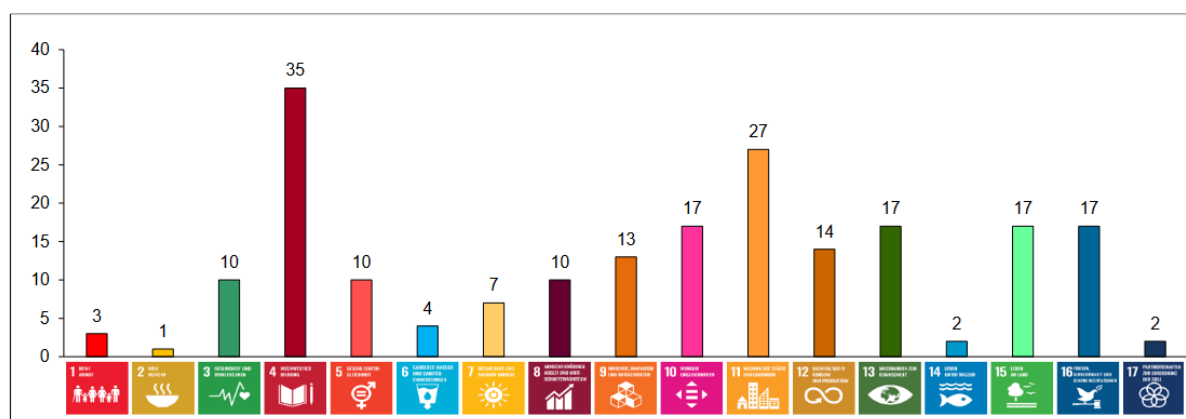
The government’s performance plan includes the province’s strategic goals, development priorities and actions and links them to the SDGs. Within a multi-annual planning tool of the province called the Integrated Activity and Organisation Plan (*Piano integrato di attività e organizzazione*, PIAO), a key element is the Provincial Performance Plan, first put in place in 2018. It is based on the provincial government programme and drives its operational implementation. It includes all of the strategic goals, development priorities and actions put in place by the different departments of the provincial administration (Autonomous Province of Bolzano-Bozen, 2023^[17]). The performance plan is both a policy and a governance tool, combining strategic policy and human and financial resource planning. The strategic goals defined in the performance plan describe the desired social, economic and environmental conditions in the province for the following three years. The strategic goals are mostly impact goals (outcome), measurable through indicators, with corresponding targets or target values planned for the three-year period. For example, in the 2023-25 performance plan, the province defined a total of 176 strategic targets. In addition to the multi-year strategic goals, the plan defines more specific development priorities (269 priorities for the 2023-35 period plus measures to achieve them), the implementation of which is of particular political relevance. Since the 2022-24 edition of the performance plan, strategic targets and development priorities must be assigned to the SDGs if a strategic goal or project relates to them. This allows analysing to which extent governmental actions cover different aspects of the SDGs and assess priorities and remaining gaps, i.e. the SDGs being

targeted the least. However, as of June 2023, the performance plan did not refer to the fields of action of Everyday for Future or sectoral strategies (see section on sectoral strategies for sustainable development).

Most of the province's strategic goals and development priorities contribute to the SDGs, particularly those related to quality education (SDG 4) and sustainable cities and communities (SDG 11). An annual performance report complements the performance plan to assess its implementation and progress. It also analyses the linkages between the plan's strategic goals and the SDGs. The latest edition shows that in 2022, 62% of the strategic goals and 55% of the development priorities were linked to one or more of the 17 SDGs, thereby contributing to their achievement (Autonomous Province of Bolzano-Bozen, 2023^[18]). Among the strategic goals, slightly more than half were connected to at least two SDGs. In addition, more than half of the development priorities were linked to only 1 SDG and a further 40% to 2 or 3 SDGs. SDG 4 Quality Education is the SDG that most strategic goals (35) target, followed by SDG 11 Sustainable Cities and Communities (27) (Figure 1.5). The annual performance report also assesses the extent to which the development priorities contributing to the SDGs have been achieved. For example, in 2022, 48 development priorities contributed to SDG 11, out of which 31 were achieved as planned, 16 were achieved with slight deviations and 1 was assessed as challenging. For SDG 4, 33 out of 44 development priorities were achieved as planned, 10 with slight deviations, while 1 was rated challenging (Figure 1.6) (Autonomous Province of Bolzano-Bozen, 2023^[18]). The ratings are based on the assessments of the provincial administration staff in charge of the different development priorities but do not follow any harmonised definition or criteria.

Figure 1.5. Contribution of the provincial administration's strategic goals to the SDGs

Number of strategic goals linked to specific SDGs

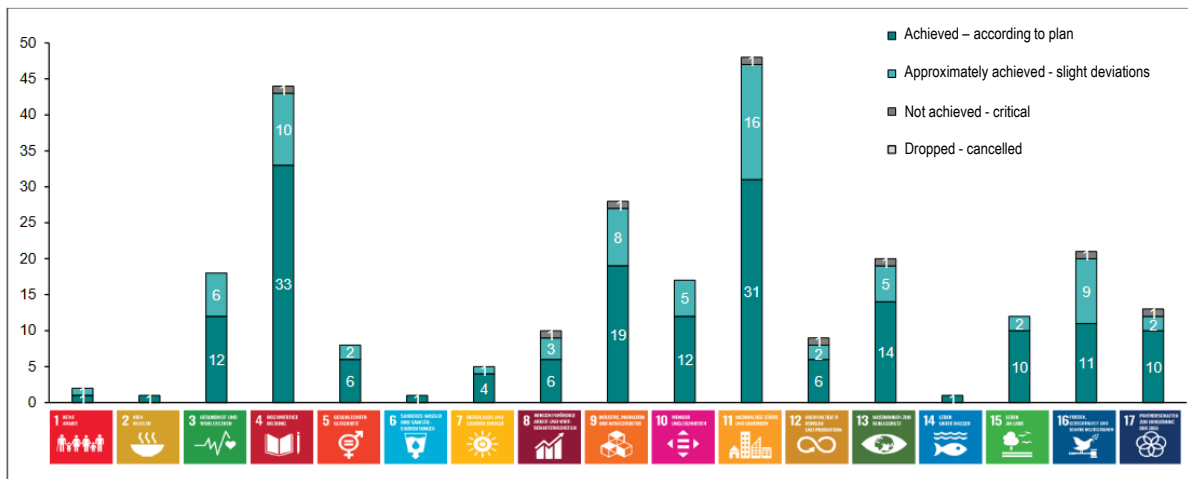


Source: Autonomous Province of Bolzano-Bozen (2023^[18]), *Performance-Bericht der Landesverwaltung 2022* [Performance Report of the Provincial Government 2022], https://www.provinz.bz.it/de/downloads/PAB_PB_2022_DE.pdf.

The performance plan also foresees connecting more explicitly the region's budget and the SDGs. The Autonomous Province of Bolzano-Bozen intends to link the SDGs more strongly to the budget but an allocation of all expenditures to the SDGs is not yet available. The performance plan contains information on the budgeting and planned expenditures for several of the strategic goals. Considering that all strategic goals and development priorities are already assigned to the SDGs, a more systematic link to the budget planning could further facilitate the implementation of the SDGs and shed transparency on related budgets assigned. Indeed, such an SDG budgeting would allocate planned expenditures for the strategic goals to specific SDGs. This could allow for a more in-depth analysis of the thematic focus areas of the budget, for example by assessing how much of available resources are spent on each goal or target. Currently, the province is working on a business intelligence tool that will assign human and financial resources to all

strategic goals. As the strategic goals are mapped to the SDGs, this new tool could make it possible to assess the personal and financial resources used for each of the 17 SDGs. It could thus strengthen the link between strategic and operational planning. At the same time, SDG budgeting could provide an opportunity to integrate participatory processes for the SDGs into the provincial budget, which could build on participatory budgeting processes that already exist in the province at the local level, such as in the municipalities of Appiano/Eppan and Malles Venosta/Mals.

Figure 1.6. Degree of achievement of the provincial development priorities linked to the SDGs



Source: Autonomous Province of Bolzano-Bozen (2023^[18]), *Performance-Bericht der Landesverwaltung 2022 [Performance Report of the Provincial Government 2022]*, https://www.provinz.bz.it/de/downloads/PAB_PB_2022_DE.pdf

Strategic plan of the Autonomous Province of Bolzano-Bozen

The Provincial Strategic Plan guides spatial development and is under revision to incorporate Everyday for Future. The revision of the Provincial Strategic Plan, a planning tool of the Autonomous Province of Bolzano-Bozen, is currently being finalised and is expected to be published by the end of 2023. It will replace the 1995 Provincial Spatial Development and Co-ordination Plan (*Landesentwicklungs- und Raumordnungsplan*). As an instrument for co-ordinating sectoral strategies, the new Provincial Strategic Plan (*Landesstrategieplan*) will guide spatial development in the medium and long terms in line with European and national strategies and serve as an orientation for all other planning instruments (Autonomous Province of Bolzano-Bozen, 2023^[19]). It deals with a variety of territorial development issues, such as soil sealing, water retention, inclusion and the provision of infrastructure, among others. The province started working on the strategic plan in the second quarter of 2021 to define its objectives and focus areas. For example, the province organised thematic workshops with different provincial departments structured according to the seven fields of action of Everyday for Future and groups of SDGs. In addition, the province also used the workshops to further raise awareness among administrative staff about the importance of sustainable development.

The province considers the strategic plan a tool to implement Everyday for Future the guiding of Everyday for Future and objectives in territorial development. During the development phase of the strategic plan, Everyday for Future and the SDGs guided some decisions on the strategic direction of the new plan. For example, the province decided to focus on the areas within the competency of the spatial planning department and to look for more practical measures to achieve the provincial sustainable development objectives. During the finalisation phase, territorial stakeholders were invited to provide feedback on the

objectives developed and propose additional suggestions. The final strategy will contain 50 objectives comprised within 17 overarching goals in the following areas:

- climate change
- landscape, ecosystems and biodiversity
- innovation, attractiveness and competitiveness
- mobility, accessibility and digitalisation
- quality of settlements, culture and quality of life
- health, inclusion and participation.

While some objectives will provide more strategic guidance, some of the specific actions foreseen in the plan will be binding on the province, e.g. in the area of soil sealing and land use. The implementation of the new strategic plan will be monitored through specific indicators. The implementation of a monitoring system shall address a main weakness of the current plan from 1995, which lacks a monitoring component. Some of the new indicators will be aligned with the SDGs, for example in the area of land use, although not all of the SDG targets match the thematic scope of the plan. Since 2020, each municipality in the province has been required to elaborate a similar strategic plan (*Gemeindeentwicklungsprogramm für Raum und Landschaft*) to promote sustainable territorial development, including the integration of participatory processes for the local population.

Sectoral strategies for sustainable development

In addition to the overarching sustainable development vision *Everyday for Future*, the Provincial Strategic Plan and the performance plan described above, the Autonomous Province of Bolzano-Bozen has developed several sectoral strategies that contribute to sustainable development and address different territorial development challenges (see Table 1.1 for an overview). Some of them explicitly address sustainable development, notably in the fields of climate, agriculture and tourism, while others do so implicitly.

Table 1.1. Strategic plans of the province linked to sustainable development

Plan	Responsible department
Performance Plan	Cross-cutting
Regional Development Strategy 2021-2027	Department for External Relations, Europe, Municipalities, Finance, Personnel, Information technology, University, Research and Innovation, Museums and Sport
Family Support Plan	Department for Family, Seniors, Social Affairs and Housing
Social Plan	Department for Family, Seniors, Social Affairs and Housing
Agricultural Strategy for 2030	Department for Agriculture, Forestry, Tourism and Population Protection
Tourism Development Concept 2030+	Department for Agriculture, Forestry, Tourism and Population Protection
Climate Plan	Department for Environment and Energy
Water Utilisation Plan	Department for Environment and Energy
Waste Management Plan	Department for Environment and Energy
Bicycle Mobility Plan	Department for Infrastructure and Mobility
Plan for Sustainable Mobility and Logistics	Department for Infrastructure and Mobility
Strategy Document - Active Labour Market Policy	Department for Trade and Services, Crafts, Industry and Work
Health Plan	Department of Health, Broadband and Cooperatives
Innovation and research South Tyrol 2030 – Smart Specialisation Strategy (RIS3)	Department for Innovation, Research, University and Museums

Source: Autonomous Province of Bolzano-Bozen (2021^[20]), *Everyday for Future - Gemeinsam für die Nachhaltigkeit* [*Everyday for Future - Together for Sustainability*], https://www.klimaland.bz/wp-content/uploads/Nachhaltigkeitsstrategie_de.pdf.

Climate

Tackling climate change is a key priority for the autonomous province. The government of the Autonomous Province of Bolzano-Bozen has been addressing climate change for over ten years since the first Climate and Energy Plan was published in 2011. The initial plan was revised and updated in 2016 and in 2021, when it became the South Tyrol 2040 Climate Plan (*Klimaplan Südtirol 2040*). Since the 2021 revision, the climate plan is no longer the plan of a single department but the instruction for action for the entire provincial government. The plan is a central pillar of the Everyday for Future strategy: it represents the first step towards its implementation and the contribution of the province to the SDGs, which are mentioned as a guiding framework in the climate plan. The first part of the climate plan published in 2022 sets out the goals, targets and areas for action until 2040, while a revised version published in July 2023 and initially planned as the second part of the plan, provides more detailed data on mobility, emissions and energy and outlines the governance of the plan's implementation through a co-ordination office as well as more detailed policies and measures.

The climate plan is the province's attempt to position itself as a climate neutrality frontrunner while improving competitiveness and increasing resilience to external natural, economic and social shocks. It is a holistic strategy that considers key sectors such as energy, mobility and agriculture that can contribute to climate neutrality in the Autonomous Province of Bolzano-Bozen. In order to achieve the objective of becoming a leader in climate neutrality, the climate plan proposes strategies to reduce activities and behaviours that generate GHG emissions. It also aims to replace them with climate-neutral alternatives and to increase the use of renewable energy and adaptation to climate change through three groups of instruments: i) norms and laws; ii) incentives; and iii) cultural change, i.e. changing cultural values as a result of individual beliefs and behavioural changes. In particular, the plan foresees a 55% reduction in CO₂ emissions from 2019 to 2030, a 70% reduction by 2037 and climate neutrality by 2040. It also aims to increase the use of renewable energy from currently 67% to 75% in 2030 and 85% in 2037. Furthermore, it aims to achieve a reduction of GHG emissions stemming from agriculture by a total of 40% until 2040, achieving above-average growth in sectors contributing to the climate and energy transition. In addition, the share of the population at risk of poverty shall decrease by five percentage points by 2030 compared to the level of 2019 (18%) (Autonomous Province of Bolzano-Bozen, 2023^[21]).

To achieve its objectives, the climate plan proposes more than 150 measures in 17 interlinked fields of action, underlining its cross-sectoral approach. The 17 fields of action outlined in the plan range from transport, construction and electricity to heating, industry and communications and have their own dedicated objectives (Figure 1.7). The climate plan stipulates that concrete measures need to be implemented across provincial departments and societal actors. In line with this, the plan considers linkages between tourism and mobility, agriculture and emissions and industry and energy costs, although it does not use the SDGs as a framework for assessing synergies and trade-offs between different policy areas. The Climate Plan contains 157 measures in its different fields of action (e.g. banning oil heating systems from 2023, expanding organic agriculture, establishing support programmes for energy efficiency measures, developing a provincial resilience plan), of which 109 have already been initiated, 41 are under development and 7 have been completed. The implementation status of these measures can be accessed via a dedicated website for the climate plan.⁴

In addition, the climate plan includes several key pillars aimed at moving from a strategic plan to an integrated cyclical process:

- Input monitoring (tracking of measures via the dedicated website mentioned above).
- Output monitoring (evaluation of the impact of measures and development of future scenarios by an external research institute with annual publication of the results).
- A Climate Citizens' Council (recurring public participation mechanism with a representative group of citizens from 2024).

- A Stakeholder Forum (from the fields of environment, economy, social affairs, trade unions and youth from 2024).
- ASTAT-panel (three annual surveys with citizens on developments in various climate-related thematic areas, building on an initial survey in collaboration with Eurac Research in 2022).
- Bi-annual progress and evaluation reports co-ordinated and produced by the Alliance for Sustainability (see Chapter 3 for more information on the alliance).

Figure 1.7. Climate Plan South Tyrol 2040 – 17 fields of action



Source: Based on Autonomous Province of Bolzano-Bozen (2023^[21]), *Klimaplan Südtirol 2040* [Climate Plan South Tyrol 2040], https://www.klimaland.bz/wp-content/uploads/Klimaplan-Suedtirol-2040_DEU_WEB-pagine-singole.pdf.

The development process of the climate plan was co-ordinated by the provincial administration, with the support of Eurac Research (a private research centre based in the city of Bolzano-Bozen) and KlimaHaus (the provincial competency centre for energy-efficient and sustainable construction and renovation). In addition to the contribution of the provincial administration, it built on a public consultation process through which citizens, private companies and non-governmental organisations contributed more than 1 500 ideas and suggestions for the climate plan. In early 2022, a high-level expert commission was appointed to carry out an independent assessment of the contributions collected. It assessed the effectiveness, appropriateness and feasibility of the measures supplemented by the contribution of Eurac Research, as well as those resulting from the public consultation regarding effectiveness, suitability and feasibility. Some direct feedback on the first part of the climate plan, provided by experts and the population, led to a modification or reorganisation of some parts of the plan. The two most important contributions were to clarify how the climate plan fits into other planning and governance instruments of the province and to add a separate field of action for the area of tourism. Nevertheless, despite these participatory elements, some civil society representatives expressed concerns regarding the lack of representation of young people in public consultations.

Agriculture

The province has developed a strategic plan for 2030 to make the agricultural sector more sustainable. To address the main challenges of the agricultural sector such as land use, water resources, widespread use of pesticides and GHG emissions, in 2021, the Autonomous Province of Bolzano-Bozen published *LandWIRtschaft 2030*, the strategic plan for its agricultural sector (in particular the three categories of mountain farming, viticulture and fruit growing), which sets a common vision and specific goals to be achieved by 2030 through six main fields of action: i) SMEs and rural areas; ii) climate change and CO₂ emission reduction; iii) water and soil; iv) biodiversity and landscape; v) health and indulgence; and vi) society and dialogue (Autonomous Province of Bolzano-Bozen, 2021^[22]). Activities in these six fields of action aim to support family farmers, maintain the balance between ecosystems and climate, foster research, redirect subsidies towards sustainable farming practices, strengthen the South Tyrol brand and find a consensus with society.

For its six fields of action, the plan describes the status quo, targets and measures to achieve them, although relatively broadly. Measures include, for example: i) the development of a supra-regional circular economy through the use of waste and by-products; ii) the development and presentation of a climate programme; and iii) the promotion of the use of renewable energies without going into further detail (Autonomous Province of Bolzano-Bozen, 2021^[22]). In addition, the plan presents good practices that already exist in the province. It also describes concrete contributions that individual farmers can make to a more sustainable agriculture through their activities (e.g. reducing water consumption and abandoning herbicides). The plan was developed in collaboration among farmers, their unions, scientists from Eurac Research, the Free University of Bozen-Bolzano and the Laimburg Research Centre (Box 1.3), and the provincial government (Autonomous Province of Bolzano-Bozen, 2021^[22]). It also connects to the sustainability strategies of the main agricultural associations in the Autonomous Province of Bolzano-Bozen, notably viticulture⁵ and fruit farming.⁶

While some synergies with other sectors than agriculture are considered in the plan, KPIs and monitoring are still missing. The plan takes into account synergies between agriculture and tourism, while social aspects are only considered in relation to the promotion of the possibility of social farming (integration of childcare and care for the elderly). Eight lighthouse projects complement the provincial strategy for agriculture, such as a project to measure the carbon footprint of agricultural companies, including their carbon sequestration performance and potential savings in the fruit, wine, dairy and forestry sectors and a project to maintain soil fertility and sequester the humus layer – and thus carbon – in cultivated soils (Autonomous Province of Bolzano-Bozen, 2022^[23]). While the strategic plan mentions existing indicators to measure soil conditions and the objective to establish animal welfare indicators, KPIs to measure implementation and ongoing developments are still missing.

Box 1.3. The Laimburg Research Centre

The Laimburg Research Centre, founded in 1975, is the main public research centre for agriculture and food processing in the province of Bolzano. Its main objective is to support agricultural businesses in the province with scientifically based research and experimental activities to ensure the quality and sustainability of agricultural products and to increase their competitiveness. In order to do so, the centre is engaged in knowledge transfer to the provincial agricultural community through training programmes and workshops. To meet the challenges of climate change, water scarcity, diversification and digitalisation faced by the agricultural food processing sector in Bolzano, the Laimburg Research Centre has developed a specific research priority programme for the 2021-30 period.

It bundles research activities in five major thematic groups with a focus on long-term sustainability:

- Sustainable and resilient farming systems, i.e. developing and exploring forms of cultivation, fertilisation, crop protection and processing that conserve soil, water, biodiversity and climate.
- Digital innovation and smart technologies, i.e. the development and implementation of new technologies and their implementation, the use of big data and new, innovative breeding methods.
- Climate-neutral agriculture, i.e. making cultivation and processing methods more climate-friendly.
- Quality and health, i.e. new methods of quality assurance in cultivation, processing and storage.
- Local diversity and circularity, i.e. diversification of production and recycling of waste and byproducts in a (supra-)regional circular economy.

Source: Research Centre Laimburg (2023^[24]), *Homepage*, <https://www.laimburg.it/de/default.asp> (accessed on 2 June 2023)

Tourism

The tourism sector in the Autonomous Province of Bolzano-Bozen aims to move from quantitative to qualitative growth. In order to make the tourism sector more sustainable and respectful of the landscape, the provincial government, together with Eurac Research, the provincial service provider for the economy Innovators, Developers and Marketers (IDM), Curtin and Steinbeis Universities, analysed the current situation of the tourism sector and the main challenges in the Tourism Development Concept 2030+ report. The main challenges include the dependence on labour from abroad, seasonality and the related difficult situation for workers (SDG 8 Decent Work and Economic Growth), urban sprawl (SDG 11 Sustainable Cities and Communities) and landscape development, which often includes the “eventisation” of nature (SDG 15 Life on Land). Furthermore, the province is close to its natural capacity limits in terms of the number of tourists arriving. In addition, the increasing number of resorts challenges small family businesses in the hospitality sector (SDG 8 Decent Work and Economic Growth). The assessment also suggests reconciling the interests of the local population and tourists by shifting from destination management to habitat management (Pechlaner et al., 2022^[25]). Some measures to address these challenges have already been taken, such as limiting the number of beds to 2019 levels to avoid overtourism in the province and to shift from quantitative to qualitative growth (bed freeze decree) (Autonomous Province of Bolzano-Bozen, 2021^[26]). To address the shortage of skilled workers in the province, there is an increasing focus on education, e.g. through specific tourism courses within technical colleges and hospitality schools as well as tourism management degrees at the Free University of Bozen-Bolzano.

