

Handbook for SDG Monitoring by Local Governments

Part A: Evaluating the Achievement
of SDG Local Actions

Second Edition

February 2022

UNCRD Research Group on
SDG Monitoring for Local Governments

ISSUED WITHOUT FORMAL EDITING

The opinions expressed here are based on the activities of the Research Group on SDG Monitoring for Local Governments and do not necessarily reflect those of the United Nations Secretariat or of the United Nations Centre for Regional Development (UNCRD).

Changes in the second edition

Since publishing the first edition (July 2021), the UNCRD Research Group on SDG Monitoring for Local Government has been reviewing its selected indicators for the SDG achievement evaluation to improve the evaluation method to be more user-friendly and more in line with actual conditions, based on opinions and requests from local governments and experts. Based on the progress of the above activities, the second edition of the handbook reflects improvements in the following evaluation indicators and method.

(a) Revision of selected indicators

In consideration of the improvement in making the evaluation results more in line with the reality of local governments and the availability of data, the following indicators have been revised.

Details of the revision	Reasons for revision
Goal 2 (Old) Output per agricultural workers (New) Agriculture and fishery output per capita	The indicator has been revised from per agricultural workers to per capita of population because using agricultural workers as the criterion would have resulted in urban areas which do not engage in agricultural production being rated higher than municipalities that do, and the contribution to food production could not be properly evaluated, the indicator has been revised from per agricultural workers to per capita of population.
Goal 7 (Old) Share of final energy consumption Renewable Energy Ratio (New) Installed renewable energy capacity per capita	Since the old indicator was only available at the prefectural level, so it has changed to the new one which can use data available also at the municipal level so that it can be incorporated into a list of indicators for municipal-level evaluation.
Goal 17 (Old) Number of sister cities (New) Number of sister cities per 100,000 population	Since there was remarkable tendency for larger municipalities to have more sister cities, it was not possible to assess whether they were making appropriate efforts to obtain partnerships based on their respective sizes; therefore, the number of sister cities has been standardized based on the size of their population.

(b) Review of aggregation method in goal-by-goal achievement evaluation

In the evaluation method of the first edition, indicators used for one goal were not used for other goals. It became clear that in such cases, the achievement of goals that did not use those indicators were not rigorously evaluated. Therefore, the second edition has changed the aggregation method, in which indicators that are important for multiple goals can be used in parallel for the achievement of each related goal. In the Handbook, we do not expect any issues regarding the appropriateness of the evaluation to arise because of this change, because the SDGs themselves have a structure that overlaps indicators considered important among goals, and because the level of SDG achievement is only aggregated for each goal, it does not constitute multiple counting.

(c) Review of “changes since 2015” in case studies in municipalities

In the evaluation for each municipality (p. 17 onwards) in the first edition, if data as of 2015 (or earlier) was not available, the change from 2015 was treated as no data, but in the second edition, the achievement rate for the earliest year available after 2015 is considered to be 2015 to calculate the change from that point and visualizes the results.

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Foreword

In 2015, the 2030 Agenda for Sustainable Development (2030 Agenda) and its 17 Sustainable Development Goals (SDGs) were adopted at the United Nations Sustainable Development Summit. Moreover, in 2019, the decade leading up to 2030 was dubbed “Decade of Action” with a call for governments and other stakeholders to take “SDG Acceleration Actions”.

In Japan, a growing number of local governments, businesses, and civil society are already thinking of the SDGs as their own issues and making efforts to achieve the goals. For local governments to tackle the SDGs, it is essential for them to not only promote creative initiatives that match the actual conditions of each region, but also to promote integration with existing initiatives including comprehensive plans, collect information to understand the status of initiatives and issues, monitor and evaluate them, and then disseminate such information in an easy-to-understand manner.

Against this background, the United Nations Centre for Regional Development (UNCRD), together with local governments and private companies that are willing to work on the SDGs, established the Research Group on SDG Monitoring for Local Governments to develop monitoring tools for promoting the SDGs by local governments. This Handbook summarizes the research results to date as useful tools for local governments to understand the progress of the SDGs and disseminate the information.

