KITAKYUSHU, JAPAN

A Territorial Approach to the Sustainable Development Goals in Kitakyushu, Japan

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Preface

The OECD and the city of Kitakyushu, Japan, are delighted to introduce the results of the policy dialogue, conducted over the last 2 years with more than 100 stakeholders, to foster a territorial approach to the Sustainable Development Goals (SDGs) in the city.

In today's highly uncertain policy environment, the SDGs are more relevant than ever to shape long-term recovery measures in response to the COVID-19 pandemic. Even before the pandemic, climate change, an ageing population, digitalisation and its impact on the future of work were exacerbating regional and local development challenges in Kitakyushu and required a more holistic approach to policymaking. The SDGs offer a valuable framework to build a more sustainable and resilient society in a shared responsibility across levels of government.

Building on its long-term efforts to overcome pollution and become a green city, Kitakyushu has embraced the 2030 Agenda and the SDGs as a framework to design, plan and implement the strategic goals of the city, notably through its participation in the "SDGs Future Cities" initiative of the Japanese government. In addition, the Voluntary Local Review (VLR) that the city released at the UN High Level Political Forum 2018 reflects its pioneering role and political commitment to implement the 2030 Agenda. The VLR showcased Kitakyushu's progress and outlined priorities in terms of gender equality and women's empowerment, renewable energy, a reduction in waste production, and partnerships in international environmental co-operation including with the private sector and civil society.

The OECD report *A Territorial Approach to the Sustainable Development Goals in Kitakyushu, Japan* provides an analysis and evaluation on where the city stands vis-à-vis the achievement of the 17 SDGs, as well as key strengths and areas of improvement. Based on this evidence, the report provides guidance on how the SDGs can help to respond to megatrends affecting the city, such as demographic pressures, and guide the city's transition following its commitment to a net-zero carbon society by 2050 in October 2020. In addition, the report provides recommendations on how Kitakyushu can strengthen its indicator system to monitor progress on the SDGs.

Throughout the policy dialogue underlying this report, we shared our experience with a variety of stakeholders in Kitakyushu and learned from peer policy makers in the city of Bonn, Germany, and the region of Southern Denmark, Denmark. We worked with numerous municipalities and institutions from public, private and non-profit sectors to build consensus, discuss policy recommendations and scale up success stories.

We are proud of this journey and the results that we achieved together, and we look forward to continued collaboration to support the implementation of the policy recommendations in the future.

Lamia Kamal-Chaoui,

Director, OECD Centre for Entrepreneurship, SMEs, Regions and Cities

Kenji Kitahashi,

Mayor of the City of Kitakyushu, Japan

Acknowledgements

This report was prepared by the OECD Centre for Entrepreneurship, SMEs, Regions and Cities (CFE) led by Lamia Kamal-Chaoui, Director, as part of the Programme of Work and Budget of the Regional Development Policy Committee. It is the result of a two-year policy dialogue with more than 100 stakeholders from public, private and non-profit sectors and representatives from across all levels of government in Kitakyushu, Japan.

The report was drafted by a core team of OECD policy analysts of the CFE, comprised of Lorenz Gross, Junior Policy Analyst, and Stefano Marta, Co-ordinator of the OECD Programme on a Territorial Approach to the SDGs, under the supervision of Tadashi Matsumoto, Head of the Sustainable Development and Global Relations Unit in the CFE, and Aziza Akhmouch, Head of the Cities, Urban Policies and Sustainable Development Division in the CFE. The report benefitted from the support of Marcos Díaz Ramírez, who provided statistical guidance on the analysis of the local SDGs data for the city of Kitakyushu, Japan.

The OECD Secretariat is grateful for the high-level political impetus and commitment from Kenji Kitahashi, Mayor of the City of Kitakyushu, Japan. Special thanks are herein conveyed to the excellent local team led by Masanori Nakagawa, former Director of the Environmental Bureau of the city of Kitakyushu, the Institute for Global Environmental Strategies (IGES) Kitakyushu Urban Centre (especially Junko Ota who provided valuable contributions to the report), as well as to all private sector actors, academia and local citizens engaged in the consultation process. The policy dialogue benefitted from insights from peer reviewers, who contributed through their expertise and experience, participated in missions and provided international best practices as well as guidance on the report. They include Verena Schwarte, Coordinator, International and Global Sustainability Affairs, city of Bonn, Germany, and Rune Stig Mortensen, former Head of Division, Regional Development of the region of Southern Denmark, Denmark.

The report was submitted for approval by written procedure to the Regional Development Policy Committee on 18 December 2020 under the cote CFE/RDPC/URB(2020)25.

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Abbreviations and acronyms

AI	Artificial intelligence
ASvis	Italian Alliance for Sustainable Development
CFE	OECD Centre for Entrepreneurship, SMEs, Regions and Cities
CSR	Corporate social responsibility
EC	European Commission
ESD	Education for sustainable development
FUA	Functional urban area
FY	Financial year
G20	Group of Twenty
GDP	Gross domestic product
GHG	Greenhouse gas
HLG	High-Level group
IGES	Institute for Global Environmental Strategies
ISO	International Organization for Standardization
JEPLAN, Inc.	Japan Environment PlanNing Inc.
JICA	Japan International Cooperation Agency
KITA	Kitakyushu International Techno-cooperative Association
KOWBA	Kitakyushu Overseas Water Business Association
KRSP	Kitakyushu Science and Research Park
LAU	Local administrative unit
LRGs	Local and regional governments
NGO	Non-governmental organisation
NPO	Non-profit organisation
R&D	Research and development

PET	Polyethylene terephthalate
$PM_{2.5}$	Particulate matter with a diameter of 2.5 microns or less
PPP	Public-private partnership
SDG	Sustainable Development Goal
SME	Small- and medium-sized enterprises
U-BCF	Upward Biological Contact Filtration
UN	United Nations
VLR	Voluntary Local Review
VNR	Voluntary National Review
WDPA	World Database on Protected Areas
WHO	World Health Organization

Executive summary

Over the past decades, the city Kitakyushu, located in the southwest of Japan, has transformed from a manufacturing hub into a city putting strong emphasis on sustainability, notably through green growth, renewable energy and the circular economy. The city has developed an SDG-based vision, which outlines the city's main sustainable development targets and actions and sets up a governance framework with a strong focus on citizen participation and private sector engagement. Several local development challenges remain, including population decline, an ageing society and the lack of attractive job opportunities. The SDGs provide a framework to address those challenges in an integrated way and boost social and economic opportunities through synergies with the environmental sector.

Key findings

An integrated policy framework to promote sustainable development

- Building on its long-standing efforts to overcome pollution and become a green and sustainable city, Kitakyushu has embraced the SDGs as a framework to design, plan and implement the strategic goals. As reflected in its Voluntary Local Review and its participation in the SDGs Future City initiative, 17 actions shape Kitakyushu's vision to foster sustainable development through, in particular, the transition to low-carbon energy production and a circular economy, female empowerment, inclusion of vulnerable groups and international cooperation.
- In order to achieve such a vision, Kitakyushu prioritised the six most relevant goals in its local planning and policy making, in particular gender equality (SDG 5), clean energy (SDG 7), decent work and economic growth (SDG 8), industry and innovation (SDG 9), responsible consumption and production (SDG 12) and partnerships (SDG 17).
- When implementing projects, Kitakyushu takes an SDG lens to promote synergies between the environmental, social and economic dimensions of sustainability. For example, the city supports the expansion of wind energy to reduce CO2 emissions, generate employment and provide learning opportunities for its citizens. It has also set up community restaurants to improve social cohesion while also contributing to reduce food waste.

Health, low unemployment and safety are key strengths of Kitakyushu but low overall employment and stagnating GDP growth are challenges

- Internationally, Kitakyushu's performance towards the SDGs is strong in a number of areas such as health (SDG 3) and safety (SDG 16) but there is potential for improvement in several economic and labour market indicators (SDG 8).
    - Notable achievements are high life expectancy, low child mortality, a large number of hospital beds per capita, which is among the top 1% of OECD regions, and a high rate of active physicians.

  - In terms of safety, very low homicide and crime rates as well as low traffic mortality compared to the majority of OECD regions are Kitakyushu's key assets.
  - Unemployment rates in the city are lower than in OECD regions on average, while the disposable income per equivalised household is higher than in the majority of OECD regions. However, the city exhibits a high share of part-time employment and low employment rates overall, while per capita GDP growth has been broadly flat since the mid-2000s.
  - Kitakyushu is among the two best performing regions in Japan regarding the recycling of municipal waste (27%), but lagging behind the OECD average of 43%.
- The Functional Urban Area (FUA) of Kitakyushu, which consists of the city of Kitakyushu and 12 neighbouring municipalities, faces some challenges such as carbon-intensive electricity production and high levels of air pollution (SDG 11).
  - CO_2 emissions reached close to 500 tons of CO_2 equivalent per gigawatt-hour in 2017, compared to the OECD average of 340 tons.
  - Air pollution levels in the FUA of Kitakyushu (12.1 µg/m³ of exposure to PM 2.5 in 2019) are above WHO guidelines (10 µg/m³) although still below the OECD average (12.7 µg/m³).
- A major challenge for Kitakyushu is the city's population decline and ageing. Between 1980 and 2015, the city lost more than 100 000 residents, a 10% decrease partially due to net outward migration of young people. In 2016, the share of people aged 65 or above reached 29.6% turning Kitakyushu into one of the regions with the fastest-growing ageing population in Japan, requiring, in turn, adaptations to the city's infrastructure to meet the needs of this rising share of elderly.

Kitakyushu leverages on a conducive institutional framework and strong support provided by the national government for the localisation of the SDGs

- The national government has taken the leadership for the implementation of the SDGs in Japan under the responsibility of the national SDGs Promotion Headquarters that co-ordinates the work of all government institutions active on the SDGs, including through a SDGs Action Plan. It also supports local governments to achieve the SDGs through the SDGs Future Cities initiative that provides financial support to local model projects contributing to sustainable development.
- Inspired by the national framework and the city's participation in the national SDGs Future City initiative in 2018, Kitakyushu has set up a conducive local system to foster multi-level and multi-stakeholder collaboration, which comprises i) the SDGs Future City Promotion Headquarters (for inter-departmental cooperation, under the Mayor's leadership), ii) the City SDGs Council (an advisory expert group), and iii) the SDGs Club (a multi-stakeholder platform).

Kitakyushu is engaging the private sector and civil society in SDGs implementation, and leveraging on education for sustainable development to engage with the youth

- Many companies in Kitakyushu are using the SDGs as part of their corporate social responsibility activities, while some of them directly integrate them into their core business, notably large and international companies. Smaller companies face an awareness gap regarding the SDGs, and difficulties in reconciling their short-term objectives and budgetary constraints with the long-term timeline of the 2030 Agenda. The Kitakyushu SDGs Club, which offers funding support for companies' SDG-related activities is an innovative tool that the city could promote further to facilitate access to private sector financing for the SDGs.
- The city of Kitakyushu is making efforts to raise the awareness of civil society and citizens at large on the 2030 Agenda. Examples include the SDGs Club, regional and environmental centres such as Kitakyushu's Eco-town centre that provides information about the SDGs, art festivals and comics around the SDGs.

- Several universities and research institutes in Kitakyushu have integrated the SDGs into their activities, notably through education for sustainable development. For instance, the University of Kitakyushu has launched several initiatives to work on disaster prevention, waste management and responsible consumption in collaboration with students and local communities. The university also offers SDG training for private sector actors to integrate the SDGs into companies' core business models and foster employment opportunities in the city.

Policy recommendations

To fully implement a territorial approach to the SDGs, the municipality could:

- Use Kitakyushu's focus on the green growth agenda, the transition to a low carbon and circular economy to create synergies with key priorities to catch up such as creating job opportunities for youth and women while addressing the challenges of an ageing society. This means:
  - Stimulating the provision of clean and affordable energy as well as energy efficiency (SDG 7) to generate cost savings and positive effects for low-income populations, particularly among the elderly (SDG 1).
  - Expanding Kitakyushu's efforts to transition to a circular economy and more resource efficiency to accelerate the city's low carbon agenda (SDG 12), support the COVID-19 recovery and improve resilience to future crises.
  - Leveraging on the strong innovation potential (SDG 9) from renewable energy sectors (SDG 7) to address gaps in the young workforce and attract more women into research and development (R&D) professions (SDG 5).
  - Expanding projects such as community restaurants for children to improve intergenerational solidarity and the integration of the elderly including by adapting infrastructure to their needs.
- Use the 2030 Agenda as a budgeting tool, including through sustainable public procurement, and mobilise private sector involvement to channel funds into sustainability projects.
- Use the SDGs as an integrated framework to improve the monitoring and evaluation culture across city departments and the baseline information for benchmarking, notably through a harmonisation of indicators and measurements across different institutions, policy plans and strategies.
- Use the SDGs Club as a platform to promote joint actions and policies for the SDGs by the local administration, private companies, universities and the civil society, taking into consideration the needs of the local stakeholders.
- Support universities and the education system in their efforts to raise awareness on the SDGs, including through intergenerational linkages and "teaching loops" between students of different age groups, families and the elderly, or through an SDG certification, where students can get credits for choosing modules on the SDGs.
- Use the SDGs as a framework and common language to enhance strategic alignment between national, prefectural and municipal sustainable development strategies and stakeholder engagement, while also promoting coherence across levels of government, between internal and external actions and across different sectors.
- Use the SDGs in designing and implementing international co-operation activities in order to better connect the "internal" and "external" activities for sustainability, focusing on the SDGs where the city has a comparative advantage and knowledge to share with its peers.

1 The SDGs as a tool to promote an integrated approach to policies and strategies in Kitakyushu, Japan

Over the past decades, Kitakyushu has transformed from a manufacturing hub into a city that is putting strong emphasis on green growth and sustainability. The Sustainable Development Goals (SDGs) have become a political priority and are now being integrated into local development strategies, notably through Kitakyushu's participation in the Japanese government's SDGs Future City initiative. As part of the programme, the city has developed a Voluntary Local Review (VLR), which contains its vision for 2030, "Fostering a trusted Green Growth City with true wealth and prosperity, contributing to the world", and defined the SDGs on gender equality, clean energy, productivity and employment, sustainable infrastructure and reduced waste generation as Kitakyushu's key objectives. Their achievement is the main driver to promote sustainable development in the city of Kitakyushu.

Key facts: Kitakyushu's transition from manufacturing hub to sustainable city

With a population of around 960 000 residents,[1] the city of Kitakyushu is one of Japan's 20 designated cities[2] by government ordinance. Kitakyushu is located in the Fukuoka Prefecture along the northern coastline of the island of Kyushu in the south of the country, 60 km northeast of the island's largest municipality Fukuoka, with which it forms the Fukuoka-Kitakyushu Greater Metropolitan Region. The city is characterised by a relatively high population density. Developable land in Kitakyushu is limited due to its mountainous landscape on one side and the adjacent ocean on the other. Consequently, the habitable land surface accounts for only 20% of the total land surface of the city (99.8 km^2 out of 487.9 km^2) (City of Kitakyushu, 2012[1]; OECD, 2013[2]).

From the early 20th century, Kitakyushu's economy has built upon a foundation of heavy industry. Industrialisation in Kitakyushu began in 1901 with the installation of steelworks (Yawata Steel Works) in Yahata run by the national government. By 1913, the company was producing 80% of the country's steel consumption. The city of Kitakyushu was created in 1963 out of the merger of five cities (Kokura, Moji, Tobata, Wakamatsu and Yahata). Kitakyushu's manufacturing sector, notably in chemicals, ceramics and electronics, was boosted by its coal reserves and its strategic port location, with major Asian cities, like Tokyo in Japan, Busan and Seoul in South Korea, and Dalian and Shanghai in China, all located within a 1 000 km radius (IGES, 2018[3]). Steel manufacturing flourished particularly during the wartime periods in the first half of the 20th century and drove industrial development after World War II, during the reconstruction period, the Korean War and in the context of Japan's campaign in the 1960s to double the national income (OECD, 2013[2]).

Its iron, steel and chemical industries, however, plagued Kitakyushu through high levels of air and water pollution until the 1960s, which resulted in severe degradation of the environment and impacted the health of the city's population. It also led to strong citizen engagement and grassroots movements eager to reduce industrial pollution and improve environmental conditions in the city. As a consequence of the anti-pollution movement mobilised by citizens and a transfer of authority from the prefecture to the city level, air and water pollution in the city have been considerably reduced from health-threatening levels in the 1960s. The key levers for reducing the environmental externalities of its heavy manufacturing industries were: the conversion of Kitakyushu's largely coal-based energy supply to oil and natural gas; cleaner production, including industrial energy efficiency improvements; and the introduction of end-of-pipe technologies (OECD, 2013[2]). In the 1980s, the steel industry in Kitakyushu started to struggle, which led the city to further adjust its industrial structure. Kitakyushu started to foster the development of new industries, including assembly industries (automobile industry, etc.) and recycling industries and became increasingly involved in pushing forward international environmental co-operation activities with other cities in Asia (City of Kitakyushu/IGES, 2018[4]).

Today, Kitakyushu remains one of Japan's most important manufacturing centres. The city benefits from its proximity to other Asian countries, ample land with a stable supply of water and electricity, low investment costs and a scarcity of natural disasters (JETRO, 2020[5]). Companies from various industries are located in Kitakyushu, including the material industry (steel, chemicals), the processing and assembly industry (machinery, automobiles) and environmental-related industry (mainly recycling) alongside advanced technology companies such as the global companies TOTO and Yaskawa Electric Corporation, which are headquartered in Kitakyushu (City of Kitakyushu/IGES, 2018[4]).

Nevertheless, economic growth has been driven mainly by increasing exports to Asia and by growing service industries since the 2000s, when they replaced manufacturing as the largest economic sector. In 1997, manufacturing represented 23.5% of the local economy's gross domestic product (GDP), whereas services (excluding finance and real estate) accounted for only 19.1%. In 2007, services already represented 24.4%, while manufacturing had declined to 19.9% of economic output. Kitakyushu's industrial heritage is also only partially mirrored in its share of manufacturing employment. In 2015, manufacturing employment accounted for around 11% of total employment in the city. The current shrinking of the

manufacturing sector underlines the evident transition of Kitakyushu from a manufacturing hub to an increasingly services-driven economy, as is also the case of many other Japanese cities.

As a result of its economic transition, Kitakyushu has achieved major milestones in reversing environmental degradation from its local industries. In the late 1990s, the city launched the Kitakyushu Eco-town Project, a collaboration between the private sector and academia in the field of waste management and recycling (Box 1.3). The city has moreover been working on introducing renewable energy as its local energy base, using hydrogen energy, transforming Kitakyushu into a smart city through energy management, and forming a comprehensive base for wind power industries in Asia. As part of these initiatives, Kitakyushu Power Co., Ltd., a local energy company providing a low-carbon supply of energy, was launched after the Great East Japan Earthquake 2011 with the involvement of local companies and financial institutions.

Economic growth in Kitakyushu has been around 0% in recent years. Despite the transition of its industrial structure, Kitakyushu is facing a number of economic challenges. Kitakyushu's growth rate has been fluctuating over the past years around the 0% threshold, with a significant decrease during the global financial crisis in 2008 and 2009 as in many other regions in the country. Despite a strong rebound in the following year, economic growth in Kitakyushu turned negative again in 2012 after the Great East Japan Earthquake in 2011 before experiencing a sharp increase in 2013 and 2014. The years 2015 and 2016 were characterised by zero to negative growth. The average growth between 2007 and 2016 was close to 0% (nominal growth rate: 0.14%, real growth rate: -0.07%).

The amount of income taxes paid in Kitakyushu and its unemployment rates are lagging behind other major Japanese cities. Among 20 ordinance-designated cities, Kitakyushu was ranked 17th in terms of gross income tax paid per taxpayer with JPY 2 984 583 in 2015 (City of Kitakyushu, 2017[6])). In addition, unemployment rates in Kitakyushu have persistently been above the national average, particularly for men (Table 1.1), although lower than in OECD regions on average (see Chapter 2).

Table 1.1. Unemployment rates (%) in Kitakyushu and Japan (1995-2015)

		1995	2000	2005	2010	2015
Total	Kitakyushu	6.3	6.1	7.7	7.7	5.5
	Japan	4.3	4.7	6.0	6.4	4.2
Men	Kitakyushu	7.0	6.7	8.9	9.0	6.3
	Japan	4.6	5.1	6.7	7.4	4.9
Women	Kitakyushu	5.3	5.3	6.2	5.9	4.4
	Japan	3.8	3.8	4.9	5.0	3.4

Note: Shares in the percentage of the working-age population.
Source: City of Kitakyushu (2017[6]), *Kitakyushu-shi Keizai Sangyo Data shu (Data Book of Economy and Industry of the City of Kitakyushu)*, http://www.city.kitakyushu.lg.jp/files/000770403.pdf; Statistics Bureau of Japan (2020[7]), *Portal Site of Official Statistics of Japan*, https://www.e-stat.go.jp/en (accessed on 3 July 2020).

Overall, Kitakyushu has achieved important milestones in tackling climate change and improving environmental conditions and performance, but some challenges remain. Since the 1990s, the city received several awards from the national government and international organisations for its efforts towards sustainable development and greening the economy. The city was for instance chosen as an Eco-Model City in 2008 and a Future City in 2011, both launched by the Japanese government. In addition, the OECD selected Kitakyushu as one of four case study cities of Green Growth (the only city from Asia), following a model of urban development that balances the environment and the economy. Nevertheless, the city is still facing a number of environmental challenges, one of which is a high level of greenhouse gas (GHG) emissions, partially resulting from its carbon-intensive electricity production. As Kitakyushu's

economic foundation was built on emission-intensive industries, they still account for around 70% of the city's GHG emissions (City of Kitakyushu/IGES, 2018[4]). Japan's manufacturing sector is one of the most efficient worldwide but additional measures are necessary to further reduce emissions, which could include a cleaner power supply. The transport and commercial sectors are also drivers of GHG emissions, with an increasing number of private vehicles in the city's modal share and increased energy consumption in the commercial sector. The city's growing service sector presents opportunities for reducing CO_2 emissions in that context as services can offer higher value-added activities and can improve productivity, while often being less energy-intensive and thus helping to reduce GHG emissions (OECD, 2013[2]).

Innovative technologies and renewable energy should play a key role in the transformation to a low-carbon economy. Kitakyushu has important green technology innovation assets, which need to be fully assessed and co-ordinated through a systematic approach. Significant investments in research and development (R&D) by major private companies, key institutions and actors, such as the Kitakyushu Science and Research Park and its unique recycling cluster Eco-town – Japan's first and largest recycling base – indicate a strong potential that needs systematic co-ordination within a regional green innovation system (OECD, 2013[2]). Japan's ambitions to increase the share of its renewable energy supply and to build more production capacity for green energy technologies present an opportunity for Kitakyushu to exploit more of its own renewable energy sources and to identify the potential for energy technology R&D and production (OECD, 2013[2]).

The 2030 Agenda: a framework for sustainable development policies and strategies in Kitakyushu

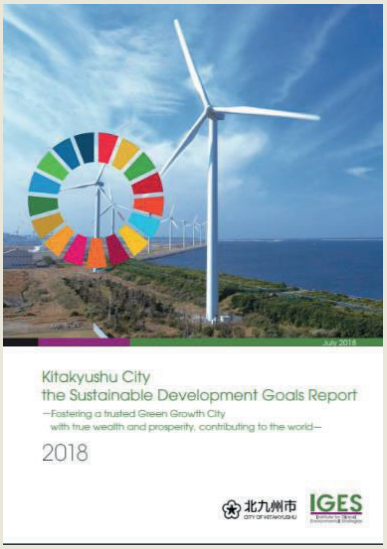
The SDGs as a political priority and opportunity for Kitakyushu

Building on its focus on sustainability, the SDGs have been a priority for the city of Kitakyushu and its mayor since 2017 with a strong political commitment to implement the 2030 Agenda. The city considers the SDGs as a helpful tool to address its local development priorities such as its changing industrial structure and stagnating economic growth, a declining and ageing population (see Chapter 2 for more information) and climate change. In particular, Kitakyushu sees the 2030 Agenda as an opportunity to address these challenges by linking and promoting synergies between the environmental SDGs and the social and socio-economic SDGs and by engaging its population in sustainable development. In June 2018, the Cabinet Office of the Japanese government selected Kitakyushu as one of 29 SDGs Future Cities, an initiative that aims at supporting local governments in implementing the SDGs through the creation of a future vision, the development of an institutional system with local stakeholders to address the SDGs, the identification of the priority goals and targets of the 2030 Agenda and the incorporation of the SDGs into various local plans. As part of the initiative, the city of Kitakyushu in collaboration with the Institute for Global Environmental Strategies (IGES) developed its first Voluntary Local Review (VLR) *Kitakyushu City: The Sustainable Development Goals Report 2018*. The VLR contains Kitakyushu's 2030 vision "Fostering a trusted Green Growth City with true wealth and prosperity, contributing to the world" and the concrete actions to reach its goals (Box 1.1).