The province has launched several projects to make tourism more sustainable. Through the Sustainable Tourism Observatory of South Tyrol (STOST), which monitors the economic, environmental and social impacts of tourism at the regional level, the Autonomous Province of Bolzano-Bozen has been a member of the United Nations International Network of Sustainable Tourism Observatories (INSTO) since 2018 (Eurac Research, 2023^[27]). As part of its activities, the STOST publishes annual progress reports to monitor, evaluate and communicate tourism developments in the province. The STOST also examines the social, ecological and economic benefits and costs of tourism including through sustainability indicators aligned with the SDGs (Windegger et al., 2022^[28]). In addition, the provincial service provider for the economy IDM launched a sustainable tourism programme in 2021. As a first step, IDM, together with local tourism organisations, business associations and the private sector, has developed sustainability standards for tourism in the province based on the criteria of the Global Sustainable Tourism Council (GSTC), resulting in a Sustainability Standard for Tourism in South Tyrol. It covers the four areas of sustainable management, socio-economic, cultural and environmental sustainability and defines specific

criteria that must be met in order to be classified as a sustainable tourist destination (Chamber of Commerce, Industry, Crafts and Agriculture of Bolzano, 2023^[29]). The highest level of certification is also internationally recognised. The certification shall serve as a benchmark for a more sustainable orientation of tourism in the province and help different actors in the tourism sector to better understand how to become a sustainable tourist destination. Four pilot destinations (Alpe di Siusi-Seiser Alm, Alta Badia, Bressanone-Brixen, Val d'Ega-Eggental) have joined IDM's sustainability programme and, in co-operation with IDM, have developed measures to comply with the sustainability standard (Chamber of Commerce, Industry, Crafts and Agriculture of Bolzano, 2023^[29]). Three destinations (Bressanone-Brixen, San Vigilio Dolomites/St. Vigil and Val d'Ega-Eggental) have already achieved the highest level of certifications. IDM has also established a sustainable destinations network that gathers the tourism destinations organisations, the Hoteliers and Innkeepers Association South Tyrol (HGV), the public transport provider *Südtiroler Transportstrukturen AG* and the Dolomiti Superski ski area. The network meets once a month to discuss best practices, share common challenges and work on lighthouse projects.

Mobility

Mobility and tourism in the province are strongly interlinked. In 2020, close to 90% of tourists arrived in the province by private car, a major contributor to GHG emissions in the Autonomous Province of Bolzano-Bozen. In addition, around 70% use private transport to travel around the province during their stay (Rachewiltz et al., 2021^[30]).⁷ This results in regular traffic jams that affect both visitors and the local population. As a result, the province has started to regulate traffic flows in heavily affected areas. Access to public roads leading to Lake Prags (Lago di Braies-Pragser Wildsee), for example, has been limited and must be booked digitally. To prevent such overcrowding on public roads, a priority of the province is to increase the proportion of tourists arriving by public transport. This shall be achieved in particular through the opening of the Brenner Base Tunnel, a 55-kilometre-long railway tunnel through the foothills of the Eastern Alps under the Brenner Pass due to open in 2032 (Autonomous Province of Bolzano-Bozen, 2022^[31]). A key measure put in place to increase the attractiveness of public transport is the South Tyrol Pass, an electronic ticket valid for one year on all means of public transport, with a degressive price structure, i.e. a fixed price per kilometre, that becomes cheaper as the distance travelled increases (sta, 2023^[32]). A similar type of ticket does not yet exist for tourists, although they can use the South Tyrol Guest Pass, which allows them to use public transport for free. However, it cannot be bought and is only distributed by certain participating hotels and accommodation facilities (IDM, 2023^[33]).

To reduce GHG emissions, the province supports electric and hydrogen mobility. Measures to promote low-carbon mobility in the province include financial subsidies and tax breaks for residents who purchase electric vehicles. In addition, through its local public transport company, the province has started to gradually replace its bus fleet with hydrogen and electric buses, which, in 2022, accounted for 25 out of 400 buses (Autonomous Province of Bolzano-Bozen, 2022^[34]). The province furthermore continues to increase the number of charging stations for electric vehicles (458 stations existed in July 2023, 375 of which were publicly accessible) (Green Mobility, 2023^[35]).

Despite the topography, cycling is also playing an increasingly important role towards sustainable mobility in the province. Cycle paths between towns and valleys were first built in the 1990s but were mainly intended for tourists. Between 2012 and 2021, the average number of trips made by bicycle increased from 146 to 168, which is reflected in an increase in daily kilometres travelled from 526 000 to 584 000. To further promote the use of cycling as a means of transport, the province launched a Bicycle Mobility Plan in 2022, which aims to increase the modal split of cycling from 16% in 2021 to 20% by 2030. The plan includes more than 100 measures to be implemented by 2030, such as the strengthening of cycling infrastructure, the allocation of additional and financial resources to support cycling in the province, participatory processes and awareness-raising activities (Autonomous Province of Bolzano-Bozen, 2022^[36]). Some of these measures have already been implemented, such as establishing a province-wide cycling co-ordination office, constructing secure bicycle parking facilities at central intersections and cycling

and mobility education in schools to raise awareness on the use of bicycles as a means of everyday transport. Furthermore, as part of the efforts to promote soft mobility, several municipalities in the province have set up a public rental system for e-bikes and e-scooters. In Merano/Meran, for example, more than 400 people have signed up to use one of the 80 e-bikes provided by the municipality. However, the mountainous topography of the province and the associated winter snowfall remain a major obstacle, making it difficult to develop cycling mobility outside of the inner-city paths and valley cycle routes.

The province has developed a Sustainable Mobility and Logistics Plan to adapt its strategic planning in the areas of mobility, freight transport and logistics to the latest EU directives. The new Sustainable Mobility and Logistics Plan, approved in the summer of 2023, foresees an integrated planning of the mobility system in the province, based on the integration of all modes of transport aiming to ensure their environmental, economic and social sustainability. It includes a strategic environmental impact assessment and provides a comprehensive, one-stop-shop framework for activities, measures and objectives in the fields of rail transport, bicycle mobility, road infrastructure, shared and intermodal transport, the Brenner Digital Green Corridor and digitalisation (Autonomous Province of Bolzano-Bozen, 2023^[37]). The plan intends to contribute to the objectives of the European Green Deal and the European Sustainable and Smart Mobility Strategy, which aims to promote inclusive, intermodal mobility adapted to people's mobility needs (Autonomous Province of Bolzano-Bozen, 2023^[38]).

Social planning

In order to address social challenges in the province, the Autonomous Province of Bolzano-Bozen has recently revised its Provincial Social Plan (*Landessozialplan*) for the first time in ten years. The province faces several challenges in the social sector, in particular an ageing population, labour shortages in the hospitality sector, health and social care and difficulties in attracting talent. The revised Provincial Social Plan, published in July 2023, is a long-term strategic document presenting the main social priorities in the Autonomous Province of Bolzano-Bozen for the next ten years. It identifies the priority areas towards families, minors, the elderly, people with disabilities, women, low-income households and the non-profit sector, as well as related objectives and measures (Autonomous Province of Bolzano-Bozen, 2023^[39]). Guidelines for the implementation include community development and solidarity, continuity of care in nursing, valuing social professions and proximity to citizens amongst others (Autonomous Province of Bolzano-Bozen, 2023^[39]).

The social plan considers megatrends but could further leverage them. The plan mentions ensuring social security and economic sustainability as part of its social policy guidelines and makes reference to SDG 1 No Poverty, albeit without going into further detail. The plan also mentions megatrends such as climate change and digitalisation. While the impact of the former is not considered in the plan's actions and objectives, the latter is taken into account in some measures, such as the creation of a digital platform to provide information on leisure activities funded by the provincial social affairs department, and the support of projects to help the elderly access the digital world. Going forward, the province intends to include potential negative social impacts of the transition to climate neutrality and sustainability into the social plan and other planning instruments, such as the family support plan (*Familienförderplan*), including financial mechanisms to mitigate these impacts in the future (e.g. impact of environmentally friendly construction on housing affordability due to increased prices). Indicators used to evaluate social policy in the province mostly refer to European Union frameworks rather than UN frameworks such as the SDGs and the social plan is not directly linked to *Everyday for Future*.

Sustainable public procurement

Sustainable public procurement regulations exist but the provincial administration and private sector actors consider them burdensome. National law no. 221/2015 on the green economy, which entered into force in 2016, obliges public administrations in Italy to comply with minimum environmental criteria when procuring

goods and services. In the Autonomous Province of Bolzano-Bozen, provincial law no. 16/2015 on public procurement regulations includes a specific article on sustainability and social criteria. Article 35 of this law states that additional sustainability requirements may be imposed when awarding public contracts. Furthermore, the provincial government may issue guidelines for the definition and application of sustainability criteria in order to achieve economic and socio-political goals. In addition, the article stipulates that short-distance transport routes and transport modalities with lower CO₂ emissions are to be preferred when awarding supply contracts (Autonomous Province of Bolzano-Bozen, 2018^[40]). While the purpose of the provision is to take into account social and environmental sustainability requirements when awarding public contracts, the law does not provide for binding sustainability criteria. Furthermore, companies and the provincial administration often consider sustainable public procurement and respective criteria as an additional burden due to the complexity of its application. In 2020, around 49% of public institutions purchased goods and/or services using minimum environmental criteria in at least one procurement procedure (ASTAT, 2023^[10]).

Decentralised development co-operation activities

In addition to promoting the SDGs within the province, the Autonomous Province of Bolzano-Bozen is also engaged in external action through decentralised development co-operation (DDC). DDC refers to international development co-operation carried out by subnational governments or cities and regions from one (often developed) country in partnership with cities and regions from another (often developing) country and can be a key driver in advancing global agendas such as the SDGs (OECD, 2023^[41]). The Autonomous Province of Bolzano-Bozen launched its first DDC projects in 1991 and has a dedicated budget for DDC (around EUR 3.1 million in 2022, compared to EUR 3.7 million in 2021). It supports around 50 DDC projects per year by funding projects of civil society organisations from the province and by directly managing programmes and projects using the SDGs as a main guideline. It is currently involved in projects in Albania, Armenia, India, Iraq, the Palestinian Authority, Tanzania and Uganda (Autonomous Province of Bolzano-Bozen, 2022^[42]). Its DDC activities focus on four main areas: i) development projects and programmes in countries of the Global South, ii) projects for the protection of linguistic and cultural minorities, iii) projects to raise awareness of the SDGs and global learning in the Autonomous Province of Bolzano-Bozen, for which the province co-finances up to 70% of costs; and iv) emergency measures and humanitarian aid (Autonomous Province of Bolzano-Bozen, 2023^[43]).

The province's main DDC projects reflect its expertise in agriculture and farming. Some examples of projects are:

- An integrated cross-border programme for regional development through the improvement of agriculture and food security, the preservation of the environment and ecosystems, and the improvement of waste management in Tanzania and Uganda, which is implemented in co-operation with Innsbruck (Austria) and Trient (Italy).
- A programme to support children, youth and women through psycho-social therapies and facilities in northern Iraq.
- The promotion of rural development in Tibetan settlements in India by supporting sustainable agriculture (Autonomous Province of Bolzano-Bozen, 2022^[42]).

Official development assistance (ODA) data are collected for each project during the *ex ante* evaluation process to allow systemic data collection and transmission to the Italian Ministry of Foreign Affairs and the OECD Creditor Reporting System.

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Notes

¹ Due to its status as an autonomous province, the Autonomous Province of Bolzano-Bozen is considered as one of the 433 OECD large regions (TL2), which represent the first administrative tier of subnational government and therefore compared to other TL2 regions in Italy.

² Fridays for Future is a youth-led and-organised global climate strike movement initiated in August 2018.

³ These include the reduction of annual energy-related CO₂ emissions, an increase in cycling journeys, an expansion of energy production through solar panels and an increase in the share of protected areas amongst others.

⁴ Dedicated webpage for the 17 actions fields of the Climate Plan: <https://www.klimaland.bz/klimaplan-suedtirol-2040/aktionsfelder/>. The digital version gives the possibility to integrate new measures (e.g. suggested during the regular evaluation, by the Climate Citizens Council or the Stakeholder Forum) on an ongoing basis. It is foreseeable that during the implementation of the measures, experiences will be made that make changes to measures appear sensible; such changes will also be incorporated.

⁵ For more information, see <https://www.suedtirolwein.com/de/unser-wein/nachhaltigkeit/102-0.html>.

⁶ For more information, see *Strategie zur nachhaltigen Entwicklung der Südtiroler Apfelwirtschaft* (<https://www.sustainapple.it/>).

⁷ Preliminary results from an IDM survey about the mobility patterns of tourists in the Province of Bolzano-Bozen indicate a decrease to 63% in the following years.

2 Sustainable development opportunities and challenges

The Autonomous Province of Bolzano-Bozen, Italy, is performing slightly better than OECD regions on average when it comes to achieving the United Nations Sustainable Development Goals (SDGs). Its key strengths are in SDG 1 No Poverty and SDG 3 Good Health and Well-Being. It also excels in maintaining low unemployment rates, especially for young people SDG 8 Decent Work and Economic Growth and generates all its electricity from renewable sources SDG 7 Affordable and Clean Energy. Policy areas with room for improvement are SDG 4 Quality Education, as reflected in a low share of tertiary degrees, and SDG 12 Sustainable Consumption and Production, mainly due to one of the highest per capita rates of motor road vehicles in the OECD and a high per capita waste rate. Challenges also include housing affordability and a low rate of investment in research and development (R&D).

The importance of data-driven policies: The province's work on SDGs indicators

The Provincial Institute for Statistics ASTAT has developed an interactive SDG Tracker to measure progress towards the United Nations (UN) Sustainable Development Goals (SDGs) in the Autonomous Province of Bolzano-Bozen. First released in 2020, the SDG Tracker, whose data are publicly available, presents the overall situation in the province for each of the 17 SDGs, including interactive access to provincial SDG data (Figure 2.1). It allows for comparisons with other regions in Italy and, when data are available, with regions in neighbouring countries. Furthermore, the tracker showcases long-term developments and progress over time. Data sources mainly come from the Italian National Institute of Statistics (ISTAT) and the interactive tool is available in German, Italian and English (ASTAT, 2023^[11]).

Figure 2.1. SDG Tracker South Tyrol



Source: ASTAT (2023^[11]), *SDG Tracker*, <https://astat.provinz.bz.it/barometro/upload/sdg/html/en/index.html> (accessed on 15 February 2023)

The SDG Tracker covers about one-third of the official UN SDG indicators. As of August 2023, the tool included data on 81 out of the 247 SDGs indicators of the United Nations, denoting important information gaps due to insufficient data availability at the subnational level. The 81 indicators are presented as accurately as possible on the basis of 245 individual measurements (with new measurements currently in the process of being integrated). For example, SDG indicator 1.2.2 – Proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions – measured by: i) the risk of poverty or social exclusion; ii) the proportion of the population suffering from multiple material deprivation, the proportion of the population with low work intensity; and iii) the proportion of the population at risk of poverty. The alignment of these measurements with the UN indicator is defined in

three categories: i) identical to the UN indicator; ii) similar to the UN indicator; and iii) in context with the UN indicator.

The province plans to increasingly integrate indicators provided in the SDG Tracker into the policy-making and monitoring process. The SDG Tracker aims to provide an easily accessible and objective database to contribute to the public discussion on sustainable development in the province. For this reason, it does not include a qualitative assessment or prioritisation of the goals, targets and indicators defined by the UN. The SDG Tracker bears the potential to underpin analysis for policy-making purposes to help assess the province's strengths and weaknesses, which has so far not been extensively used. To tap this opportunity, the province has, however, started mapping policy goals in the field of sustainable development to the indicators in the SDG Tracker, with the objective of measuring its distance to achieving the provincial targets. The tracker also seeks to inform the public about the evolution of sustainability indicators over time, although increasing awareness about the tracker among the population remains a challenge.

Measuring the distance to the SDGs in Bolzano-Bozen, Italy

The OECD localised indicator framework for the SDGs allows for international comparisons across several dimensions of sustainable development. Based on this framework and complemented with data from the SDG Tracker, the following section provides a first overview of the performance of the Autonomous Province of Bolzano-Bozen in relation to the SDGs, compared to around 400 regions in OECD countries. The structure of the section follows the five critical dimensions or "5Ps" of the 2030 Agenda (i.e. People, Prosperity, Planet, Peace and Partnerships) and is based on a selection of 78 indicators (59 indicators from the OECD localised indicator framework for measuring distance to the SDGs and 19 indicators from the ASTAT SDG Tracker) covering relevant aspects of 16 out of the 17 SDGs (Figure 2.2). For more information on the methodology of the assessment, see Box 2.1.

Figure 2.2. The 17 Sustainable Development Goals



Source: UN (2023^[2]), *Sustainable Development Goals*, <https://www.un.org/en/sustainable-development-goals> (accessed on 30 January 2023).

Box 2.1. OECD methodology for measuring cities' and regions' distance to achieving the SDGs

The OECD has developed a framework to localise the SDG targets and indicators and measure the distance of regions and cities to reaching each of the 17 SDGs. This consensual, comparable and standardised framework allows benchmarking performances within countries and across regions and cities to support public action across levels of government.

In the context of OECD countries, around 105 out of the 169 SDG targets have been identified as very relevant for regions and cities. Through an extensive literature review and expert consultation, the 169 SDG targets from the UN indicator framework have been classified according to their level of relevance for subnational levels of government (place-relevant). Subsequently, a subset of these SDG targets has been selected based on their applicability to the context and specificities of OECD countries (OECD relevant). The result is a selection of 105 SDG targets and 135 indicators for OECD regions and cities (also referred to as the “OECD subnational SDG targets and indicators”).

With its 135 indicators, the OECD localised framework covers at least 1 aspect of each of the 17 SDGs for both regions and cities. Nevertheless, the coverage in terms of indicators and targets is higher for regions than for cities. Although the set of indicators aims to cover the broad spectrum of all 17 SDGs, the coverage in terms of indicators also varies widely across SDGs.

To evaluate the achievements of a city or region on the SDGs, the OECD localised framework defines end values to shed light on the global trends in OECD regions and cities towards the SDGs, based on available indicators and to provide technical guidance for governments on a possible way to use the SDG indicator framework as a tool to advance local development plans and sustain evidence-based policies. By defining end values for 2030, regions and cities can assess where they stand today and seize how much distance they have to travel to reach the intended end value. When they are not inferable from the UN framework, the OECD defines end values for indicators based on the knowledge of experts in the field or based on the best performance of regions and cities in that indicator. The OECD localised indicator framework attributes end values to 88% of its indicators, of which 65% are defined using the criteria of “best performers”. The framework also normalises the SDG indicators from 0 to 100 – where 100 is the suggested end value of an indicator to be achieved by 2030 – and aggregates headline indicators that belong to the same SDG to provide an index score for each of the 17 SDGs. The distance to the target or goal is the number of units the index needs to travel to reach the maximal score of 100.

Source: OECD (2020^[3]), *A Territorial Approach to the Sustainable Development Goals: Synthesis Report*, <https://doi.org/10.1787/e86fa715-en>; OECD (2023^[4]), *Measuring the Distance to the SDGs in Regions and Cities (visualisation tool)*, <http://www.oecd-local-sdgs.org> (accessed on 30 January 2023).






Overall, the achievements of the Autonomous Province of Bolzano-Bozen on the SDGs are slightly better than in OECD regions on average. The province's results are particularly good regarding SDG 1 No Poverty, notably due to a low share of relative poverty, SDG 3 Good Health and Well-Being as a result of a high life expectancy low infant and child mortality rates and high rates of active physicians. Furthermore, unemployment rates are low, including for youth (SDG 8 Decent Work and Economic Growth). Furthermore, 100% of electricity produced in the province comes from renewable sources (SDG 7 Affordable and Clean Energy). In other policy areas, the province has room for improvement. This is notably the case for SDG 4 (Quality Education), mainly due to a low share of tertiary degrees. Furthermore, the province has one of the highest per capita rates of motor road vehicles, which creates challenges with regard to sustainable mobility and produces more waste per person than the average of OECD regions

(SDG 12). Other challenges for the province are the affordability of housing (SDG 11) and a low rate of investment in research and development (R&D) (SDG 9).

People

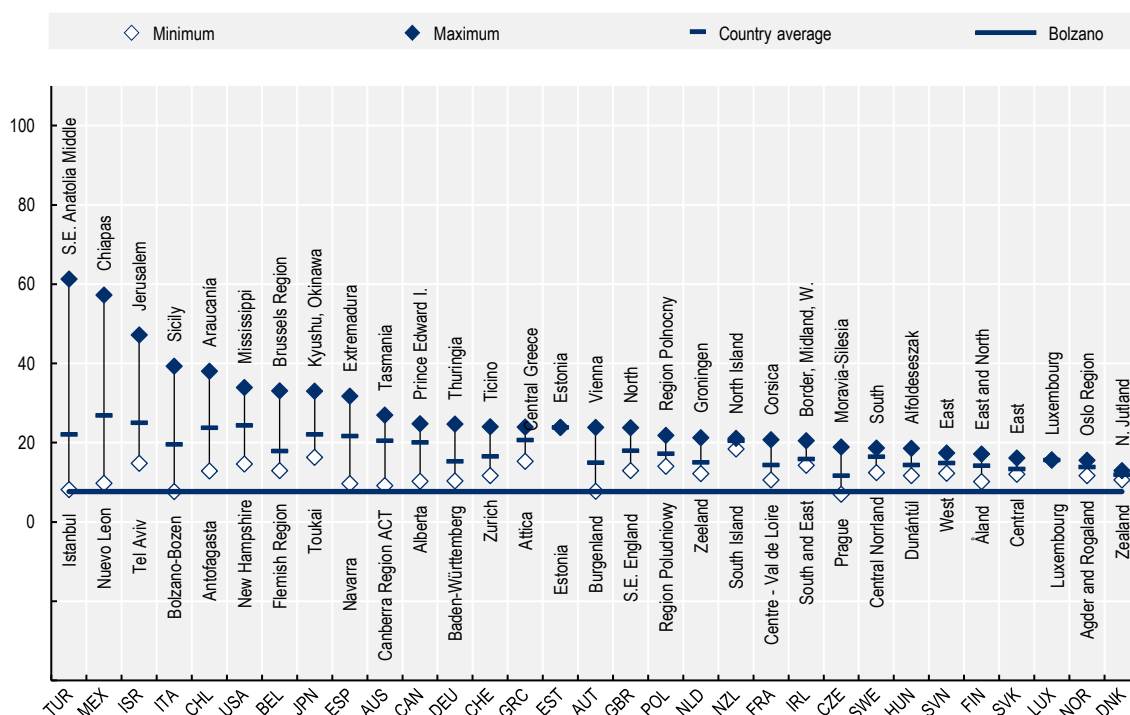
The Autonomous Province of Bolzano-Bozen has a low rate of relative poverty, partially due to taxes and transfers. SDG 1 aims to “end poverty in all its forms everywhere”. National and subnational governments are key actors in achieving that goal. The province has the lowest share of people living at risk of poverty. In 2021, 7.7% of people lived in households with a net equivalent income below 60% of the national median, compared to 20.4% in OECD regions and 19.5% in Italian regions on average (Figure 2.3). Government transfers and taxes play a key role as they account for a decrease in poverty rates by 68%, considerably above the national (48%) and OECD (38%) averages. As a result, the average disposable income per day of the first quintile (equivalised household in USD PPP, constant prices of 2010) of around USD 36 lies above the national (USD 21) and OECD regional average (USD 23). Nevertheless, between 2008 and 2018, only about a third of the population stated to be satisfied with the government’s efforts to deal with poverty. This share is lower than in around 60% of OECD regions. Regarding housing, the number of rooms per person (1.3 in 2019) in the province is lower than the OECD average (1.75) and Italian average (1.72), which can partly be explained by the limited availability of land in the province due to its mountainous topography.