UNCRD is responsible for the overall planning and compilation of this Handbook. At the same time, Nagoya City Government and Toyota City Government, as leading municipalities in the Chubu region in tackling the SDGs, provide various examples of initiatives and related data, as well as advice and peer review from the perspective of local governments. Nippon Engineering Consultants Co., Ltd., as a consulting company supporting the SDGs of local governments, conducted development of achievement indicators and monitoring mechanisms, while Toppan Printing Co., Ltd., and Esri Japan Corporation. mainly provided visualization examples for information collection and dissemination.

We hope that more local governments interested in monitoring and evaluating the implementation of the SDGs and the Voluntary Local Reviews (VLRs) will use this Handbook to effectively promote their activities and projects and learn from each other to accelerate the movement toward achieving the SDGs.

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Executive Summary

Efforts to achieve the Sustainable Development Goals (SDGs) adopted at the United Nations Summit in September 2015 are underway around the world. Nowadays, the SDG management is an indispensable perspective for local governments and private companies in Japan. However, the infrastructure for collecting information, evaluating it, and visualizing it, which is the foundation for each region and municipality in Japan to engage in the SDGs management, is not well developed.

The purpose of this Handbook is to provide indicators for evaluation, assessment methods, and case studies for several types of monitoring that are essential for Japanese local governments to promote the SDGs in a sustainable manner. The Part A of this Handbook first introduces an overview of the “SDG Achievement Evaluation,” which has been localized to enable Japanese local governments to identify the challenges and characteristics of each region in their endeavor to promote the SDGs and to appropriately measure the effectiveness of their initiatives, and then presents results of the analysis.

The “SDG Achievement Evaluation” introduced in this Handbook assess the achievement level of the SDGs in each region using 56 indicators for the 169 targets of the SDGs, especially those related to local governments. The evaluation results are obtained as the achievement level (0%-100%) for each goal, making it easier to grasp which goals each region has achieved more or less. By focusing on the indicators that contribute to that, it is possible to analyze what the causes are. Furthermore, by comparing the obtained data with the national average, it is also possible to understand the strengths and weaknesses of the region.

The results of applying this method to all prefectures in Japan suggested that the achievement status of some of these goals varies from region to region, and that there were correlations among some of the goals. It became clear that each region can work toward achieving the SDGs more efficiently by considering measures which are appropriate for each region, and that resolving the key factors may contribute to improving the achievement of multiple goals. The Handbook also includes the results of evaluations conducted in Nagoya City and Toyota City as case studies. The characteristics of each city were revealed in a way that linked them to the SDGs, and it was confirmed that the strengths and weaknesses of each municipality were clearly indicated and that the factors behind them could be identified.

While the achievement indicators proposed in this Handbook are incredibly useful, it has also become clear that there is room for improvement. It is hoped that the indicators will be improved through their use and feedback in more regions, and that efforts will be actively promoted in each region of Japan.

1. SDG Promotion by Local Governments and the Need for Monitoring

1-1 Role of Regions and Local Governments toward the SDGs

The Sustainable Development Goals (SDGs)¹⁾ are the global goals for 2030 set in the 2030 Agenda for Sustainable Development (2030 Agenda) adopted at the UN Sustainable Development Summit in September 2015 as the successor to the Millennium Development Goals (MDGs) formulated in 2001. The SDGs consist of 17 goals and 169 targets to achieve a sustainable and better world, and pledge to ensure “no one will be left behind”. The SDGs are universal, not only for developing countries but also for developed countries, and all stakeholders, including businesses, communities, and citizens, must work together to achieve them.

In adopting the 2030 agenda, UN member states have committed to work closely with local governments in implementing the SDGs. Therefore, in response to calls from the international community and national governments, cities and regions worldwide are actively localizing the 2030 Agenda, encouraging local governments to educate people about the SDGs, and moving toward concrete planning and actions.