Box 1.1. Pioneering Voluntary Local Reviews in the city of Kitakyushu, Japan

The city of Kitakyushu, Japan, launched its first VLR *Kitakyushu City: The Sustainable Development Goals Report 2018* at the HLPF in New York City in 2018, developed in collaboration with the IGES. Using the UN Secretary-General's guidelines for Voluntary National Reviews as its framework, the report with the subtitle "Fostering a trusted Green Growth City with true wealth and prosperity, contributing to the world" illustrates practical examples and the direction of future initiatives related to the SDGs in Kitakyushu.

The VLR elaborates on the progress and remaining challenges on the pathways towards the city's vision for achieving the SDGs. It reflects the city's political commitment to implement the 2030 Agenda, outlines its priority targets and showcases Kitakyushu's progress on the SDGs. Furthermore, the city's VLR also serves as a communication tool and reference for other cities inside and outside of Japan that are addressing the SDGs. In addition, it seeks to contribute to the sharing of good practices on the SDGs between local authorities. At the 2018 HLPF, the mayor of Kitakyushu conveyed his belief that an additional (18th) SDG linked to culture should be added to the current list of SDGs. The idea of accepting and respecting different cultures, history and traditions would, according to the mayor, contribute to creating a more peaceful world.



Together with New York City, Kitakyushu was one of the first cities in the world to publish a VLR. Since the release in 2018, a wide range of cities and across different continents including Bristol, United Kingdom, Buenos Aires, Argentina, Oaxaca, Mexico, Bonn and Mannheim, Germany, and Turku, Finland, have followed Kitakyushu and developed their own VLRs.

Source: City of Kitakyushu/IGES (2018[4]), *Kitakyushu City the Sustainable Development Goals Report 2018 – Fostering a Trusted Green Growth City with True Wealth and Prosperity, Contributing to the World*, https://www.iges.or.jp/en/publication_documents/pub/policyreport/en/6569/Kitakyushu_SDGreport_EN_201810.pdf.

Kitakyushu's SDGs Future City Programme and its sustainability priorities

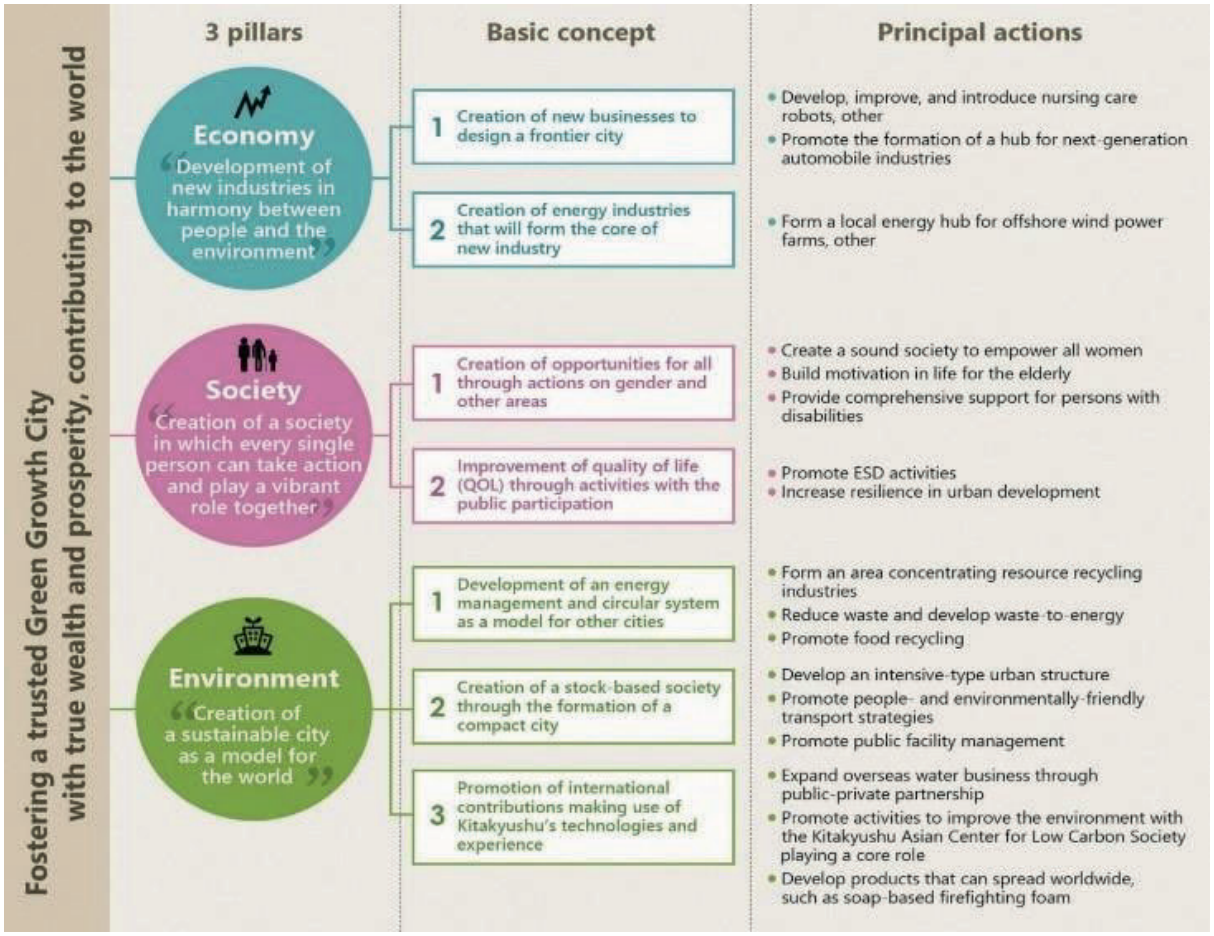
Kitakyushu's SDG Vision "Fostering a trusted Green Growth City with true wealth and prosperity, contributing to the world", which is part of the city's participation in the Japanese Future Cities initiative,

entails several objectives in relation to the three pillars of economic, social and environment sustainability. These objectives can be understood as the city's targets or ideal vision for its future development**.**

- By the economic pillar, the city understands the "development of new industries in harmony between people and the environment" (City of Kitakyushu/IGES, 2018[4]). It focuses on the creation of new businesses and new energy industries to form the core of a new industry.
- The society pillar aims for the "creation of a society in which every single person can take action and play a vibrant role together" (City of Kitakyushu/IGES, 2018[4]). It pursues the objective to create opportunities for all through actions on gender and other areas and the improvement of quality of life.
- Lastly, the environmental pillar has the objective to "contribute to the creation of a sustainable city as a model for the world" (City of Kitakyushu/IGES, 2018[4]) through i) the development of an energy management and circular system to act as a model for other cities; ii) the creation of a society that takes advantage of existing public infrastructure and public transport to foster the formation of a compact city structure; and iii) the promotion of sustainable development by sharing Kitakyushu's knowledge and experience transitioning from a manufacturing hub to sustainability frontrunner with other cities around the world.

Building on these pillars, the city of Kitakyushu has identified 17 principal actions that should contribute to the realisation of the vision. An emphasis is on the environmental dimension (see Figure 1.1). In particular, Kitakyushu wants to reduce waste, promote resources recycling and environmental-friendly transportation and contribute to international cooperation, among other things through the development of eco-friendly exportable products. In some of these areas, Kitakyushu is already active for example by organising trainings on waste collection and composting for residents and students, by expanding its bus network and by developing business partnerships in the fields of water supply and sewerage with public and private partners in other Asian countries. With regards to fostering economic sustainability in the city, Kitakyushu considers the development of nursing and care robots and the formation of a local energy hub for offshore wind power and next-generation automobiles as principal actions. In order to contribute to social sustainability in the city, Kitakyushu aims at the empowerment of women, providing comprehensive support for people with disabilities and the promotion of education for sustainable development (ESD). To that end, the city has established among other things the Woman Work Café Kitakyushu, a one-stop shop helping women find employment and is organising events in collaboration with residents, universities and other stakeholders to raise awareness of the SDGs and ESD and foster local leaders.

Figure 1.1. Vision and actions outlined in Kitakyushu's Future City Programme



Source: City of Kitakyushu/IGES (2018[4]), *Kitakyushu City the Sustainable Development Goals Report 2018 – Fostering a Trusted Green Growth City with True Wealth and Prosperity, Contributing to the World*, https://www.iges.or.jp/en/publication_documents/pub/policyreport/en/6569/Kitakyushu_SDGreport_EN_201810.pdf.

In order to achieve its overall SDG Vision and promote the sustainable development in the city, Kitakyushu has set six relevant goals and targets: i) gender equality and women's empowerment (SDG 5, Target 5.5); ii) access to affordable and clean energy, in particular renewable energy (SDG 7, Target 7.2); iii) decent work and inclusive and sustainable economic growth (SDG 8, Targets 8.2 and 8.5); iv) industry, innovation and infrastructure (SDG 9, Target 9.4); v) sustainable production and consumption patterns, in particular reducing waste generation (SDG 12, Target 12.5); and vi) partnerships for the goals, with a focus on international co-operation on the environment and collaboration with the private sector and civil society (SDG 17, Targets 17.7 and 17.17) (Table 1.2). Kitakyushu considers these as the key strengths of the city that have the potential to generate synergies with other SDGs.

Table 1.2. Kitakyushu Future City Programme – Prioritised SDGs and related projects

	Prioritised SDGs and targets	Self-assessment and related actions in Kitakyushu based on its VLR
	**SDG 5 – Gender equality** *5.5 Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic and public life*	Gender equality is a challenge in Japan, with only about 9% of parliamentary seats held by women. Although Kitakyushu's city assembly has 19% female members and the city-affiliated committees over 50%, there is the need to comprehensively promote women's active participation in the workforce, including through work style reforms and child support. The city has established the IkuBoss alliance to stimulate top executives in the private sector to take initiative, as well as the Woman Work Cafe to support working women.
	**SDG 7 – Affordable and clean energy** *7.2 Increase substantially the share of renewable energy in the global energy mix*	The amount of electricity produced by solar energy in Kitakyushu is the third-largest in the country. As of 2017, the amount of renewable energy produced through wind energy was larger than in all other government-designated cities in Japan. Kitakyushu is currently working to further expand its renewable energy base through the concentration of its wind power industry and the production of solar power and biomass, through the next-generation local energy model project. The project aims to improve local production of energy while integrating economic, social and environmental dimensions.
	**SDG 8 – Decent work and economic growth** *8.2 Achieve higher levels of economic productivity through diversification, technological upgrading and innovation, including through a focus on high-value-added and labour-intensive sectors* *8.5 Achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value*	Kitakyushu aims to counter the trend of an ageing population due to younger people moving out of the city to seek better employment opportunities. The Kitakyushu Science and Research Park contributes to the creation of highly specialised job opportunities for young researchers. It further aims to boost higher economic-value-added industries that serve as a basis for the development of advanced technologies, PPPs and the development of highly skilled professionals. The city aims to develop widely attractive projects on artificial intelligence (AI), nursing care robots and next-generation vehicles.
	**SDG 9 – Industry, Innovation and infrastructure** *9.4 Upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency*	The city of Kitakyushu is a well-connected city with expressways, central international ports and a 24-hour airport. To overcome issues of pollution in the past, many companies have established efficient production and supply chain processes. However, better energy efficiency and infrastructure as well as incentives and policy measures are needed to reduce CO_2 emissions that have remained constant in recent years.
	**SDG 12 – Responsible consumption and production** *12.5 Substantially reduce waste generation through prevention, reduction, recycling and reuse*	The Kitakyushu Eco-town is Japan's first and largest recycling base working with waste paper, polyethylene terephthalate (PET) bottles and cans, food waste, automobiles, cell phones, fluorescent lights and used solar panels among others.
	**SDG 17 – Partnerships for the goals** *17.7 Promote the development, transfer, dissemination and diffusion of environmentally sound technologies to developing countries on favourable terms, including on concessional and preferential terms, as mutually agreed.* *17.17 Encourage and promote effective public, public-private and civil society partnerships, building on the experience and resourcing strategies of partnerships*	The city of Kitakyushu is very active in international co-operation, in particular regarding technological solutions for water treatment and distribution. A PPP flagship co-operation in Phnom Penh, Cambodia, was presented as a good practice example at the High-level Political Forum in 2017. Across various sectors, Kitakyushu dispatched around 200 experts abroad and received over 9 000 people from all over the world for training.

Source: OECD elaboration on the basis of the Kitakyushu City Voluntary Local Review, City of Kitakyushu/IGES (2018[4]), *Kitakyushu City the Sustainable Development Goals Report 2018 – Fostering a Trusted Green Growth City with True Wealth and Prosperity, Contributing to the World*, https://www.iges.or.jp/en/publication_documents/pub/policyreport/en/6569/Kitakyushu_SDGreport_EN_201810.pdf.

The city of Kitakyushu is planning to reflect its priority SDGs in each sectoral policy through the implementation and evaluation process of the Kitakyushu SDGs Future City Plan, which entails the city's SDG Vision. The plan is reviewed by external experts every year to ensure to take into account the most recent local development needs. The second version of the SDGs Future City Plan (FY2021 – FY2023) for instance integrates the challenges of the COVID-19 pandemic, the digital transformation and the transition to a zero-carbon city. Going forward, the city has the objective to link the main projects of the local development plans of each sectoral department with the SDGs as well as developing future projects in line with them (Table 1.3). One notable example, where this has already been implemented is the Kitakyushu Basic Environment Plan. In order to align it with the SDGs, it was revised in November 2017 and is now subtitled "Environmental Capital & SDGs Realisation Plan". It includes a mapping of the measures proposed in the plan and their linkages to the SDG targets and indicators. These are monitored annually both from an environmental and an SDG perspective. The city has also integrated the SDGs into its educational plan to emphasize the importance of knowledge about sustainable development and the role that children and the youth can play in contributing to sustainable development in Kitakyushu. In addition, the city is planning to formulate an SDG and Energy Strategy, with the goal to promote the introduction of renewable energy, such as offshore wind power and biomass to achieve the SDGs. Furthermore, Kitakyushu is currently developing its Green Growth Strategy, which is expected to be finalised by December 2021.

Table 1.3. Main policy plans of the city of Kitakyushu

SDGs Future City Plan of the city of Kitakyushu
Kitakyushu City Basic Environment Plan
Energetic Kitakyushu Plan (The Kitakyushu City Master Plan)
Comprehensive Strategy of the city of Kitakyushu for Overcoming Population Decline and Vitalizing Local Economies
Kitakyushu City Basic Plan for Gender Equality
Kitakyushu City Plan for Cultural Promotion
Kitakyushu City Guidelines on Human Rights
Kitakyushu City Welfare (Regional Welfare Plan)
Kitakyushu City Plan for Active Longevity
Kitakyushu City Plan for Supporting Persons with Disabilities
Kitakyushu City Plan for Health Promotion
Kitakyushu City Plan for Children
New Growth Strategy of the city of Kitakyushu
City Planning Master Plan of the city of Kitakyushu
Environmental Capital Kitakyushu City Comprehensive Transportation Strategy
Kitakyushu City Educational Plan for Children's Future
Kitakyushu City Lifelong Learning Promotion Plan

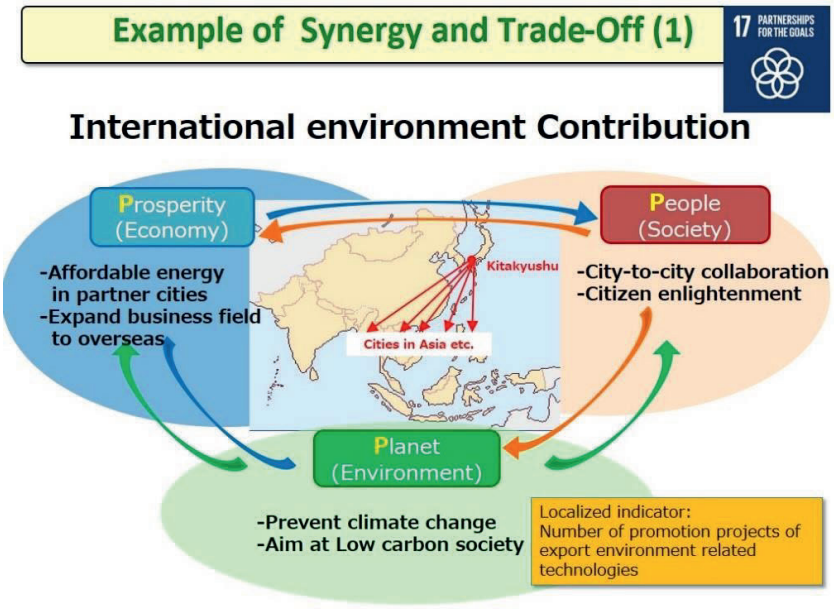
Using the SDGs to respond to megatrends and create positive synergies in Kitakyushu

Responding to and leveraging megatrends is key for the achievement of the SDGs in the city of Kitakyushu. The impact of megatrends on people and societies is very much context-specific and therefore requires place-based policies to effectively respond, minimise their potential negative impact on regional disparities and capture the opportunities related to those trends locally (Box 1.4). Kitakyushu is facing a number of challenges related to critical megatrends influencing the achievement of the SDGs in cities and regions, which have also been highlighted in its VLR. These include – but are not limited to – the city's declining population, particularly low birth rates and an ageing society, changes in its industrial structure, climate

change and the need to transition to a low-carbon economy. They can be addressed by linking and promoting synergies between the environmental SDGs and the social and socio-economic SDGs, an activity, which the city of Kitakyushu has already started.

Building on its experience in tackling pollution, the city of Kitakyushu has developed a framework of international co-operation to support cities abroad, aiming to strengthen their engagement in the environmental dimension of the SDGs (Box 1.2). Through its Kitakyushu Asian Centre for Low-Carbon Society, Kitakyushu is actively seeking the creation of synergies between the environmental, social and economic SDGs. Using its expertise in the field of environmental protection and pollution reduction, the centre has been implementing various projects over the past decade to solve environmental problems abroad, in particular in Southeast Asian cities. While contributing to the mitigation of climate change, the co-operation activities strengthen the city's international partnerships. At the same time, they also generate a positive impact on SDG 17 and create synergies with the dimension of Prosperity by generating a growing demand for services and technology provided by local companies from Kitakyushu, which can allow them to expand their business overseas (Figure 1.2). The SDGs thus bring a common international language, which helps to expand the city's international co-operation activities in the field of sustainable development, notably in the environmental sector.

Figure 1.2. Synergies between the SDGs created through Kitakyushu's international co-operation activities



Source: City of Kitakyushu (2019[8]), "Presentation by the City of Kitakyushu at the 1st OECD Roundtable on Cities and Regions for the Sustainable Development Goals, March 2019, Paris".

Box 1.2. Kitakyushu's international technical co-operation in the fields of environmental improvement, water and sewage

Actors active in international technical co-operation in Kitakyushu

The city of Kitakyushu has been actively promoting international technical co-operation in the field of pollution abatement, resources recycling, water and sewage to the Asian community through environmental international co-operation, using environmental networks developed with a number of cities overseas since the 1990s. For instance, Kitakyushu has created an intercity network through co-operation with relevant institutions and worked on joint sustainable development projects. Several organisations have been set up by the city, the private sector and the central government to manage these collaborative projects. The Japan International Cooperation Agency (JICA) Kyushu Center, located in the city, receives trainees from developing countries and dispatches environmental experts to those countries. The Kitakyushu International Techno-cooperative Association (KITA) was established by the city's chamber of commerce and other partners to hold international training courses.

Kitakyushu Asian Centre for Low Carbon Society

The Kitakyushu Asian Centre for Low Carbon Society was set up in 2010 to solve environmental problems in other Asian countries that have emerged through the economic development and growth in Asian countries. To tackle these problems, Kitakyushu promotes the export of urban environmental infrastructure by taking advantage of its experience, know-how and networks with other countries. Over the past years, the centre has conducted various activities such as: a garbage composting project in Surabaya City, Indonesia; a support project for the elaboration of a green city plan in Hai Phong City, Viet Nam; the development of a climate change adaptation plan in Phnom Penh City, Cambodia; technical support for a project introducing waste power generation in Davao City, Philippines; and co-operation with six cities in China working on the improvement of air quality among others.

Kitakyushu's main achievements in international environment-related technical co-operation

One of the main outcomes of Kitakyushu's international co-operation activities so far is the environmental improvement master plan jointly formulated with Chinese partners, which has led to a substantial reduction of pollution in the city of Dalian, China. Another successful example is the establishment of a public-private partnership (PPP) in Cambodia aimed at improving the development of new water businesses, which resulted in a water supply coverage increase from 25% to 90% of households in the capital city of Phnom Penh, Cambodia. In Viet Nam, Kitakyushu is actively contributing to technology transfers by introducing an advanced water treatment technology called U-BCF (Upward Biological Contact Filtration), originally developed in Kitakyushu. Through the partnership, technology now also contributes to a high-quality water supply for people in Viet Nam. In light of its extensive work on water and sewage technologies, the city of Kitakyushu has been selected by the OECD as Asia's first Green Growth Model City in 2011. While the city and government partners provide reliable management and support human resource development, private companies bring expertise in civil engineering, construction and operation and maintenance. Through its ongoing international co-operation projects, Kitakyushu was able to generate a number of employment opportunities in recent years. Between 2015 and 2019, low-carbon projects implemented by the city of Kitakyushu on the Asian continent created overall close to 70 new jobs.

The Kitakyushu Overseas Water Business Association

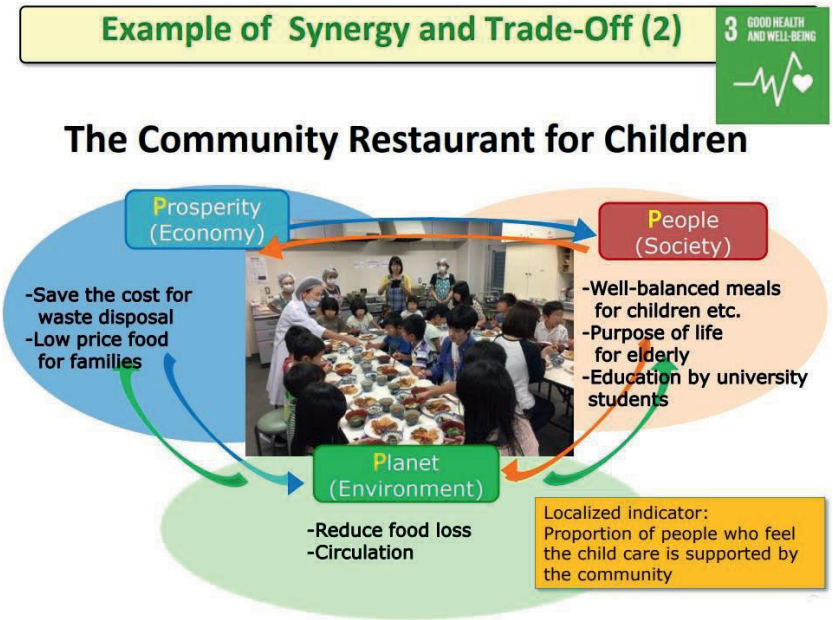
The Kitakyushu Overseas Water Business Association (KOWBA) is an organisation that aims to actively promote water business initiatives overseas through PPPs in Kitakyushu. Established in 2010, it is composed of 130 companies, academia and the local government. Kitakyushu, in close collaboration

with JICA and academia, was one of the first cities to establish such an association. The association conducts studies on local needs in the field of water management overseas and exchanges and shares information with association members and related organisations. KOWBA also examines and promotes methods for overseas development and the formulation of concrete projects through PPPs. The promotion of water businesses overseas also contributes to the revitalisation of local companies involved and provides the opportunity to improve the water environment in partner countries.