Table 2.1. Indicators used to assess the dimension People in the Autonomous Province of Bolzano-Bozen

SDG	Indicator	Source
	Average disposable income per day of the first quintile (equivalised household, in USD PPP, constant prices of 2010)	OECD Regional Database
	Percentage of the population living below 60% of the national median disposable income	SDG Tracker (ASTAT)
	Decrease in poverty rates (national poverty line) due to transfers and taxes (%)	OECD Regional Database
	Rooms per person	OECD Regional Database
	Percentage of the population satisfied with efforts to deal with poverty	OECD based on Gallup World Poll
	Productivity (gross value added [GVA] per worker) in agriculture, forestry and fishing (International Standard Industrial Classification of All Economic Activities [ISIC] rev4) (in constant 2010 USD PPP)	OECD Regional Database
	Change in cropland (from 1992 to 2015, percentage points)	OECD Environment Database
	Cropland as a percentage of total area in 2015	OECD Environment Database
	Mortality rates for the 0 to 4 years old population	OECD Regional Database
	Infant mortality rate (number of deaths of children one year old or younger per 1 000 live births)	OECD Regional Database
	Satisfaction with life as a whole (from 0 to 10)	OECD based on Gallup World Poll
	Life expectancy at birth	OECD Regional Database
	Percent of people satisfied with the availability or quality of healthcare	OECD based on Gallup World Poll
	Active physicians rate (active physicians per 1 000 people)	OECD Regional Database
	Hospital beds rate (hospital beds per 10 000 people)	OECD Regional Database
	Percentage of the population from 15 to 19 years old enrolled in public or private institutions	OECD Regional Database
	Percentage of early leavers from education and training for the 18 to 24 years old population	SDG Tracker (ASTAT)
	Percentage of the population from 25 to 64 years old with at least tertiary education	OECD Regional Database
	Graduates and other tertiary qualifications (30-34 years)	SDG Tracker (ASTAT)
	Persons aged 25-64 who participated in education and training activities in the previous 12 months	SDG Tracker (ASTAT)
	Gender gap in part-time employment incidence (female-male, percentage points)	OECD Regional Database
	Female R&D personnel as a percentage of total R&D employment	OECD Regional Database
	Proportion of women elected to regional councils out of the total number elected	SDG Tracker (ASTAT)

The province has one of the most productive agricultural sectors in OECD countries. SDG 2 aims to reduce the number of people worldwide suffering from hunger and achieve zero hunger by 2030. Sustainable food production systems and the implementation of resilient agricultural practices are important contributors. The Autonomous Province of Bolzano-Bozen has one of the highest levels of productivity (GVA per worker) in agriculture, forestry and fishing among OECD regions. In 2019, its productivity (in constant 2010 USD PPP) reached USD 71 573, about 70% above the average of OECD (USD 41 630) and Italian (USD 42 000) regions. This puts the province among the 11% most productive regions across the OECD's primary sector. However, this value has to be put into context, as many of the agricultural businesses in the province are family-owned. This means that family members tend to support the activities on a voluntary, i.e. unpaid, basis, which is not reflected in the data. Due to the topography of the province, only 7.7% of the total area is used as cropland, a share that has remained relatively stable in recent decades (slightly decreasing by 0.91% percentage points between 1992 and 2015).

Figure 2.3. Percentage of the population living below 60% of the national median disposable income



Note: Japan (2009); Slovenia (2010); New Zealand (2011); Austria, Mexico, the Netherlands, Norway, the United States (2014); the United Kingdom (2015), Autonomous Province of Bolzano-Bozen (2021); all others (2013).

Source: (2023^[5]), *OECD Regional Statistics (database)*, <http://dx.doi.org/10.1787/region-data-en>; data for the Autonomous Province of Bolzano-Bozen come from ASTAT (2023^[11]), *SDG Tracker – Info*, <https://astat.provincia.bz.it/barometro/upload/sdg/html/en/index.html>.

Health and well-being indicators show better results than the average for OECD and Italian regions. SDG 3 has the objective to ensure healthy lives and promote well-being for all ages. The Autonomous Province of Bolzano-Bozen ranks among the lowest 30% of all OECD regions for infant mortality (number of deaths of children aged 1 year or less per 1 000 live births) and child mortality rates (0-4 years old population). In 2017, infant mortality was 2.8 deaths compared to the OECD average of 5.9, while child mortality was 7.0 deaths compared to 11.8. At the same time, the rate of active physicians per 1 000 people (4.2 in 2019) and the rate of hospital beds (35.0 in 2019) were higher than in 62% and 55% of OECD regions

respectively. Furthermore, the autonomous province also has one of the highest life expectancies at birth among all OECD regions.

Life expectancy and satisfaction with life and healthcare are above the average for OECD regions. In 2021, life expectancy was 83.8 years, slightly above the Italian average (83.1 years) and about 4.2 years above the average for OECD regions (79.6 years). The perception-based indicators of life satisfaction (from 0 to 10) and the percentage of people satisfied with the availability or quality of healthcare underline the good results of the province in SDG 3. The average satisfaction with life reached 6.7 between 2008 and 2018, slightly higher than in OECD regions (6.5) and Italian regions (6.1). At the same time, more than 75% of the population was satisfied with the availability or quality of healthcare, around 10 percentage points higher than OECD regions and more than 20 percentage points above the average of Italian regions.

The Autonomous Province of Bolzano-Bozen is lagging behind the OECD average in terms of the share of higher education degrees among the working-age population. SDG 4 Quality Education aims to ensure inclusive and equitable quality education for all. Enrolment in educational institutions is a crucial prerequisite for achieving this goal. In the Autonomous Province of Bolzano-Bozen, around 97% of the population aged 15-19 were enrolled in public or private institutions in 2021. This is one of the highest shares among OECD regions compared to the average of 81.7%. In addition, in 2022, 13.5% of the 18-24 year-olds were considered to have left education and training early.¹ This is in line with the median for OECD regions but almost twice as high as the suggested end value of 7.4% based on the best-performing regions in OECD countries. As regards higher education, there is room for improvement. The share of the population aged 25-64 years old with at least tertiary education in the province is considerably below the average for OECD regions (31.1%), standing at 18.1% in 2021, although similar to the Italian average of 20.3%. If only recent graduates are taken into account, the share of population aged 30-34 with tertiary education reached 24.7% in 2021, slightly higher than for the total working-age population. Yet, it was still below the national average (26.8%). Overall, more than two-thirds of people aged 25-64 participated in education and training activities in the previous 12 months.





There is some progress to make to fulfil SDG 5 on Gender Equality. Achieving gender equality and empowering all women and girls is at the core of SDG 5, which envisions a society without discrimination against women and without differences in social and economic outcomes based on gender. In the Autonomous Province of Bolzano-Bozen, the gender gap in the employment rate (between men and women) reached 13.9 percentage points (pp) in 2021. Although this is lower than the average for OECD regions (15.6 pp) and well below the average for Italian regions (18.1 pp), there is still a considerable gap to the suggested end value of 0 pp. As regards the gender gap in part-time employment (35.3 pp in 2021), the province performs worse than the OECD average (17.3 pp) and the average of Italian regions (24.0 pp). Overall, the province was among the 11% of OECD regions with the highest gender gaps in part-time employment. There is also a gender gap in R&D, where around 30% of employees in the province were female in 2018, compared to 36.7% in OECD regions and 35.3% on average in other Italian regions. Moreover, the political representation of women is low. In 2021, only 25.7% of the representatives elected to the regional councils were women, similar to the Italian average of 23.5%.

Planet

The province exhibits a high level of public satisfaction with water quality. SDG 6 addresses a basic human need: access to water and sanitation. One of its targets is to improve water quality by 2030. Between 2008 and 2018, an average of more than 94% of the province's population expressed satisfaction with water quality. This puts the province in the top 15% of OECD regions. Less than 1% of households (0.8% in 2021) do not trust drinking tap water and almost all wastewater is treated (99.7% in 2015). Furthermore, less than 2% of the population reported irregularities in water distribution in 2021, compared to 28.5% on average in Italy. Due to its topography, only about 0.4% of its territory is covered by water bodies, which makes their preservation even more important. Between 1992 and 2015, the volume of water bodies

remained stable (increase of 0.06 percentage points), placing it in the top 30% of OECD regions in terms of water body preservation. However, the province faces challenges with regard to high consumption of water resources in agriculture.

Table 2.2. Indicators used to assess the dimension Planet in the Autonomous Province of Bolzano-Bozen

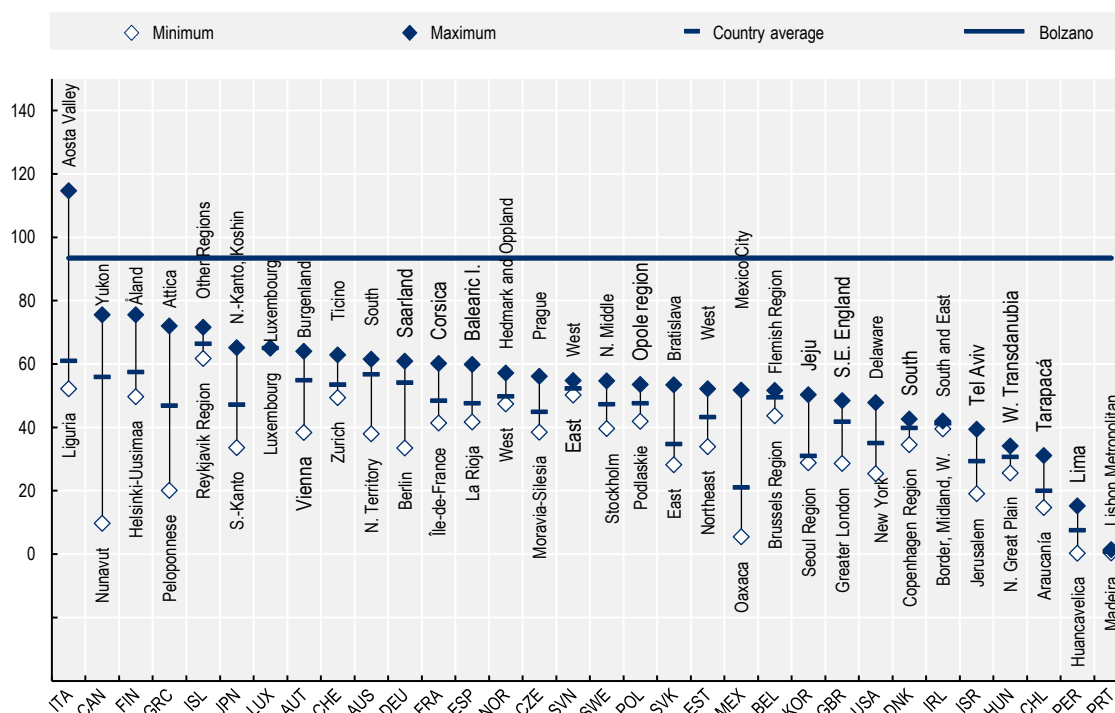
SDG	Indicator	Source
	Percentage of the population satisfied with the quality of water	OECD based on Gallup World Poll
	Households-families that do not trust drinking tap water	SDG Tracker (ASTAT)
	Irregularities in water distribution	SDG Tracker (ASTAT)
	Share of treated wastewater	SDG Tracker (ASTAT)
	Change in water bodies (from 1992 to 2015, percentage points)	OECD Environment Database
	Water bodies as a percentage of the total area in 2015	OECD Environment Database
	Municipal waste rate (kilos per capita)	SDG Tracker (ASTAT)
	Number of motor road vehicles per 100 people	OECD Regional Database
	Employed who usually travel to work only by private transport	SDG Tracker (ASTAT)
	Percentage of people aged 14 and over who consider climate change or the increasing greenhouse effect and ozone hole to be among their top 5 environmental concerns	SDG Tracker (ASTAT)
	Percentage of the population satisfied with the effort to preserve the environment	OECD based on Gallup World Poll
	CO ₂ emissions per electricity production (in tonnes of carbon dioxide [CO ₂] equivalent per gigawatt hours)	OECD based on Global Power Plant Database
	Change in tree cover (from 1992 to 2015, percentage points)	OECD Environment Database
	Tree cover as a percentage of the total area in 2015	OECD Environment Database
	Terrestrial protected areas as a percentage of the total area	OECD based on World Database on Protected Areas (WDPA)

SDG 12 Responsible Consumption and Production is the goal in which the Province of Autonomous Province of Bolzano-Bozen lags the most behind other OECD regions. SDG 12 highlights the urgent need to decouple economic growth from intensive resource use in order to reduce the negative impact of human activity on the planet. In the Autonomous Province of Bolzano-Bozen, the number of motor road vehicles is higher than in 99% of OECD regions. In 2019, 93.4 motor road vehicles were registered per 100 people compared to an average of less than 40 in OECD regions and 61 in Italian regions (Figure 2.4). Indeed, around 60% of employees in the province usually use private transport to get to work. The provincial waste rate of 464 kg per capita is 53 kg higher than average for OECD regions (411 kg) and almost 100 kg higher than the suggested end value (366 kg) based on best-performing regions in the OECD, although it compares favourably to the Italian average (487 kg). Both indicators refer to the material footprint of consumers, which should be reduced as much as possible in order to protect natural resources and limit pollution.

Electricity production has a low CO₂ intensity but the population's satisfaction with efforts to preserve the environment is lower than in most OECD regions. SDG 13 Climate Action has the objective to take urgent action to combat climate change and its impacts. In 2021, around 64% of the province's population aged 14 and above (67% of women and 62% of men) considered climate change or the increasing greenhouse effect and ozone hole to be among their top 5 environmental concerns. Two ways to contribute to SDG 13 are actions to preserve the environment and to reduce CO₂ intensity, including in electricity production. In the Autonomous Province of Bolzano-Bozen, the satisfaction rate with efforts to preserve the environment between 2008 and 2018 was lower than in two-thirds of OECD regions, reaching 44%, while the average of OECD regions was around 52%. On the other hand, the province has one of the lowest degrees of CO₂

emissions per tonne of gigawatt hour of electricity produced (24 tonnes of CO₂ equivalent). Compared to other OECD regions (344 tonnes on average), its electricity production generated less than a tenth of the CO₂ emissions.

Figure 2.4. Number of motor road vehicles per 100 people



Note: Canada (2002); France, Spain (2010); Estonia, Ireland, Poland, Slovenia (2011); Colombia, Luxembourg, the United States (2012); Finland, Hungary, Israel, Japan, Mexico, Peru, Portugal, the Slovak Republic, the United Kingdom (2013); Bolzano-Bozen (2019); all others (2014).

Source: OECD (2023^[5]), *OECD Regional Statistics (database)*, <http://dx.doi.org/10.1787/region-data-en>.






Forests account for 60% of the province’s land area but tree cover has been decreasing in recent decades. To measure the achievement of SDG 15 Life on land, the OECD localised indicator framework uses the indicators of tree cover loss (from 1992 to 2015, in percentage points) and terrestrial protected areas as a percentage of total area. Both indicators reflect the main purpose of SDG 15 Life on land, which is to protect and restore territorial ecosystems by combating deforestation and desertification. While 60% of the province’s land area was covered by trees in 2015, compared to an average of 38% in OECD regions, the province experienced a loss in tree cover of almost two percentage points between 1992 and 2015. This decline in tree cover is higher than in 80% of OECD regions. This has implications for the achievement of other environment-related SDGs, given that forest protection, or alternatively, tree restoration, is one of the most effective strategies for climate change mitigation (Bastin et al., 2019^[6]). At the same time, about a quarter of the province had terrestrial protected area status in 2017, compared to an average of 19% in OECD regions.

Prosperity

The electricity produced in the province comes entirely from renewable sources. SDG 7 aims to ensure access to clean and affordable energy. In terms of electricity production, the Autonomous Province of Bolzano-Bozen has already achieved one key aspect of the SDG Target 7.2, referring to a significant

increase in the share of renewable energy in the energy mix. In 2019, all electricity produced in the province came exclusively from renewable sources, notably hydropower. Although the same is not yet the case for electricity consumption, since the share of renewable sources in gross final energy consumption was 69.2% in 2021, this share is more than 3 times higher than the Italian average (20.4%).

Table 2.3. Indicators used to assess the dimension Prosperity in the Autonomous Province of Bolzano-Bozen

SDG	Indicator	Source
	Percentage of total electricity production that comes from renewable sources	OECD based on Global Power Plant Database
	Share of energy from renewable sources in gross final energy consumption	SDG Tracker (ASTAT)
	Employment in knowledge-intensive services as a percentage of total employment	OECD Regional Database
	Percentage of labour force with at least secondary education	OECD Regional Database
	Firm creation rate (%)	OECD Regional Database
	Unemployment rate (%)	OECD Regional Database
	Gender gap in the unemployment rate (percentage points)	OECD Regional Database
	Long-term unemployment incidence (%)	OECD Regional Database
	Part-time employment incidence (%)	OECD Regional Database
	Percentage of the young population (from 18 to 24 years old) not in education, employment or training (NEET)	OECD Regional Database
	Youth unemployment rate (%)	OECD Regional Database
		Percentage of the population satisfied with roads and highways
Percentage of the population satisfied with public transportation		OECD based on Gallup World Poll
Households declaring difficulties with public transport connections in the area where they live		SDG Tracker (ASTAT)
Productivity (GVA per worker) in manufacture (ISIC rev4) (in constant 2010 USD PPP)		OECD Regional Database
Manufacturing employment as a percentage of total employment		OECD Regional Database
R&D expenditure as a proportion of GDP (%)		OECD Regional Database
R&D personnel as a share of total employment		OECD Regional Database
Patent applications (Patent Cooperation Treaty) per 1 000 000 people		OECD Regional Database
	Enterprises with product and/or process innovation activities	SDG Tracker (ASTAT)
	Net income inequality (s80/s20)	SDG Tracker (ASTAT)
	Rate of change in household income per head for the poorest 40% of the population	SDG Tracker (ASTAT)
	Rate of change in household income per head for the total population	SDG Tracker (ASTAT)
	Enterprises with product and/or process innovation activities	SDG Tracker (ASTAT)
	Percentage of household expenses dedicated to housing costs	OECD Regional Database
	Housing cost overload	SDG Tracker (ASTAT)
	Percentage of the population satisfied with the affordability of housing	OECD based on Gallup World Poll
	Exposure to particulate matter 2.5 (PM2.5) in micrograms per cubic metre (µg/m³), population-weighted	OECD Regional Database
	Percentage of the population satisfied with the quality of air	OECD based on Gallup World Poll

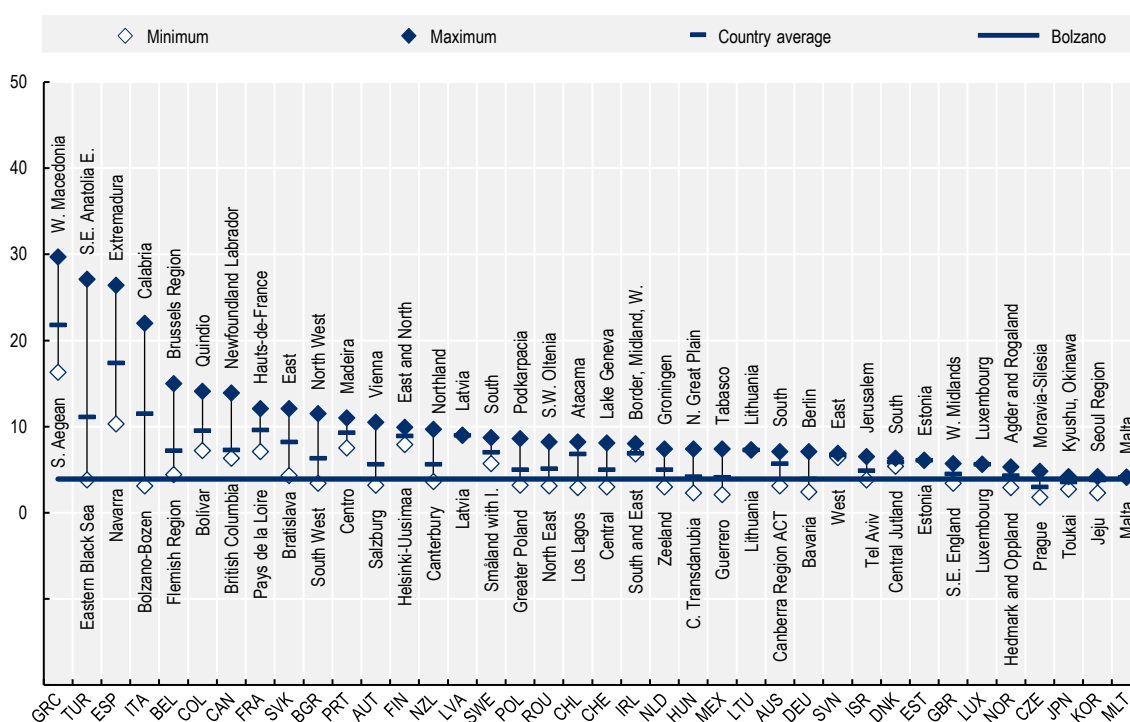
The firm creation rate, the employment rate in knowledge-intensive services and the share of the labour force with tertiary education are all slightly below the average of OECD regions. Sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all (SDG 8 Decent Work and Economic Growth) are means to achieve a more sustainable economy. The creation of new firms can be an important contribution to this goal. However, in the Autonomous Province of Bolzano-Bozen, the rate of new firm creation lags behind the OECD average. In 2016, its enterprise birth rate reached 6.3%. This was in the bottom 10% of all OECD regions, whose average rate was 11.2%. Knowledge-intensive services, which can be an accelerator for economic growth and employment, accounted for around a third of total employment in 2016, slightly below the OECD average (37%). Moreover, less than 70% of the

labour force in the province had at least upper secondary education, placing it among the 40% of OECD regions with the lowest share of the labour force with upper secondary education.

The Autonomous Province of Bolzano-Bozen has a low unemployment rate. In 2021, the unemployment rate in the province was 3.9%, around half the OECD regional average (7.6%). This puts the province in the top 20% of OECD regions (Figure 2.5). Twenty-one percent of unemployment were long-term unemployment incidences of 12 months or more. This is below the OECD and Italian regional averages of 30.2% and 58.1% respectively. At the same time, the province recorded a gender gap in unemployment of 1.5 percentage points. Although this is below the OECD average of 1.95 percentage points, it is still below the suggested end value of 0 percentage points, corresponding to full gender equality.

Figure 2.5. Unemployment rate

Percentage of unemployed with respect to the labour force



Note: Japan (2015); Australia, Canada, Chile, Colombia, Israel, Korea, Mexico, New Zealand (2016); Bolzano-Bozen (2021); all others (2017).
Source: OECD (2023^[5]), *OECD Regional Statistics (database)*, <http://dx.doi.org/10.1787/region-data-en>.

Youth unemployment is low but part-time employment is common. In 2017, the youth unemployment rate in the Autonomous Province of Bolzano-Bozen was 9.1%. This is almost half of the corresponding average in OECD regions (16.7%). The gap between the youth unemployment rate in the province and the Italian average (34.7%) is even more pronounced. Accordingly, the share of the young population aged 18-24 years old NEET was at a low 10.9% compared to the OECD average of 18% and the Italian average of 29%. Part-time work is relatively common in the Autonomous Province of Bolzano-Bozen. In 2021, 22.4% of employment was part-time, which is higher than the average for OECD regions (17.9%) and Italian regions (18.5%) on average. While part-time employment offers greater flexibility for workers, it is also associated with lower wages and a higher risk of poverty for part-time workers.

Satisfaction with roads and highways and manufacturing productivity are higher than the OECD average, while satisfaction with public transport is in line with it. Regarding SDG Target 9.1 on developing high-quality, reliable and sustainable infrastructure, the Autonomous Province of Bolzano-Bozen shows average to good results. Between 2008 and 2018, more than 80% of the population was satisfied with roads and highways. This figure is around 17 percentage points higher than the average for OECD regions (63%). Around 60% were satisfied with the quality of public transport. This aligns with the OECD average and is around 15 percentage points higher than the average for Italian regions. In 2021, 14% of households reported difficulties with public transport connections in the area where they live, which is less than half the average for Italian regions. SDG Target 9.2 aims to promote inclusive and sustainable industrialisation. Productivity in the manufacturing sector, which accounts for 12% of total employment in the province, reached around USD 94 092 in 2019 (measured as GVA per worker in constant 2015 USD PPP), which is above the average of OECD regions (USD 81 000).