After the adoption of the SDGs in 2015, the Government of Japan first worked to put a system in place to implement the SDGs, establishing the SDG Promotion Headquarters in May 2016, headed by the Prime Minister, with the Chief Cabinet Secretary and the Minister of Foreign Affairs as deputy heads, and consisting of all cabinet members to take initiatives in both domestic implementation and international cooperation²⁾. Furthermore, under the Headquarters, through dialogue at the SDG Promotion Roundtable Meeting, which was composed of a wide range of stakeholders including government, the private sector, NGOs and NPOs, experts, international organizations, and various groups, the SDG Implementation Guiding Principles were decided in December of the same year to serve as guidelines for Japan's future efforts.

The latest Implementation Guiding Principles³⁾, revised in December 2019, state that active efforts

by local governments and stakeholders operating in respective regions are essential to realizing the promotion of the SDGs throughout Japan. In addition, it is expected that local governments will use the SDGs as a driving force in resolving various issues and promoting regional development, and that they will promote the sharing of good practices, cooperation among local governments themselves, and collaboration with stakeholders, as well as the implementation of the SDGs in their diverse and unique way. Furthermore, to promote these initiatives, it is also expected that each local government will establish governance methods to manage the progress, accurately measure their efforts, and set local up indicators.

In fiscal 2018, the Office for Promotion of Overcoming Population Decline and Vitalizing Local Economy in Japan, Cabinet Office launched the project “SDGs Future Cities and Municipal SDGs Model Projects,” with an aim to establish SDG initiatives and advanced models that will lead to regional revitalization and has selected 93 cities and 30 projects over the past three years⁴⁾. In a questionnaire survey of local governments throughout Japan⁵⁾, the percentage of local governments that responded that they are promoting the SDGs has increased eightfold from 4.9% in fiscal 2018 to 39.7% in fiscal 2020, indicating that the role of local governments is becoming crucial. On the other hand, even among those local governments that are promoting SDG initiatives, even though they are promoting to some extent the reflection of these initiatives in existing plans (46.4%) and awareness-raising activities within the local governments (30.5%), they are not making much progress in collaborating with stakeholders (22.9%) and building an institutional mechanism (16.2%). In addition, the development of local indicators to grasp and manage the progress of SDG implementation (14.4%) is one of the areas where efforts are slowest.

To ensure that local governments' efforts to address the SDGs are not transient but take root in a sustainable manner, it is necessary to go

beyond awareness raising and planning to implementation and monitoring, in other words,

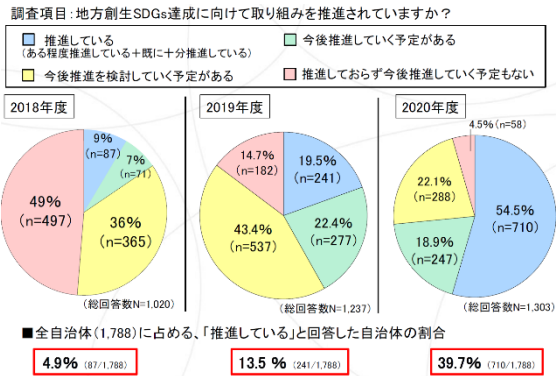
to shift to the SDG-based regional management.

Box 1.1 Status of SDG initiatives in Japanese local governments (2020)

Local governments' interests in and commitment to the SDGs

- The Cabinet Office has been supporting local governments in their efforts to achieve the SDGs by establishing "SDG Future Cities" since 2018. 93 cities have been selected so far until 2020, with an average of around 30 cities each year, and they have started their efforts to achieve the SDGs.
- The number of municipalities that responded that they are "promoting" efforts to achieve the SDGs has increased eight-fold, from only about 5% in 2018 to about 40% in 2020.