Source: OECD SDG survey compiled by the local team from the city of Kitakyushu (2018); OECD (2013[2]), *Green Growth in Kitakyushu, Japan*, https://dx.doi.org/10.1787/9789264195134-en.

Another initiative through which Kitakyushu aims to tackle social, economic and environmental issues simultaneously are its Kodomo Shokudo community restaurants for children. Given the growing trend of single parents or households where both parents are working, many children in Kitakyushu stay home alone after school, resulting in poor nutrition and lack of social contact. Kitakyushu reacted to this development by establishing community restaurants for children, which provide them with homemade food and a comfortable and safe place to stay after school until their parents come home. These restaurants have been high in demand with their number growing from only 2 in 2015, a year before Kitakyushu started participating in the project, to 30 restaurants in 2019. The Kodomo Shokudo programme brings together non-profit organisations, elderly volunteers who cook the meals, university students to help with homework and local supermarkets that provide food that is close to its expiration date. In that way, the project supports children in their social education, strengthens the ties of the community as the elderly feel a sense of purpose and food waste can be reduced while keeping the costs low, thus creating positive synergies across different SDGs and dimensions of sustainability (Figure 1.3).

Figure 1.3. Synergies between the SDGs created through Kitakyushu's community restaurants

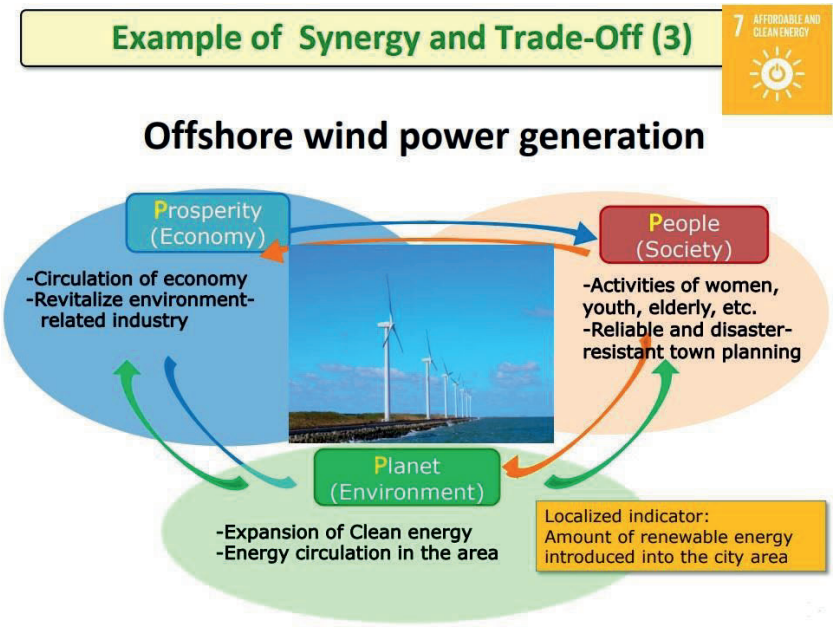


Source: City of Kitakyushu (2019[8]), "Presentation by the City of Kitakyushu at the 1st OECD Roundtable on Cities and Regions for the Sustainable Development Goals, March 2019, Paris".

The city of Kitakyushu seeks to promote synergies between the environmental, social and socio-economic dimension of sustainability when implementing projects related to the SDGs. One example is the

Kitakyushu Hibikinada Offshore Wind Farm. It is expected to enter the construction phase in financial year 2022 to support the Green Energy Port Hibiki in Kitakyushu City, accelerate the development of marine renewable energy, reduce GHG emissions and contribute to energy security. The wind farm has the potential to promote different dimensions of sustainability in the city through: i) the enhancement of global warming countermeasures by reducing CO_2 (environment); ii) employment opportunities by promoting the offshore wind power generation industry (economy); iii) the provision of a place to learn about environmental issues and measures (society) (Figure 1.4). There are also other green technology projects using the environmental dimension of sustainability to create economic opportunities and provide the city with a great potential for green growth. Two examples are the Kitakyushu Eco-town Project (Box 1.3) and the Kitakyushu Power Co., Ltd., a local renewable energy company, established by the city of Kitakyushu in 2015 after the Great East Japan Earthquake 2011 (see Chapter 2 for more details).

Figure 1.4. Synergies between the SDGs created through offshore wind power generation in Kitakyushu



Source: City of Kitakyushu (2019[8]), "Presentation by the City of Kitakyushu at the 1st OECD Roundtable on Cities and Regions for the Sustainable Development Goals, March 2019, Paris".

Box 1.3. Kitakyushu Eco-town Project

Bringing the city's industrial past into the future

The Kitakyushu Eco-town Project demonstrates the city's unique policy approach since the late 1990s, combining environmental conservation and industry promotion policies to construct a "resource-recycling-based" society and promote an "environmental industry". As such, the Eco-town Project draws on both the city's long manufacturing tradition (steel, chemicals, cement, etc.) and associated industrial infrastructure and technologies, as well as on human resources, technologies and know-how acquired when trying to overcome problems linked to sea and air pollution in the past. Starting in the Hibiki area in the northern part of the city, where it benefitted from the availability of vast areas of reclaimed land

at low cost, Kitakyushu expanded the scope of the project in 2004 to integrate the whole city in its work to become more eco-friendly.

Figure 1.5. Aerial view on the Kitakyushu Eco-town Project

Source: City of Kitakyushu (2019[9]), "Presentation given by the City of Kitakyushu during the 2nd OECD Roundtable on Cities and Regions for the Sustainable Development Goals, December 2019, Bonn".

The three pillars of Kitakyushu's Environmental Industry Promotion Strategy, which have their own dedicated space in the Eco-town Project, consist of:

- **Education and basic research**, with the Kitakyushu Science and Research Park as a base for industry-academia co-operation. The site brings together national, local and private universities and graduate schools working on topics such as reuse, recycling and energy initiatives.
- **Technology and practical research**, through the dedicated practical research area that gathers businesses, government and academia to develop cutting-edge environmental technologies, with a focus on waste disposal and recycling. The Practical Research Area also hosts the Eco-town Centre, established in 2001 as a learning and support facility for the project. The re-opened Next-Generation Energy Park is another centre where visitors can observe energy-related initiatives.
- **Commercialisation**, which is promoted through the Comprehensive Environment Industrial Complex and Hibiki Recycling Industrial Park that clusters recycling plants in the Hibikinada East Area. In the latter, local small- and medium-sized enterprises (SMEs) and venture enterprises are engaged in the recycling of a number of different materials, including cooking oil, organic solvents, paper and cans.

There are a number of financial support instruments provided by the city for enterprises and universities that are part of the Eco-town Project and located in Kitakyushu, for example the Environmental Future Technology Aid, which includes research and development (R&D) subsidies of up to USD 0.3 million for a maximum of 3 years.

To further expand the project and promote environmental industries in Kitakyushu, the city has launched the Kitakyushu Environmental Industries Promotion Conference, which forms an industry-academia-

government network. The city also grants the Kitakyushu Eco Premium certification for industrial businesses in the city and helps SMEs obtain the Eco Action 21 certification for eco-friendly businesses by offering general consultation services about the application process, holding Eco Action 21 seminars and allocating experts to companies for further exchange.

Two of the key features of the Kitakyushu Eco-town Project are its supervision mechanism, consisting of an industry-academia-government coalition, and the intensive collaboration between the industry and research facilities in the Eco-town. Aiming to be near greenhouse gas neutral, waste materials are traded between the sites and organisations in a close-knit web to reuse and recycle as much as possible. The project also puts emphasis on its communication with the public to raise awareness of the issues dealt with at the various sites. It further aims to facilitate business processes in the Eco-town, for example by simplifying paperwork.

Source: City of Kitakyushu (2017[10]), *Kitakyushu Eco-Town Project*, Informational brochure, Office for Environmental Industry Promotion, Future City Promotion Department.

Box 1.4. Why a territorial approach to the SDGs?

The 2030 Agenda was not designed specifically for cities and regions but they play a crucial role to achieve 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 have 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 (60% 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, they are also an integral part of the solution as the varying nature of sustainable development challenges therefore calls for place-based solutions, tailored to territorial specificities, needs and capacities. Place-based policies incorporate a set of co-ordinated actions specifically designed for a particular city or region and stress the need to shift from a sectoral to a multi-sectoral approach, from one-size-fits-all to context-specific measures and from a top-down to a bottom-up approach to policymaking. Based on the idea of policy co-ordination across sectors and multi-level governance, whereby all levels of government and non-state actors should play a role in the policy process, they consider and analyse functional territories, build on the endogenous development potential of each territory and use a wide range of actions (OECD, 2019[11]).

The SDGs can help to advance conceptually 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 risk vary widely as does their capacity to cope with them.
- The interconnected SDG framework allows the promotion of policy complementarities and the management of trade-offs across goals. Indeed, the SDGs enable policymakers to address the social, economic and environmental dimensions of sustainable development concomitantly, building on the synergies and taking interlinkages into account.
- The SDGs allow to better implement the concept of functional territories, a common framework that neighbouring municipalities can use to strengthen collaborations and co-ordinate actions.

- The SDGs can be used to promote multi-level governance and partnerships, including the engagement of various stakeholders in the policymaking 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 proposed OECD framework foresees three key areas, policies and strategies, actors and tools, for cities and regions to implement a territorial approach to the SDGs.

Policies and strategies

Cities and regions can use the SDGs as a means to shift from a sectoral to a multi-sectoral approach, both in the design and implementation of their policies. The SDGs can help to bring various departments of a local administration together to strengthen the collaboration in policy implementation. Regional policy aims to effectively address the diversity of economic, social, demographic, institutional and geographic conditions across cities and regions. It also ensures that sectoral policies are co-ordinated with each other and meet the specific needs of different regions and provides the tools that traditional structural policies often lack in order to address region-specific factors that cause economic and social stagnation (OECD, 2019[11]).

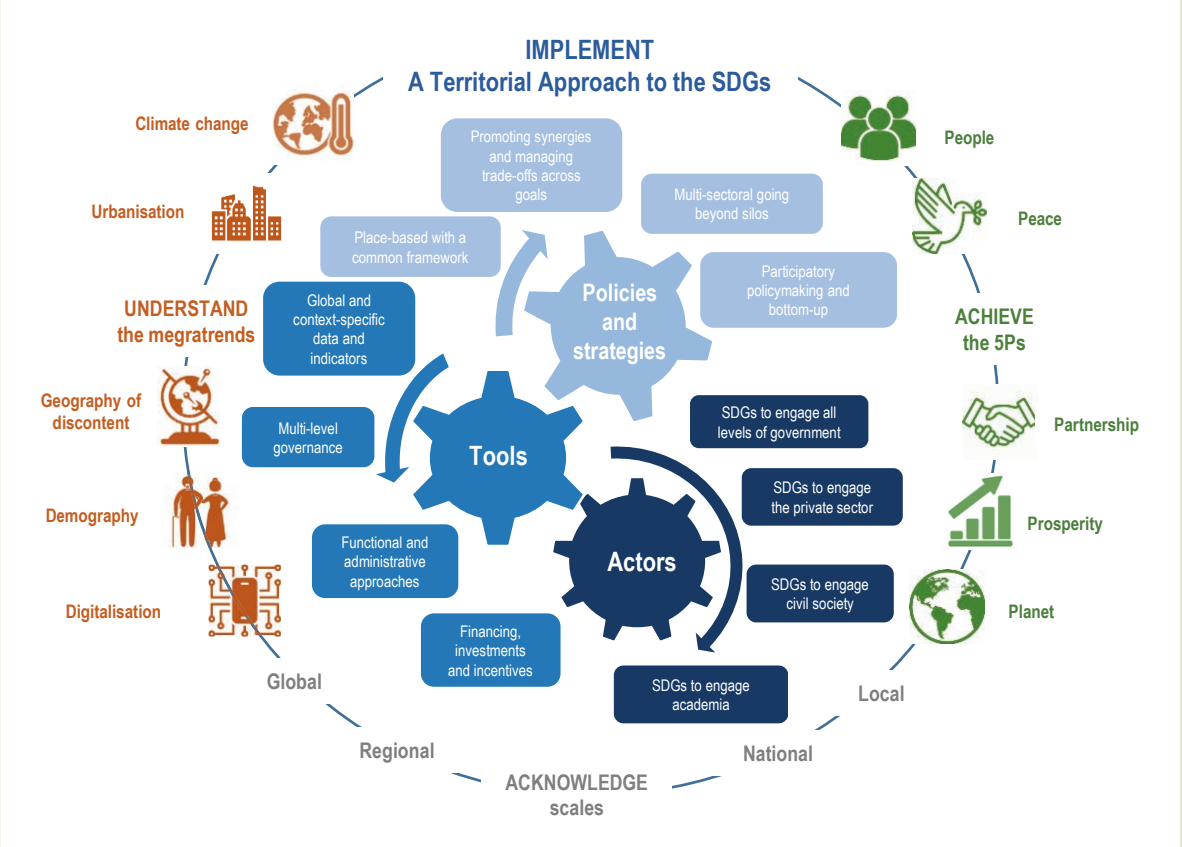
Tools

The effective implementation of a territorial approach to the SDGs implies the combined use of a variety of tools. These span from a solid multi-level governance system to global and context-specific data for evidence-based policies. They also consist of combining functional and administrative approaches to address territorial challenges and opportunities beyond borders, as well as investment and incentives, in particular for the private sector to contribute. Multi-level governance represents a key tool to promote vertical co-ordination (across levels of government) and horizontal co-ordination (across ministries and departments) – both within the local, regional and national governments and between the government and other key stakeholders. National governments can also use the SDGs as a framework to promote policy coherence across levels of government, align priorities and rethink sustainable development through a bottom-up approach.

Actors

A participatory policymaking and bottom-up process is one of the core elements of a territorial approach to the SDGs. Shifting from a top-down and hierarchical to a bottom-up and participatory approach to policymaking and implementation is key for the achievement of the SDGs. The 2030 Agenda requires a more transparent and inclusive model that involves the public as well as non-state actors to co-design and jointly implement local development strategies and policies. The SDGs provide cities and regions with a tool to effectively engage in multi-stakeholder dialogues with actors from the private sector, civil society, as well as schools and academia.

Figure 1.6. The OECD analytical framework for A Territorial Approach to the SDGs



Source (figure): OECD (2020[12]), *A Territorial Approach to the Sustainable Development Goals: Synthesis Report*, https://doi.org/10.1787/e86fa715-en.
Source (box): OECD (2019[11]), *OECD Regional Outlook 2019: Leveraging Megatrends for Cities and Rural Areas*, https://dx.doi.org/10.1787/9789264312838-en.

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OECD (2012), *Definition of Functional Urban Areas (FUA) for the OECD Metropolitan Database*, OECD, Paris, https://www.oecd.org/cfe/regional-policy/Definition-of-Functional-Urban-Areas-for-the-OECD-metropolitan-database.pdf. [13]

Statistics Bureau of Japan (2020), *Portal Site of Official Statistics of Japan*, https://www.e-stat.go.jp/en (accessed on 3 July 2020). [7]

Notes

[1] This number refers to the administrative boundaries of the city of Kitakyushu. The functional urban area (FUA) of Kitakyushu was comprised of 1.34 million residents in 2018. An FUA consists of a densely inhabited city and of a surrounding area (commuting zone) whose labour market is highly integrated with the city (OECD, 2012[13]).

[2] A city designated by government ordinance, must have a population in excess of 500 000 and must have been granted designated city status by an order of the central government under Article 252 of the Law on Local Autonomy. Designated cities are delegated certain functions in fields normally managed by prefectural governments in fields such as education, social welfare, sanitation, business licensing and urban planning (OECD, 2016[14]).

2 Sustainable development challenges and opportunities in Kitakyushu, Japan

The chapter applies the OECD localised indicator framework to assess the performance of Kitakyushu towards reaching the Sustainable Development Goals (SDGs) and benchmark it against OECD regions. Kitakyushu's results are particularly good across all health-related indicators (SDG 3). Labour market and economic indicators (SDG 8) reveal mixed results compared to the average of OECD regions. While disposable income is high and unemployment rates are low, part-time employment remains a challenge. One clear strength of Kitakyushu is the dimension of safety (SDG 16), where the city displays very low homicide rates and transport-related deaths. The functional urban area (FUA) of Kitakyushu, which consists of the city of Kitakyushu and 12 neighbouring municipalities, faces some challenges such as a carbon-intensive electricity production (SDG 7) and high air pollution levels (SDG 11), while the degree of terrestrial and coastal protection (SDG 13 and 15) is very high compared to OECD averages.

Measuring the distance to the SDGs in Kitakyushu, Japan

This chapter assesses the performance of the city of Kitakyushu towards reaching the SDGs based on the OECD localised indicator framework. The section follows the structure of the five critical dimensions of the 2030 Agenda (people, prosperity, planet, peace and partnership) (Figure 2.1). It considers a selection of 20 indicators covering 11 of the 17 SDGs,[1] comparable to around 400 OECD regions.[2] For Kitakyushu, the main data sources are administrative data. In some cases, where administrative data for the city of Kitakyushu was not available (4 of the 20 indicators used for the report),[3] it also considers data from the FUA of Kitakyushu. The FUA of Kitakyushu encompasses the city of Kitakyushu and 12 neighbouring municipalities, whose labour market is highly integrated with the city (Box 2.2). It is important to note that data of the FUA of Kitakyushu does not intend to measure the situation in the city of Kitakyushu alone but in an economically integrated metropolitan area of Kitakyushu, which is more suitable for international benchmarking in certain policy areas. Further information on the methodology of the assessment can be found in Box 2.1.

Figure 2.1. The 17 Sustainable Development Goals

Source: UN (2020[f1]), *Sustainable Development Goals*, https://sustainabledevelopment.un.org/?menu=1300.

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

The OECD has developed a framework to localise 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 to benchmark performances within countries and across regions and cities to support public action across levels of government (Figure 2.2).

Figure 2.2. OECD web-tool for measuring cities' and regions' distance to the SDGs

Source: OECD (2020[2]), *Measuring the Distance to the SDGs in Regions and Cities (visualisation tool)*, http://www.oecd-local-sdgs.org.(accessed on 15 July 2020)

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 United Nations (UN) indicator framework have been classified by their level of relevance for subnational governments (place-relevant) and by their applicability to the context and specificities of OECD countries. The result is a selection of 105 SDG targets – and 135 indicators – for OECD regions and cities (also referred to as "subnational SDG targets"). 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. Currently, 56 indicators (covering 32% of the subnational SDG targets) are available for cities above 250 000 inhabitants in OECD and partner countries. 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 cities and regions on the SDGs, the OECD localised framework defines suggested end values for 2030 through which regions and cities can assess where they stand today and seize their distance to reaching the intended end value. When end values are not inferable from the UN framework, the OECD defines end values for indicators based on the knowledge of experts in the field or, alternatively, based on the best performance of OECD regions and cities in that indicator. The OECD localised indicator framework attributes suggested end values to 88% of its indicators, of which 65% are defined using the criteria of "best performers". The framework also normalises the SDGs 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 towards each of the 17 SDGs. The distance to the target is the number of units the index needs to travel to reach the highest score of 100. Each of the 17 indexes uses a selection of indicators that better reflect the essence of the goal and that benefit from good coverage across OECD regions and cities.

Source: OECD (2020[3]), *A Territorial Approach to the Sustainable Development Goals: Synthesis Report*, https://doi.org/10.1787/e86fa715-en; OECD (2020[2]), *Measuring the Distance to the SDGs in Regions and Cities (visualisation tool)*, http://www.oecd-local-sdgs.org.(accessed on 15 July 2020)

Box 2.2. Definition of functional urban areas (FUA)

The European Commission (EC) and the OECD have jointly developed a methodology to define FUAs in a consistent way across countries. Using population density and travel-to-work flows, a FUA consists of a densely inhabited city and of a surrounding area (commuting zone) whose labour market is highly integrated with the city. The ultimate aim of the EC-OECD approach to FUAs is to create a harmonised definition of cities and their areas of influence for international comparisons as well as for policy analysis on topics related to urban development. In that context, a city is defined as a local administrative unit (i.e. LAU for European countries, such as municipalities, local authorities, etc.) where at least 50% of its population live in an urban centre.

An urban centre is defined as a cluster of contiguous grid cells of 1 km^2 with a density of at least 1 500 inhabitants per km^2 and a population of at least 50 000 inhabitants overall. Urban centres are defined using the population grid from the Global Human Settlement Layer database, referred to circa 2015. The commuting zone is composed of the LAUs for which at least 15% of their workforce commute to the city. Commuting zones of the functional areas are identified based on commuting data (travel from home-to-work). Commuting data are also used to define whether more than one city share the same commuting zone in a single polycentric FUA.

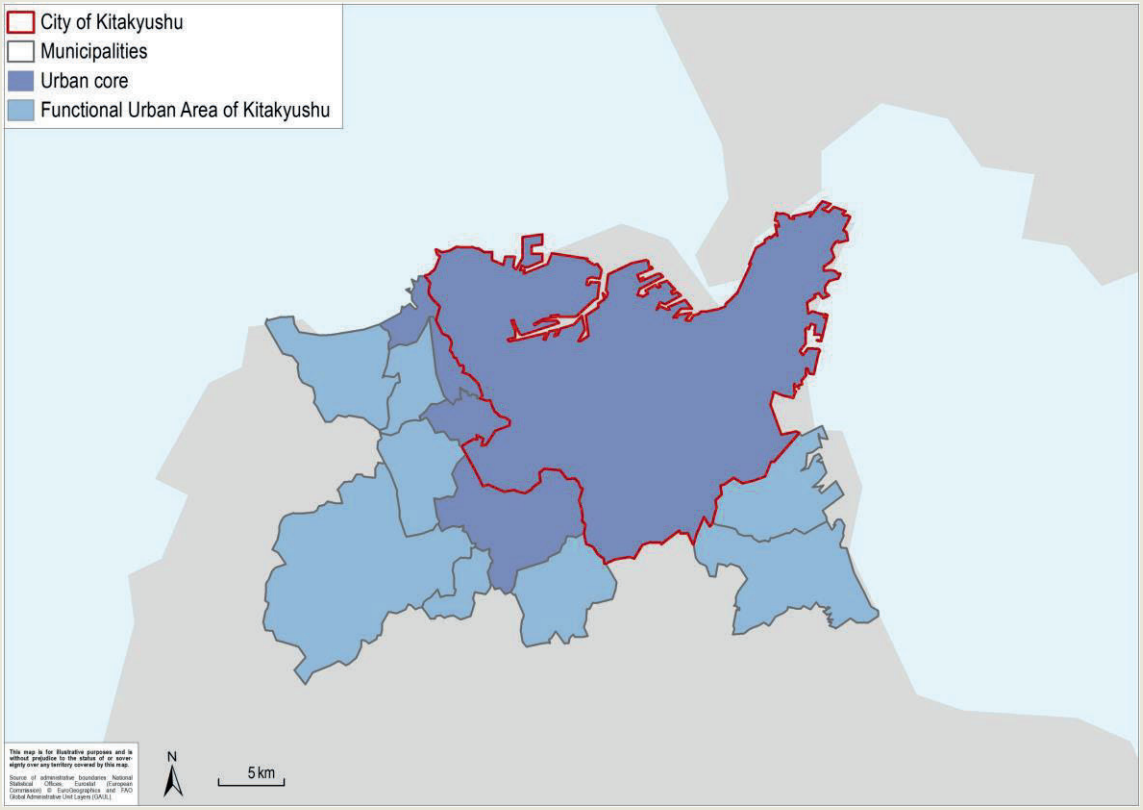
Table 2.1. Kitakyushu: A FUA consisting of 13 municipalities in the prefecture of Fukuoka

Municipalities in the FUA of Kitakyushu
Ashiya Machi (Town)
Fukuchi Machi (Town)
Kanda Machi (Town)
Kitakyushu Shi (City)
Kotake Machi (Town)
Kurate Machi (Town)
Miyawaka Shi (City)
Mizumaki Machi (Town)
Nakama Shi (City)
Nogata Shi (City)
Okagaki Machi (Town)
Onga Cho (Town)
Yukuhashi Shi (City)

Source: Dijkstra, L., H. Poelman and P. Veneri (2019[4]), "The EU-OECD definition of a functional urban area", https://doi.org/10.1787/d58cb34d-en.