R&D is an area where the province shows room for improvement. With regard to SDG Target 9.5 on scientific research, the Autonomous Province of Bolzano-Bozen is lagging behind the OECD average. Its share of R&D expenditure, at 0.91% of GDP (0.98% according to data from ASTAT) in 2020, lies considerably below the OECD average (1.5%). Furthermore, in 2018, only around 1.4% of employment was in R&D, slightly below the average of OECD regions (1.5%). In terms of innovation capacities, its patent application rate is below the average of OECD regions. In 2015, the province registered around 38 patent applications (PCT) per 1 million inhabitants, less than half the corresponding OECD average (85) and lower than the average of other Italian regions (59). In line with this, only 45% of firms with at least 10 employees introduced product and/or process innovations in the last 3 years (2018-20), 5.6 percentage points below the national average.

Net income inequality in the Autonomous Province of Bolzano-Bozen is lower than the Italian average but income growth rates are among the lowest in the country. In 2020, the ratio of the total equivalent income received by the 20% of the population with the highest income to that received by the 20% of the population with the lowest income was 4.0 compared to the Italian average of 5.9. This was Italy's second-lowest net income inequality degree, behind only the Marche region. Between 2016 and 2020, the real per capita household income of the 40% of the population with the lowest income grew by 1.3% per year, compared to -0.3% for the whole population. The province ranks among the bottom 5 Italian regions in terms of income growth for the 40% with the lowest income and it is the only Italian region with a negative per capita income growth between 2016 and 2020 when considering the whole population.



Housing affordability is a challenge for the Autonomous Province of Bolzano-Bozen. With more than half of the world's population living in cities, achieving SDG 11 Sustainable Cities and Communities, which aims to create sustainable cities and communities and make them inclusive, safe and resilient, can have a significant impact on people's lives. Housing plays an important role in this regard, as reflected in SDG Target 11.1, which aims to ensure access for all to adequate, safe and affordable housing and basic services. In the province, 35% of household expenditures is devoted to housing costs, which is significantly higher than the average for OECD regions (24%) but in line with the average for Italian regions (35%). More than 8% of the population had to spend more than 40% of their income on housing in 2021, 1.3 percentage points above the Italian average. Accordingly, only 46% of the population were satisfied with the affordability of housing between 2008 and 2018 compared to 53% in OECD regions on average.

Air pollution levels are below the OECD average but above the WHO air quality guidelines. The average population-weighted exposure to PM_{2.5}, which can cause cardiovascular and respiratory disease and cancer, reached 9.5 µg/m³ in 2020, compared to 13.3 in OECD regions on average. However, this exposure still hovers well above the World Health Organization (WHO) air quality guideline of 5 µg/m³ average annual exposure (WHO, 2021^[7]). Between 2008 and 2018, about 84% of the population reported being satisfied with air quality in the province, slightly higher than the OECD average (80%).

Peace and Partnership

The Autonomous Province of Bolzano-Bozen shows good results in terms of peace and safety. SDG 16 Peace, Justice and Strong Institutions aims to promote peaceful and inclusive societies for sustainable development, ensure access to justice for all and build effective, accountable and inclusive institutions at all levels. In terms of safety, the Autonomous Province of Bolzano-Bozen has good results, as reflected by a low homicide rate of 0.2 deaths per 100 000 people in 2019, among the 3% of OECD regions with the lowest rates. It also has a high proportion of people who feel safe walking alone at night in the area where they live (75% between 2008 and 2018, compared with 67% on average in OECD regions). In the same time period, 71% of the population believe that their place of residence is a good place to live for migrants, compared to 66% in OECD regions on average. Sixty-five percent consider the province a good place for gays and lesbians, compared to 53% in OECD regions.

Table 2.4. Indicators used to assess the dimensions Peace and Partnerships in the Autonomous Province of Bolzano-Bozen

SDG	Indicator	Source
	Homicides per 100 000 persons	OECD Regional Database
	Percentage of the population that feel safe walking alone at night around the area they live	OECD based on Gallup World Poll
	Confidence in the judicial system and courts	OECD based on Gallup World Poll
	Percentage of the population that believes corruption has spread throughout the government in the country	OECD based on Gallup World Poll
	Percentage of the population that has confidence in the national government	OECD based on Gallup World Poll
	Percentage of population that believes their place of residence is a good place to live for migrants	OECD based on Gallup World Poll
	Percentage of the population that believes their place of residence is a good place to live for gay or lesbian people	OECD based on Gallup World Poll
	Percentage of households reporting great difficulty in reaching three or more essential services	SDG Tracker (ASTAT)
	Households that have been asked for money, favours or other things in exchange for facilities or services in their lifetime	SDG Tracker (ASTAT)
	Share of PCT co-patent applications that are done with foreign regions (in % of co-patent applications)	OECD Regional Database
	Percentage of households with broadband Internet access	OECD Regional Database

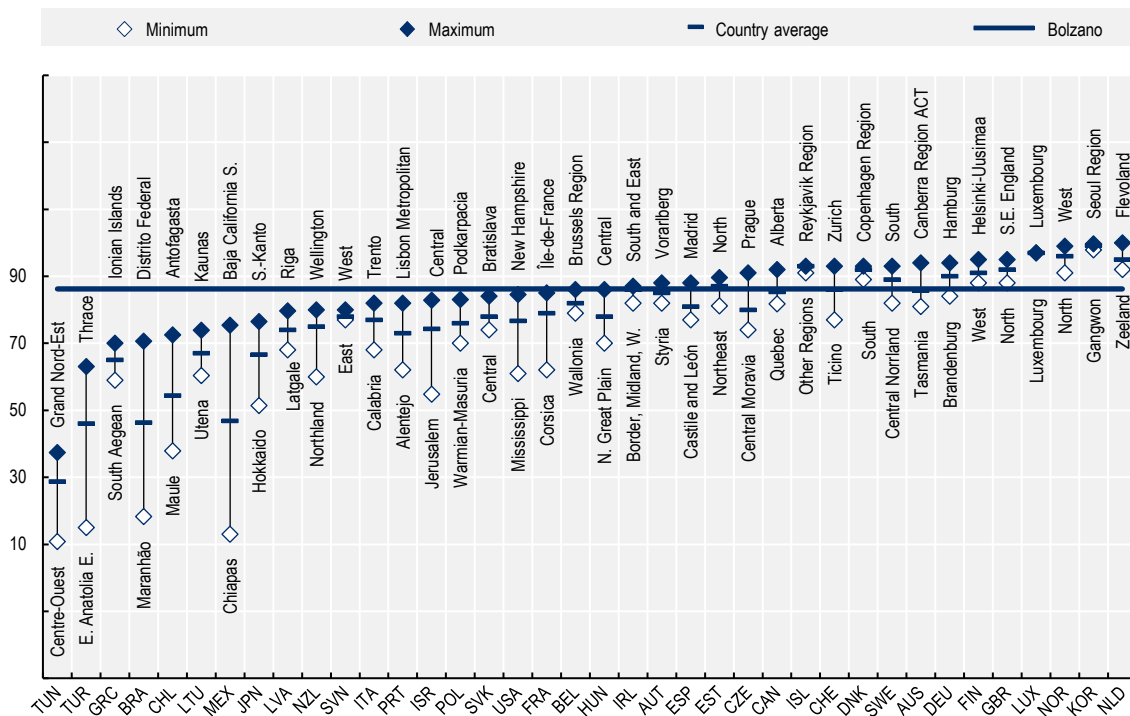
Confidence in the national government and the judiciary is low but access to public services and infrastructure is high. Around 44% of the population have confidence in the judiciary and courts, compared to 35% in the rest of the country. Roughly one-third have confidence in the national government. Yet, 90% of respondents believe that corruption is spread throughout the country's government, compared to 62% in regions of OECD countries on average. Around 3% of people in the province have already been asked for money, favours or other things in exchange for facilities or services in any of the following eight sectors: health, care, education, work, public offices, justice, law enforcement, public utilities, which is less than half the national average (7.9%). At the same time, accessibility to public services and infrastructure is high. Between 2018 and 2020, only 2.3% of households reported great difficulty in reaching three or more essential services (pharmacies, first aid, post office, police, carabinieri, municipal offices, nursery school, primary school, junior high school, food shops, markets, supermarkets), compared to a national average of 5.5%.

Joint patent applications with foreign regions and access to broadband Internet in the Autonomous Province of Bolzano-Bozen are higher than in OECD regions on average. SDG 17 aims to strengthen the means of implementation and realise the global partnership for sustainable development. The OECD uses the indicators of the share of co-patent applications with foreign regions (as a percentage of co-patent applications) and the percentage of households with broadband Internet access to measure how advanced

a region is towards achieving that goal. On both indicators, the province's performance is above the average of OECD regions. Around 77% of PCT co-patent applications were filed with foreign regions, exceeding the average of OECD regions (54%) by more than 20 percentage points. Furthermore, in 2021, 92% of households had access to broadband Internet access, nearly 20 percentage points above the OECD average and 15 percentage points above the average of Italian regions (Figure 2.6).

Figure 2.6. Broadband Internet access

Percentage of households with broadband Internet access



Note: Iceland, New Zealand (2012); Brazil, Chile, Switzerland, Türkiye (2013); Greece, Tunisia (2014); Australia, Canada, Estonia, Israel, Japan, Latvia, Lithuania, the United States (2015); Bolzano-Bozen (2021); all others (2016).

Source: OECD (2023^[5]), *OECD Regional Statistics (database)*, <http://dx.doi.org/10.1787/region-data-en>.

Spotlight on co-benefits and potential policy tensions: Using the SDGs to address interlinked sustainability challenges

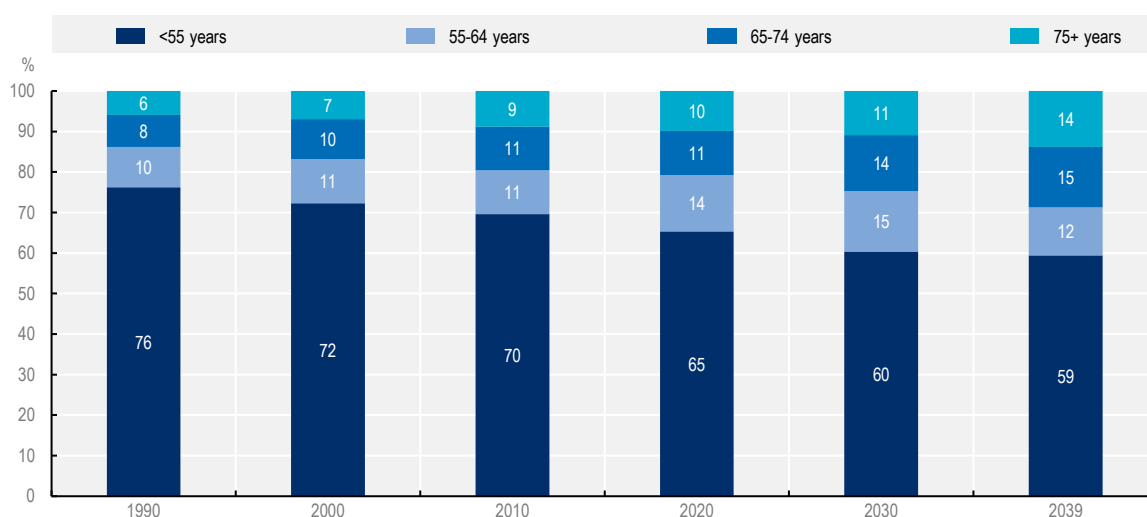
The SDGs can provide a forward-looking vision for the autonomous province to respond to global challenges and trends that affect the regional policy environment. Building on the data analysis and assessment, this section explores the province's main interlinked sustainability challenges and their relevance to the SDGs. Among the critical megatrends influencing the achievement of the SDGs in the province, it examines the extent to which demographic and climate change affect policy areas such as agriculture, education, housing, mobility, tourism and waste management.

The province is facing the consequences of labour shortages in several sectors. A key long-term sustainability challenge for the Autonomous Province of Bolzano-Bozen is demographic change, the associated changing labour market conditions and difficulties in attracting workers. Labour shortages are particularly prevalent in the social services sectors, including hospitality, health and social care (SDG 3 Good Health and Well-Being) as well as in the public sector, where the average age of employees is close

to 50. Several concurrent factors are at play, including skills gaps, both in terms of low- and high-skilled workers (SDG 4 Quality Education), bottlenecks in attracting talent from other countries and regions, as well as competition from neighbouring regions in Austria and Switzerland offering better working conditions (SDG 8 Decent Work and Economic Growth). The requirement of its labour market to speak both German and Italian is a major challenge for recruitment from abroad. It has a particular impact on the tourism sector, which relies heavily on foreign workers. Seasonality and the resulting difficulties for seasonal workers are further obstacles to recruitment.

The provincial labour market is characterised by an ageing workforce. By 2030, a quarter of the population will be 65 years or older compared to 10% in the 1970s. The share of the population aged 75 and over is projected to increase from 9.5% in 2017 to almost 12% by 2030 (Figure 2.7) (Autonomous Province of Bolzano-Bozen, 2018^[8]). The current shortage of labour in the care sector will make it challenging to support an ageing population with increasing needs for care and assistance for the elderly and people with disabilities. The new provincial social plan provides an opportunity to address the needs of the vulnerable and elderly (SDGs 3, 10) on the one hand and the labour market (SDG 8) on the other, while considering potential negative social repercussions of the transition to climate neutrality and sustainability, such as potentially higher costs for housing and mobility.

Figure 2.7. Age composition of the population in the Autonomous Province of Bolzano-Bozen



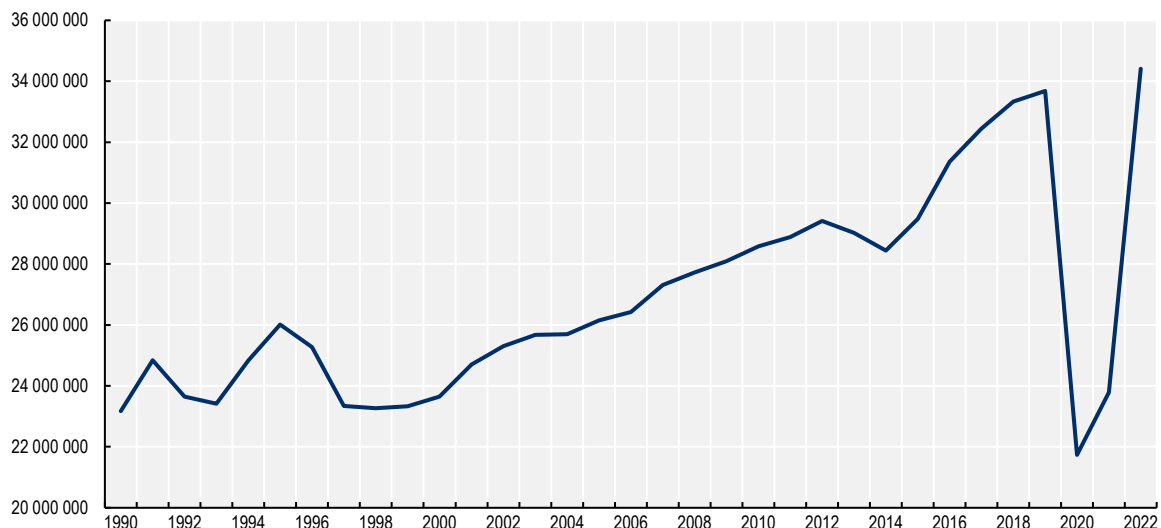
Source: ASTAT (2023^[9]), *Bevölkerung in Südtirol [Population in South Tyrol]*, https://astat.provinz.bz.it/pyramid/index_d.html#ly=2000&a=64,75&q.

Another social challenge to address is the affordability of housing in the context of high inflation. An increase in housing prices, particularly driven by the tourism industry, puts additional pressure on households, especially those with lower income, e.g. in the care and hospitality sector. This is particularly relevant in the current economic context of high inflation rates: the provincial consumer price index went up by 9.0% in 2022 (ASTAT, 2023^[10]). It also adds to the challenge of ensuring a sufficient supply of labour for care and hospitality occupations, especially considering that households in the province already spend, on average, 35% of household expenditure on housing (OECD, 2023^[5]). In 2021, property values ranged from EUR 3 871 to EUR 5 036 per square metre in the city of Bolzano-Bozen and from EUR 2 308 to EUR 2 968 per square metre on average in the other municipalities, thus the highest among Italian regions (ASTAT, 2022^[11]). Tourism plays a key role in the increase of housing costs. In municipalities characterised by significant tourism activity, the average rent per square metre is approximately EUR 3.1 higher than in municipalities with limited tourism presence (Windegger et al., 2022^[12]). At the same time, environmental

standards for new buildings and energy-efficient renovations are necessary to achieve global climate objectives. Yet, they may also contribute to further increases in housing prices, threatening affordability. It will be crucial for the province to consider the impact of such climate measures (SDG 13) on inequality (SDG 10), with particular attention to vulnerable groups, and to manage the trade-offs between the provision of affordable housing (SDG 11), the needs of the tourism sector (SDG 8) and the conservation of natural habitats and forests (SDG 15).

In the Autonomous Province of Bolzano-Bozen, mobility and tourism are closely linked to climate change. During the 20th century, the average annual temperature in the Alpine region has increased by 2 degrees Celsius (CREA Mont-Blanc, 2020^[13]). Global warming affects precipitation patterns in the Alps, where rainfall is expected to go up in winter but decrease in summer (Gobiet et al., 2014^[14]). At the same time, an expected increase in the frequency of extreme weather events due to climate change also makes landslides more likely, which can endanger parts of the local population. This is particularly relevant in the Autonomous Province of Bolzano-Bozen, where most settlements are located in valleys. Between 2015 and 2020, the share of the population exposed to the risk of landslides has already increased from 0.5% to 2.3% (ASTAT, 2023^[11]). Greenhouse gas (GHG) emissions further accelerate extreme weather events. Road traffic (SDG 11 Sustainable Cities and Communities), significantly affected by the influx of tourists, is the main source of GHG emissions in the province. It accounts for 44% of total emissions (SDGs 11 and 13), mainly due to the highway A22 connecting the province to Austria through the Brenner Pass, followed by agriculture (17%) and non-industrial combustion (residential heating, including tourism and services) (17%) (Autonomous Province of Bolzano-Bozen, 2022^[15]). Between 1990 and 2022, the number of tourists staying in the province increased by almost 50%, from 23 million to 34 million (Figure 2.8), of which close to 90% arrive by private car and the majority primarily use private transport during their stay. This influx of cars adds to the province's high per capita vehicle ownership rate, which is already more than double the OECD average. Furthermore, 40% of the population use a car on a daily basis, with an additional 32% using it at least once a week (ASTAT, 2022^[16]).

Figure 2.8. Number of overnight stays in the Autonomous Province of Bolzano-Bozen, 1990-2022



Source: ASTAT (2023^[17]), *Tourismus [Tourism]*, https://astat.provinz.bz.it/barometro/upload/statistikatlas/de/atlas.html#!wirt/fnv_fnv/fn_nacht (accessed on 30 June 2023)

The province has implemented several measures to address the links between mobility, tourism and climate. The provincial climate plan recognises the existing linkages between tourism, mobility and emissions. Going one step further and using the SDGs as a framework for assessing synergies and

trade-offs between these different policy areas could help to better systematise these interlinkages and analyse how measures in the different action areas affect each other. Measures such as the construction of the Brenner Base Tunnel, the reduction of individual traffic through digital booking systems, the introduction of the South Tyrol Pass and Guest Passes and a shift towards hydrogen busses are the first steps to reduce car dependency (SDG 12) and move towards less carbon-intensive mobility (SDG 11). However, measures to lower the share of car rides in the modal split could potentially also negatively impact the attractiveness of the province of a tourist destination, considering the still existing strong preference of tourists for individual car usage (SDGs 8 and 11) (see above). The expansion of the cycling infrastructure, including bike-sharing systems such as in Merano-Meran, and the approval of the first provincial cycling mobility plan also contribute to the goal of low-carbon mobility (SDG 11) while at the same time providing health benefits for the population and visitors (SDG 3). Nevertheless, it remains important to also take into account the mobility needs of the population and visitors with walking impediments (SDG 3).

Agriculture is another major driver of GHG emissions and climate change in the province. The agricultural sector accounts for 17% of CO₂ emissions and 76% of methane emissions in the province, reinforcing the interdependencies and actions between climate (SDG 13) and agriculture (SDG 2) (Autonomous Province of Bolzano-Bozen, 2021^[18]). Organic farming has grown by 10% between 2016 and 2021 but the share of utilised agricultural area under organic cultivation (6.8% or 13 875 hectares [ha] in 2022) was lower than the national average (17.4%). However, estimates for 2023 indicate a value of 50 000 ha, mainly attributable to the new area support of the EU programming period 2023-27 for grassland agriculture, leading to a substantial increase in biologically certified agricultural land area. The amount of fertilisers used in agriculture reached 863 kg/ha compared to a national average of 632 kg/ha. The high consumption of water resources (SDG 6 Water and Sanitation) and fossil fuels (SDG 7 Clean and Affordable Energy) in the province's export-oriented food production adds to the challenges.

The SDGs can help see agriculture as part of the broader territorial development. While agriculture is an important contributor to climate change (SDG 13), it also provides employment opportunities (SDG 8) and sources of innovation (SDG 9), e.g. through the further development and research of forms of cultivation, fertilisation, plant protection and processing that conserve soil, water, biodiversity and climate, but also through digital innovation and smart technologies. These include the development and implementation of new technologies, the use of big data as well as new, innovative breeding methods. Territorial development also relates to the topic of land management and the question of how much space should be devoted to agriculture, forests and settlements, e.g. the share of social housing or infrastructure projects. This is particularly the case in a region such as the Autonomous Province of Bolzano-Bozen, where habitable land is scarce and the trade-offs between the different types of land use mentioned above need to be carefully examined. The agricultural sector, for example, has the potential to contribute to a circular economy (SDG 12), such as through the recovery of byproducts and waste in construction materials and products, thus reducing the carbon footprint of new construction and building renovation (Rizzari et al., 2023^[19]). However, it is at the same time responsible for a large share of GHG emissions and usage of water resources. The use of waste from the agricultural sector in a circular economy system is already a main research focus of the Laimburg Research Centre for the period 2021-30. Moving towards a circular economy can also prevent the generation of waste in the Autonomous Province of Bolzano-Bozen (464 kg per capita in 2020) while reducing the use of materials means reducing GHG emissions. Reducing the amount of waste incinerated through waste prevention, recycling and recovery could reduce the amount of particulate matter released into the atmosphere, thus mitigating climate change impacts (National Research Council, 2000^[20]). In Ireland, some circular practices are already in place in the agricultural sector. For example, nutrients recovered from sewage sludge can be used as fertiliser on farms, helping to close nutrient loops; 89% of the 58 630 tonnes of sewage sludge produced by wastewater treatment plants was used as fertiliser and 10% as compost for agriculture in 2019 (OECD, 2022^[21]).

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Note

¹ The measurement of early leavers from education is based on a sample survey. This means that the estimation of the value is subject to a sampling error, which can be reflected in a fluctuation range of (confidence interval) of 2-3 percentage points.

3

Multi-level governance and stakeholder engagement for the SDGs

The Everyday for Future strategy establishes an institutional and governance framework to co-ordinate provincial efforts towards the United Nations 2030 Agenda. The co-ordination is overseen by the Working Group for Sustainability, tasked with facilitating cross-departmental collaboration within the provincial administration, co-ordinating with various government levels and engaging territorial stakeholders. However, the definition of roles among stakeholders varies: provincial statistical institutions and municipalities have clearly established roles, while others, including civil society, academia and the private sector, are still clarifying their roles. Opportunities for improvement also exist in co-ordinating sustainable development policies with the national government and neighbouring regions, whereas co-operation with municipalities through the establishment of municipal sustainability officers is beginning to yield results.