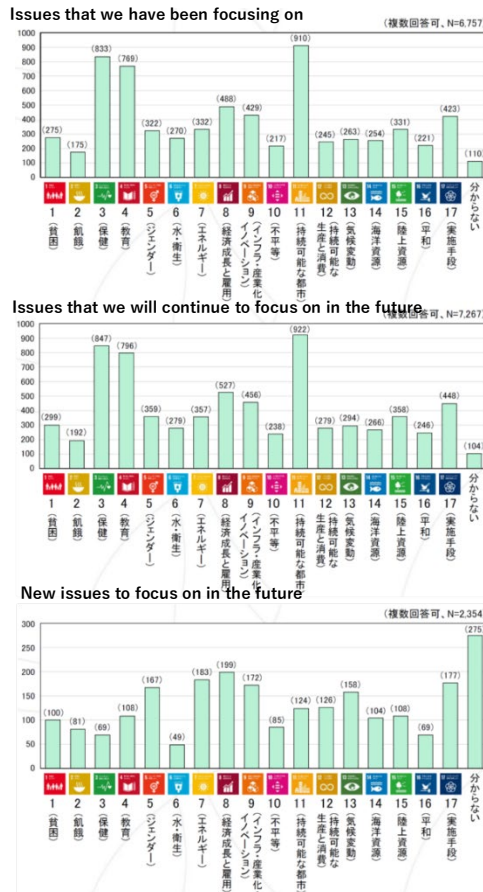
Figure 1.1 Changes in the promotion of SDG by local governments



Goals of particular interest in the future

- Out of the 17 goals, many municipalities cited Goal 3 (good health and well-being), Goal 4 (quality education), and Goal 11 (sustainable cities and communities) as the goals they have been focusing on, and these goals overlap with the issues they will continue to focus on in the future.
- On the other hand, there is a wide range of new issues that they would like to focus on in the future, with Goal 8 (decent work and economic growth), Goal 7 (affordable and clean energy), Goal 17 (partnerships for the goals), Goal 9 (industry, innovation, and infrastructure), Goal 5 (gender quality), and Goal 13 (climate action) being of particular interest.
- There is a growing interest in a wide range of fields, including gender, climate change, and energy, which are currently social issues, not to mention the local economy, and it is expected that specific initiatives will be promoted and developed.

Figure 1.2 Local governments' interest in each goal



1-2 From Planning to Implementation and Monitoring

Localization of the SDGs, or promotion of the SDGs by local governments, is being undertaken in many countries throughout the world, and various methods and approaches have been proposed for sharing good practices, managing progress, and monitoring.

Launched by the United Nations Department of Economic and Social Affairs (UN DESA) in the wake of the 2019 Summit, SDG Acceleration Actions is an online platform⁶⁾ for sharing new and ambitious initiatives by governments and any other non-state actors - individually or in partnership to accelerate the SDG implementation around the world. It contains 295 initiatives (as of April 30, 2021). The Research Group that developed this Handbook is selected as one of these initiatives as #SDG Action 37000⁷⁾.

Local 2030⁸⁾ is also a platform that brings together leaders from national, regional, and local governments, the UN, private sector, civil society, philanthropy, and academia to collaboratively develop and implement solutions to advance the SDGs at the local level. It introduces various tools, documents, actions, and examples to localize the 2030 Agenda into sustainable actions at the local level, as well as the Voluntary Local Reviews (VLRs), which will be elaborated later. From Japan, Shizuoka City was selected as a Local 2030 Hub, and its efforts are being communicated to the world⁹⁾.

In parallel with the increase in the number of diverse and unique initiatives around the world, there is a rapidly growing need for frameworks and mechanisms to follow up, monitor, and review the progress of initiatives to achieve the goals of each region.

One of the initiatives that are currently being implemented by local governments in the world is VLRs. They are based on the framework of the Voluntary National Reviews (VNRs), which is a periodic review presented at the ministerial meetings of the UN High Level Political Forum (HLPF). The VNRs are positioned at the center of the process at the HLPF for countries to share their experiences in implementing the SDGs, and confirm and promote progress.