The FUA of Kitakyushu encompasses the city of Kitakyushu itself and its surrounding area (commuting zone), which consists of 12 municipalities (8 towns [*machi*], which are contained within a district – a geographical and statistical unit comprising 1 or several rural municipalities in Japan – and 4 cities [*shi*], which are not components of a district) (Figure 2.3). The FUA of Kitakyushu has a population of around 1.3 million inhabitants (compared to the city of Kitakyushu, where roughly 960 000 people live). Using the concept of FUA can provide useful policy implications for Kitakyushu as it considers the situation in the city of Kitakyushu itself but also the surrounding area (commuting zone) whose labour market is highly integrated with the city.

Figure 2.3. Functional urban area of Kitakyushu



Source: OECD (2021[5]), "Metropolitan areas", https://doi.org/10.1787/data-00531-en.

Overall, the city of Kitakyushu's performance towards the SDGs is strong in a number of areas such as health and safety but shows potential for improvement compared to other OECD regions when it comes to several economic and labour market indicators. The city's results are particularly good in the indicators of health (SDG 3). Notable achievements are its high rate of active physicians, a large number of hospital beds per capita and a high life expectancy. The city of Kitakyushu also displays a very high level of safety (SDG 16), such as very low homicide and crime rates (SDG 16). Labour market and economic indicators (SDG 8) reveal mixed results compared to other OECD regions. Unemployment rates are lower than the average of OECD regions and the disposable income per equivalised household is higher than in the majority of OECD regions. However, the city exhibits a high share of part-time employment incidences and low employment rates overall, while the per capita growth rate of real gross domestic product (GDP) was negative in the latest year available. The FUA of Kitakyushu, which consists of the city of Kitakyushu and 12 neighbouring municipalities, faces some further challenges such as high levels of air pollution (SDG 11).

People: A strong health sector and high life expectancy

The city of Kitakyushu is well equipped with hospital beds. SDG 3 has the objective to ensure healthy lives and promote well-being for all. One of the prerequisites for good achievements in this area is the capacity of the healthcare system, which includes resources such as hospital beds and active physicians. With a hospital bed rate (hospital beds per 10 000 people) of 199 in 2017, Kitakyushu outperforms around 99%

of OECD regions, whose average hospital bed rate is 41.4 (Figure 2.4). Kitakyushu also exceeds the suggested end value based on the best-performing regions in the OECD to be achieved by 2030, which is considerably lower (64 hospital beds per 10 000 people). Kitakyushu's result is in line with the high hospital beds rate in Japanese regions overall averaging at 123 hospital beds per 10 000 residents, indicating a strong national performance in this indicator. The city's hospital bed rate also exceeds the rate in the region of Kyushu overall (176 hospital beds per 10 000 people) and is higher than the best-performing region in Japan for this indicator, Shikoku (184 hospital beds per 10 000 people).

Table 2.2. OECD indicators used to assess the dimension People in Kitakyushu

SDG	Indicator	Geographic area covered	Result	Average of OECD regions
	Hospital bed rate (hospital beds per 10 000 people)	City of Kitakyushu	199.2	41.4
	Active physicians rate (active physicians per 1 000 people)	City of Kitakyushu	3.5	2.3
	Life expectancy at birth	City of Kitakyushu	83.8	79.6
	Transport-related mortality rates (deaths per 100 000 people)	City of Kitakyushu	2.0	9.4
	Mortality rates for the 0-4 year-old population	City of Kitakyushu	7.1	11.8

Source: OECD (2020[3]), *A Territorial Approach to the Sustainable Development Goals: Synthesis Report*, https://doi.org/10.1787/e86fa715-en; OECD (2020[2]), *Measuring the Distance to the SDGs in Regions and Cities (visualisation tool)*, http://www.oecd-local-sdgs.org/ (accessed on 15 July 2020).

In Kitakyushu, the share of physicians in the population is higher than on average in OECD regions. An important indicator regarding cities' and regions' performance in SDG 3 is the availability of active physicians, which refers to a human resource necessary to improve health results. In 2016, there were around 3.5 active doctors per 1 000 residents in the city. Overall, the physicians rate in Kitakyushu was higher than the average rate of active physicians in OECD regions (2.8). Around two-thirds of OECD regions have a lower number of active physicians per 1 000 people living in their region. In the Japanese context, Kitakyushu positively stands out in comparison to the average of Japanese regions (2.4 physicians per 1 000 people).

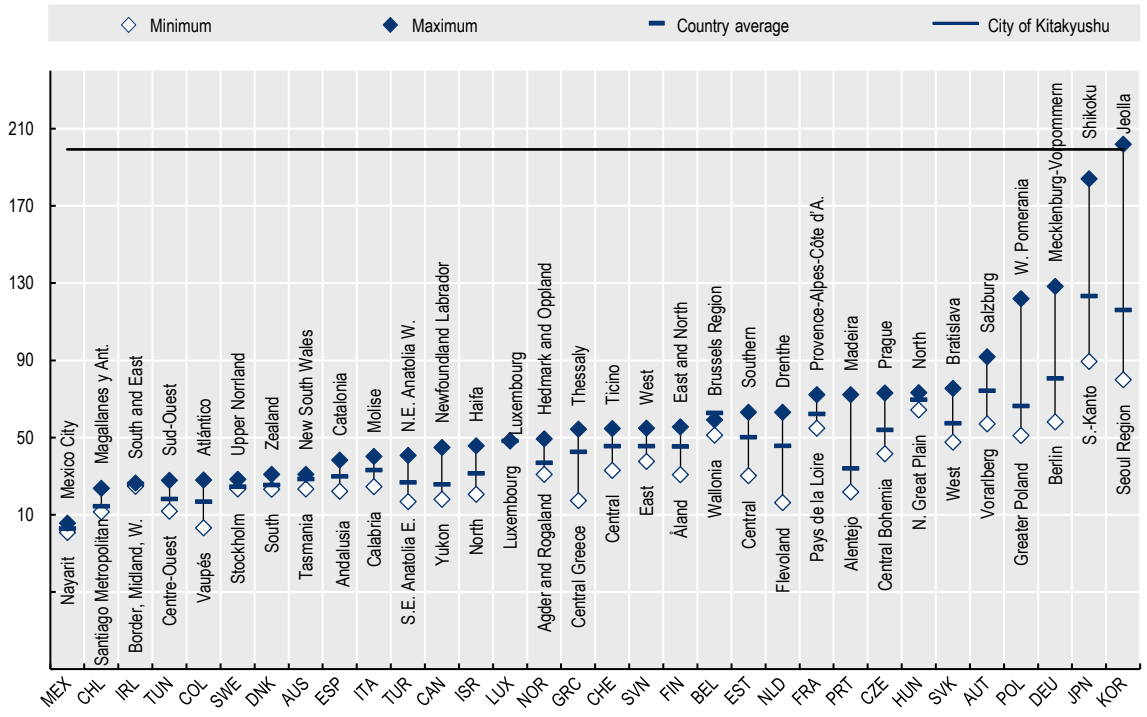
The city of Kitakyushu is among the OECD regions with the highest life expectancy. In addition to high per capita rates of hospital beds and physicians, Kitakyushu's residents benefit from a very high life expectancy. In 2015, the average life expectancy in Kitakyushu was around 83.8 years (80.4 years for men and 87.1 years for women) exceeding both the average of OECD regions (79.6 years) and the suggested end value based on the best-performing regions in the OECD (81.5 years). Overall, only 4% of OECD regions exhibit a higher average life expectancy than Kitakyushu. Moreover, the life expectancy in Kitakyushu exceeds the average of Japanese regions of 82.9 years. The high life expectancy highlights the need to address the challenges of an ageing society in Kitakyushu considering that the elderly (over 65 years of age) share of the population is expected to reach close to 40% by 2050 (OECD, 2016[6]).

Traffic-related mortality in Kitakyushu is very low. Another target of SDG 3 is to halve the number of global deaths and injuries from road traffic accidents. Kitakyushu is one of the cities in OECD countries that is already characterised by a low number of fatal road traffic accidents. In 2018, Kitakyushu recorded a total of 18 traffic accidents with fatalities, 19 people died. Considering Kitakyushu's population, its traffic mortality rate was at a low 2.0 deaths per 100 000 people.[4] In comparison, the average transport-related mortality rate of OECD regions of 9.4 deaths per 100 000 people is much higher. The city of Kitakyushu also has a lower traffic-related mortality rate than the Fukuoka prefecture (which has 2.7 traffic-related

death per 100 000 people) – where Kitakyushu is located – and other prefectures in Kyushu (which range from 2.6 to 3.9 traffic-related deaths per 100 000 people).

Figure 2.4. Hospital bed rate: Comparison across regions in relation to the city of Kitakyushu

Hospital beds per 10 000 people, circa 2015



Note: Netherlands (2002); Australia, Belgium, Estonia, Finland, France, Ireland, Italy, Slovenia, Turkey (2014); Austria, Chile, Colombia, Germany, Hungary, Israel, Mexico, Norway, Switzerland (2016).
Source: OECD (2020[7]), *OECD Regional Statistics (database)*, http://dx.doi.org/10.1787/region-data-en; data for Kitakyushu provided by the city of Kitakyushu.

Child-mortality in Kitakyushu is lower than the average of OECD regions but higher than in other Japanese regions. Target 3.2 has the objective to end preventable deaths of new-borns and children under 5 years of age. In this indicator, Kitakyushu performs better than the majority of OECD regions. Kitakyushu's mortality rate for the 0-4 year-old population (number of deaths per 10 000 people in the same age group) was at 7.1 in 2017 (27 deaths among a 0-4 year-old population of around 38 000) – undercutting the average of OECD regions (11.8 deaths) by close to 5 units. Around 70% of OECD regions exhibit higher mortality rates for the 0-4 year-old population than the city of Kitakyushu and are thus further away from reaching the SDG target. However, Kitakyushu's child mortality rate exceeds the average of Japanese regions (5.0 deaths per 10 000 people).

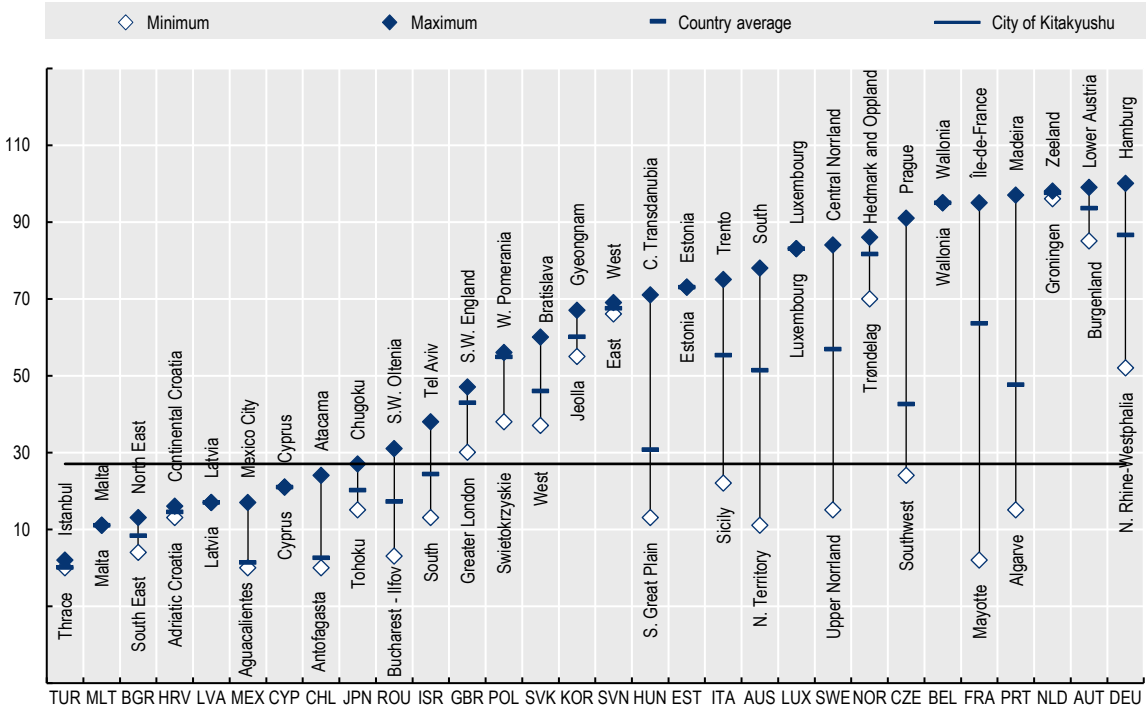
Planet: A high degree of terrestrial protection and tree cover but recycling rates and carbon-intensive electricity production are pressing issues

The city of Kitakyushu has made progress towards recycling municipal waste. As stated by SDG 12, ensuring sustainable consumption and production patterns is key to preserve the planet. In order to transform the planet into a more sustainable place, ensuring sustainable consumption and production patterns, the objective of SDG 12, is key. One of the targets (Target 12.5) to achieve this goal is to

substantially reduce waste generation through prevention, reduction, recycling and reuse. Kitakyushu has been working intensively to contribute to this target. Recycling rates have increased significantly since 2003 when the overall rate of recycled municipal waste was 15%. In 2018, 27% of its municipal waste got recycled (31.4% of households waste and 23% of the waste produced in the different businesses within the administrative boundaries of the city). This means that the city of Kitakyushu is the best performer in Japan regarding recycling (together with the region of Chugoku). Internationally, the city of Kitakyushu is nevertheless still lagging behind the average rate of recycled municipal waste in OECD regions (42.6%). Around half of the regions in the OECD recycle a higher share of their municipal waste compared to the city of Kitakyushu. The best-performing regions in OECD countries reach municipal recycling rates of 100% (Figure 2.5).[5]

Figure 2.5. Municipal waste – Recycling rates: Comparison across regions relative to the city of Kitakyushu

Percentage of municipal waste that is recycled, 2018



Note: Sweden (2010); Belgium, Romania (2012); Bulgaria, Croatia, Cyprus, Czech Republic, Estonia, Latvia, Luxembourg, Malta (2013); Turkey (2014); Chile, Norway, United Kingdom (2015), Japan except Kitakyushu, Mexico (2016); Australia, Italy, Netherlands (2017).
Source: OECD (2020[7]), *OECD Regional Statistics (database)*, http://dx.doi.org/10.1787/region-data-en; data for Kitakyushu provided by the city of Kitakyushu.

Electricity production in the FUA of Kitakyushu is more carbon-intensive than in OECD FUAs on average. In addition to sustainable production and consumption patterns, it is similarly important to take urgent action to combat climate change and its impacts, for instance through the reduction in greenhouse gas (GHG) emissions. The production of electricity can be an important factor in this context. This is the case for the FUA of Kitakyushu, which encompasses the city of Kitakyushu and 12 neighbouring municipalities, where the CO_2 emissions per electricity production reached close to 500 tons of CO_2 equivalent per gigawatt-hour in 2017. This is mainly due to 2 natural gas and coal-based power plants, located in the city of Kitakyushu and Kanda Town, operating to meet the demand of the industry in the area and the whole

Kyushu Region. To put it into perspective, the FUA of Kitakyushu's value for this indicator of SDG 13 exceeds the average of Japanese FUAs (around 305 tons per gigawatt-hour) by around 195 tons and the average of OECD FUAs (circa 340 tons per gigawatt hours) by about 160 tons. In order to catch up with the efficiency of the best-performing regions and reach the suggested end value of around 110 tons of CO_2 equivalent emissions per gigawatt-hour of electricity produced, emissions per electricity production would need to be reduced by nearly 80% by 2030.

Table 2.3. OECD indicators used to assess the dimension Planet in Kitakyushu

SDG	Indicator	Geographic area covered	Result	Average of OECD regions
	Percentage of municipal waste that is recycled	City of Kitakyushu	27.0	42.4
	CO_2 emissions per electricity production (in tons of CO_2 equivalent per gigawatt hours)	FUA of Kitakyushu	499.7	338.9 (Average of OECD FUAs)
	Protected coastal area as a percentage of total coastal area/ Terrestrial protected areas as a percentage of the total area	FUA of Kitakyushu	22.9	17.1/17.4 (Average of OECD FUAs)
	Tree cover as a percentage of the total area	City of Kitakyushu	39.7	37.7

Source: OECD (2020[3]), *A Territorial Approach to the Sustainable Development Goals: Synthesis Report*, https://doi.org/10.1787/e86fa715-en; OECD (2020[2]), *Measuring the Distance to the SDGs in Regions and Cities (visualisation tool)*, http://www.oecd-local-sdgs.org/ (accessed on 15 July 2020).

Shifting carbon-intensive electricity production towards cleaner methods (e.g. renewable energy) means a serious challenge for the FUA of Kitakyushu, given the size of required investment to meet the demand, potential risks of job losses in certain sectors and stranded assets). However, projects such as the Kitakyushu Hibikinada offshore wind farm indicate that the city has already started such efforts. The amount of electricity produced from solar energy is already the third-largest in the country and, as of 2017, the amount of electricity produced through wind energy was larger than in all other government-designated cities in Japan.

Kitakyushu Power Co., Ltd., a local energy company, established by the city of Kitakyushu in 2015 after the Great East Japan Earthquake 2011 and co-funded by local companies and financial institutions, is a front-runner on the pathway to achieving carbon-neutrality. The rationale was to form a local energy company that would be able to supply low-carbon, stable and low-price energy in and for Kitakyushu and thereby provide business opportunities in the city. In that sense, it follows the principle of "locally produced for locally consumed energy in order to supply low-carbon energy" (IGES, 2016[8]). In 2018, its CO_2 emission levels per kWh of electricity produced were only around one-tenth compared to the regional energy provider Kyushu Electric Power Company, Inc. (Ministry of Economy, Trade and Industry/Ministry of the Environment, 2020[9]).

The degree of coastal and terrestrial protection in the FUA of Kitakyushu is higher than the average in OECD FUAs. Conserving and sustainably using the oceans, seas and marine resources for sustainable development (SDG 14) is another objective of the 2030 Agenda. By applying geospatial analysis techniques to the World Database on Protected Areas (WDPA), the OECD modelled the share of coastal protected area of a region or city[6] (Mackie et al., 2017[10]). In the FUA of Kitakyushu, where 100% of the area falls under the category of coastal area using the abovementioned methodology, the share of coastal protected area was about 23% (of total coastal area) in 2017 compared to the average of OECD FUAs of 17%. Kitakyushu thus has a higher degree of coastal protection than 77% of OECD coastal FUAs. It was

also higher than the average degree of coastal protection in Japanese FUAs (18%). The same applies when considering the indicator of terrestrial protected areas, which equals the share of protected coastal area of 23%. The FUA of Kitakyushu exceeds the degree of terrestrial protection of more than 70% of OECD FUAs and the average of Japanese FUAs (20.3%).

Close to 40% of the area of the city of Kitakyushu are forests. The protection, restoration and promotion of sustainable use of terrestrial ecosystems and sustainable management of forests (SDG 15) is another key factor on the pathway to environmental sustainability. One of the indicators that the OECD localised framework uses to measure the achievement of this target is tree cover as a percentage of total area in a city or region. In the city of Kitakyushu (administrative borders), the share of forest areas as a percentage of the total city area is slightly higher than in the other OECD regions on average (39.5% of forest area in Kitakyushu in 2014 compared to 37.7% of tree cover in OECD regions in 2017). At the same time, it is lower than the average tree cover in Japanese regions (66%). This is of particular relevance in the context of Kitakyushu, as the restoration of trees is one of the most effective strategies for climate change mitigation (Bastin et al., 2019[11]).

Prosperity: High disposable income and low unemployment rates, however part-time employment remains a challenge

The city of Kitakyushu has made progress on the expansion of electricity production from renewable sources in the past five years. SDG 7 aims at ensuring universal access to affordable, reliable and modern energy services, particularly by substantially increasing the share of renewable energy in the global energy mix. The city of Kitakyushu is making progress on this pathway. Between 2015 and 2019, Kitakyushu has increased its annual electricity generation capacity from renewable energy sources (solar, wind, hydro, geo-thermal and biomass) by close to 50%, from 279 000 kW to 411 000 kW (Agency for Natural Resources and Energy of Japan, 2021[12]).

Table 2.4. OECD indicators used to assess the dimension Prosperity in Kitakyushu

SDG	Indicator	Geographic area covered	Result	Average of OECD regions
	Employment rate (%)	City of Kitakyushu	50.2	61.8
	Unemployment rate (%)	City of Kitakyushu	5.5	7.6
	Gender gap in unemployment rate (percentage points)	City of Kitakyushu	-1.9	2.0
	Part-time employment incidence (%)	City of Kitakyushu	26.1	17.9
	Percentage of foreign-born among the total population	City of Kitakyushu	1.0	10.0
	Manufacturing employment as a percentage of total employment	City of Kitakyushu	11.4	12.5
	Annual growth rate of real GDP per capita (%)	City of Kitakyushu	-0.8	0.9
	Average disposable income per equivalised household (in USD purchasing power parity, constant prices of 2010)	City of Kitakyushu	27 325	23 051

SDG	Indicator	Geographic area covered	Result	Average of OECD regions
	Exposure to PM2.5 in µg/m³, population-weighted (micrograms per cubic metre)	FUA of Kitakyushu	12.1	12.7 (Average of OECD FUAs)

Source: OECD (2020[3]), *A Territorial Approach to the Sustainable Development Goals: Synthesis Report*, https://doi.org/10.1787/e86fa715-en; OECD (2020[2]), *Measuring the Distance to the SDGs in Regions and Cities (visualisation tool)*, http://www.oecd-local-sdgs.org/ (accessed on 15 July 2020).

The unemployment rate in Kitakyushu is lower than the average of OECD regions, while employment rates reveal some potential for improvement. SDG 8 has the objective to "promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all". In 2015, the latest year with available data, the employment rate of the city of Kitakyushu amounted to 50.2% compared to the OECD average (61.8%) and the average of Japanese regions (57.3%) (2014 value). On the other hand, in 2015, Kitakyushu's unemployment rate was about 5.5% of the city's labour force, well below the average of OECD regions (7.6%) and close to the suggested end value of 5% based on the best-performing regions. OECD-wide, about 60% of the member countries' regions show higher unemployment rates, although Japan-wide data shows that Kitakyushu's unemployment rate is higher than that of all the regions conforming to the Kyushu Region (to which Kitakyushu belongs) (Figure 2.6).