The Italian National Sustainable Development Strategy

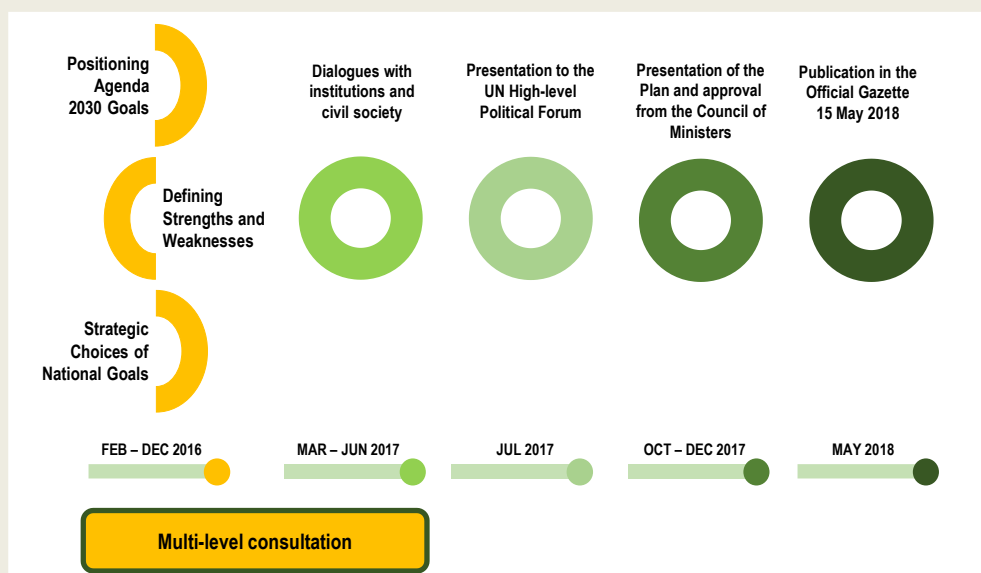
The national governance framework for the SDGs

In Italy, the National Sustainable Development Strategy provides the overarching strategic framework to guide the implementation of the United Nations (UN) 2030 Agenda. The process that led to the definition of the strategy started in 2016 when the Italian Ministry of the Environment published an initial assessment of the Italian context in relation to the UN Sustainable Development Goals (SDGs) (Box 3.1). The strategy constitutes the national reference framework for sustainable development and sets the government's commitment to defining coherent, global and efficient policy goals and actions for the implementation of the 2030 Agenda (Ministry of the Environment of Italy, 2017^[1]).

Box 3.1. Italy's National Sustainable Development Strategy

Italy's Sustainable Development Strategy has been developed and implemented through a multi-level approach. Consultations took place between 2016 and 2017 with three primary stakeholder groups: regional governments, academia and research institutions and civil society. Regional governments, convened through the State-Regions Conference,¹ provided guidance on defining objectives and strategic policy choices. Prominent public research institutions, including the National Research Council (CNR), the Italian Institute for Environmental Protection and Research (ISPRA) and the National Agency for New Technologies, Energy and Sustainable Economic Development (ENEA), along with 217 additional academic and research institutions, contributed technical expertise to consolidate the indicators used to assess Italy's progress toward achieving the SDGs. Additionally, more than 200 non-governmental organisations (NGOs) participated in roundtable discussions to shape the long-term vision of the national strategy. This inclusive process ensured an evidence-based approach and promoted a shared understanding of the national strategic priorities for sustainable development.

Figure 3.1. Process for the definition of the National Sustainable Development Strategy



Source: Ministry of the Environment of Italy (2017^[1]), *Strategia Nazionale per lo Sviluppo Sostenibile [National Strategy for Sustainable Development]*, https://www.mase.gov.it/sites/default/files/archivio_immagini/Galletti/Comunicati/snsvs_ottobre2017.pdf.

The national strategy is structured around the “5Ps” of the 2030 Agenda: People, Planet, Prosperity, Peace and Partnership. Each of the first four Ps is translated into national strategic objectives in line with the 169 targets of the 2030 Agenda (Table 3.1). The strategy maps the relevant SDG targets for each national strategic objective to monitor its implementation. This allows for the formulation of cross-sectoral actions in line with each national strategic objective, while considering their multi-dimensional impact (OECD, 2021^[2]). Regarding the fifth P, Partnership, the strategy is structured into areas of intervention and objectives, reflecting the framework outlined in Italian law for international development co-operation (Law 125/2014).² Furthermore, the strategy also identifies five “sustainability vectors”, defined as cross-cutting fields of action and key levers to initiate, guide, manage and monitor the integration of sustainability into national policies, plans and projects (Ministry of the Environment of Italy, 2017^[1]). These are:

- Common knowledge.
- Monitoring and evaluation of policies, plans and projects.
- Institutions, participation and partnerships.
- Education, awareness and communication.
- Modernising public administration and restructuring public expenditure.

Table 3.1. Strategic Objectives of the National Sustainable Development Strategy

People	Planet	Prosperity	Peace
I. Fight poverty and social exclusion, eliminating territorial inequalities	I. Prevent and stop biodiversity decline	I. Finance and promote sustainable innovation and research	I. Promote and inclusive and non-violent society
II. Guarantee adequate conditions for human capital development	II. Guarantee a sustainable management of natural resources	II. Guarantee full employment and quality education	II. Eliminate any form of discrimination
III. Promote health and well-being	III. Create resilient local communities, preserving landscapes and cultural heritage	III. Implement sustainable models for production and consumption	III. Ensure legality and justice
		IV. Decarbonise the economy	

Note: Partnership is not included as it has been structured according to the framework outlined in Law 125/2014.

Source: Ministry of the Environment of Italy (2017^[1]), *Strategia Nazionale per lo Sviluppo Sostenibile [National Strategy for Sustainable Development]*, https://www.mase.gov.it/sites/default/files/archivio_immagini/Galletti/Comunicati/snsvs_ottobre2017.pdf.

The role of subnational governments in the National Sustainable Development Strategy

The Italian Ministry of Ecological Transition (MiTE, recently renamed Ministry of the Environment) supports the elaboration of regional sustainable development strategies. Italian regions exhibit significant variations in economic and social performance, highlighting the need for development strategies tailored to the specific characteristics of each local economy. Regional disparities among regions in Italy remain above the median of OECD countries. For instance, the gross domestic product (GDP) per capita of the Autonomous Province of Bolzano-Bozen is nearly three times higher than that of Calabria (OECD, 2022^[3]). In 2018, MiTE issued a call for proposals to ensure effective multi-level co-ordination, providing technical and financial support to regions and autonomous provinces to design regional sustainable development strategies and establish governance frameworks at the regional level. As a result, MiTE signed 34 collaboration agreements with regions, autonomous provinces and metropolitan cities in 2019 and 2020 (OECD, 2021^[2]). The regional and provincial strategies for sustainable development (*Strategie regionali e provinciali per lo sviluppo sostenibile*) formulated as a result of these agreements are structured around three fields of action: governance, involvement of civil society, and strategy definition and monitoring (Figure 3.2). They also consider the development of frameworks for the 2021-27 European Union Cohesion Policy programming cycle and territorial-level policy evaluation (Ministry of the Environment of

Italy, 2020^[4]). Additionally, the strategies include a reporting and monitoring system to track the progress of actions taken and results achieved, utilising the national set of strategic choices and indicators outlined in the National Strategy for Sustainable Development as a common reference point.

Figure 3.2. Multi-level co-ordination for the definition of the National Strategy for Sustainable Development



Note: SNSvS refers to the national strategy; SRSvS refers to the regional strategies.

Source: Ministry of the Environment of Italy (2020^[4]), *Strategie Regionali per lo Sviluppo Sostenibile [Regional Strategies for Sustainable Development]*, <https://www.mase.gov.it/pagina/il-contributo-dei-territori-regioni-province-autonome-e-citta-metropolitane-le-strategie>

In 2018, MiTE initiated the CReIAMO PA project to enhance co-ordination between national and regional strategic plans. The initiative, funded by the National Operational Programme on Governance and Institutional Capacity (*Programma Operativo Nazionale Governance e Capacità Istituzionale 2014-2020*), runs until the end of 2023 and aims to assist subnational levels of government in implementing their strategic plans for the 2030 Agenda (Ministry of the Environment of Italy, 2022^[5]). The project encompasses four main activities:

- Organisation of awareness-raising events to promote the dissemination of goals and activities related to the 2030 Agenda.
- Establishment of technical working committees, co-ordinated by the University of Roma Tre in partnership with the Sapienza University of Rome and Tor Vergata University of Rome, to actively involve subnational levels of government and the alignment between national and regional strategies.
- Organisation of multilateral workshops and meetings to facilitate co-ordination among regional strategies for the 2030 Agenda.
- Provision of technical support to regions during the development, implementation and monitoring phases of their Regional Strategies for Sustainable Development, including the provision of evidence for evaluating policy impacts.

Public officials and public managers from all regions, including the 2 autonomous provinces, as well as 14 metropolitan cities, have participated in the CReAMO PA project. Capacity-building activities on sustainability were conducted for regional and provincial administrations in collaboration with the Italian National Institute of Statistics (ISTAT), ISPRA and the *Centro Interregionale per i Sistemi Informatici Geografici e Statistici* (CISIS). The Territorial Cohesion Agency played a role in providing support for aligning regional strategies for sustainable development with the national programme for the 2021-27 period.

Latest developments and challenges in governance and regional engagement

Currently, the national strategy is undergoing a comprehensive review aimed at strengthening governance mechanisms and fostering greater involvement of regions and cities. Throughout this review process, which draws upon a systematic monitoring and reporting system concerning the strategy's implementation progress,³ regions and metropolitan cities play a pivotal role by contributing their expertise and perspectives to the discussion. The Permanent Conference for Relations between the State, the Regions, and the Autonomous Provinces held in September 2022 confirmed the support of Italian regions and autonomous provinces for the approval of a new National Strategy for Sustainable Development, which includes the provision of a National Action Plan for Policy Coherence for Sustainable Development to facilitate multi-level dialogue and the establishment of shared tools to plan and assess the sustainability of public policies.⁴ As a result, the new strategy is poised to receive formal approval from the Inter-ministerial Committee for Ecological Transition, signifying a major milestone in its implementation journey.

To effectively implement the strategy, several activities and tenders have been initiated. These initiatives encompass endeavours to enhance policy coherence, promote cultural and communication efforts in sustainable development, advance sustainable development education and foster participation and stakeholder engagement. Evaluating the outcomes of the initial and subsequent agreements with regions implemented between 2018 and 2022, has been instrumental in informing future actions. Additionally, Italy has collaborated with the European Commission's Directorate-General for Structural Reform Support and the OECD in a project aimed at reviewing the strategy, benefitting from international expertise and best practices to shape Italy's approach.⁵ Notably, partnerships have been established with the National School of Administration and the Department of Public Administration within the Presidency of the Council of Ministers to bolster capacity-building endeavours and facilitate effective governance for sustainable development. Furthermore, a collaborative data framework involving ISTAT and ISPRA is being developed to support evidence-based decision making. At the regional level, 15 regional administrations have established dedicated fora to facilitate dialogue, knowledge exchange and collaboration among diverse stakeholders.

The co-operation between the national government and the Autonomous Province of Bolzano-Bozen in implementing the National Sustainable Development Strategy has been weak. While collaborative efforts have been undertaken, there is room for strengthening co-ordination across levels of government. Eurac Research, a private research centre based in the city of Bolzano-Bozen, received national financial support to shape and organise regional committees for sustainable development and establish platforms for engaging stakeholders in sustainability efforts. Furthermore, a meeting held at the national level in 2021 to discuss how to measure Italy's progress towards achieving the SDGs brought together universities and research institutions from across the country as well as their respective host regions, including the Autonomous Province of Bolzano-Bozen. There is limited evidence regarding the extent to which these efforts have contributed to the definition of the provincial strategy on sustainable development and its alignment with national-level initiatives. Additionally, it is noteworthy that the Autonomous Province of Bolzano-Bozen stands as the sole region where a formal agreement with the national government, fostering a shared vision and identifying collaborative areas of work within the framework of respective sustainable development strategies, has not yet been established.

The institutional framework for the SDGs in the Autonomous Province of Bolzano-Bozen

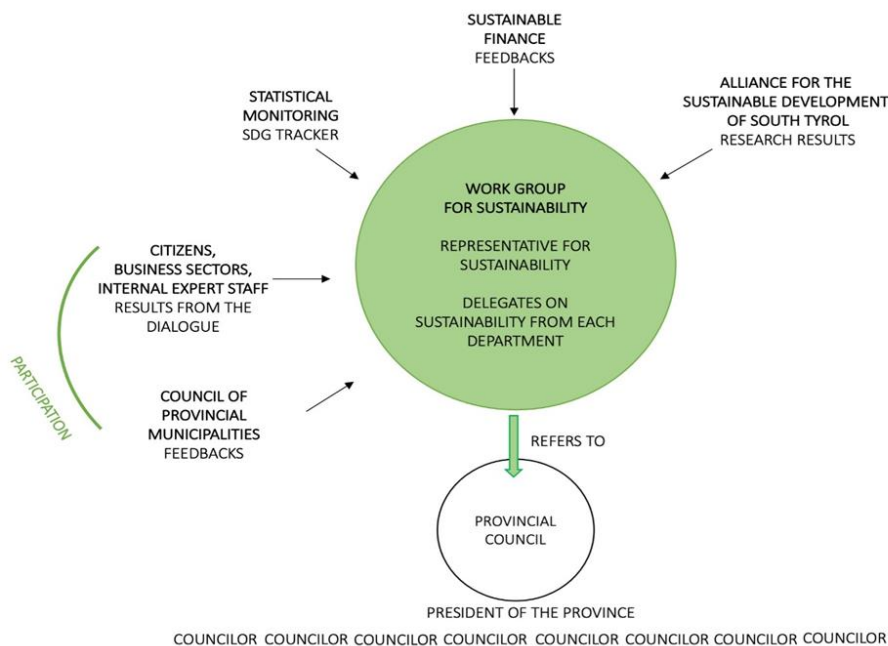
The governance structure of Everyday for Future

The Everyday for Future strategy establishes an institutional and governance framework to co-ordinate efforts towards achieving the 2030 Agenda. It aims to connect different fields of action, break silos across departments and manage interconnected challenges across sectors. The governance structure of the Everyday for Future strategy identifies various stakeholders involved in its implementation, including internal departments, the provincial statistical unit, citizens, civil society organisations, private stakeholders and research institutions (Autonomous Province of Bolzano-Bozen, 2021^[6]).

The co-ordination of the Everyday for Future strategy is carried out by the Working Group for Sustainability. This working group comprises the provincial representative for sustainability, a public servant specifically appointed by the provincial administration to facilitate collaboration among different departments, and sustainability delegates from each department. The primary responsibility of the working group is to co-ordinate the collaborative process and facilitate the sharing of information to design, implement and adapt new policies for sustainable development. Feedback and ideas collected by the working group are then shared with the provincial council, which is responsible for translating them into policies.

The governance framework also involves local stakeholders from academia, the private and public sectors (Figure 3.3). The Provincial Statistics Institute ASTAT is tasked with monitoring and evaluating the outcomes of implemented policies. Its SDG Tracker (see Chapter 2) aims to provide the provincial government with effective tools for quantitatively assessing policy outcomes related to sustainable development in the province. However, Everyday for Future only offers a general framework for this collaborative scheme, lacking clear guidelines regarding specific tasks, rules and responsibilities for each institution and actor involved.

Figure 3.3. Everyday for Future governance framework



Source: Autonomous Province of Bolzano-Bozen (2021^[6]), *Everyday for Future - Gemeinsam für die Nachhaltigkeit [Everyday for Future - Together for Sustainability]*, <https://assets-eu-01.kc-usercontent.com/bad10f1e-e9af-0140-aa47-ca5379671ba5/3828f8f0-7fc6-4dd6-bb31-53a5045e9664/WEB-sostenibilita-paper-it.pdf>.

Clear roles and responsibilities are essential for the successful governance of the Everyday for Future strategy. As emphasised by the OECD (2018^[7]), policy ownership plays a crucial role in maximising the effective use of public spending and investments for regional development. Simplicity, flexibility and strong relationships among stakeholders are factors that contribute to a sense of ownership. Conversely, the lack of a clear division of roles and responsibilities among stakeholders may hinder their effective engagement. In the specific case of the Everyday for Future strategy, focus groups indicated that the situation is mixed. Some types of stakeholders, such as ASTAT and municipalities, have been assigned clear tasks. However, others, including civil society, academia and the private sector, are still in the process of defining their roles within the context of the strategy.

The role of sustainability officers in strengthening multi-level co-ordination

Sustainability officers, who are appointed in each municipality, play a crucial role in facilitating multi-level co-ordination among local and provincial governments within the governance structure of Everyday for Future. As the focal point for sustainability at the municipal level, sustainability officers are responsible for raising awareness about the 2030 Agenda and implementing the SDGs within their respective municipalities. Additionally, they serve as points of contact for the association of municipalities and the provincial administration, fostering collaboration and striving to align sustainability efforts across different levels of government.

At the core of sustainability officers' responsibilities is the facilitation of strategic collaboration among different municipal departments to ensure adherence to sustainability criteria and alignment with the provincial strategy. Their main tasks include:

- Elaborating strategic plans to achieve the 2030 Agenda at the municipal level.
- Conducting capacity-building activities on sustainable practices for local stakeholders.
- Ensuring citizen participation in the policy process and activities related to the 2030 Agenda.
- Providing advisory services to local administrations on best practices and policy initiatives for sustainable development.
- Monitoring and evaluating the impact of local policies on sustainable development, developing specialised tools and instruments for policy measurement.

Sustainability officers, like other stakeholders in the governance of Everyday for Future, undergo periodic training and evaluation. In spring 2023, a collaborative effort between the provincial government, the provincial association of municipalities, the Network for Sustainability and the Cusanus Academy initiated a three-part sustainability training programme for sustainability officers. This programme enables them to share experiences and best practices in sustainable development. Additionally, the association of municipalities and KlimaHaus will organise a CO₂ day in autumn 2023, involving all municipalities in discussions on reducing carbon footprints. These initiatives demonstrate the commitment to continuous learning and knowledge sharing among sustainability officers and local stakeholders in the Everyday for Future strategy. Taking into account the unique characteristics of each municipality, a tailored approach is encouraged by the provincial government, leveraging existing work and foundational ideas. As a result, sustainability officers must consistently assess the effectiveness of their initiatives while guiding and inspiring colleagues and stakeholders to understand the importance of sustainability.

Sustainability officers are primarily selected by mayors from the local administrative structures, with mayors themselves or municipal council members often assuming these roles. This ensures that sustainability is given high political significance and commitment. While leveraging internal structures and expertise enhances the credibility and effectiveness of the sustainability officer's role, it is important to ensure that appointing officials with significant political responsibilities does not compromise the operational actions necessary for this role to make a tangible impact. Over time, the importance and contributions of sustainability officers have gained recognition and value. Although there may have been some degree of

ambiguity surrounding their significance at the beginning, growing awareness has highlighted their crucial role in driving sustainable practices across sectors. They collaborate with other municipal administrators responsible for specific areas, such as mobility or EU matters, to integrate sustainability considerations. Sustainability officers participate in conferences, exchange programmes and events to share best practices with other municipalities, facilitating knowledge transfer and promoting innovation. Their role extends beyond internal initiatives to include external engagement as well.

Collaboration between the Autonomous Province of Bolzano-Bozen and neighbouring regions

Co-operation between the Autonomous Province of Bolzano-Bozen and its neighbouring regions extends across national borders, including various transnational and interregional co-operation programmes. A notable example of such programmes is the Interreg Italy-Austria co-operation programme, which covers six jurisdictions located along the border between these countries. The Autonomous Province of Bolzano-Bozen plays a pivotal role as the managing authority of the programme, responsible for overseeing and supporting project implementation. Several priority areas have been identified during the 2021-27 programming period, which marks the second cycle of operations for the Interreg Italy-Austria Programme. These priorities align with sustainable development objectives and include:

- Innovation and entrepreneurship.
- Climate change and biodiversity.
- Sustainable tourism and culture.
- Community-led local development (CLLD).
- Reducing cross-border obstacles.

The programme operates with a budget of approximately EUR 91 million, with 80% of it originating from the European Regional Development Fund and the remaining 20% from national contributions. The programme's priorities are closely aligned with the goals of the EUSALP macro-strategy for the Alpine region. Additionally, co-ordination efforts extend to other territorial co-operation programmes, such as Alpine Space, with the aim of fostering synergies for the exchange of best practices, knowledge, experience and the organisation of joint events. A prominent aspect of the Interreg Italy-Austria Programme is its CLLD approach, which has garnered interest from the European Commission and countries worldwide, as detailed in Box 3.2.

Box 3.2. Community-led local development in the Interreg Italy-Austria Programme

CLLD is a participatory approach to local development, allowing communities to shape their own development. In the context of Interreg Italy-Austria, it implies the involvement of civil society and local administrations in the design of measures to address social, economic and environmental challenges in specific areas through cross-border participation and co-operation. Local actors are encouraged to work closely with their partners on the other side of the border to achieve joint results in regional development. Thus, border obstacles are expected to be overcome in daily life and local communities implement projects of regional interest thanks to the input and collaboration of civil society and local authorities. Ultimately, this approach fosters cross-border co-operation and local empowerment, promoting local solutions to local problems.

The Interreg Italy-Austria Programme has applied CLLD since 2014, involving stakeholders from both sides of the border in addressing regional challenges. The Interreg Italy-Austria Programme continues its CLLD approach in the 2021-27 period, with a budget exceeding EUR 19 million. This approach reaffirms local development as a priority in four CLLD areas, including:

- Dolomiti Live: Alto Bellunese, East Tyrol, Pustertal.
- HEurOpen: Canal del Ferro and Val Canale, Carnia, Gemona, Hermagor.
- Terra Raetica: Imst, Landeck, Lower Engadine, Vinschgau.
- Wipptal: Wipptal South Tyrol, Wipptal Tyrol.

Key factors for success include a bottom-up approach, partnership focus, participatory strategy development, local innovation, networking and co-operation in project implementation.

Source: EC (2022^[8]), *Community-Led Local Development: The Added-value of Cross-border Local Development in the Interreg Italy-Austria Programme 2014-2020*, https://ec.europa.eu/regional_policy/sources/policy/cooperation/european-territorial/Interreg_Italy-Austria2014-2020t_12Jan23.pdf (accessed on 4 September 2023)

Other prominent cross-border co-operation initiatives the province is part of include Euregio Tyrol-South Tyrol-Trentino and the Interreg Alpine Space. Euregio is a European Grouping of Territorial Co-operation⁶ established in 2011 with the goal of enlarging collaboration among its three member regions (i.e. the autonomous provinces of Bolzano-Bozen and Trento in Italy and the federal state of Tyrol in Austria) in the fields of mobility, transportation and climate change. It is directed by the Euregio Board, composed of the three governors of the member regions (Euregio EGTC, 2021^[9]). Euregio plays a critical role in co-ordinating regional initiatives, establishing shared objectives and fostering collaboration among its members. While most projects within Euregio are not explicitly linked to the SDGs, the institution serves as a co-ordinating entity where each member assesses the alignment of projects with their respective sustainable development strategies. The regional governments propose project topics and Euregio facilitates co-ordination among them. In recent years, Euregio has implemented collaborative projects in different fields, including sustainable mobility, as part of the EUSALP initiative (Euregio EGTC, 2021^[10]).⁷ The Autonomous Province of Bolzano-Bozen supports this work on sustainable mobility through its Office for Mobility. EUSALP's Work Plan 2023-25 focuses on five main thematic areas, aligning with a commitment by the provincial government to incorporating sustainability within its various fields of action, with a focus on mobility (EUSALP, 2022^[11]):

- Smart clean logistics and policy measures to support modal shift (multimodal and combined transport).
- Secondary railway infrastructure (local and regional transport links).
- Climate-resilient road and rail infrastructure.
- Smart and sustainable passenger transport (local, regional and cross-border mobility).
- Energy transition in the transport system.