The VNRs¹⁰⁾ review the efforts of national governments from five main perspectives: (a) institutional mechanisms; (b) incorporation of the SDGs into national frameworks; (c) mainstreaming the principles of the 2030 Agenda; (d) creating ownership of the SDGs; and (e) overview of priority issues related to the SDGs and good practices. In Japan, the review was conducted at the HLPF in July 2017¹¹⁾.

UN DESA provides support to local governments through providing the “Global Guiding Elements for Voluntary Local Reviews (VLRs) of SDG implementation” and organizing a series of workshops on VLRs. In the workshop on the theme of “Monitoring, Data and Indicators” conducted in January 2021, UNCRD presented a presentation titled “Monitoring and Evaluation Tools for SDG Local Actions in Chubu, Japan”. On the UN DESA’s website, VLRs implemented in 34 cities and regions are listed as of December 2020¹²⁾. The United Cities and Local Governments (UCLG) and UN-HABITAT have published the first volume of “Guidelines for Voluntary Local Reviews” in 2020, conducting a comparative study on the contents of VLRs in cities around the world¹³⁾. In the report, while there are some challenges to be addressed to make VLRs more desirable at this stage, including the collection and organization of data and indicators, it is hoped that a VLR will not only be a report for progress management, but will also be a powerful tool for political dialogue, citizen participation, and policy implementation. It also shows the VLRs’ potential of sharing various case studies and knowledge through the involvement of a broader range of cities and regions.

In Japan, the Institute for Global Environmental Strategies (IGES) has launched the Online Voluntary Local Review Lab¹⁴⁾ to collect reports produced by cities and regions around the world, support Japanese cities to conduct a VLR, and hold relevant seminars. So far in Japan, VLRs have been launched by Toyama City, Shimokawa Town, Kitakyushu City, and Hamamatsu City, all of which have been selected as SDGs Future Cities. IGES has also compiled the process of the VLR conducted in Shimokawa Town as the Shimokawa Method¹⁵⁾.

The promotion of the SDGs in local governments is gradually evolving from the planning and awareness-raising stages to the implementation of specific initiatives and the process of

appropriately managing the progress and monitoring the outputs and outcomes. To further promote the SDGs in local governments, it is essential to provide comprehensive support for the developing these mechanisms.

Box 1.2 Movement of VLRs manual production

Guidelines for Voluntary Local Reviews

The United Cities & Local Governments (UCLG), UN-HABITAT

- The UCLG and UN-HABITAT are actively supporting local governments in their efforts to localize and monitor the SDG agenda, providing them with the necessary tools, methods, and institutions to do so. To encourage a wider range of regions around the world to adopt VLRs in the future, they are beginning to prepare guidelines with various information necessary for VLR preparation.
- "Volume 1: A Comparative Analysis of Existing VLRs" was published in July 2020, which covered all the VLRs published in various regions of the world so far and analyzed their contents in detail. It summarizes the information that is effective for VLRs, the implementation system necessary for creating VLRs, and the issues at this stage.



Shimokawa Method for Voluntary Local Reviews

Institute for Global Environmental Strategies (IGES)

- Shimokawa, Hokkaido, a small town in northern Japan, is grappling with the challenges of rigorous monitoring, review, and follow-up despite its relative isolation, small size, and limited financial resources.
- Based on the successful cases in the town, IGES has compiled a practical and step-by-step method for implementing a VLR as the "Shimokawa Method".
- This Handbook consists of ten steps, each of which provides the steps necessary to successfully implement a VLR. It is hoped that by following these steps, communities will begin to make the transition to a more sustainable society.



1-3 Development of Required Local Indicators

To establish an effective monitoring mechanism for SDG promotion in regions, developing and utilizing local indicators is essential. Appropriately designed quantitative indicators are particularly useful for local governments to (a) understand the characteristics and conditions of the regions under their jurisdiction concerning the SDGs; (b) make comparisons with other regions, consider effective policy measures; (c) verify the effectiveness of the measures implemented; and (d) actively disseminate information to relevant parties. In fact, against this background, local indicators have been developed in various countries in the world (see Box 1.3).