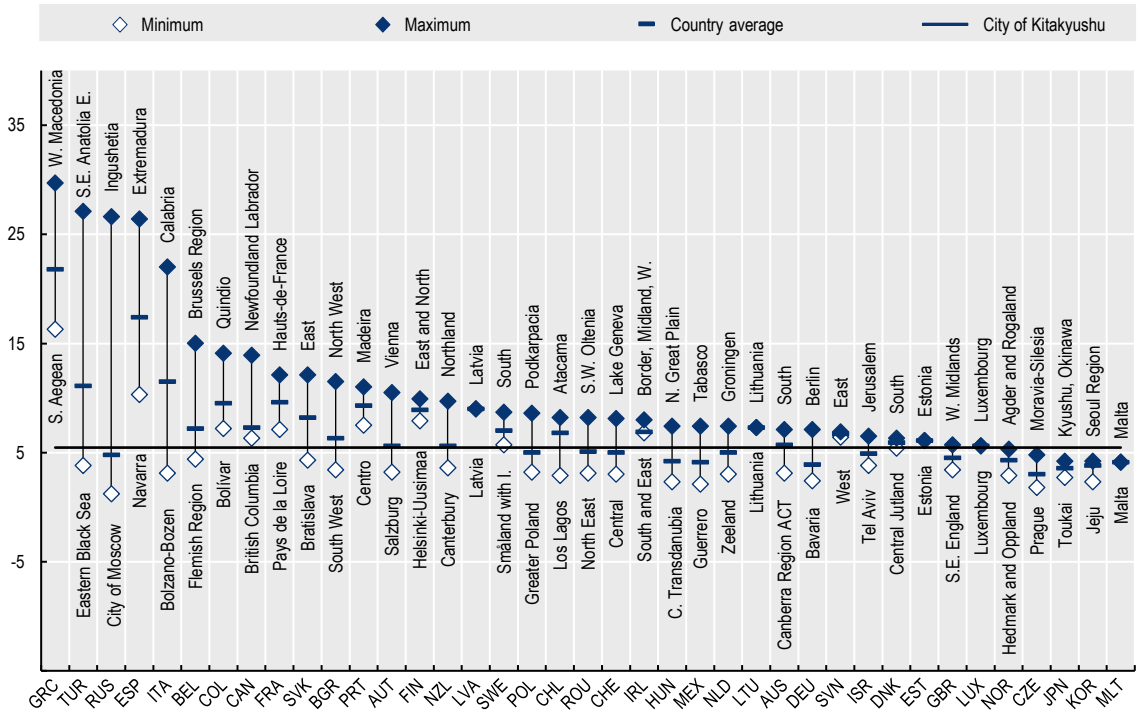
The unemployment rate among women in Kitakyushu is lower than the corresponding rate among men. As outlined in Chapter 1, unemployment in Kitakyushu is unequally distributed between men and women. While 4.4% of the female labour force was unemployed in 2015 (8 718 out of 196 457 women), the value for men reached 6.3% (15 353 out of 242 705 men). While the end value of 0 percentage points suggests the desired outcome of equally low unemployment rates between men and women, the result of the city of Kitakyushu stands in contrast to the vast majority of OECD regions, where the unemployment rates for women are higher than for men.

Part-time employment is more widespread in the city of Kitakyushu than in the average of OECD regions. SDG Target 8.5 aims at reaching full and productive employment for all women and men. In 2015, however, more than 100 000 people in the city of Kitakyushu were employed in part-time jobs, corresponding to a share of around 26% of overall employment in the city. Hence, Kitakyushu's part-time employment incidence lies significantly above the OECD regional average of 18%. It was similar but slightly higher than the average of Japanese regions in 2015 (25%). While part-time employment comes with more flexibility for employees, it also leads to lower salaries and can mean a higher risk of poverty for the part-time employed (Horemans, 2017[13]). The suggested end value to be reached by 2030 is therefore considerably lower, set at 15% based on the best-performing regions in OECD countries.

Less than 1% of Kitakyushu's population are foreigners. Foreign-born residents can be an important factor in labour market dynamics. In Kitakyushu, the share of foreigners among the population is quite low, which reflects a general pattern in Japan. In 2015, around 10 000 people living in Kitakyushu were not Japanese, which corresponds to a share of about 1% of the foreign population. This is similar to the share of the foreign population in the Fukuoka prefecture overall (0.9% in 2015) and lower than the national average of 1.4% in 2015. A comparison with other OECD regions reveals larger disparities. In the OECD context, Kitakyushu's share of the foreign population is comparatively low considering that the average share of foreign-born among the total population in OECD regions is about 10%. 85% of OECD regions exhibit a higher share of the foreign-born population. Attracting more people from abroad could play a crucial role in diversifying the workforce in the labour markets and boosting innovation in Kitakyushu.

Figure 2.6. Unemployment rates: Comparison across regions relative to the city of Kitakyushu

Unemployment rate (%), 2017



Note: Japan (2015); Australia, Canada, Chile, Colombia, Korea, Israel, Mexico, New Zealand (2016), Russia (2017).
Source: OECD (2020[7]), *OECD Regional Statistics (database)*, http://dx.doi.org/10.1787/region-data-en; data for Kitakyushu: Statistics Bureau of Japan (2020[14]), *Portal Site of Official Statistics of Japan*, https://www.e-stat.go.jp/en (accessed on 3 July 2020).

Kitakyushu's industrial heritage is only partially mirrored in its share of manufacturing employment. As illustrated in Chapter 1, Kitakyushu has long been characterised by a large manufacturing sector. Due to changes in its industrial structure, following a decline in manufacturing output in the past decades and rising importance of the services sector, manufacturing employment has decreased over the past decades. In 2015, it accounted for around 11% as a share of the city's total employment. Kitakyushu's manufacturing employment rate thus lies slightly below the average of OECD regions (12.5%) and equals the median value. Due to the different characteristics of OECD cities and regions, this indicator of SDG 9 Industry, Innovation and Infrastructure is only of informative nature and does not have an end value to be achieved by 2030.

Disposable income per equivalised household in the city of Kitakyushu is higher than in OECD regions on average. Reducing inequalities and ensuring no one is left behind (SDG 10) is integral to achieving the SDGs and often related to income among other factors. In the city of Kitakyushu, the average disposable income per equivalised household (in USD purchasing power parity, constant prices of 2010) in 2016 reached around USD 27 300. By comparison, the average in OECD regions was about USD 23 000 in 2013. That means that the disposable household income in Kitakyushu is higher than in around 60% of regions in the OECD. One has to consider in that context, however, the income in cities tends to be higher than in rural areas. To illustrate, the average disposable income per equivalised households in OECD cities (FUAs) is about USD 28 800, around USD 6 000 higher than in OECD regions on average. This partially relativises the comparison between the income levels in the city of Kitakyushu and the average of OECD regions (which encompass both urban and rural areas).

Real GDP per capita growth rates are lower than the average of OECD regions. The per capita income growth rate is another indicator included in the OECD framework for SDG 10. Here, Kitakyushu shows the potential to catch up with other OECD regions. Between 2015 and 2016, the latest years available, the annual growth rate of real per capita GDP in the city was slightly negative, reaching -0.8%. In comparison, the average of OECD regions is 0.9%. The result however needs to be seen in the context of Kitakyushu's fluctuating growth rates over the past years. GDP growth rates in earlier years such as 2010, 2013 and 2014 suggest much higher and positive real GDP per capita growth rates.

Residents' exposure to air pollution in the FUA of Kitakyushu is below the average of OECD FUAs but exceeds World Health Organization (WHO) guidelines. Air pollution is one of the main concerns in densely populated areas around the world. SDG Target 11.6 therefore envisages reducing the adverse environmental impacts of cities, including air pollution. In the FUA of Kitakyushu, the average annual level of exposure to small particulate matter with a diameter of 2.5 microns or less ($PM_{2.5}$) in 2019 was 12.1 µg/m³ (population-weighted, micrograms per cubic metre). While the average annual exposure of $PM_{2.5}$ is nevertheless lower than in OECD FUAs on average (12.7 µg/m³) – and has improved compared to 2005 (15 µg/m³), it still exceeds the WHO air quality guideline value of 10 µg/m³ average annual exposure – which is the suggested end value for 2030 (WHO, 2018[15]). The value was also slightly higher than the average annual exposure in Japanese FUAs, which was at 11.1 µg/m³ in the same year but lower than the average annual exposure in FUAs of its neighbouring country South Korea (25.8 µg/m³). In that context, it however has to be considered that some studies (e.g. Kaneyasu et al. (2014[16]), Yoshino et al. (2016[17])) indicate that parts of the $PM_{2.5}$ exposure in the northern Kyushu area of Japan are resulting from an inflow of long-range transported aerosols from neighbouring countries on the Asian continent.

Peace: Safety is one of Kitakyushu's assets

The city of Kitakyushu is a very safe place to live in. The lack of safety is one of the major threats to the achievements of sustainable development. The UN therefore pursues the target to significantly reduce all forms of violence and related death rates everywhere (SDG Target 16.1). Kitakyushu is one of the cities in the OECD, where personal safety does not need to be considered challenging. With a homicide rate of around 0.7 murders per 100 000 persons in 2019, the prefecture of Fukuoka, in which the city of Kitakyushu is located, can be considered a very safe region in comparison to most OECD regions. The value for this indicator in Kitakyushu is well below the average of OECD regions of 5.3 homicides per 100 000 people (Figure 2.7). This is in line with the generally low homicide rates in other Japanese regions. The average rate of 0.7 killings per 100 000 in Japanese regions in 2015 is equal to the value in the prefecture of Fukuoka. In addition, the city of Kitakyushu has registered a steady decrease in criminal offences over the past years suggesting a positive development in terms of safety. While the number of criminal offences registered in the city was around 9 700 in 2015, the city registered around 6 100 criminal offences in 2019, a decline of 37% within 4 years (Fukuoka Prefectural Police, 2020[18]).

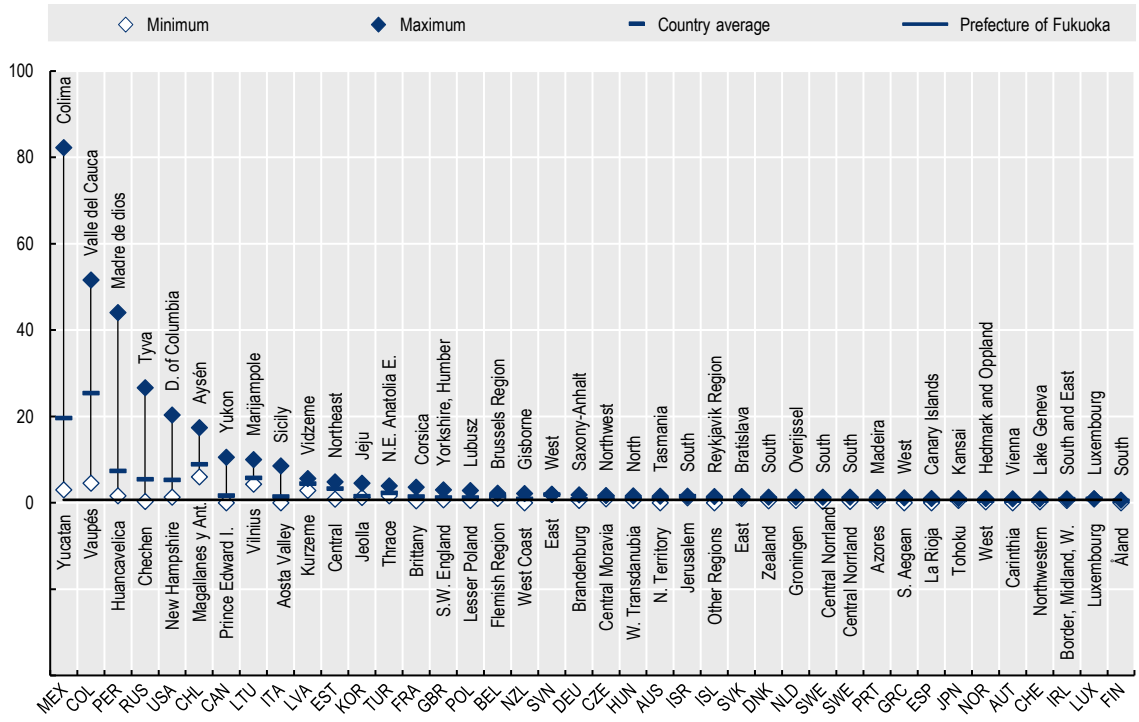
Table 2.5. OECD indicators used to assess the dimensions Peace and Partnership in Kitakyushu

SDG	Indicator	Geographic area covered	Result	Average of OECD regions
	Homicides per 100 000 persons	Prefecture of Fukuoka	0.72	5.34

Source: OECD (2020[3]), *A Territorial Approach to the Sustainable Development Goals: Synthesis Report*, https://doi.org/10.1787/e86fa715-en; OECD (2020[2]), *Measuring the Distance to the SDGs in Regions and Cities (visualisation tool)*, http://www.oecd-local-sdgs.org/ (accessed on 15 July 2020).

Figure 2.7. Homicide rate: Comparison across regions relative to the city of Kitakyushu

Homicides per 100 000 people, 2016



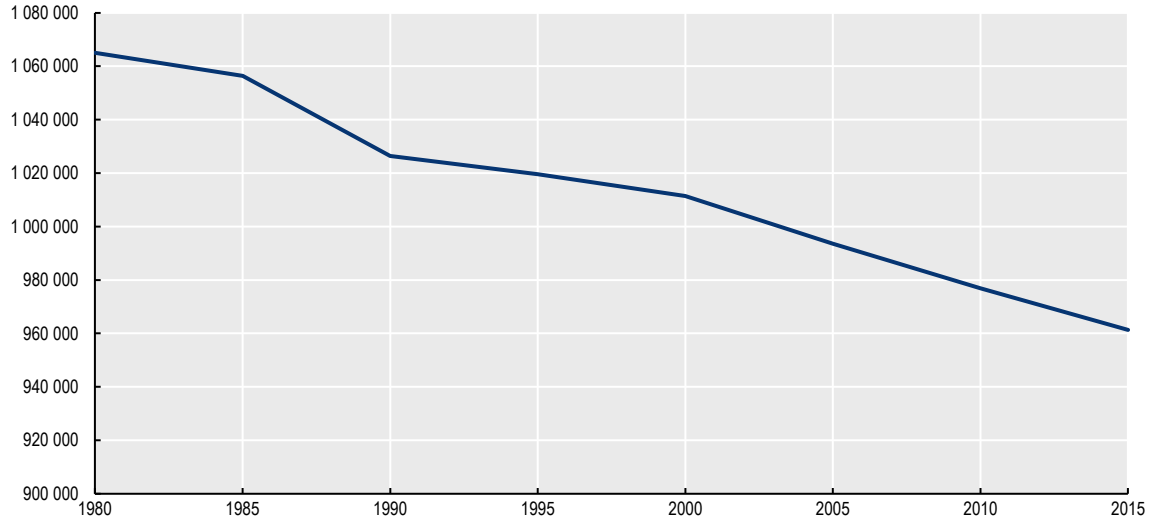
Note: Netherlands (2009); Slovenia (2012); Italy (2013); New Zealand, Peru, Turkey (2014); Israel, Japan, Korea, Latvia, Lithuania (2015); Germany (2018).
Source: OECD (2020[7]), *OECD Regional Statistics (database)*, http://dx.doi.org/10.1787/region-data-en; data for Kitakyushu provided by the city of Kitakyushu.

Tackling demographic change in the city of Kitakyushu

A major challenge for Kitakyushu is the city's population decline. Kitakyushu's population peaked in 1979 and has been declining since then. Between 1980 and 2015, the city of Kitakyushu has lost more than 100 000 residents, down from around 1 065 000 to 961 000, which corresponds to a decrease of about 10% (OECD, 2021[5]) (Figure 2.8). Although migration patterns have improved in the last decades, the city has experienced net outmigration since the mid-1960s (Figure 2.9). There is a tendency for young people to leave the city, including a significant number of students who leave the city after graduation to seek opportunities elsewhere. It is a challenge for Kitakyushu to attract students from other cities or to retain educated workers. There have been improvements in intra-country migration patterns, even though net outmigration is still negative (OECD, 2013[19]). One potential factor for this trend is that the gross income per taxpayer in Kitakyushu is lower than in the majority of the other major Japanese cities. Kitakyushu, therefore, pursues the objective to further improve its attractiveness and job market perspectives by strengthening forward-looking and innovative industries and employment opportunities that help improve local income, such as the concentration of wind power generation industries (City of Kitakyushu/IGES, 2018[20]). The economic sectors connected to the environmental dimension, such as innovative fields (eco-industries, offshore wind power generation and ecotourism, etc.) or culture could provide additional job opportunities to youth, the elderly, women and foreign workers, and promote social cohesion through intergenerational solidarity.

Figure 2.8. Population development in Kitakyushu, Japan, 1980 to 2015

Number of residents in the city of Kitakyushu, all ages

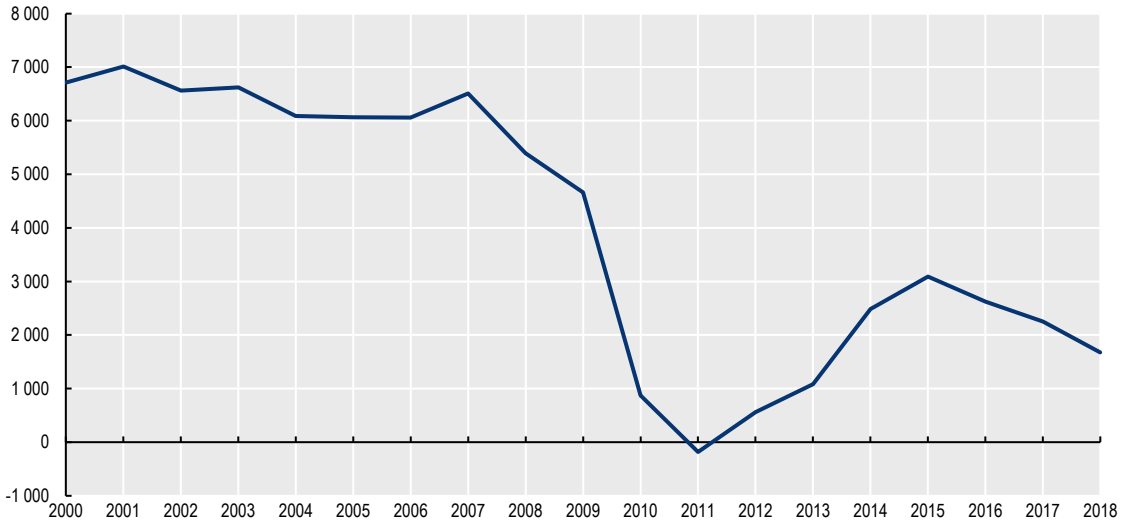


Source: Statistics Bureau of Japan (2020[14]), *Portal Site of Official Statistics of Japan*, https://www.e-stat.go.jp/en (accessed on 3 July 2020).

Kitakyushu's population decline coincides with a growing elderly dependency rate. In addition to outward migration, population ageing has become widespread in Kitakyushu. In 2016, the ageing rate of people aged 65 or above reached 29.6% turning Kitakyushu into the city with the fastest-growing ageing population of all ordinance-designated cities in Japan (City of Kitakyushu/IGES, 2018[20]). These trends are also reflected in one of the highest elderly dependency rates[7] among OECD regions. The ageing-phenomenon is however not limited to Kitakyushu. Since the late 1990s, Japanese annual population growth rates overall have slowed and became negative in 2008. Today, Japan is one of the most rapidly ageing countries in the world primarily caused by a steady decline of the natural birth factor since the late 1960s (OECD, 2013[19]). The high life expectancy in Japan and Kitakyushu is a crucial contributory factor in that regard. The country's population is expected to further decline by around 23% between 2010 and 2050, with the elderly (over 65 years of age) share of the population rising to almost 40% by mid-century (OECD, 2016[6]). While the city needs to adapt its infrastructure to the needs of the rising share of elderly among the population, it will also be important to improve the living environment for young families. This concerns childcare facilities and nursery systems as well as other support schemes for families and working parents, which could also be a means to attract more young people to the city.

Figure 2.9. Net outflow of population in Kitakyushu, 2000-18

Net outflow of Kitakyushu residents per year to other municipalities (number of people migrating out of Kitakyushu to other municipalities minus number of people migrating to Kitakyushu from other municipalities)



Source: Statistics Bureau of Japan (2020[14]), *Portal Site of Official Statistics of Japan*, https://www.e-stat.go.jp/en (accessed on 3 July 2020).

The development and monitoring process of SDG indicators in Kitakyushu

The city of Kitakyushu is also developing a framework for the monitoring process of its SDG achievements at the local level. Kitakyushu is working on the establishment of SDG indicators in all its major policy plans. Kitakyushu's Planning and Coordination Bureau monitors indicators for comprehensive strategies like the Kitakyushu City Master Plan, the Comprehensive Strategy for Overcoming Population Decline and Vitalizing Local Economies and the SDGs Future City that span across different departments of Kitakyushu's administration. Its statistics department compiles and publishes key indicators relevant to local citizens, including data on population, trade, electricity, gas and water supply, waste treatment, fire prevention and emergency incidents, among others.

Overall, more than 80 indicators have already been developed to measure progress related to the SDGs. Under its plan for the SDGs Future City, the city has established 22 indicators in collaboration with the national government. The Kitakyushu Basic Environment Plan is another key plan for the implementation of the SDGs and was revised in 2017 adding the subtitle "Environmental Capital & SDGs Realization Plan". Its framework includes 37 indicators to measure progress related to the SDGs, which are monitored annually. The 37 indicators in the Basic Environment Plan, covering 13 of the 17 SDGs, and the 22 indicators of the SDGs Future City Plan are further complemented by more than 20 indicators in other administrative plans of the city as well as the Kitakyushu statistical yearbook. Overall, 84 indicators are currently available. Each bureau and department of the city administration monitors data for relevant SDGs related to their policy domains. For example, the Environment Bureau covers areas such as greenhouse gas emissions, air pollution and water quality. In addition, most bureaus and departments undertake project-based monitoring to verify the results of specific projects. The General Affairs Bureau is in charge of compiling these results in an annual report. In 2017, it contained information and results of a total of 519 projects. Moving forward, the city of Kitakyushu could consider harmonising and aggregating the different indicators measured by the various departments to create a holistic indicator framework that spans across all 17 SDGs such as the OECD localised indicator framework for measuring distance to the SDGs in cities and regions.

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Notes

[1] While 122 indicators (covering 59% of the subnational SDG targets) are available for regions, only 56 indicators (covering 32% of the subnational SDG targets) are currently available 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.

[2] The OECD defines large regions (TL2) as the first administrative tier of subnational governments. Large regions (TL2) also include "administrative cities" that belong to the first administrative tier of subnational government.

[3] The four indicators that consider data from the FUA of Kitakyushu are: i) CO_2 emissions per electricity production (in tons of CO_2 equivalent per gigawatt hours); ii) Protected coastal area as a percentage of total coastal area; iii) Terrestrial protected areas as a percentage of total area; and iv) Exposure to $PM_{2.5}$ in $\mu g/m^3$, population weighted (micrograms per cubic metre).

[4] The traffic mortality rate was calculated using the latest available population data from 2015 (961 286 people), whereas the traffic accident statistics are from 2019.

[5] Recycled municipal waste includes waste that undergoes material recycling, composting or energy recovering. Landfilling is excluded.

[6] Going beyond administrative boundaries, the coastal area is here defined as the overlap between the regional or city area and a buffer of 50 km from the coastline (this can include the area of regions or cities without a coastline but within 50 km from it).

[7] Data for elderly dependency rates refers to the whole Fukuoka prefecture.

3 The SDGs as a means to strengthen multi-level governance and stakeholder engagement for sustainability

The Sustainable Development Goals (SDGs) provide an opportunity to advance the collaboration between the city of Kitakyushu and other different levels of government in Japan. The national SDGs Promotion Headquarters aims to co-ordinate a whole-of-government approach to the 2030 Agenda and promote regional development through the SDGs. Inspired by the national government, Kitakyushu has established a similar governance framework to implement the SDGs at the local level, including through the creation of its SDGs Future City Promotion Headquarters, the SDGs Council and the SDGs Club. Through the engagement of stakeholders from civil society to the private sector and academia, Kitakyushu seeks to raise awareness on the shared responsibility behind the 17 SDGs.

Kitakyushu's contribution to the multi-level governance of the SDGs

The national governance and institutional framework for the SDGs

In May 2016, the Japanese government created the SDGs Promotion Headquarters, chaired by the Prime Minister. The aim of this initiative is to promote effective actions to achieve the SDGs at all levels in the country, and co-ordinate the work of all government institutions relevant to the 2030 Agenda in an integrated way. The SDGs Promotion Headquarters defined guiding principles for the implementation of the SDGs based on SDGs Promotion Roundtable Meetings, which brought together various stakeholders including the government, non-governmental organisations (NGOs) and non-profit organisations (NPOs), experts, the private sector and international organisations (Ministry of Foreign Affairs of Japan, 2020[1]). The guidelines include eight priorities to meet the five critical dimensions of the 2030 Agenda (SDGs Promotion Headquarters Japan, 2019[2]):

1. Realisation of gender equality and a society where every person can play an active role (People);
2. Achievement of good health and longevity (People);
3. Creating growth markets, revitalisation of rural areas and promoting science, technology and innovation (Prosperity);
4. Sustainable and resilient land use, promoting quality infrastructure (Prosperity);
5. Energy conservation and renewable energy, disaster risk reduction and climate change countermeasures, sound material-cycle society (Planet);
6. Conservation of biodiversity, forests and oceans, and other environments (Planet);
7. Achieving peaceful, safe and secure societies (Peace); and
8. Strengthening the means and frameworks for the implementation of the SDGs (Partnership).