Euregio's projects are primarily supported by regional resources, which account for approximately 90-95% of the finances. Euregio's role in accessing EU funding is relatively limited, with the Italy-Austria Interreg Fund representing a significant portion of the remaining financial support. Challenges are reported to exist in terms of resource sharing among the three regions and the establishment of mechanisms that enable providers to extend their services across regional boundaries is considered desirable. In terms of governance, the Euregio platform has primarily facilitated collaboration among the three regional governments since its establishment in 2007. However, with a reform in 2021, the council for municipalities and the council of citizens have been established, with the aim of providing a platform for municipal and civil society voices to contribute to the decision-making process within the region.

Several provincial institutions are involved in the work of the Interreg Alpine Space. Over the years, the Interreg Alpine Space (Box 3.3) has funded several projects involving institutions such as Eurac Research, KlimaHaus and the provincial chamber of commerce. One example is the AlpGov project, which aims to improve multi-level governance across the Alpine Arc. Various institutions, including the provincial KlimaHaus and the Autonomous Province of Trento, participated in AlpGov. The project focuses on creating harmonised mechanisms for action groups, mapping institutional frameworks, actors and funding schemes, and identifying and promoting actions in areas such as natural resources conservation, energy efficiency and natural risk prevention. While the Autonomous Province of Bolzano-Bozen and its main local stakeholders are engaged in sustainable development projects at different governmental levels, initiatives conducted via interregional organisations are not currently linked to the common framework of the SDGs. To harmonise all policy efforts around a common topic, these initiatives should be included in the provincial strategy for sustainable development, allowing them to be discussed and analysed within the mechanisms established by Everyday for Future.

Box 3.3. The Interreg Alpine Space

The Interreg Alpine Space is a programme that encompasses 40 subnational institutions of the Alpine Arc, including Liechtenstein, covering an area of 450 000 km² and over 80 million inhabitants. It serves as a platform for financing co-operation projects that transcend the borders of seven Alpine countries. The programme engages public authorities at the national, regional and local levels, higher education institutions, enterprises, business support organisations, NGOs and associations. Interreg Alpine Space is a significant instrument of the EU Cohesion Policy and receives funding from the European Regional Development Fund as well as national contributions from its seven partner states. Initially launched in 2000, the programme has, as of March 2023, co-financed 179 projects and participated in over 2 000 initiatives. It supports projects aligned with four main priorities:

- Creating a climate-resilient and green Alpine region.
- Promoting a carbon-neutral and resource-sensitive Alpine region.
- Encouraging innovation and digitalisation to support a green Alpine region.
- Facilitating the co-operative management and development of the Alpine region.

Source: Interreg Alpine Space (2021^[12]), *Programme Priorities*, <https://www.alpine-space.eu/for-applicants/priority-overview/> (accessed on 2 February 2023)

The SDGs as a tool to engage civil society, academia, the private sector and youth

Citizen involvement and the South Tyrol Network for Sustainability

In Bolzano, the provincial government recognises the importance of directly involving citizens in localising the SDGs. As part of the participatory process of the Everyday for Future strategy, informative sessions were organised in 2021 and 2022, engaging citizens and external stakeholders. Local representatives and civil society organisations, including groups such as Fridays for Future South Tyrol, were engaged in the development of the strategy through participatory solutions. However, the timing and impact of this involvement faced some criticism during the initial stages of the strategy. Workshops, online questionnaires and discussions focused on various sustainable development topics such as climate change, energy, mobility and social justice, with over 1 000 citizens participating. Furthermore, since February 2023,

citizens have submitted more than 550 questions to the provincial administration regarding its sustainability strategy, indicating their active involvement and interest (Autonomous Province of Bolzano-Bozen, 2022^[13]). Another avenue for raising awareness and citizen engagement in sustainable development is the organisation of the Sustainability Days, which were held for the first time in September 2022 (Box 3.4).

Box 3.4. Sustainability Days 2022

In September 2022, the Autonomous Province of Bolzano-Bozen organised the first edition of the Sustainability Days, an event aimed at engaging citizens, local stakeholders and experts in discussions and idea sharing for the province's future. The event spanned 4 days and attracted over 10 000 participants on line and in person. It focused on four strategic topics: renewable energy and energy efficiency, agriculture and food, sustainable mobility and resilient rural habitats. Participants contributed their experiences, opinions and suggestions on how these topics can promote sustainable development.

On the final day, the Sustainability Days' Advisory Board, consisting of professors and researchers, published a recommendation paper on sustainable development. The paper, subsequently submitted to the European Union and the Italian government, provides a comprehensive assessment of the province's situation in each of the four main topics. It includes recommendations for policy makers and examples of good practices.

Source: IDM (2022^[14]), *International Platform for the Regions of the Future - Recommendation Paper*, https://sustainabilitydays.com/uploads/blocks/files/sustainability_days_recommendation_paper_1666706679.pdf, Autonomous Province of Bolzano-Bozen (2022^[15]), *Bilancio molto positivo, edizione 2023 sulla sostenibilità sociale [Very positive report, 2023 edition on social sustainability]*, <https://news.provincia.bz.it/it/news/bilancio-molto-positivo-edizione-2023-sulla-sostenibilita-sociale> (accessed on 8 February 2023)

The South Tyrol Network for Sustainability (*Rete Alto Adige per la Sostenibilità*) provides a platform for groups, associations and organisations to strengthen their advocacy role in promoting change aligned with the SDGs in the province. Established in 2020 and funded by the Autonomous Province of Bolzano-Bozen, the network encompasses a range of organisations, including longstanding actors in the province's social economy like Caritas Bolzano, as well as more recent movements such as Fridays for Future Bolzano. Operating as an independent and non-partisan platform, the network pursues three main objectives (La Rete dell'Alto Adige per la Sostenibilità, 2021^[16]):

- Sharing knowledge about the SDGs in the Autonomous Province of Bolzano-Bozen and raising awareness about their global and local synergies and importance.
- Facilitating collaboration, peer-to-peer learning and networking opportunities among associations, organisations and civil society groups around these goals.
- Providing visibility on the platform's website to projects implemented by network partners.

Academia and the Research Alliance for Sustainability

In 2022, the provincial government established the Research Alliance for Sustainability, a network that brings together the main local research institutions working on sustainable development. The main goal is to pool expertise and foster discussions on topics related to the SDGs. It aims to provide recommendations to citizens, companies and policy makers regarding sustainable development. The alliance comprises local research institutions such as Eurac Research, the Free University of Bozen-Bolzano, the Philosophical-Theological College Brixen/Bressanone, the Laimburg Research Centre, Fraunhofer Italia Research, the Natural Sciences Museum of South Tyrol, Eco Research and Ökoinstitut South Tyrol. By joining forces, they aim to promote synergies among research organisations and establish a lasting framework for

collaboration in the field of sustainable development. As part of its activities, the Research Alliance for Sustainability launched a series of lectures in the 2022/23 academic year, featuring researchers and professors from the participating research organisations. These lectures are open to all citizens, free of charge, and conducted in both Italian and German (Research Alliance for Sustainability, 2022_[17]).

Private sector

Some private companies in the Autonomous Province of Bolzano-Bozen are actively engaged in sustainable practices. Several companies and their representative associations openly report their efforts to conduct operations in a sustainable manner, mainly focusing on environmental, social and governance (ESG) and SDG-related projects. One example is the South Tyrol Farmers' Association (*Südtiroler Bauernbund*), which has actively contributed to the creation of the provincial Agriculture Strategy for 2030 (*Südtiroler Bauernbund*, 2021_[18]). The ski industry is another sector increasingly involved in transitioning towards more sustainable practices. Two of the largest ski resorts in the province have implemented strategic sustainability plans. One launched the DS Responsibility project in 2018, aiming to develop strategies to reduce the destination's carbon footprint, while another one, through its Climate Neutrality Alliance 2025, is currently working on reducing CO₂ emissions and compensating for them through offsetting projects.

Greater co-ordination is essential to effectively implement a common sustainability framework among private stakeholders. Although some companies in the province are actively engaged in sustainable practices, it is important to note that the evidence of such practices remains largely anecdotal. While there are encouraging examples, there is a lack of systematic assessment of sustainability efforts. Additionally, the adoption of sustainable practices is hindered by limited public and private incentives and a lack of co-ordination. Moreover, the absence of a shared understanding of which notion of sustainability should be embraced poses a challenge. The SDGs are not universally regarded as a reference framework by private organisations in the Autonomous Province of Bolzano-Bozen. Without a common framework, private entities assert that they encounter difficulties in establishing consistent goals and measures across different sectors and organisations. According to the experience of stakeholders from the private sector, this lack of co-ordination not only hampers the effectiveness of sustainability initiatives but also impedes the ability to monitor progress and evaluate the impact of these practices.

The lack of well-established criteria for assessing companies' sustainability performance presents challenges. When it comes to sustainability performance, businesses in the province frequently adopt an experimental approach, initially implementing their own sustainability measurement and communication tools or adhering to industry-specific indicators before contemplating the potential alignment with the SDGs as a reference framework. For instance, a family-driven company producing waffle and chocolate products prioritises responsible practices and natural raw materials. With a global reach, three production plants and a substantial turnover, it intensified its commitment to sustainability in 2018-19. It implemented a materiality matrix to evaluate financial aspects and explored the adoption of SDGs as a global guideline, initially sceptical of their applicability to companies. Recognising the value-added of the SDGs as an internationally comparable framework, the company decided to communicate its 5 main sustainability priorities through the 17 SDGs. These priorities include climate neutrality, employee responsibility, sustainable supply chains, sustainable packaging and mindful indulgence. By aligning them with the SDGs, the company aims to drive sustainable practices within the company and its partners.

Small and medium-sized enterprises (SMEs) encounter greater obstacles when it comes to pursuing the SDGs. A lack of awareness about sustainability and inadequate internal capabilities to meet the growing demands of environmental reporting requirements present significant challenges for SMEs in terms of accessing financial instruments for sustainable transitions (OECD, 2022_[19]). Despite efforts made by various business associations, more comprehensive solutions are required. Everyday for Future places particular emphasis on offering capacity-building support to the private sector to overcome the size-related constraints in engaging with the private sector.

Regulations on public tenders prioritising pricing over sustainability also hinder the promotion of sustainable practices in the private sector. A service company specialising in catering and cleaning services for large institutions provides an example of promoting sustainability through corporate social responsibility initiatives that focus on impact measurement and transparency while having to deal with bidding procedures that prioritise cost reduction. This company has adopted a strategic framework to guide its sustainability efforts and regularly issues an annual report that focuses on measuring the impact of its cleaning services and calculating its carbon footprint using certified methods. Through these measures, the company has made significant progress in reducing cleaning material usage and combating food waste despite challenges related to cost prioritisation.

The financial sector in the Autonomous Province of Bolzano-Bozen has launched several initiatives to enhance its internal sustainability practices and finance sustainability projects. The financial sector in the province is increasingly engaged in sustainable development practices.

- For instance, a local co-operative bank established two new dedicated organisational units, Innovation and Sustainability as well as Corporate Finance and Sustainable Credit, as part of its Sustainable 2023 project. The Innovation and Sustainability Unit serves as a hub for innovative ideas and technologies that should become integral to the bank's core business in the future. It pursues sustainability initiatives involving the bank, its customers and other stakeholders. Examples include reducing the corporate carbon footprint through the purchase of electric vehicles and bikes for employees, implementing waste reduction policies and raising awareness among employees. On the other hand, the Corporate and Sustainable Credit Unit promotes the development and integration of ESG topics within the bank's lending process.
- Another co-operative bank from the region has published a detailed sustainability strategy, including a multi-level governance structure. The Group Sustainability Management Department sets corporate priorities, which are then implemented and monitored at the operational level. In 2021, the risk management team conducted a risk analysis using the United Nations Environment Programme Finance Initiative Portfolio Impact Analysis Tool, aligning the sustainability strategy with the SDGs. The bank also publishes sustainability ratings and analyses performed by external agencies specialised in assessing corporate social and ecological performance, such as ISS ESG and MSCI ESG Rating.
- A third local banking group established a new ESG and Sustainability Committee to oversee their ESG plan and engage in discussions regarding challenges and opportunities, and created a dedicated organisational ESG and sustainability unit to co-ordinate planned activities, foster strategic development and facilitate dialogue with stakeholders. In 2022, they initiated support for the Competence Centre for Economic, Environmental and Social Sustainability, with the goal of contributing to sustainable development in the Autonomous Province of Bolzano-Bozen, while also promoting education and awareness on sustainable development issues. Furthermore, the Corporate Banking Division of this bank has entered into an agreement with the European Investment Bank for 2023 to assist local SMEs in their transition towards green practices. Most recently, the bank's group has established a new entity with the primary objective of generating renewable energy in the upcoming years to meet the energy needs of the entire group.

Despite its engagement in sustainable development projects, the financial sector continues to utilise frameworks that deviate from the SDGs, hindering their integration into the wider sustainability discourse and broader societal engagement. As previously mentioned, most initiatives undertaken in the region centre around ESG parameters, which encompass ESG aspects in a broader sense than the SDGs. Such a different approach can be attributed to the requirement for financial institutions to adhere to industry-specific regulations, as indicated by the EU directive 2014/95/EU and the guidelines from the Bank of Italy (EU, 2014^[20]; Banca d'Italia, 2022^[21]).

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Notes

¹ The Permanent State-Regions Conference for relations between the state, the regions and the Autonomous Provinces of Trento and Bolzano-Bozen favours co-operation between the activities of the state and those of the regions and autonomous provinces and political negotiation between the central government and the system of regional autonomy (Dipartimento per gli Affari Regionali, n.d.[22]).

² The areas of intervention outlined within Partnership, which is intended to represent the external dimension of the strategy, encompass: governance, rights and inequality reduction; migration and development; health; education; sustainable agriculture and food security; environment, climate change and energy for development; preservation of cultural and natural heritage; and the private sector.

³ For more information, see <https://www.mase.gov.it/pagina/la-relazione-annuale-sullo-stato-di-attuazione-della-strategia-nazionale-lo-sviluppo>.

⁴ For more information, see https://www.mase.gov.it/sites/default/files/archivio/allegati/sviluppo_sostenibile/SNSvS_eventi/Parere_Conferenza_Stato_Regioni_PA_SNSvS_28_settembre_2022.pdf.

⁵ For more information, see https://reform-support.ec.europa.eu/what-we-do/green-transition/policy-coherence-sustainable-development-italy_en.

⁶ European Groupings of Territorial Cooperation (EGTCs) aim to facilitate cross-border, transnational and interregional co-operation between EU member states or their regional and local authorities. EGTCs enable these partners to implement joint projects, share expertise and improve co-ordination of spatial planning.

⁷ EUSALP stands for the European Strategy for the Alpine Region. It is an EU macro-regional strategy designed to promote co-operation and sustainable development in the Alpine region, which spans several European countries. EUSALP focuses on key areas such as economic growth, environmental protection, transportation and innovation to address the unique challenges and opportunities in the Alpine region. It aims to improve quality of life for both residents and visitors while preserving the region's natural and cultural heritage.

4 Policy recommendations

This chapter offers policy recommendations and an action plan to enhance the territorial approach to the United Nations (UN) Sustainable Development Goals (SDGs) in the Autonomous Province of Bolzano-Bozen. The recommendations range from defining concrete measures across the seven fields of actions of its sustainability strategy Everyday for Future to respond to challenges related to sustainable mobility, tourism, agriculture, housing and labour supply to assessing the implementation of Everyday for Future and the Climate Plan by integrating key performance indicators (KPIs) into the provincial monitoring tool. Furthermore, the chapter recommends enhancing collaboration with the national government, neighbouring regions and municipalities for a shared commitment to achieve the SDGs.

Policy recommendations












The following policy recommendations were developed based on a policy dialogue with a wide range of stakeholders in the Autonomous Province of Bolzano-Bozen. They follow the OECD Checklist for Public Action to implement A Territorial Approach to the SDGs (Figure 4.1). The key recommendations and associated actions outlined in this chapter provide the province with strategic directions and a menu of options for the implementation of the OECD recommendations in the short term (less than one year), medium term (more than one year, less than three years) and long term (more than three years). While some measures constitute actions that the province can take in the short run, others require joint efforts from different levels of government and with other stakeholders, civil society and the private sector.

Figure 4.1. OECD Checklist for Public Action to implement A Territorial Approach to the SDGs



Source: OECD (2020^[1]), *A Territorial Approach to the Sustainable Development Goals - Policy Highlights*, <https://www.oecd.org/cfe/cities/SDGs-policy-highlights.pdf>.

Figure 4.2. Eight key recommendations for a territorial approach to the SDGs in the Autonomous Province of Bolzano-Bozen

 <p>Policies and strategies</p>	 <p>Recommendation 1</p> <p>Define concrete measures across the seven fields of action of Everyday for Future to respond to the province's challenges related to sustainable mobility, tourism, agriculture and housing</p>
	 <p>Recommendation 2</p> <p>Identify and manage the synergies and trade-offs between measures foreseen in the different sectoral plans to: i) address housing affordability while adapting buildings to climate change; ii) foster sustainable mobility while managing the influx of tourists; and iii) maintain the competitiveness of the agricultural sector while reducing greenhouse gas emissions</p>
 <p>Multi-level governance</p>	 <p>Recommendation 3</p> <p>Strengthen collaboration with the national government for a shared commitment to achieve the SDGs</p>
	 <p>Recommendation 4</p> <p>Strengthen the co-ordination and capacity of the provincial Working Group for Sustainability to enhance the implementation of Everyday for Future</p>
 <p>Data and information</p>	 <p>Recommendation 5</p> <p>Assess the implementation of Everyday for Future and the Climate Plan by integrating key performance indicators into the SDG Tracker</p>
 <p>Financing and budgeting</p>	 <p>Recommendation 6</p> <p>Allocate proper resources to address the main territorial development challenges of the province (SDGs 4, 11, 12) by integrating an SDG budgeting in the Provincial Performance Plan</p>
 <p>Engagement</p>	 <p>Recommendation 7</p> <p>Clearly define the roles and responsibilities of all stakeholders involved in the Everyday for Future initiative</p>
	 <p>Recommendation 8</p> <p>Use Everyday for Future and the SDGs as a framework to enhance strategic alignment between public and private actors in fields such as promoting sustainable practices and assessing the progress towards achieving sustainability</p>

Policies and strategies

Figure 4.3. Action plan to implement OECD Recommendation 1 to define concrete measures across the seven fields of action of Everyday for Future – Part I

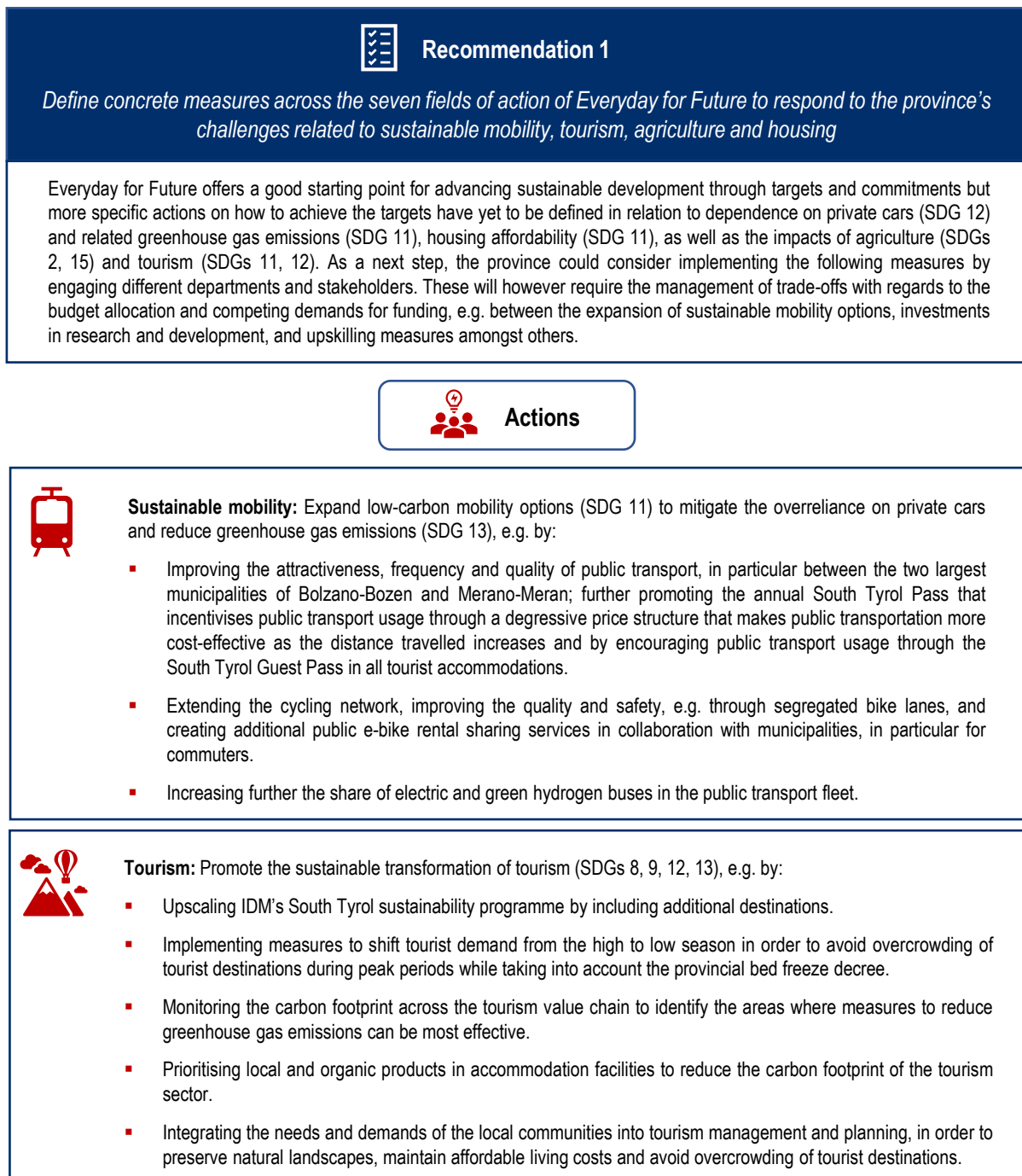


Figure 4.4. Action plan to implement OECD Recommendation 1 to define concrete measures across the seven fields of action of Everyday for Future – Part II




	<p>Agriculture: Support the transition to sustainable agriculture (SDGs 2, 13) to minimise its impact on biodiversity and climate, e.g. by:</p> <ul style="list-style-type: none"> ▪ Phasing out the widespread use of pesticides and plant protection products and replacing them with organic fertilisers (SDG 13). ▪ Moving towards a circular economy approach (SDG 12) by reusing agricultural byproducts and waste in building materials and products, which can help reduce the province's per capita waste rate. ▪ Further investing in research and development, for instance through the Laimburg Research Centre, to reduce energy and water consumption and increase the use of renewable sources (SDG 7).
	<p>Affordable housing: Address the challenges related to housing, especially to increase the supply of affordable housing, while ensuring access to affordable and quality housing for the most vulnerable (SDG 11), e.g. by:</p> <ul style="list-style-type: none"> ▪ Providing incentives for affordable and social housing, e.g. by requiring a certain proportion of housing units to be affordable renting units in the design of development proposals. ▪ Repurposing existing space for housing, such as vacant or underutilised buildings, e.g. by relaxing zoning and densification restrictions. ▪ Regulating short-term rentals in city centres (e.g. Airbnb), especially in Bolzano-Bozen and Merano-Meran. ▪ Considering the impact of environmental standards for new buildings and energy efficiency measures on housing affordability and accordingly implement measures to mitigate the impact through targeted support for struggling households (e.g. direct financial support or subsidised loans).
	<p>Labour market: Tackle labour shortages (SDG 8), e.g. by:</p> <ul style="list-style-type: none"> ▪ Improving labour market conditions and flexibility (e.g. temporary vs. permanent contracts, compensation, professional development opportunities, work-life balance) in the care, hospitality and public administration sectors (SDG 8). ▪ Further investing in higher education to increase the share of tertiary degrees among the labour force (SDG 4). ▪ Improving skills through specific courses and training in healthcare and tourism in technical colleges and hospitality schools (SDG 4). ▪ Offering free German and Italian language courses to attract talent (SDG 4).