The SDGs Promotion Headquarters also foresees an SDGs Action Plan with specific measures. Based on the United Nations (UN) Guiding Principles, the SDGs Action Plan has the objective to organise specific government measures and their budgets while showcasing how they contribute to the SDGs and how each project contributes to the goals in the priority areas by 2030 (SDGs Promotion Headquarters Japan, 2019[2]) (Box 3.1). The Action Plan was first released in December 2017 and is revised every six months by the SDGs Promotion Headquarters taking into account the contributions of stakeholders.

Box 3.1. The SDGs Action Plan of Japan

The SDGs Action Plan includes three key pillars, namely: i) the promotion of a "Society 5.0"[1] linked to the SDGs; ii) regional revitalisation driven by the SDGs and development of an attractive community that is resilient and environmentally friendly; and iii) the empowerment of future generations and women as promotors of the SDGs (Figure 3.1).

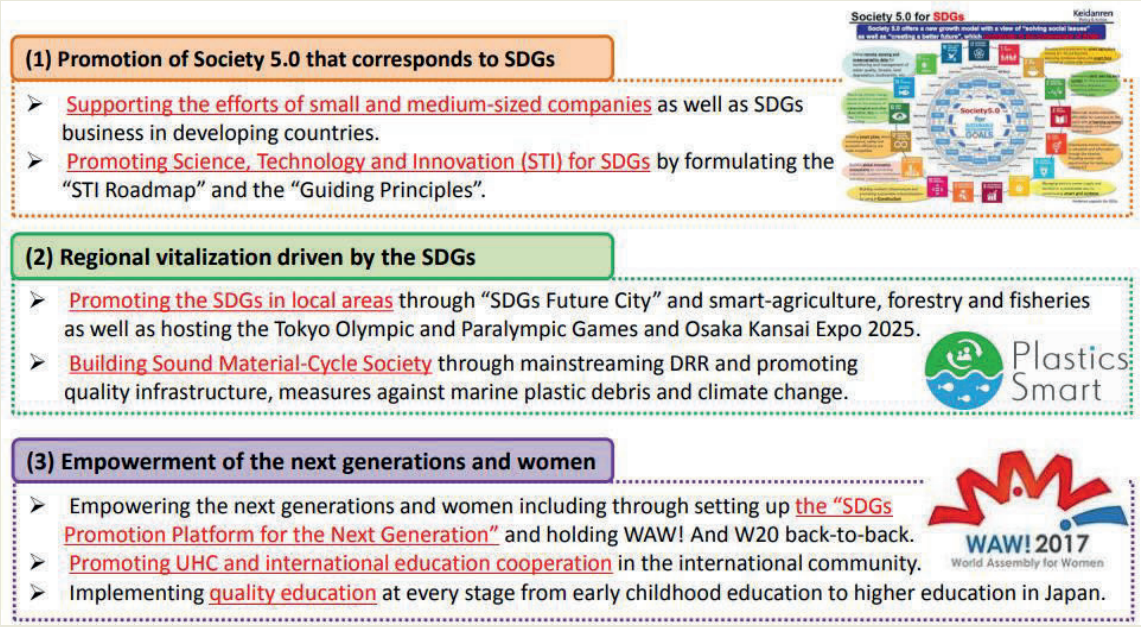
More specifically, the government of Japan wants to support the implementation of the SDGs in the business sector and use science and technology innovation as an accelerator of the SDGs achievements (Pillar 1). It further wants to link the SDGs to regional revitalisation, create resilient cities and a circular economy (Pillar 2). Additionally, it puts emphasis on the empowerment of future generations and women, for instance through the promotion of women's active participation in various fields, the promotion of diversity and accessibility, and the issues of education and health (Pillar 3).

The government of Japan also promotes gender equality as a cross-cutting issue to be mainstreamed in addressing different topics of the plan. The different measures implemented under the scope of the action plan should follow a number of principles, which are directly described in or derived from the

2030 Agenda: i) universality; ii) inclusiveness; iii) a participatory approach; and iv) an integrated approach and transparency and accountability.

Source: (Ministry of Foreign Affairs of Japan, 2020[3]).

Figure 3.1. The three pillars of the Japanese SDGs Action Plan



Source: Ministry of Foreign Affairs of Japan (2019[4]), "Japan's efforts for promoting the SDGs", https://sustainabledevelopment.un.org/content/documents/21603JAPANS_EFFORTS_FOR_PROMOTING_THE_SDGS.PDF (accessed on 1 July 2020).

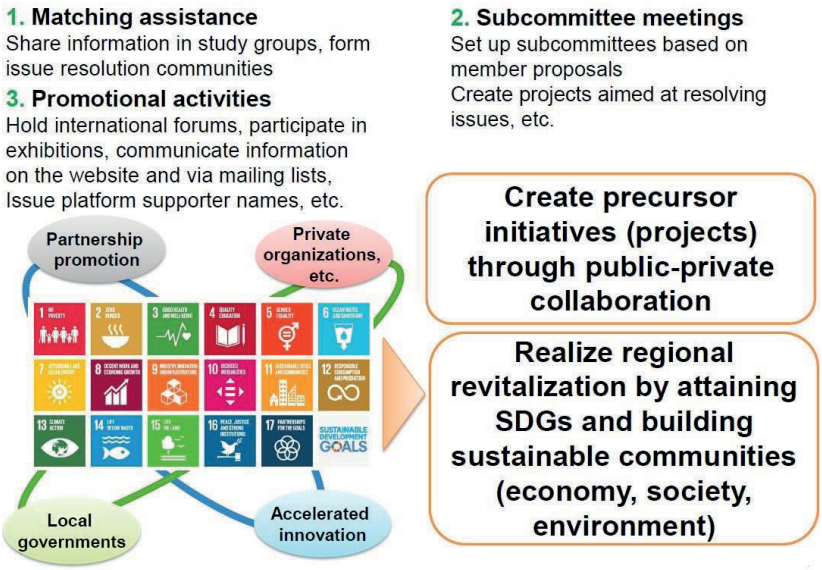
A special feature of the Japanese national framework is its linkage between the SDGs and the idea of regional revitalisation. For the Japanese government, regional revitalisation means the curbing of population imbalances, notably addressing the disparity between the population concentration in the Tokyo area on the one hand and the increasing number of regions with declining population on the other hand. Local governments and initiatives aimed at the achievement of the SDGs at the local level are seen as important factors that contribute to sustainable community building and regional innovation to overcome population decline and the shrinkage of local economies. In order to support local governments in their efforts to tackle the impact of the population decline in many Japanese cities and regions, the second pillar of the Japanese SDGs Action Plan therefore focuses on the localisation of the SDGs and the promotion of SDGs initiatives by local governments (Government of Japan, 2019[5]). Using the SDGs Promotion Headquarters, the government of Japan promotes the initiatives of local governments to achieve the SDGs through different activities. These include:

- Awareness-raising activities among local governments, for instance through holding international fora to exchange knowledge among SDG stakeholders as well as through support to local governments in the organisation of awareness-raising events on the SDGs.
- Financial support for model projects that are expected to create an added value in the three dimensions (economic, social, environmental) of the SDGs and promote sustainable development at the local level at large. An initiative through which the government of Japan selected 29 local governments as SDG Future Cities is one example of this support scheme. In

particular, ten of the 29 initiatives carried out by these cities, including Kitakyushu, were selected to become SDG model projects. Being awarded such a status includes financial support by the government – approximately USD 5 million for the 10 cities in 2018 – to implement the SDGs strategy (see Annex 3.A).

Engaging the private sector in the implementation of the 2030 Agenda is a priority of the Japanese government, both at the national and the local level. Therefore, the government has launched the SDGs Public-Private Partnership Platform for Regional Revitalisation in August 2018, which is chaired by the Mayor of Kitakyushu. The main goal of the platform is the promotion of the SDGs in Japan and the advancement of regional innovation (Figure 3.2). In order to achieve that objective, the platform is active in bringing together different actors and knowledge from the private sector and local governments working on the SDGs and regional innovation. It also sets up subcommittees to discuss projects and proposals raised by its member organisations to foster the achievement of the SDGs in Japan. In addition, the platform also holds international fora, participates in exhibitions and communicates information on the SDGs on their website and via mailing lists. Platform membership has grown from 434 organisations at its establishment to 4 171 organisations as of 31 December 2020, of which more than 3 300 are private companies, and more than 800 local governments (Murakami, 2021[6]). The Cabinet Office also created an expert research panel to report on the importance of SDGs for regional revitalisation finance. In this group, a wide variety of stakeholders in the regions collaborate to generate cash flow through business activities aimed at the achievement of the SDGs for regional revitalisation while seeking to resolve regional issues and reinvest the profits in the regions.

Figure 3.2. Key elements of the SDGs Public-Private Partnership Platform for Regional Revitalisation



Source: Government of Japan (2019[5]), "Promoting SDGs that create regional revitalization", https://future-city.go.jp/data/pdf/event/2019/20190213_Hakaru_Tamura_en.pdf.

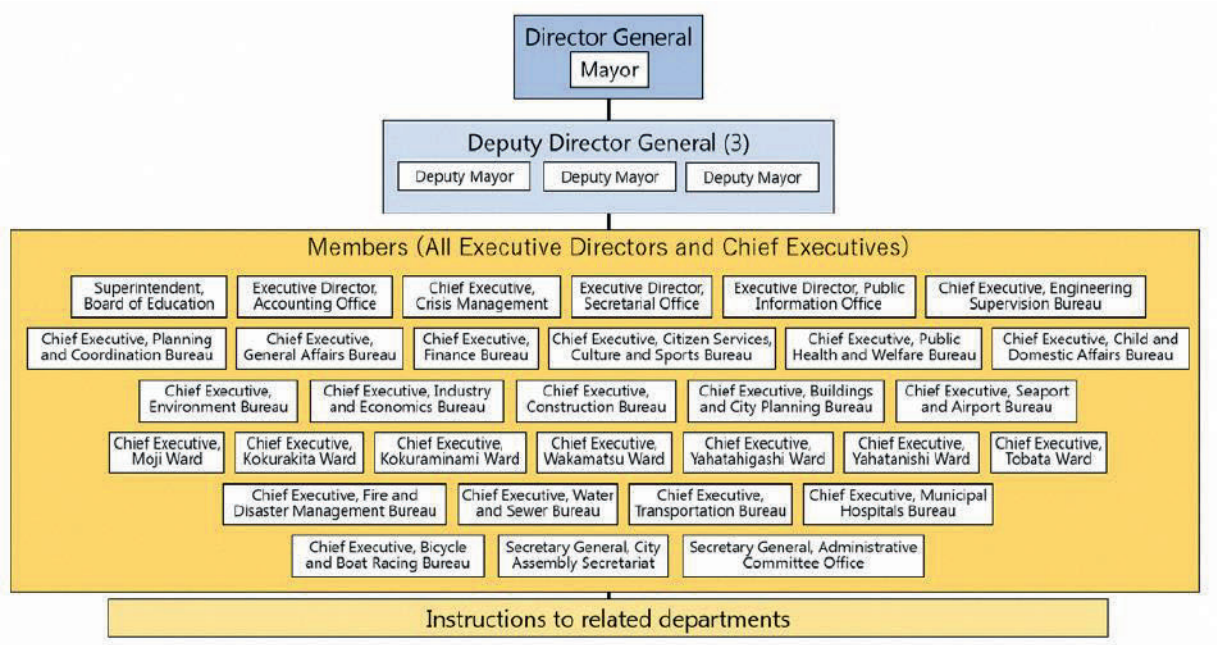
The government is using international events to promote the activities of local governments on the SDGs. One example is the G20 Summit and Ministerial meetings 2019 in Japan, where the Japanese G20 presidency proposed frameworks, principles and projects addressing seven key areas related to the SDGs, namely quality infrastructure, disaster risk reduction, marine plastic litter, climate change, empowerment of women, health and education. In the G20 Osaka Leaders' Declaration, G20 leaders reaffirmed their commitment to address major global issues and environmental challenges and to achieving the SDGs.

The Tokyo Olympics and Paralympics Games, planned for 2021, incorporate a Sustainability Management Plan in their planning. In November 2018, the UN and the organisers of the Olympics and Paralympic Games in Japan moreover signed an agreement to emphasise the important contribution of sports in order to achieve the SDGs by 2030 (UN News, 2018[7]). Some examples of such commitments to mitigate the contribution of apparel and footwear production to global greenhouse gas emissions include Japan's Olympic and Paralympic teams set to wear official sportswear produced from donated and recycled textiles, and podiums to be made of plastic waste (UN, 2020[8]).

The institutional framework for the SDGs at the local level

Consistency with the national SDGs framework is one of Kitakyushu's priorities. Inspired by the national SDGs Promotion Headquarters, the city of Kitakyushu has established an institutional and governance framework to implement the SDGs in its territory. The framework aims at engaging all key stakeholders in the city, including various departments of the local administration, the private sector, civil society and academia. In July 2017, the city first created an internal working group with representatives of various departments to discuss how to implement the SDGs in Kitakyushu and to share information about the 2030 Agenda. Building on those discussions, the city established the Kitakyushu City SDGs Future City Promotion Headquarters in February 2018 with the aim of strengthening the collaboration and co-ordination across departments. The headquarters are under the direct leadership of the mayor (Figure 3.3). As part of its participation of the SDGs Future City initiative, Kitakyushu also cooperates with the national SDGs Promotion Headquarters as well as national level ministry task forces and experts related to the promotion of the SDGs localisation (City of Kitakyushu/IGES, 2018[9]).

Figure 3.3. SDGs Future City Promotion Headquarters of the city of Kitakyushu

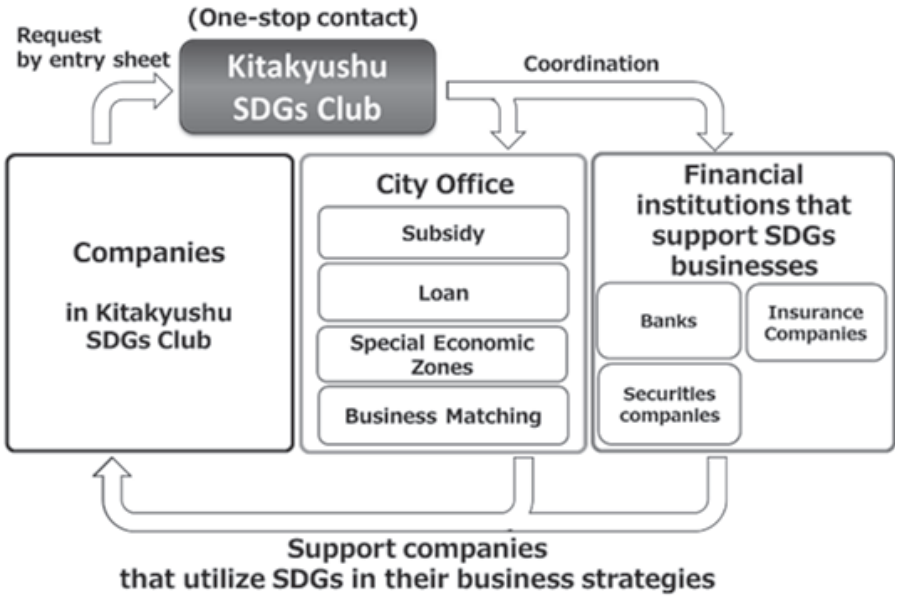


Source: City of Kitakyushu/IGES (2018[9]), *Kitakyushu City the Sustainable Development Goals Report 2018 – Fostering a Trusted Green Growth City with True Wealth and Prosperity, Contributing to the World*, https://www.iges.or.jp/en/publication_documents/pub/policyreport/en/6569/Kitakyushu_SDGreport_EN_201810.pdf.

The city also established the Kitakyushu City SDGs Council to provide advice on actions and directions regarding the implementation of the SDGs through the engagement of various stakeholders from civil

society, the private sector and academia. It consists of eight experts from environmental, economic and social professions. In addition, Kitakyushu has created the Kitakyushu SDGs Club that plays an important role in the local governance scheme. Its aim is to raise awareness of the 2030 Agenda by promoting SDG activities and collaboration among members. Access to the SDGs Club is free and open to everybody. The number of registered members has been increasing sharply since its foundation in 2018 from 451 to above 1 278 as of 30th April 2021 (455 companies, 201 organisations, 240 schools, 382 citizens). Registered members include regular citizens, companies, NPOs and schools, among others. One of the main activities of the club is the promotion of business collaborations between local companies, local financial institutions and the city itself in order to stimulate SDG-related activities in local small- and medium-sized enterprises (SMEs). The club provides a one-stop-contact for business support services that allows the simplification of access to funding. In addition, in collaboration with 19 financial institutions based in the city, Kitakyushu city has created a loan system for local companies working on the SDGs (Figure 3.4). The Kitakyushu SDGs Club also features "project teams", which work on solving region-specific issues through the co-operation between club members. As an example, one of the project teams is working on an action plan to improve the capabilities of regional disaster prevention in Kitakyushu in collaboration with several high schools in the city.

Figure 3.4. The Kitakyushu SDGs Club as a one stop-contact for SDG-related business support services



Source: Figure provided by the city of Kitakyushu.

Kitakyushu is working with other municipalities on the SDGs. Through its participation in the Regional Revitalisation SDGs Public-Private Collaboration Platform, Kitakyushu is contributing to the promotion of partnerships with other municipalities and private companies. In the field of the environment, Kitakyushu has defined a co-operation agreement on the measures against global warming with Oguni, a municipality in the Kumamoto prefecture in Kyushu, which is also one of the model municipalities of the national SDG Future Cities initiative. In addition, the subcommittee ALL Kyushu SDGs Network has been established to deepen the co-operation among SDG stakeholders in the Kyushu area, which encompasses seven prefectures. Kitakyushu is also working with 16 neighbouring local governments, a vast majority of them belonging to the functional urban area (FUA) of Kitakyushu, acting as the central hub of the Kitakyushu metropolitan area.

The SDGs as a tool to engage the private sector and civil society in Kitakyushu

Private sector engagement on the 2030 Agenda is on the rise

The private sector is very active in addressing the SDGs in the city of Kitakyushu. As a result of the reshaped industrial structure and image of the city, many local companies focus on green industries such as renewable energy, water or circular economy. Beyond that, the activities of the private sector on the SDGs also include areas such as insurance and manufacturing. Although many companies are still addressing the SDGs mainly through corporate social responsibility (CSR), interesting examples of companies using the SDGs beyond CSR are emerging in Kitakyushu.

A number of companies are linking the SDGs to their core activities. This is the case for insurance companies that are using awareness-raising activities and are investing in actions and information on the SDGs that can help support the prevention of incidents, reduce the outcome of damages and take advantage of data about the ageing society and education (e.g. Sompo Japan Nipponkoa, which has a branch in Kitakyushu). By investing in digitalisation, they can help to improve early warning systems, which can have beneficial effects for both the achievement of the SDGs and their own business. Moreover, the soap company Shabondama Soap, which is headquartered in Kitakyushu, contributes to the SDGs for example by developing environmentally friendly additive-free soap. In addition, the company develops soap-based environment-friendly fire-fighting foam to extinguish forest and peatland fires in partnership with local stakeholders like the Kitakyushu Fire and Disaster Management Bureau, the IGES and the University of Kitakyushu. This foam shall in the future be introduced in Indonesia as a solution to prevent CO_2 emissions and land degradation through fires.

Companies in the Kitakyushu Eco-town are also working on the SDGs. One example is the Amita Corporation, a company which has a recycling plant in the Kitakyushu Eco-town. It established the Kyushu Circular Economy Partnership organisation, consisting of companies, public institutions and research institutes, to expand its business while at the same time implementing a regional circular economy. The company Japan Environment PlanNing (JEPLAN, Inc.), which also has a recycling plant in the eco-town, produces and sells new clothing made from polyethylene fibres from plastic bottles using polyethylene terephthalate (PET) recycling technology.

Furthermore, Kitakyushu's Uomachi Shopping Street has launched an initiative to become an "SDG shopping street" through conducting a range of activities to foster the achievement of the SDGs. For instance, shop owners on this street address the SDGs through a reduction of food losses, by installing solar panels on the roofs of the shopping street, and renovating and utilising empty real estate without demolishing. Activities also include seminars on a variety of topics around the SDGs, for instance inclusion and food security. The SDG logos are displayed at the entrances to the street, which helps to raise awareness of the 2030 Agenda among citizens.

Private companies are also investing in awareness-raising activities, both internally and externally. Internally, some private companies are trying to align all departments within the company with the SDGs to address the 2030 Agenda, while externally supporting education activities to raise awareness through conferences and events on SDGs, which also target and include the public sector, civil society and universities. For instance, Shabondama Soap Co., Ltd., the Asahi Shimbun Company – a Japanese media conglomerate – and the city of Kitakyushu jointly co-sponsored an enlightenment project called My SDGs Contest that encourages people to think about the 2030 Agenda by producing photos and humorous poems about the SDGs.

The constraints and obstacles to address the SDGs are higher for SMEs than for big companies. When it comes to addressing the SDGs, one of the main challenges for the private sector is the reconciliation of the long-term timeline of the 2030 Agenda with short-term objectives and budget constraints (e.g. risk management, premiums, insurance, etc.). While well-established big companies are able to manage the

gap between the two, addressing this trade-off is more challenging for SMEs. There is also a certain discrepancy in terms of awareness. While large companies in Kitakyushu are more engaged with and aware of international agendas, SMEs tend to be less engaged and aware. Financial institutions in Kitakyushu have created a financing system for companies of all sizes working on the SDGs and have elaborated schemes to promote business matching. The city of Kitakyushu has also implemented measures such as subsidising technology development to tackle and solve the issue of plastic waste that can lead to an increase in the amount of microplastics accumulating in the ocean. Increasing awareness of these issues has led to a change in the consciousness about the SDGs and sustainability issues among SMEs.

International Organization for Standardization (ISO) requirements in public procurement can play a key role in supporting the private sector contribution to the SDGs. In order to further involve private companies in SDG activities, ISO norm certifications can have beneficial effects and be used as criteria in public procurement. ISO 14001, for instance, is an environmental label that specifies the requirements for an environmental management system that an organisation can use to enhance its environmental performance. It is intended for use by organisations seeking to manage their environmental responsibility in a systematic manner that contributes to the environmental pillar of sustainability (ISO, 2015[10]). Using such requirements in public procurement that consider the SDGs could allow improving environmental standards and would represent an important incentive for the private sector to engage with the 2030 Agenda.

Citizen engagement: A key factor to advance the SDGs in Kitakyushu

The city of Kitakyushu has a long history of citizen engagement and the city's SDGs implementation builds on it. Since the early 1950s, various women's associations have been at the forefront of a strong citizen engagement and grassroots movements fighting against environmental degradation and negative health impacts through local industrial pollution, which reached its peak in the 1960s. The citizens' activism continued for over 20 years, engaging the local government and eventually local industries.

More recently, citizens have played an important role in conceiving sustainability plans and strategies. In 2004 for instance, local citizens, the business community and the city administration jointly developed the vision of Kitakyushu's Grand Design on World Capital of Sustainable Development. The idea of addressing the social, economic and environmental dimensions simultaneously was at the heart of the vision. The city of Kitakyushu subsequently reflected this idea in its main development plans, such as the City Master Plan and the Basic Environment Plan. Citizens also played an important role in developing the Grand Design and the Green Frontier plan via their participation in a large number of town-hall-style meetings (City of Kitakyushu, 2012[11]). An important initiative is the Kitakyushu Clean-up Union, organised by a community-based sanitation and environment association with over 70% of Kitakyushu's households participating. This association includes a large number of elderly people who pass on their experience and know-how to younger generations (City of Kitakyushu, 2012[11]). In order to foster citizen engagement, the city of Kitakyushu has established community development councils that comprise various local groups such as social welfare councils, women's associations, senior clubs, schools, private companies and government bodies, aiming to strengthen the community dimension in the city (City of Kitakyushu/IGES, 2018[9]).