Figure 4.5. Action plan to implement OECD Recommendation 1 to define concrete measures across the seven fields of action of Everyday for Future – Part III

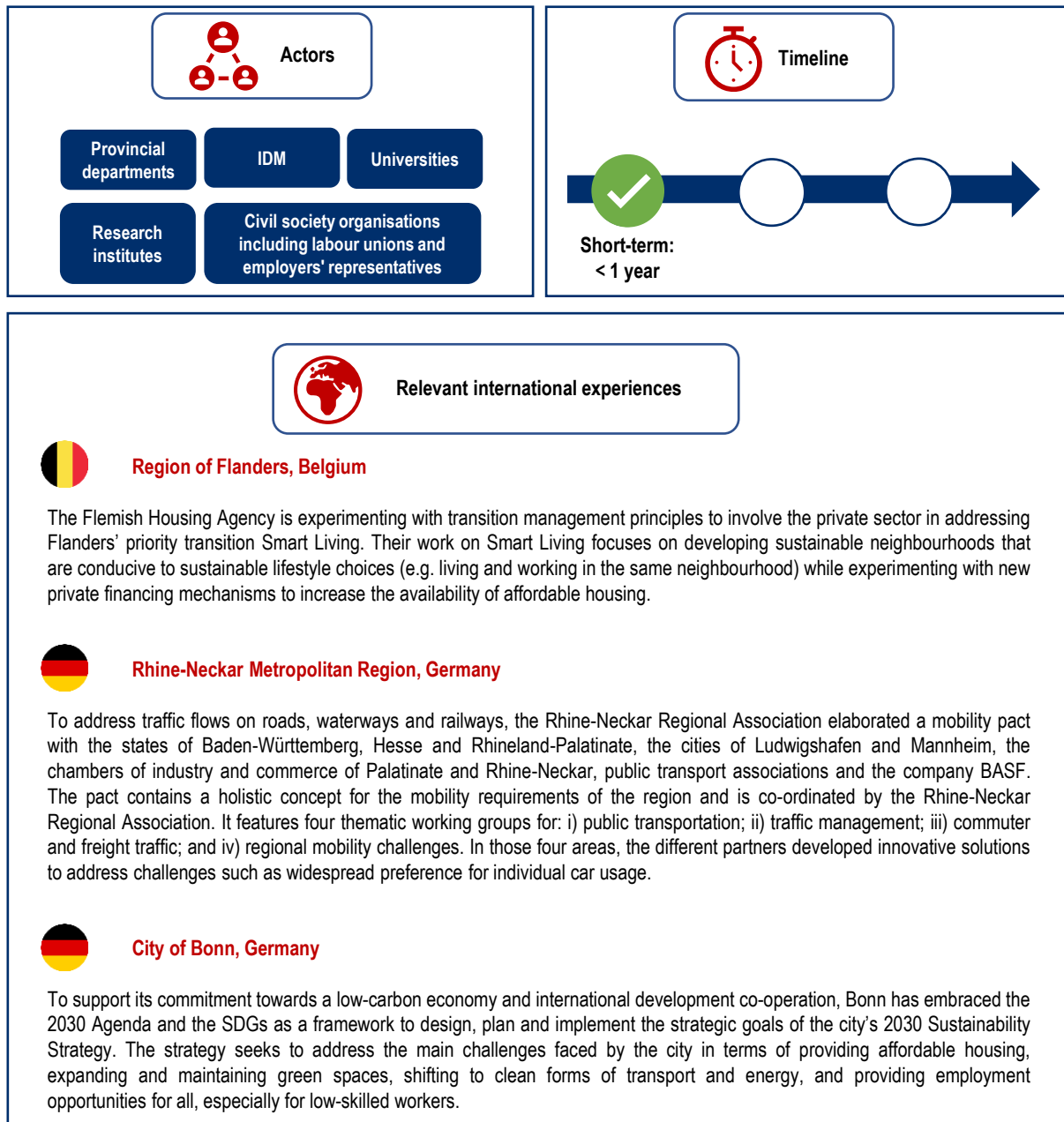


Figure 4.6. Action plan to implement OECD Recommendation 2 to identify and manage the synergies and trade-offs foreseen in the different sectoral plans – Part I

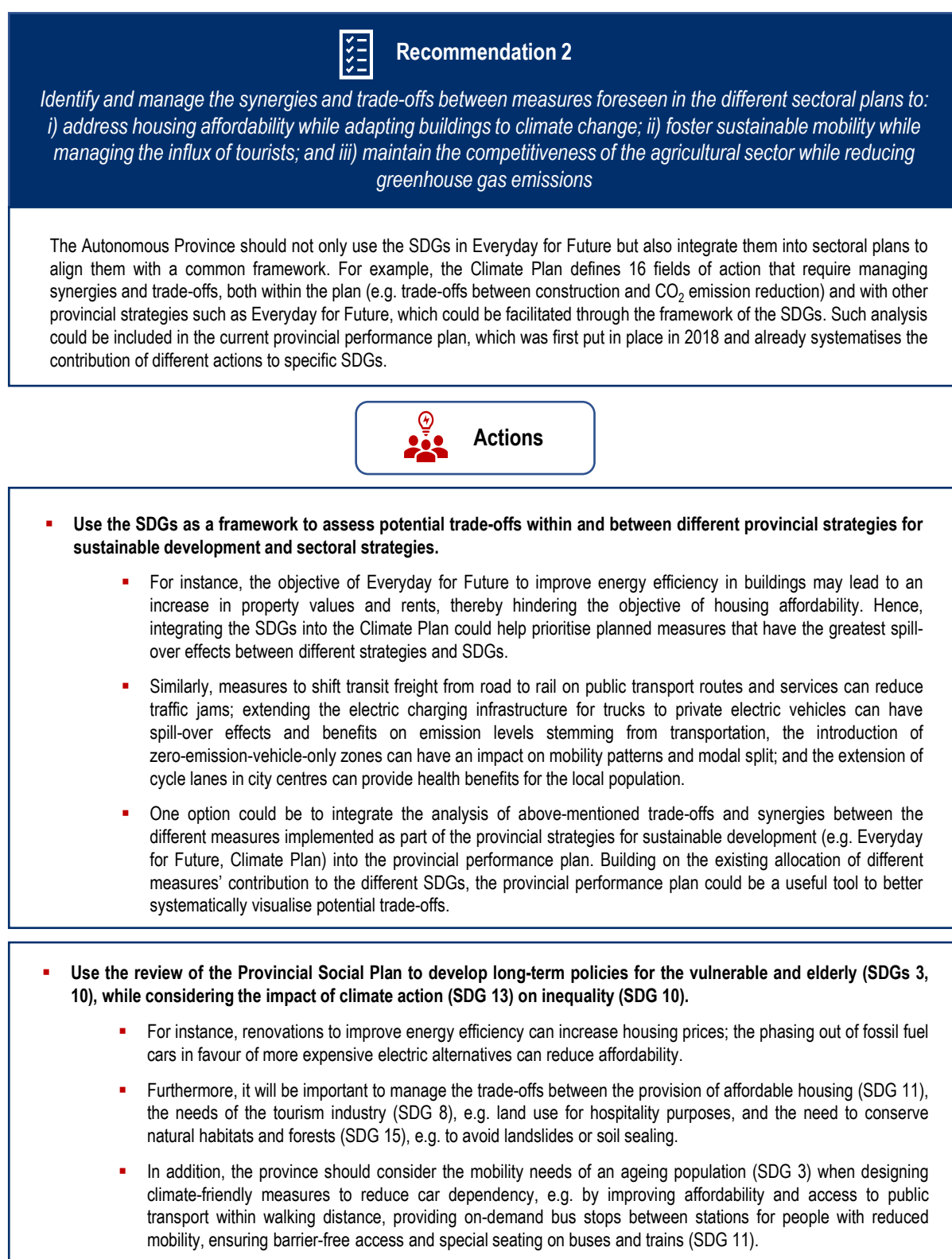
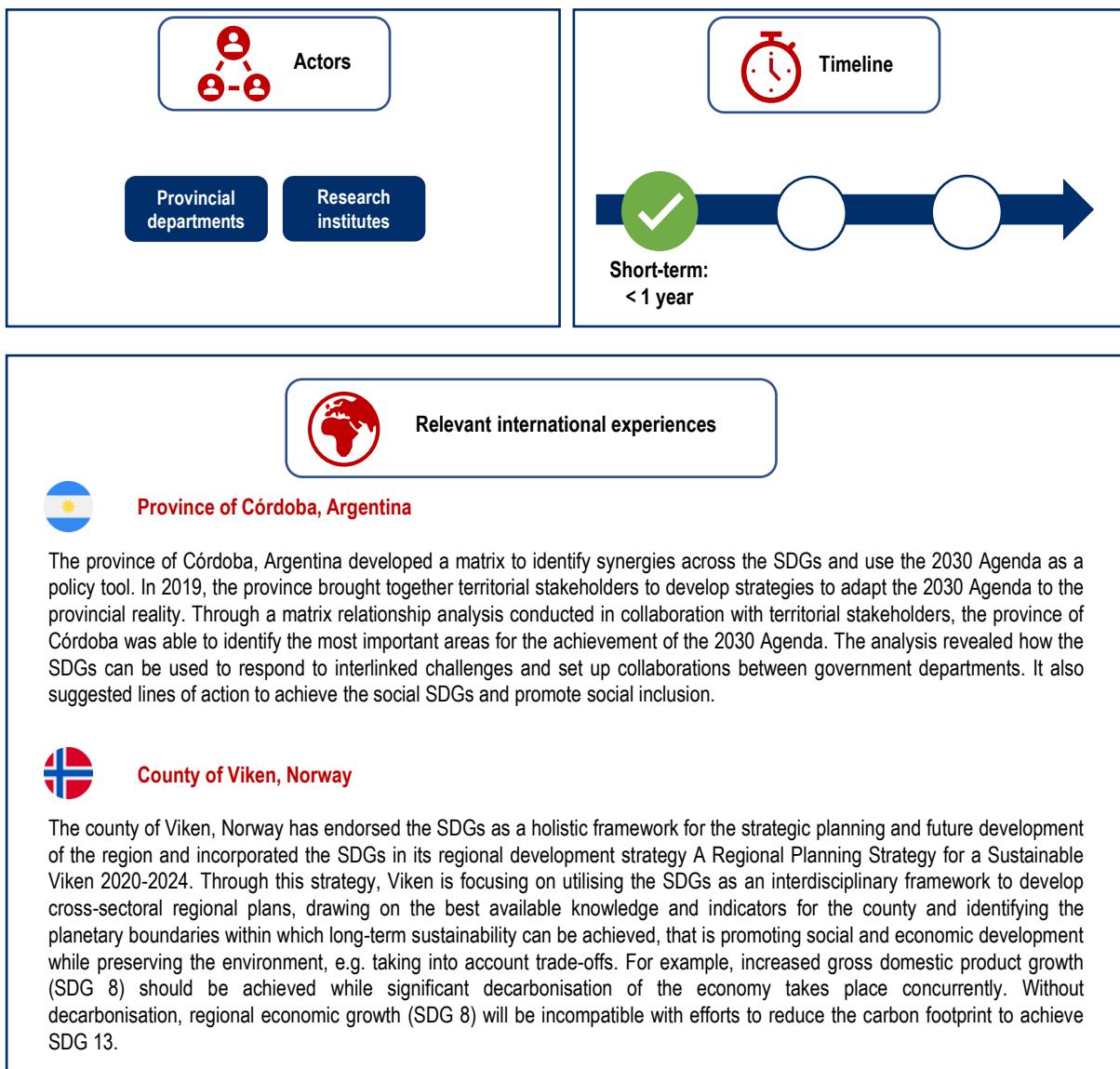


Figure 4.7. Action plan to implement OECD Recommendation 2 to identify and manage the synergies and trade-offs foreseen in the different sectoral plans – Part II



Multi-level governance

Figure 4.8. Action plan to implement OECD Recommendation 3 to enhance collaboration with the national government, neighbouring regions and municipalities – Part I



Figure 4.9. Action plan to implement OECD Recommendation 3 to enhance collaboration with the national government, neighbouring regions and municipalities – Part II

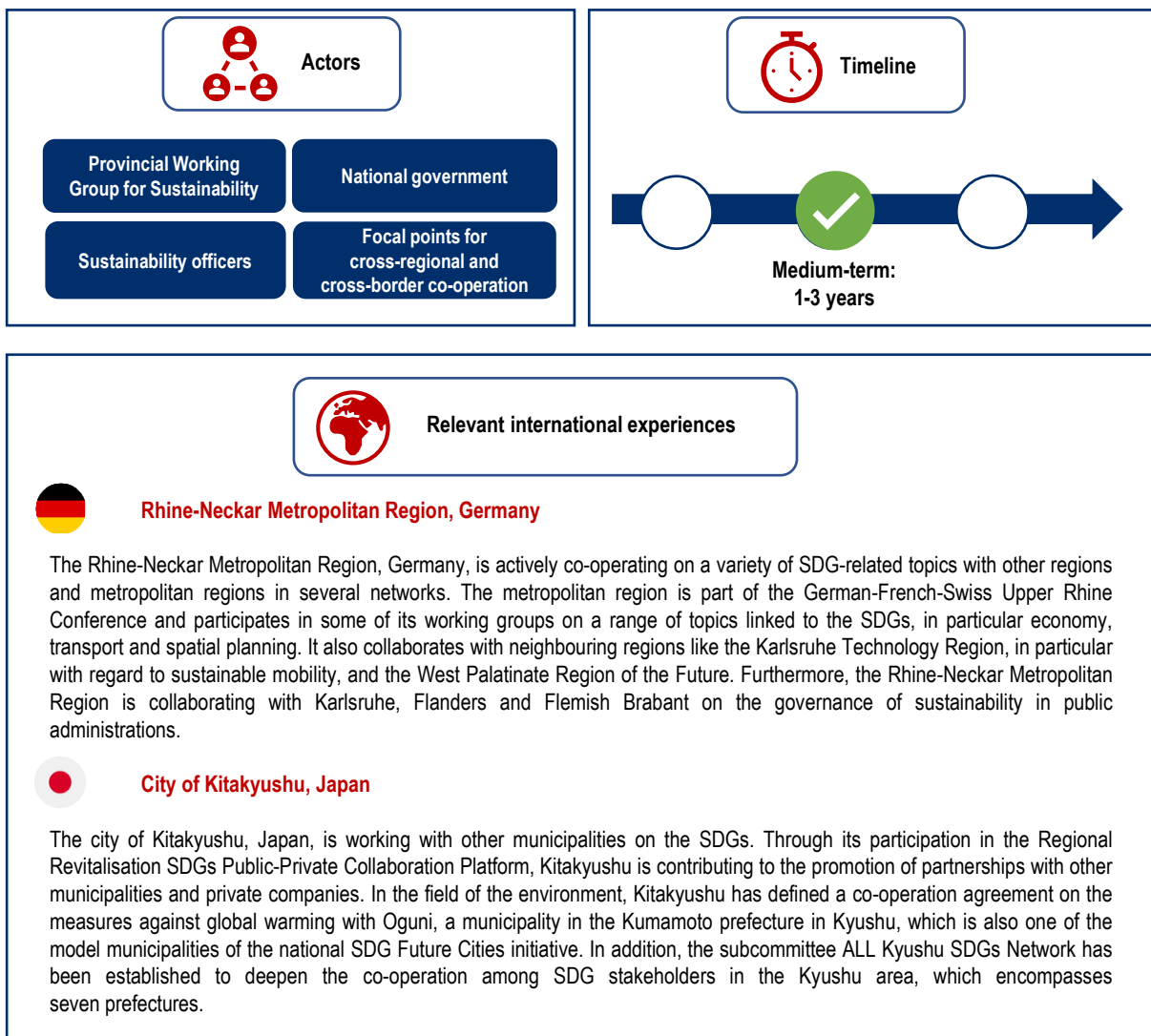




Figure 4.10. Action plan to implement OECD Recommendation 4 to strengthen the co-ordination and capacity of the provincial Working Group for Sustainability – Part I



Recommendation 4

Strengthen the co-ordination and capacity of the provincial Working Group for Sustainability to enhance the implementation of Everyday for Future

Given the strategy's multifaceted nature and the wide array of activities spanning different government levels to promote it, the Working Group for Sustainability, serving as the strategy's governing body, plays a pivotal role in ensuring its success. To achieve this, it is crucial to establish regular consultation meetings among its members, including the provincial sustainability representative appointed by the presidency and the sustainability focal points designated by each department. Other measures may include deploying digital tools for stakeholder mapping and policy progress tracking as well as providing training and capacity-building to enhance skills in areas vital for effective implementation of the strategy. Effective co-ordination is essential to align internal (inter-departmental) and external (private stakeholders) initiatives and prevent potential inefficiencies.



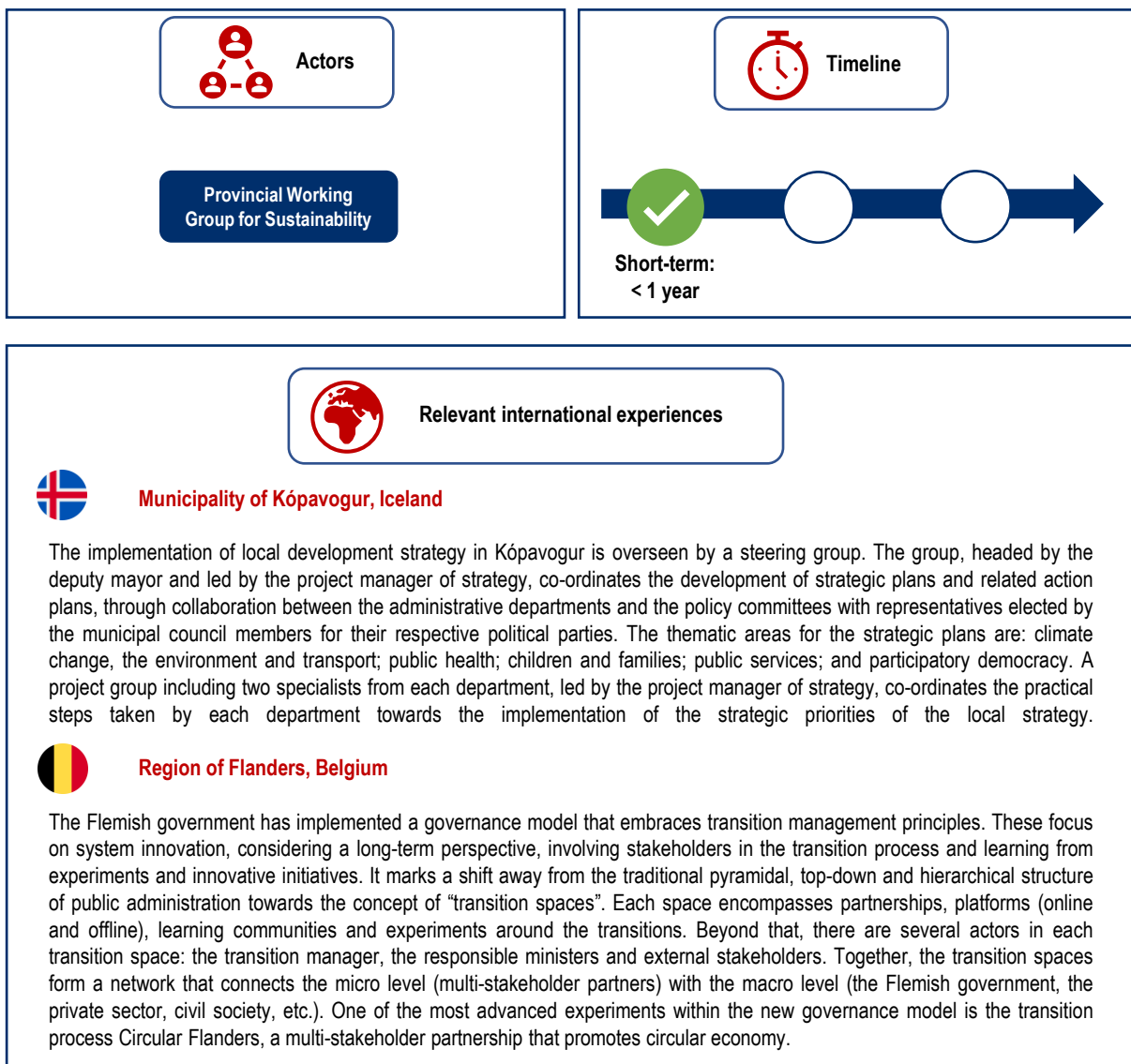
Actions

- **Define clearly the roles and responsibilities of actors within the Working Group to foster effective collaboration and a shared understanding of their contributions to SDG implementation.** When assigning departmental delegates as sustainability focal points, balance their regular responsibilities with their sustainability duties, managing workloads effectively while maintaining dedicated attention to sustainability issues. To foster active participation and commitment as focal points, incentives to be considered may include:
 - Acknowledge the efforts and achievements of focal points through public recognition, such as certificates or awards, highlighting their contributions to sustainability initiatives within their departments and the broader community.
 - Provide opportunities for professional growth and skills enhancement through specialised training programmes, workshops or conferences related to sustainability. This can help focal points expand their knowledge base and enhance their capabilities in managing sustainability-related tasks.
 - Incorporate sustainability-related targets or metrics into the performance evaluation system, based on contributions to the implementation of Everyday for Future and other sustainability goals.
 - Facilitate networking opportunities for focal points to connect with peers from other departments, municipalities or relevant organisations. This allows them to exchange best practices, share experiences and collaborate on common sustainability challenges.
 - Ensure that focal points have access to the necessary resources, including financial support, data, information and tools required to effectively carry out their responsibilities. This can include dedicated budget allocations or access to specialised sustainability-related software or databases.

- **Establish a schedule for regular consultation meetings and develop a comprehensive, mission-driven roadmap within the Working Group for Sustainability.** These meetings should serve as a platform for members to discuss the progress made, share valuable insights, address emerging challenges and align their collective efforts towards the successful implementation of the Everyday for Future strategy. Developing a mission-driven roadmap involves defining the overarching goals and objectives of the Everyday for Future strategy, along with the concrete steps, actions and timelines needed to achieve them. The roadmap should:
 - Clearly articulate the desired outcomes and long-term vision of the Everyday for Future strategy.
 - Identify significant milestones and key actions that need to be accomplished to achieve the strategy's objectives.
 - Establish realistic timelines and deadlines for the completion of specific activities and milestones.
 - Conduct a thorough assessment of potential risks and challenges that may arise during the implementation process.
 - Incorporate mechanisms for ongoing evaluation and periodic review of the roadmap.

- **Implement and regularly update digital tools and mechanisms to map stakeholders involved in the sustainability strategy.** This will help identify key stakeholders, understand their interests and ensure their effective engagement throughout the implementation process, and build consensus around public initiatives.
- **Provide comprehensive training and capacity-building activities for all members of the Working Group for Sustainability.** Focus on areas such as agile planning and governance, monitoring and evaluation, stakeholder engagement and participatory processes.