Many NGOs and NPOs in Kitakyushu are very engaged in the SDGs. Satoyama, a local NPO based in Kitakyushu, for example, is focusing on sustainable development and has three main priorities: i) finding a balance between the economic and environmental dimensions of sustainability (e.g. using socially and ecologically sound approaches in production activities to conserve biodiversity and ecosystems while contributing to poverty reduction); ii) learning from citizens' experiences (e.g. the actions of women's associations against pollution); and iii) empowering citizens to promote social innovation. Food Bank Kitakyushu Life Again, an NPO partnering with companies and public organisations, is engaged in both environmental activities related to food loss and social activities, supporting families with children in

financial difficulties. Rocinantes, a Kitakyushu-based NPO, provides support with the collection of donations and sponsorships for countries and regions across the world that are facing issues such as poverty or conflict. On top of that, Rocinantes is providing recommendations on the implementation of the 2030 Agenda, notably SDGs 1, 2, 3, 4, 6 and 17, and is active in developing an international exchange on the SDGs with other countries.

In terms of awareness-raising initiatives, the city of Kitakyushu is using the 2030 Agenda to engage with civil society through a wide range of activities. These include the SDGs Club, the regional and environmental centres (e.g. Kitakyushu Eco-town Centre, Kitakyushu Environmental Museum), art festivals that use the SDGs as a theme, as well as by publishing SDG-themed Manga (Japanese comics). The SDGs were also promoted through a variety of local events such as the Kitakyushu Marathon or the Wasshoi Hyakuman Summer Festival, Kitakyushu's largest festival, to increase awareness of the SDGs among the population (City of Kitakyushu/IGES, 2018[9]). The mayor is also directly promoting the SDGs through the dialogue format "Casual Talk with Citizens" where he directly addresses citizens in all seven sub-districts of the city and in other public events that he attends. Expanding the incentives to encourage an enhanced civil society engagement in the 2030 Agenda is an important contributory factor to achieve the SDGs. A number of goals, such as reducing energy consumption, waste production or increasing decentralised energy production, rely on citizens' active participation in shaping this process. Consistent communication and information campaigns as well as clear incentives to engage with the SDGs in Kitakyushu are essential to generate the necessary level of citizen participation in achieving the SDGs.

Universities and research institutes play a key role to promote the SDGs in Kitakyushu

The University of Kitakyushu is a key player in the city that has integrated the SDGs into its activities. The department of regional development of the University of Kitakyushu seeks to support sustainable development through practical activities with students. The university has started working on education for sustainable development (ESD) in 2011 and has included the SDGs in its activities since 2016**.** Concretely, it launched three main initiatives to address the 2030 Agenda:

- **Campus SDGs**: Campus SDGs is an initiative with students and 400 faculty members collaborate together on the SDGs, which started in June 2018. Around 19 projects to work on local issues such as disaster prevention, waste management and responsible consumption have been launched. In addition, the initiative promotes the SDGs on campus and through articles and resources on the SDGs that are uploaded on the university's website. About 30 articles were published in 2018.
- **SDGs training for business leadership**: This training is a year-long programme that was launched in May 2018 between the University of Kitakyushu and a number of private companies with the goal to develop an action plan for the SDGs. The training emphasises that the SDGs should not only be used in CSR but also in companies' main business operations to create new employment opportunities.
- **Centre of Community SDGs human resources working group**: This initiative is a collaborative programme between universities and administrative bodies that was funded by the Ministry of Education, Culture, Sports, Science and Technology for a 5-year period from 2015 to 2019. The establishment of the working group had two main objectives: i) finding solutions for local issues by strengthening the co-operation with local communities; and ii) ensuring that initiatives are taking the planning and implementation of regional revitalisation into consideration.

The University of Kitakyushu is furthermore participating in the UN Academic Impact initiative, working with three main groups of stakeholders to raise awareness of the SDGs: students, the private sector and citizens.

- **Students**: The strategy is drawing attention to the urgency and necessity of addressing global issues, and explains how those are linked to the citizen's daily life (e.g. the linkage between climate change and heavy rains in Kitakyushu and students' daily life).
- **Private sector**: The University of Kitakyushu illustrates how the SDGs can be used as an opportunity for businesses to expand and identify new markets, underlining that companies need to take the SDGs seriously to stay in business. The SDGs are a very powerful tool in that regard, to promote partnerships, recognise the shared responsibility beyond the city and citizens, and attract more investments. Many companies in the city already have developed technology that allows pursuing the SDGs and could benefit from further collaboration. Universities are a neutral player and can therefore play a fundamental role in the development and dissemination of technology in collaboration with the private sector.
- **Citizens**: The experience of heavy pollution and related damages are an important reason why many citizens are involved in community activities and community development councils. The university's activities provide a platform for citizens to become further involved in the topic of the SDGs.

Other universities and research centres are also contributing to the 2030 Agenda in Kitakyushu. Among others, the Kyushu Institute of Technology, the University of Occupational and Environmental Health and the Kitakyushu Science and Research Park (KSRP) are particularly active in the field of sustainable technologies. In the KSRP, four universities together with several research institutes and company research and development (R&D) departments are concentrated on one campus, which serves as the base for academic research with a focus on environmental and information technologies (City of Kitakyushu/IGES, 2018[9]). The collaboration between these institutions, the government and the private sector is generating employment opportunities, particularly in the field of artificial intelligence, the development of nursing care robots and the establishment of a circular economy. Moreover, the Kitakyushu International Techno-cooperative Association (KITA) links the research conducted by different actors in Kitakyushu with the city's international co-operation efforts by transferring new and improved industrial technologies to partner cities in developing countries. Another example is a monthly study group in Kitakyushu named "Promotion of citizen-orientated activity including ESD and civic activities". The study group is involved in discussions about the SDGs and organises cleaning activities in the city undertaken by university students and citizens in collaboration with NPOs. The goal of such activities is to generate synergetic effects between multiple goals including SDGs 4 and 11.

Finally, the Institute for Global Environmental Strategies (IGES) plays a special role in advising Kitakyushu on sustainable development issues and has been closely involved in the work on localising the SDGs in the city. Conducting research and providing policy advice to the national government, the IGES has three decentralised offices in Japan, one of which is in Kitakyushu. The city of Kitakyushu thus invited the IGES to support the localisation process of global issues, providing funding for the local office. The IGES is connecting the city to international frameworks, contributed to the publication of Kitakyushu's Voluntary Local Review (VLR) in 2018, organises SDG training programmes for interested citizens and is an active member of the Kitakyushu City SDGs Council and SDGs Club.

Annex 3.A. List of SDG Future Cities and local government SDG model projects

Annex Table 3.A.1. List of selected SDG Future Cities and local government SDG model projects

Category	City name	Proposal title
SDG Future Cities (including local government SDG model projects)	Niseko Town, Hokkaido Prefecture	"Sustainable Town Niseko" – An Environment Ally Conscious, Self-Governing Town that Enjoys a Circular Economy of Recycled Resources
	Shimokawa Town, Hokkaido Prefecture	Shimokawa Challenge 2030 – Leading Top People and Nature of the Future
	Kanagawa Prefecture	Kanagawa For Vibrant Lives – Realising a Sustainable Society with Smiling Centenarians
	City of Yokohama, Kanagawa Prefecture	SDGs Future City Yokohama – Creating a Major City Model through Collaboration
	Kamakura City, Kanagawa Prefecture	Creation of Sustainable City Management "SDGs Future City Kamakura"
	Toyama City, Toyama Prefecture	Realisation of a City that Creates Sustainable Added Value Based on the Compact City Strategy
	Maniwa City, Okayama Prefecture	Realisation of 2030 SDGs – Future City Maniwa with an Energy Self-Sufficiency Rate of 100% (Aiming for a Permanent Development Model for Agricultural and Mountain Villages – Community in Which People Live in Their Own Way)
	City of Kitakyushu, Fukuoka Prefecture	Kitakyushu SDGs Future City
	Iki City, Nafasaki Prefecture	Iki Iki (Vibrant) Dialogue-Based Society "Iki Na (Smart) Society 5.0"
	Oguni Town, Kumamoto Prefecture	Aiming to Develop a Sustainable Community through the Benefits of Geothermal Power and Forests and People-to-People Connections
SDG Future Cities	Hokkaido Prefecture	Development of a Wide-Area SDGs Model Taking Advantage of Hokkaido Value
	City of Sapporo, Hokkaido Prefecture	A Sustainable City in Which Future Generation Children Can Live with a Smile: "Environmental Capital Sapporo"
	Higashi-Matsushima City, Miyagi Prefecture	Higashi-Matsushima – All Generations Growing
	Semboku City, Akita Prefecture	Internet of Things and Hydrogen Energy Utilisation Infrastructure Development Project
	Lide Town, Yamagata Prefecture	Revival of an Agricultural Planning Research Institute "To Remain the Most Beautiful Village in Japan in 2030"
	City of Tsukuba, Ibaraki Prefecture	Tsukuba SDGs Future City Pilot Project
	Suzu City, Ishikawa Prefecture	Noto's Challenge Towards Cutting-Edge "Future City"
	Hakusan City, Ishikawa Prefecture	Hakusan SDGs Future City 2030 Vision to Pass Down the Bounty of Nature to Next Generations
	Nagano Prefecture	Formation of Independent Dispersion-Type Society Through Learning and Power of Autonomy
	Shizuoka City, Shizuoka Prefecture	Realisation of "Shioka, A City of World Standards"- Shizuoka City Five Main Concepts for SDGs
	Hamamatsu City, Shizuoka Prefecture	Hamamatsu: Enriching the World 2050 and 80 Years into the Future
	Toyota City, Aichi Prefecture	A Smart City Leading to the Future and Connecting People, the Environment and Technology
	Shima City, Mie Prefecture	With a Long History of Providing Produce to the Imperial Court, Shima Will Become a Sustainable Food Supplying Region
	Sakai City, Osaka Prefecture	"A City in which Everyone Leads a Healthy and Active Life Based on the Spirit of Freedom and Self-Governing"

Category	City name	Proposal title
	Totsukawa Village, Nara Prefecture	Totsukawa Village SDGs Model Plan Based on Preservation of Sustainable Forests and Tourism Promotion (Tentative Name)
	Okayama City, Okayama Prefecture	Okayama, A City Where People Live Healthy, Active and Learn Together Throughout Their Lives
	Hiroshima Prefecture	Accelerating Initiatives to Make Hiroshima into a Hub for Global Peace which Creates Peace Activities towards Achieving the SDGs – Enhancing SDGs Activities through a Multi-Stakeholder Partnership
	Ube City, Yamaguchi Prefecture	"Human Resources Are Treasure": Ube SDGs Promotion Project Created by Everyone – Further Evolution of "Prosperous Co-Existence and Harmonious Collaboration"
	Kamikatsu Town, Tokushima Prefecture	SHLs (Sustainable Happy Lives) through SDGs

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Note

[1] Society 5.0 is technologically defined as a system of systems, where many systems (e.g. energy management systems, road transport systems, etc.) are connected through the Internet to achieve some global requirements (e.g. reducing carbon emissions) (Nagahara, 2019[12]). The term refers to the idea that Society 5.0 will follow the previous Society 1.0 (hunter-gatherer), Society 2.0 (agricultural), Society 3.0 (industrialized) and Society 4.0 (information). Also called the “super-smart society”, Society 5.0 envisions a sustainable, inclusive socio-economic system, powered by digital technologies such as big data analytics, artificial intelligence (AI), the Internet of Things and robotics (UNESCO, 2019[13]).

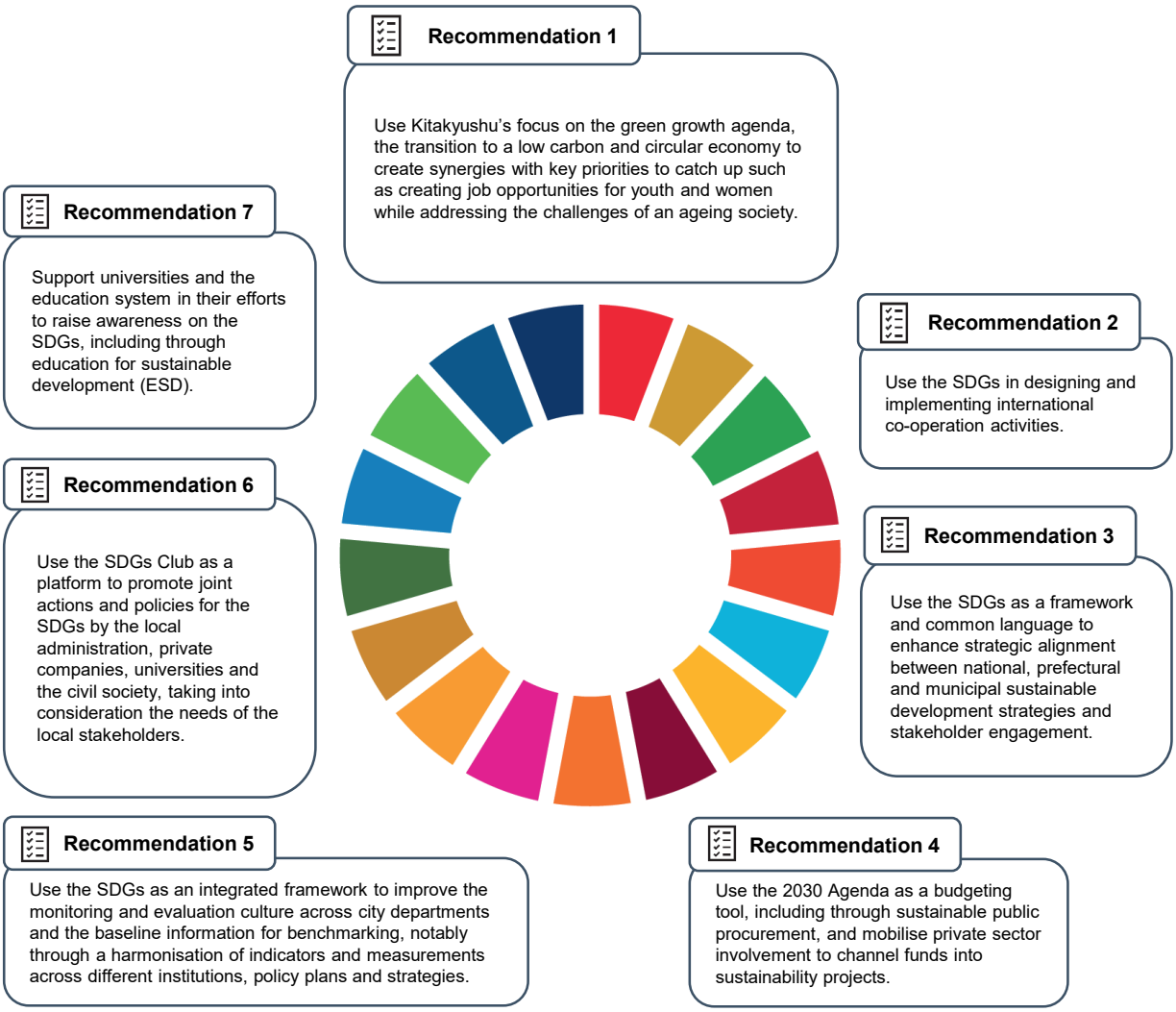
4 Policy recommendations and implementation strategies

The chapter suggests concrete policy recommendations and a plan for public action to enhance the territorial approach to the SDGs in Kitakyushu, Japan, based on the OECD Checklist for Public Action to Localise the SDGs. For Kitakyushu, key recommendations include using the focus on the green growth agenda to generate synergies with the SDGs where the city has the potential to catch up, in particular the creation of employment opportunities for youth and women and the creation of a holistic indicator framework spanning across all 17 SDGs. Other recommendations suggest to use the SDGs Club as a platform to promote the development of concrete actions and policies for the SDGs jointly with various local stakeholders and to expand the support for the university and education systems in their ongoing efforts to raise awareness of the SDGs. In addition, the SDGs could be used as a framework to enhance the strategic alignment of sustainable development strategies and to design and implement international co-operation activities.

Key recommendations for Kitakyushu

The seven key recommendations and associated actions outlined in this chapter provide Kitakyushu with strategic directions and a menu of options for the implementation of the OECD recommendations contained in the SDG pilot case. While some measures constitute actions that the city can take in the short run, some require joint efforts from different levels of government to civil society and the private sector.

Figure 4.1. Seven key recommendations for a territorial approach to the SDGs in Kitakyushu



Box 4.1. OECD Checklist for Public Action to Localise the SDGs

The OECD Checklist for Public Action is directed to governments at all levels to facilitate the implementation of a territorial approach to the SDGs. The checklist provides action-oriented recommendations around five main categories:

- **Planning, policies and strategies**: Use the SDGs to define and shape local and regional development visions, strategies, plans, and re-orient existing ones. Cities and regions should

use the SDGs to address local challenges that require a holistic approach, such as clean forms of urban mobility, affordable housing, gender equality, access to green spaces, balanced urban development, clean water and sanitation, air quality, solid waste management, territorial inequalities or service delivery.

- **Multi-level governance:** Use the SDGs as a framework to align policy priorities, incentives, objectives across all levels of governments as well as to manage trade-offs and promote synergies across policy areas. In particular, regions and cities should be engaged in the process of Voluntary National Reviews (VNRs) to reflect progress at the subnational level and address regional disparities. Voluntary Local Reviews (VLRs) can also drive better multi-level governance of the SDGs and shed light on local initiatives.
- **Financing and budgeting:** Mainstream the SDGs in budgeting processes to ensure adequate resources are allocated for the implementation of the 2030 Agenda and to foster policy continuity across political cycles. Governments should allocate financial resources based on the identified place-based policy priorities and local challenges, and use the SDG framework to foster multi-sectoral programmes and priorities.
- **Data and information**: Leverage SDG data and localised indicator systems to guide policies and actions for better people's lives, and to showcase the performance and positive stories of cities and regions. In particular, for more comprehensive assessment and policy responses, cities and regions should combine data and indicators at different scales, including administrative boundaries (unit for political and administrative action) and functional approaches (economic geography of where people live and work).
- **Engagement**: Use the SDGs as a vehicle to enhance accountability and transparency through engaging all territorial stakeholders, including civil society, citizens, youth, academia and private companies, in the policymaking process. Cities and regions should use a combination of various tools to engage local stakeholders, such as awareness-raising campaigns, networking opportunities, but also de-risking investments in SDG solutions through grants or loans, as well as a fiscal incentive for innovative solutions towards sustainability.

Source: OECD (2020[1]), *A Territorial Approach to the Sustainable Development Goals: Synthesis report, OECD Urban Policy Reviews*, https://doi.org/10.1787/e86fa715-en.

Box 4.2. Objectives of the OECD implementation strategy for a territorial approach to the SDGs in Kitakyushu

The main objective of the implementation strategy is to provide Kitakyushu with a menu of options for the implementation of the OECD recommendations contained in the SDGs pilot case. The strategy sets out a series of specific actions aiming at supporting Kitakyushu's implementation of the SDGs. In particular, it identifies:

- **Objectives**: The strategy presents a number of objectives for each of the recommendations, in terms of expected outcomes.
- **Practical steps**: The strategy includes a set of actions that can be useful in advancing towards the achievement of the objectives.
- **Possible champions and partners**: This section refers to the stakeholders, institutions or organisations that can play a (leading) role in the execution of the actions.

- **International experiences**: These experiences include relevant practices carried out in the field of localising the SDGs by cities, regions and national governments as well as international organisations that can serve as inspiration. These experiences are not expected to be implemented as such but to provide the region/municipality with a set of examples for the design and development of the suggested actions.
- **Timeline**: In order to implement the recommendations efficiently, it is necessary to prioritise the recommendations within in the short, medium and long term. These time scales are indicative and should be updated as actions are being implemented.

It is important to note that:

- **Actions are neither compulsory nor binding**: Identified actions address a variety of ways in which recommendations can be implemented and objectives achieved. They represent suggestions, whose adequacy and feasibility should be carefully evaluated in an inclusive manner, involving stakeholders as appropriate. The combination of more than one action can be explored, if necessary.
- **Resources for implementation should be assessed**: The implementation of the actions will require human, technical and financial resources. When prioritising and assessing the adequacy and feasibility of the suggested actions, the resources needed to put them in practice should be carefully evaluated, as well as the role of stakeholders that can contribute to the implementation phase.
- **The implementation strategy is a dynamic tool**: It requires updating as new potential steps and objectives may emerge as actions start to be implemented.