Figure 4.11. Action plan to implement OECD Recommendation 4 to strengthen the co-ordination and capacity of the provincial Working Group for Sustainability – Part II

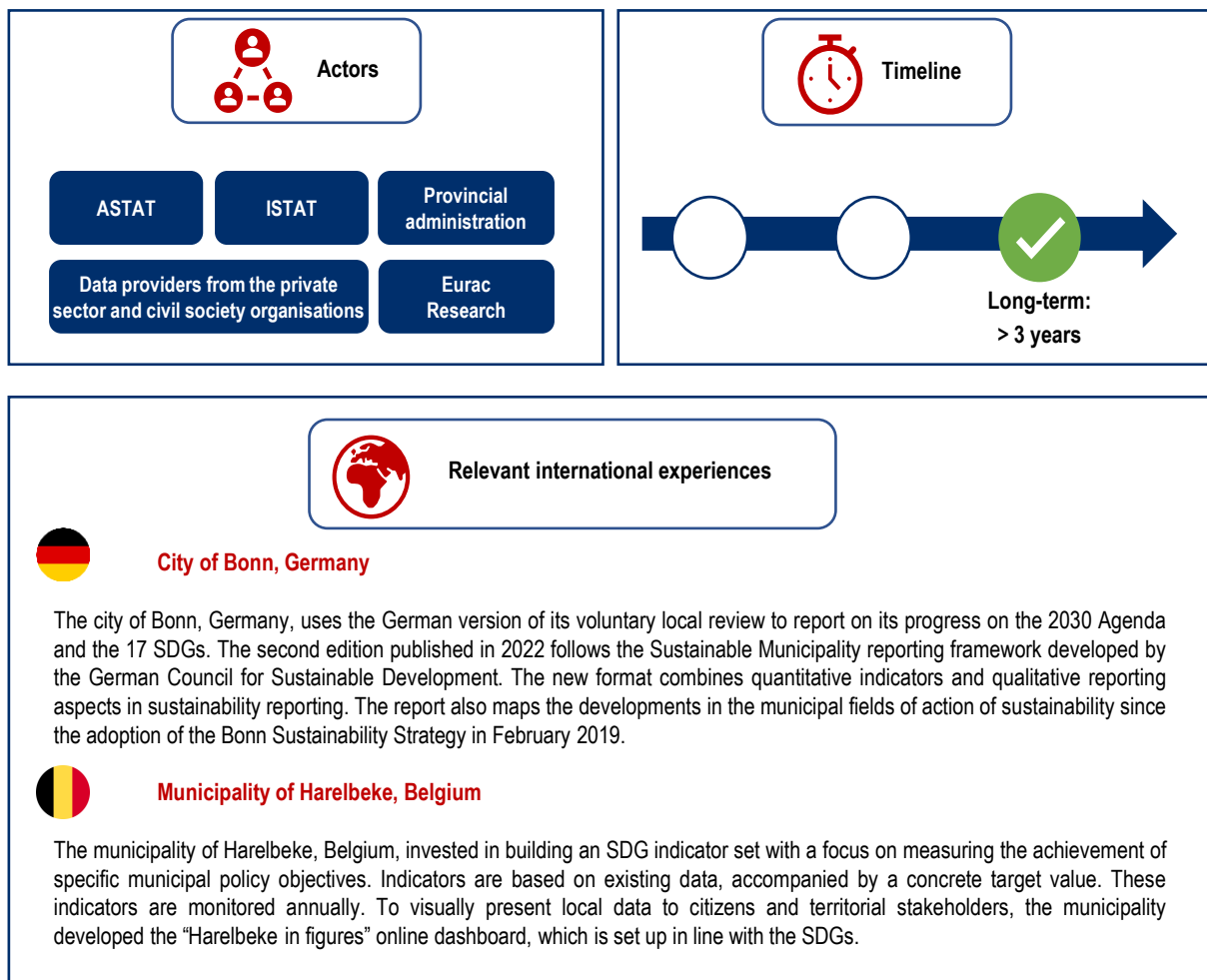


Data and information

Figure 4.12. Action plan to implement OECD Recommendation 5 to assess the implementation of Everyday for Future and the Climate Plan by integrating KPIs into the SDG Tracker – Part I



Figure 4.13. Action plan to implement OECD Recommendation 5 to assess the implementation of Everyday for Future and the Climate Plan by integrating KPIs into the SDG Tracker – Part II



Financing and budgeting

Figure 4.14. Action plan to implement OECD Recommendation 6 to allocate resources to the main territorial development challenges by using an SDG budgeting – Part I

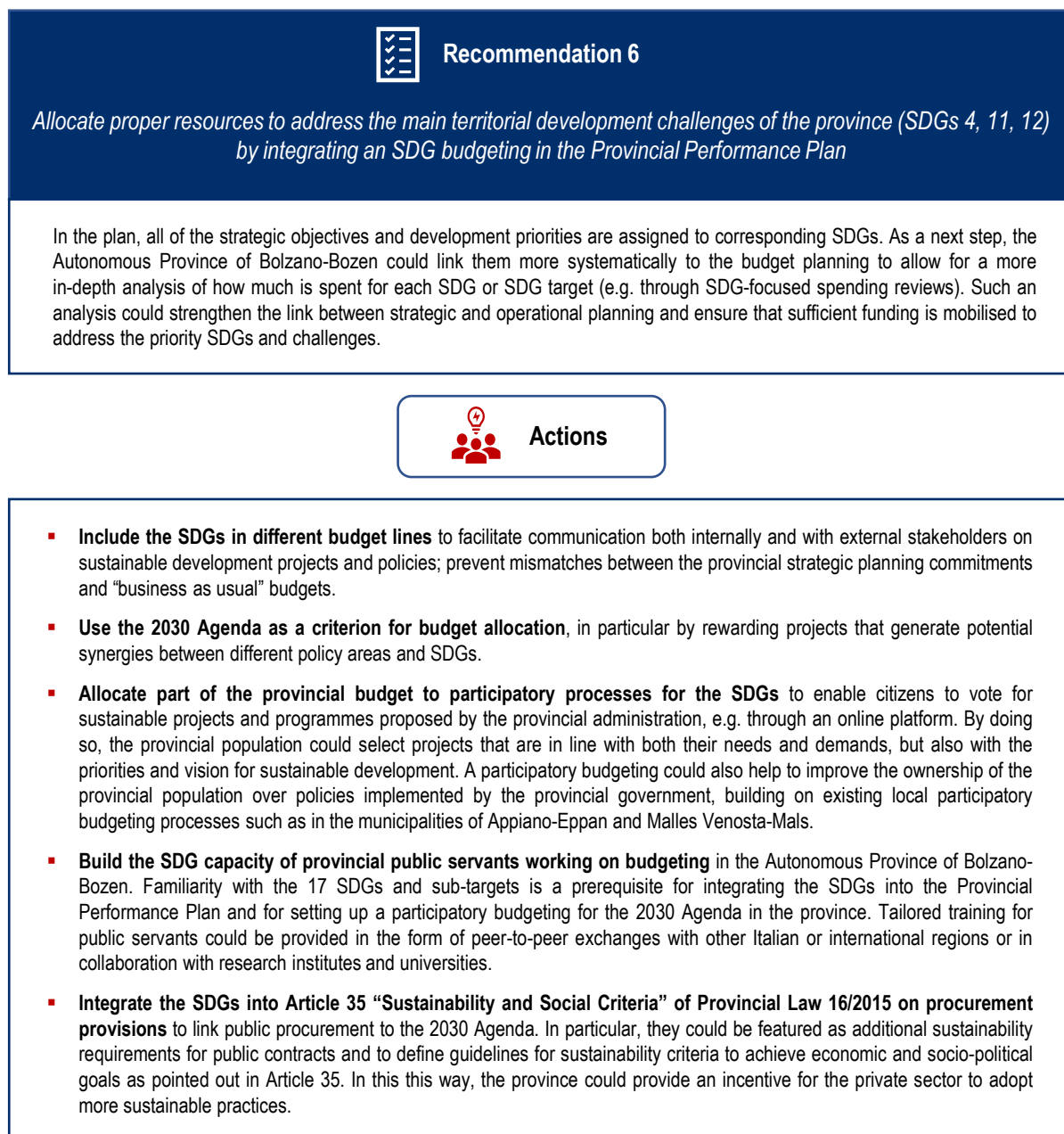
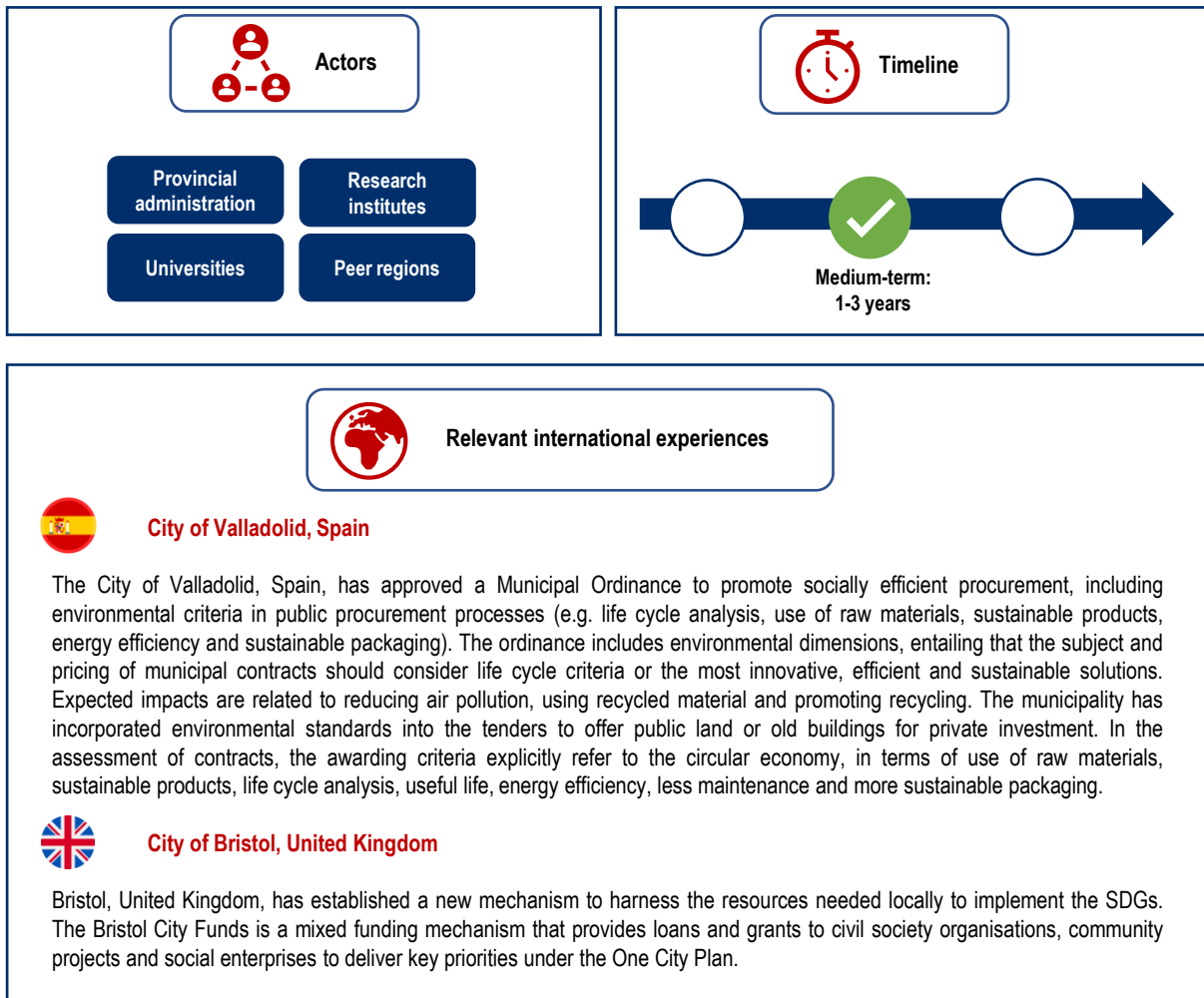


Figure 4.15. Action plan to implement OECD Recommendation 6 to allocate resources to the main territorial development challenges by using an SDG budgeting – Part II



Engagement

Figure 4.16. Action plan to implement OECD Recommendation 7 to clearly define the roles and responsibilities of all stakeholders in the Everyday for Future initiative – Part I

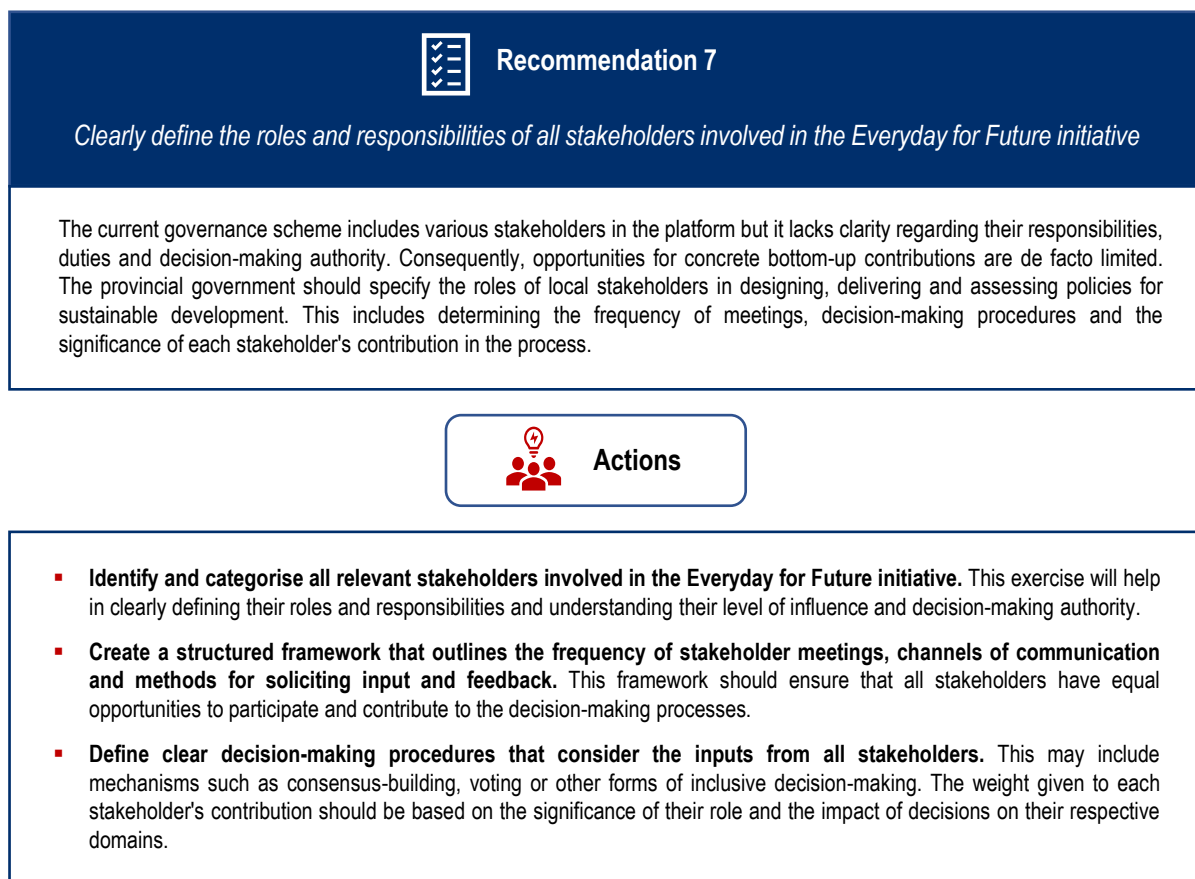


Figure 4.17. Action plan to implement OECD Recommendation 7 to allocate resources to the main territorial development challenges by using an SDG budgeting – Part II

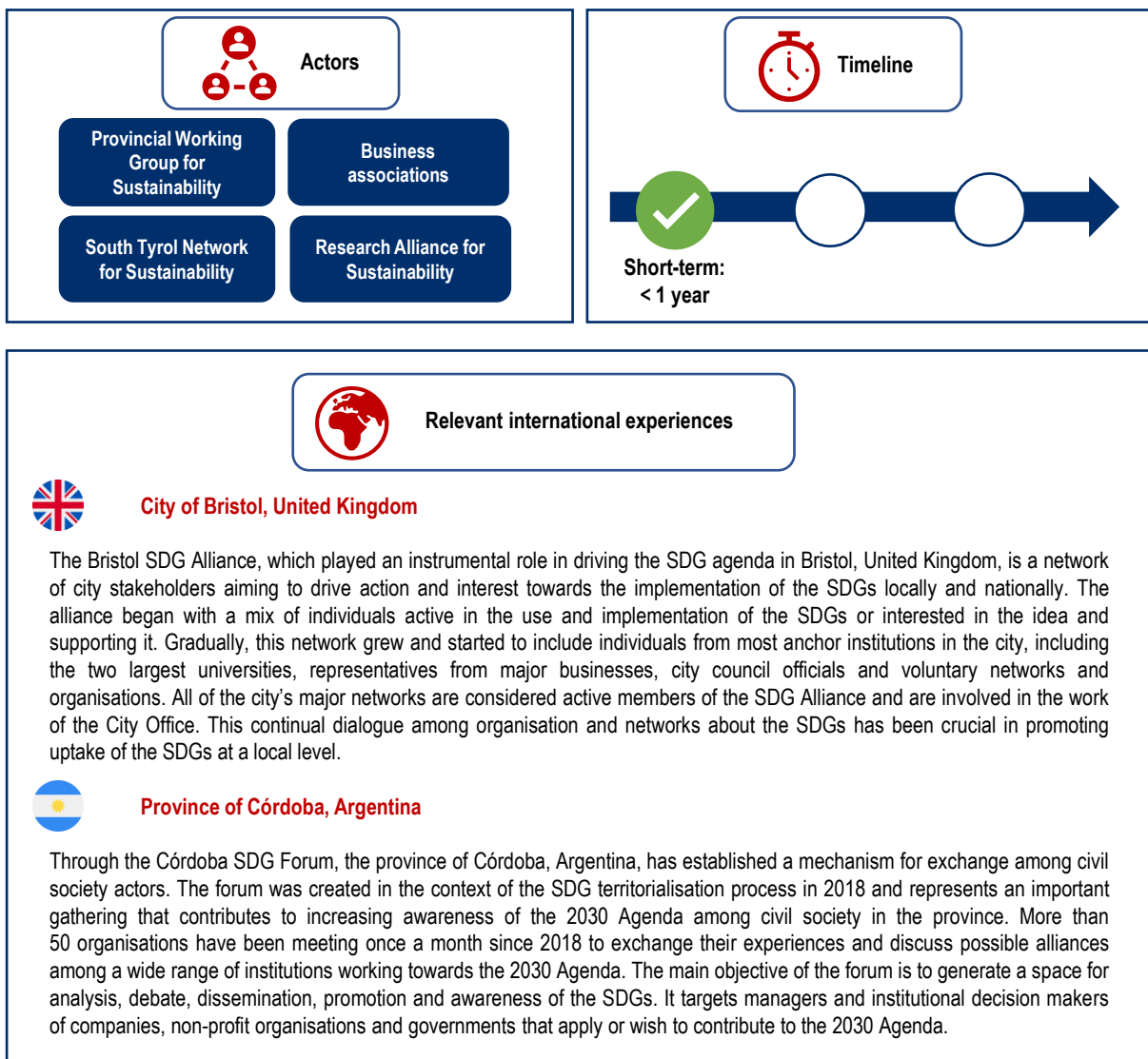
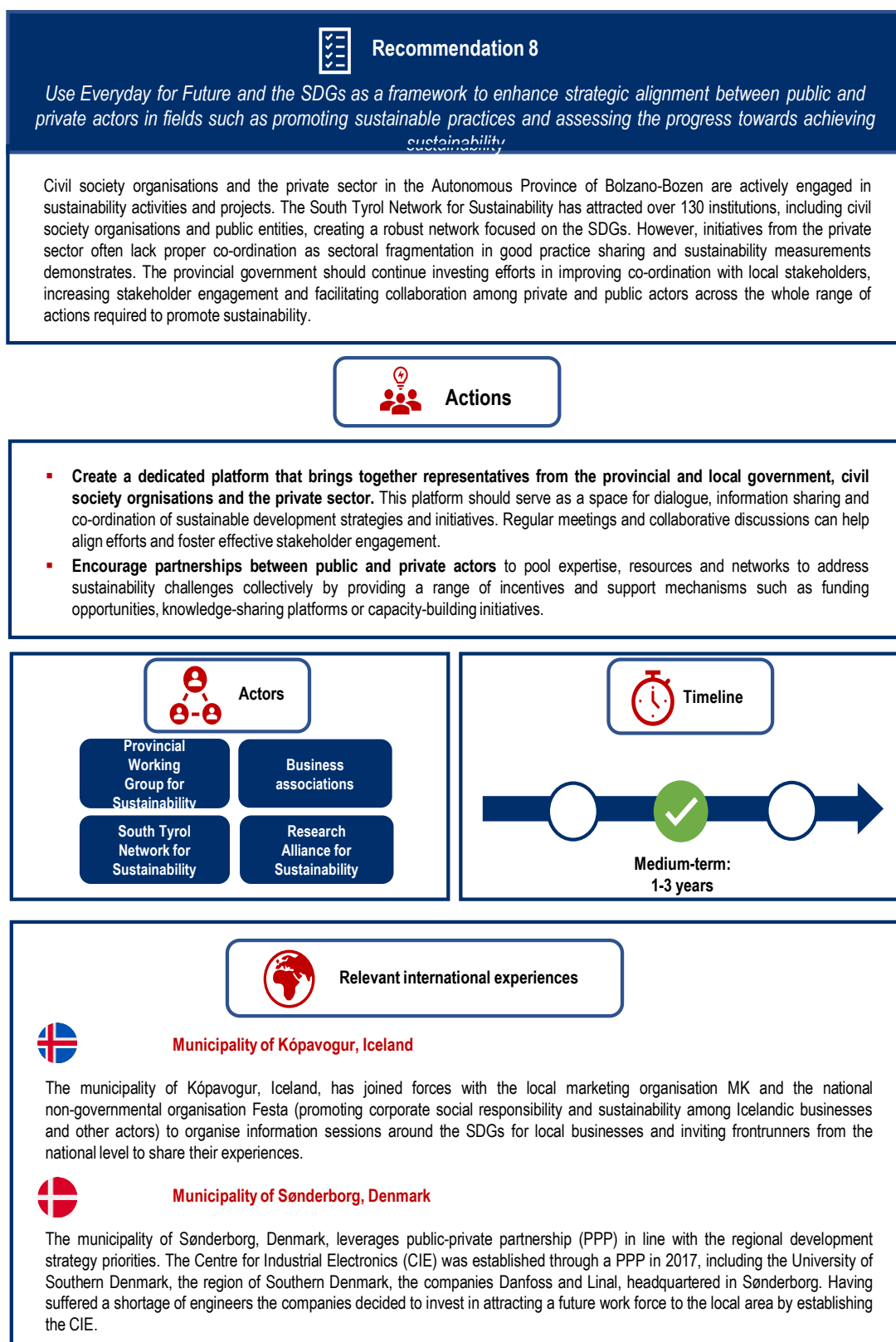


Figure 4.18. Action plan to implement OECD Recommendation 8 to use Everyday for Future and the SDGs as a framework to enhance strategic alignment between public and private actors



Reference

OECD (2020), *A Territorial Approach to the Sustainable Development Goals - Policy Highlights*, OECD, Paris, <https://www.oecd.org/cfe/cities/SDGs-policy-highlights.pdf>. [1]