Planning, policies and strategies

Figure 4.2. Implementation strategy for OECD Recommendation 1 to use the SDGs where the city shows a strong performance to create opportunities in other areas with the potential to catch up

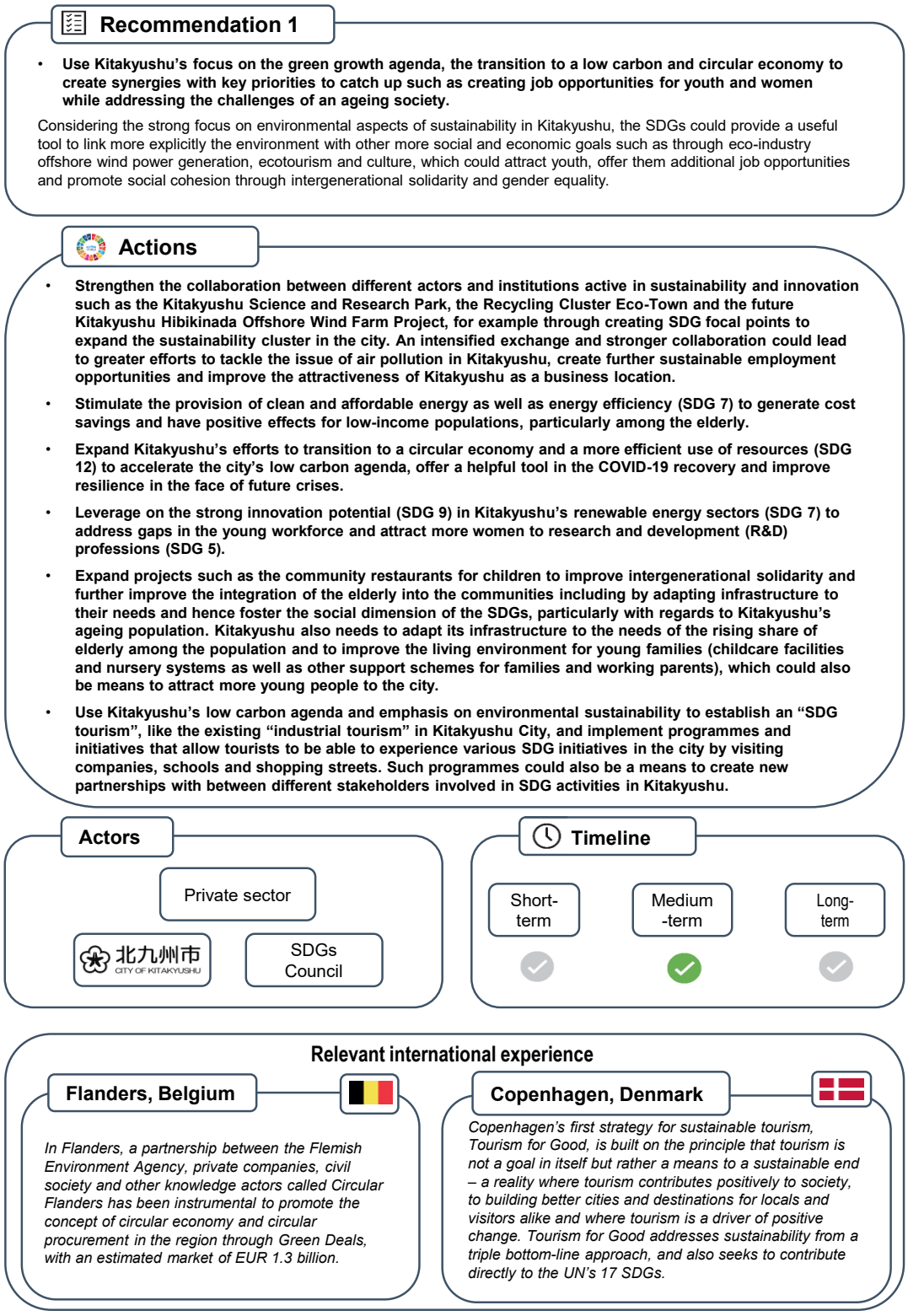
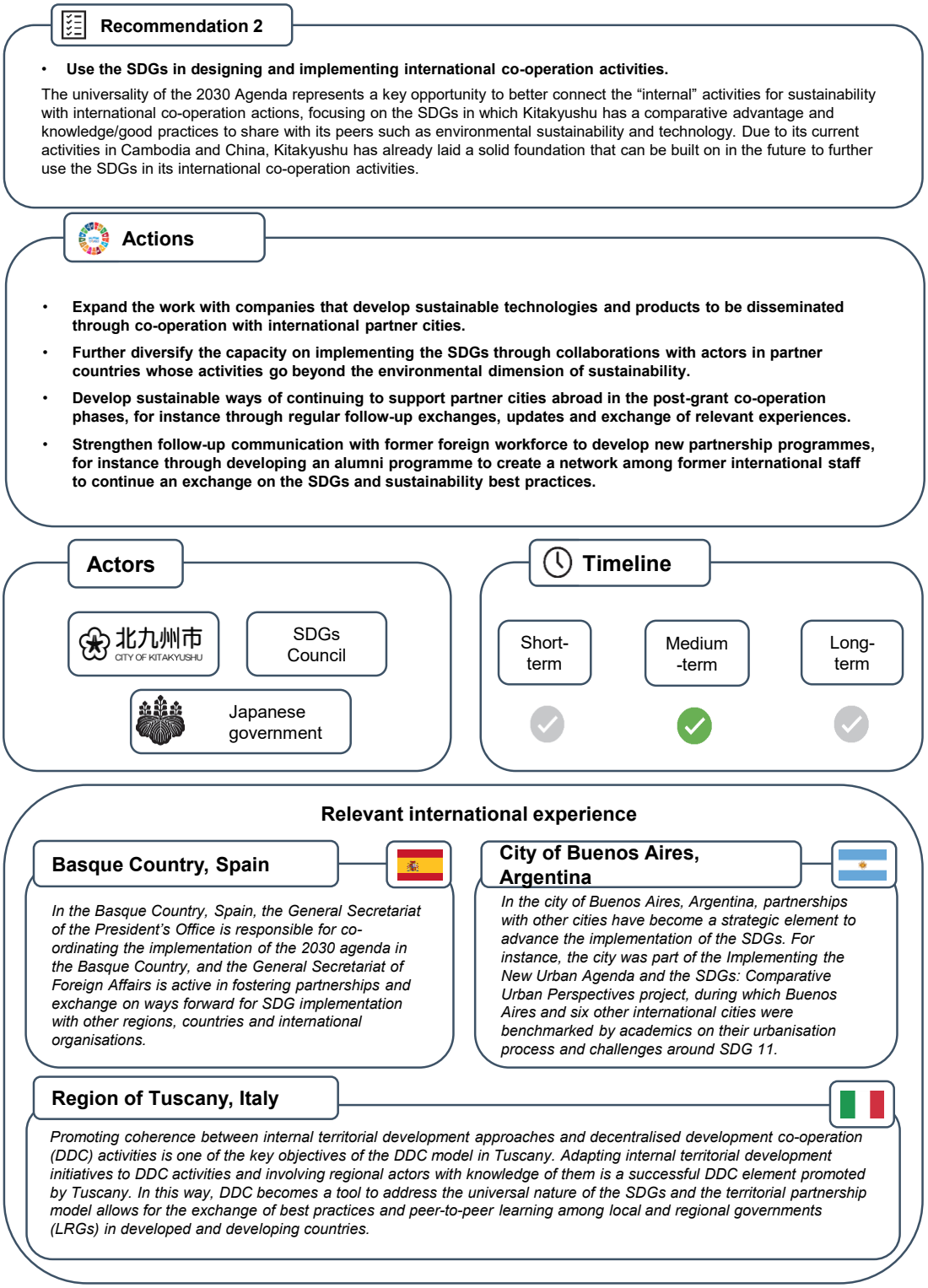
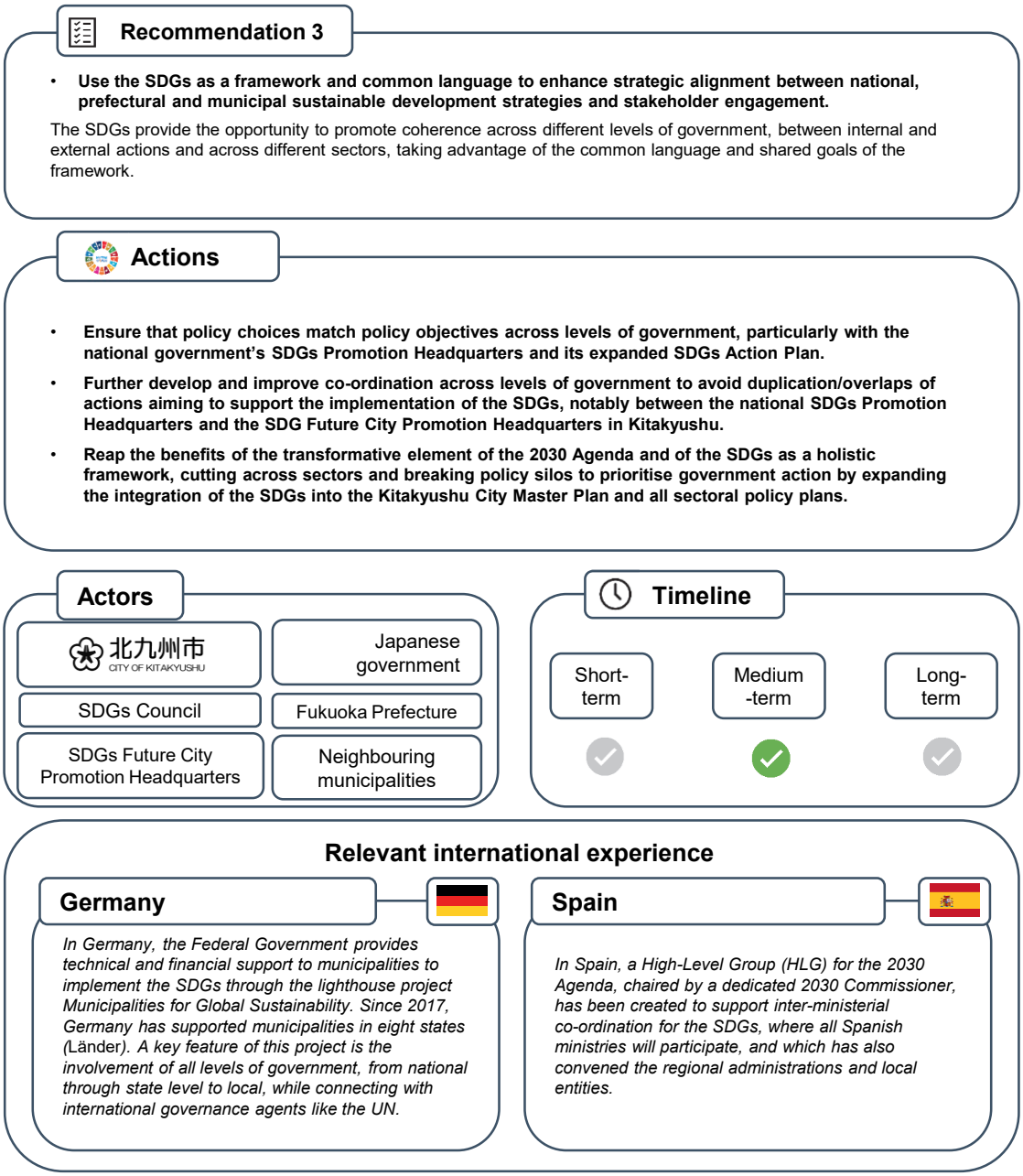


Figure 4.3. Implementation strategy for OECD Recommendation 2 to use the SDGs in designing and implementing international co-operation activities



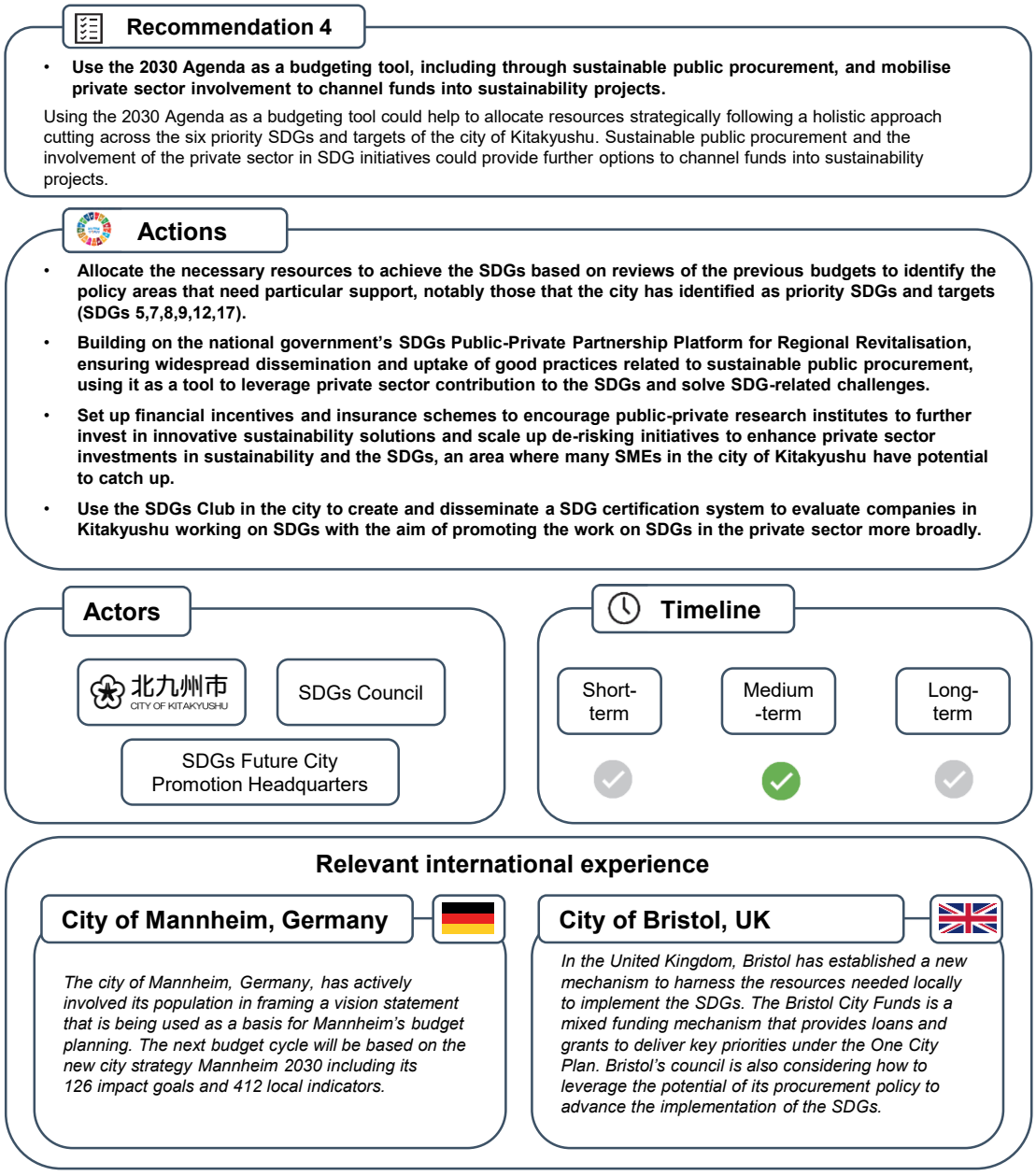
Multi-level governance

Figure 4.4. Implementation strategy for OECD Recommendation 3 to use the SDGs as a framework to enhance the strategic alignment of sustainable development strategies across levels of government



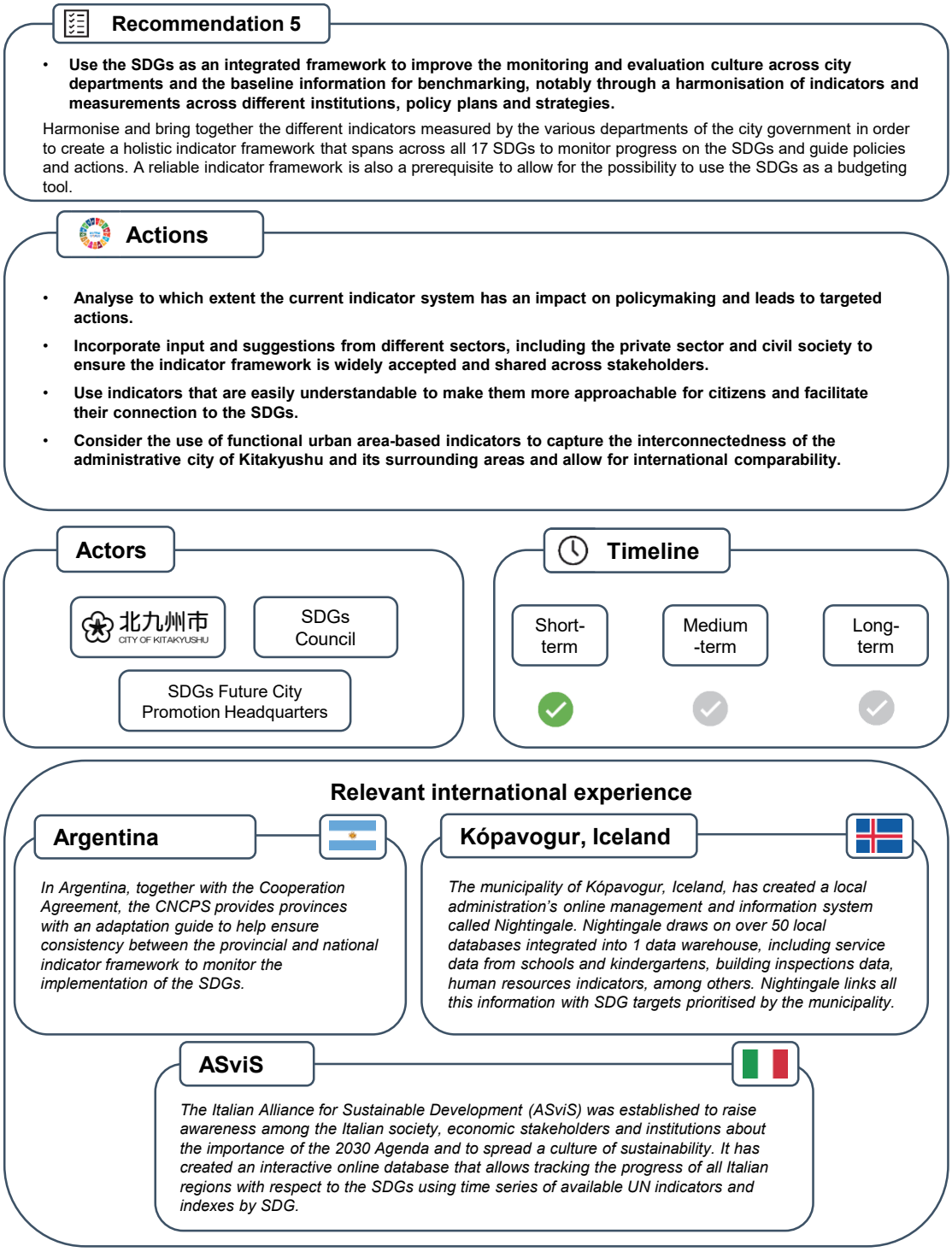
Financing and budgeting

Figure 4.5. Implementation strategy for OECD Recommendation 4 to use the 2030 Agenda as a budgeting tool and to mobilise private sector involvement in SDG activities



Data and information

Figure 4.6. Implementation strategy for OECD Recommendation 5 to strengthen the indicator system to monitor progress on the SDGs



Engagement

Figure 4.7. Implementation strategy for OECD Recommendation 6 to promote joint actions and policies for the SDGs developed by the local stakeholders

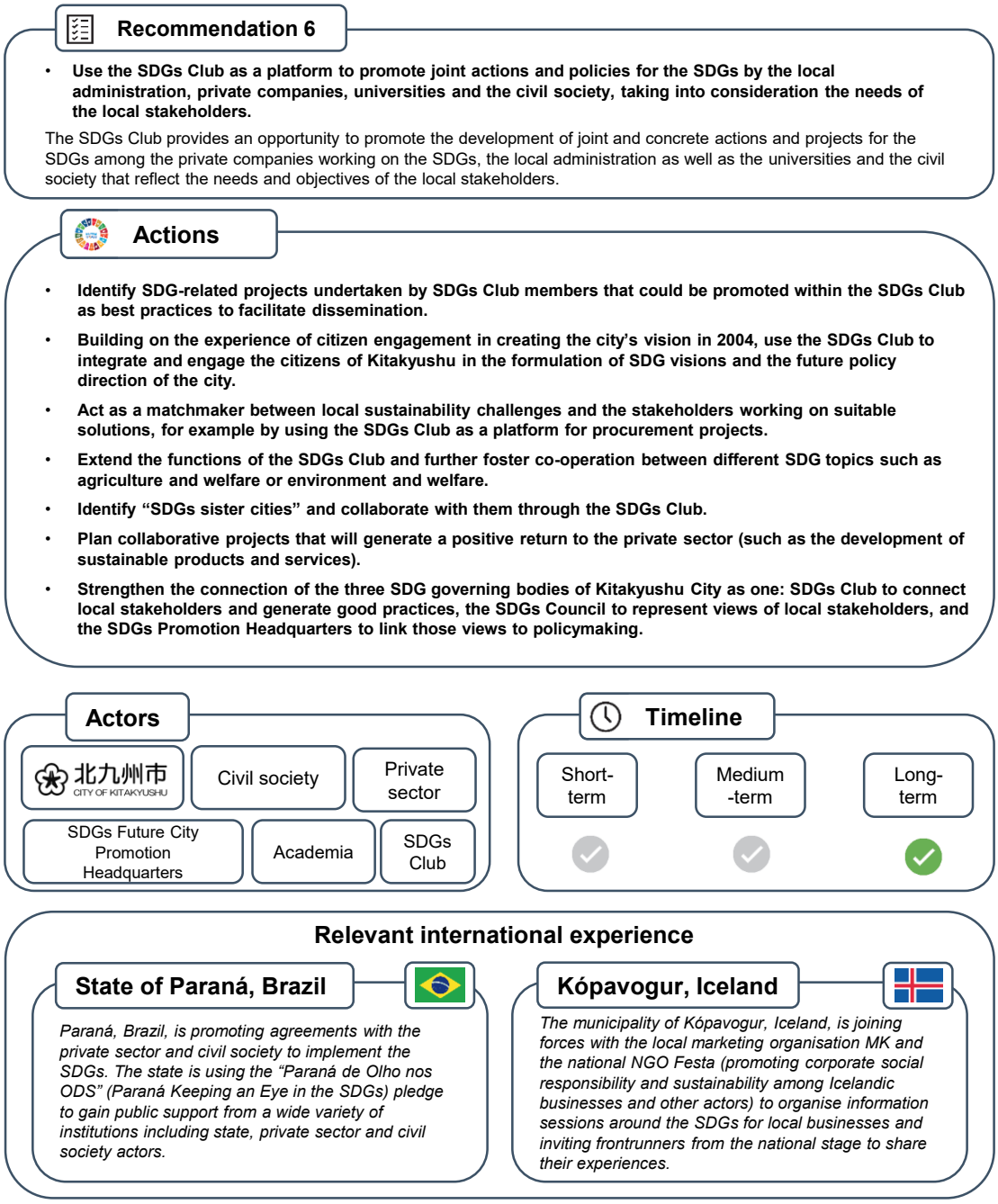
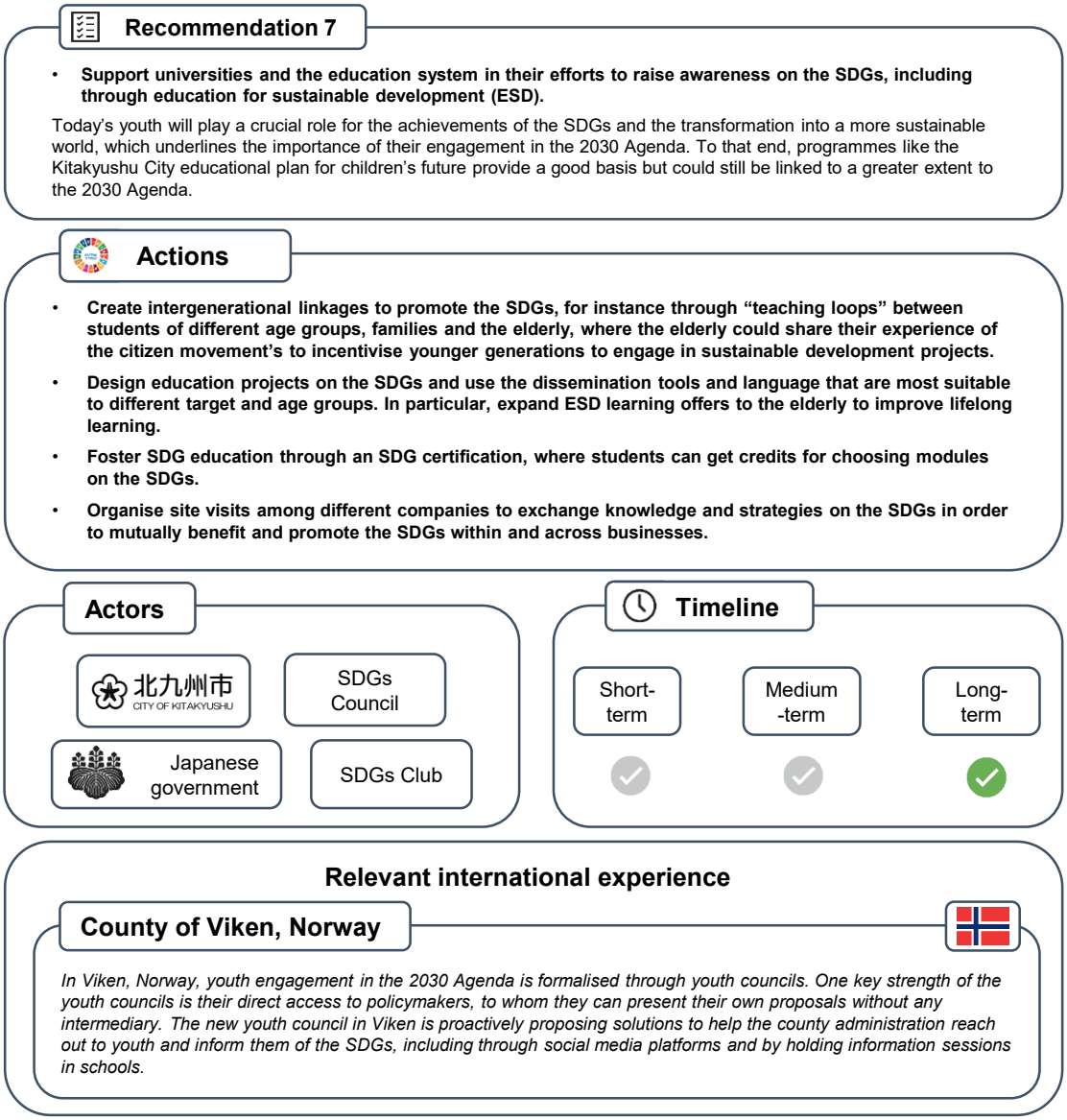


Figure 4.8. Implementation strategy for OECD Recommendation 7 to strengthen the support for the university and education systems in their ongoing efforts to raise awareness of the SDGs



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