However, even if we discuss local indicators briefly, desirable evaluation indicators vary greatly. They are dependent on their position in the local government management, the phase of SDGs promotion, the status of data development in each region, and the content to be analyzed. For instance, each of the local governments selected as SDG Future Cities has established a basic plan for promoting the SDG and has set KPIs as part of the plan. However, the purpose of the KPIs is to understand the extent to which they are advancing their own initiatives. They cannot be used for comparison with other countries or regions or for analyzing their characteristics. Similarly, the indicators developed by the organizations introduced so far can be compared internationally, but they are not suitable for analyzing the characteristics of local governments, and it is difficult to design indicators that meet all the needs.

What are the needs of local governments in Japan for local indicators? The following needs were expressed by local governments at the Workshop on “SDGs Management at the Local Level and Effective Information Dissemination” organized by

UNCRD in July 2020:

- Analyzing the strengths and weaknesses of the region by comparing its achievement level of the SDGs with other local governments;
- Enhancing the accountability and persuasiveness of local governments in addressing the SDGs;
- Considering both the international and domestic perspectives of comparative advantage;
- Support on where to start to achieve the SDGs; and
- Localization of the SDGs is important, but local governments need to make sure that does not lead to their extended interpretation.

On the other hand, according to the results of the questionnaire survey on local governments⁵⁾, the setting of local indicators (14.4%) was cited as the most challenging item for local governments to tackle in promoting the SDGs. More than half of the municipalities answered that they had no plans to address any of the following item: “setting indicators to measure the progress of the goals;” “plans for collecting data on indicators;” “comparable indicators with other municipalities;” “indicators that express the identity of the municipality;” and “concrete targets for achievement”. Of these, “comparable indicators with other municipalities” was least addressed.

In Japan, it is necessary to provide local governments with further support, especially to collect, organize, and evaluate quantitative data related to the SDGs in a comparable manner, and then to visualize and disseminate them while fully utilizing the knowledge of local indicators developed by various organizations around the world.

Box 1.3 Examples of SDG indicators at the city level

Sustainable Development Report¹⁶⁾

Sustainable Development Solutions Network (SDSN) and the Bertelsmann Stiftung

- The report uses a set of evaluation indicators to rank the achievement of the SDGs by country. It has been issued every year since 2015 (Japan is ranked 17th in the 2020 report).
- City-by-city assessments are also being actively developed, with city-by-city assessments in the United States starting in 2017, major cities in Europe starting in 2018, and city-by-city assessments for Italy, Spain, and Bolivia being developed and published in 2020.
- Country-level evaluations are constrained by the availability of data that can be measured globally, but it is possible to develop indicators that are localized to the status of statistical data in each country.

ISO-37120 Sustainable Cities Index¹⁷⁾

The World Council on City Data (WCCD)

- The WCCD was established in Canada in 2014 to support ISO-standardized and independently verified mechanisms for cities and communities of all sizes and is promoting certification of the three rating systems for sustainable cities established by ISO as international standards (ISO-37120, ISO-37122, and ISO-37123).
- Of these, ISO-37120, Indicators for Sustainable Cities, consists of 19 themes and 104 indicators, each of which is linked to each goal of the SDGs, allowing cities to understand the progress of the SDGs.
- Certification is implemented through registration from each city, and more than 60 cities worldwide have received certification (so far there are no local governments in Japan that have received certification).

A Territorial Approach to the Sustainable Development Goals¹⁸⁾

The Organisation for Economic Co-operation and Development (OECD)

- This is an attempt to measure the distance toward the SDGs in regions and cities in OECD member countries. From Japan, the City of Kitakyushu, the University of Kitakyushu, and IGES were involved, and the synthesis report was published in February 2020.
- Of the 169 targets in the SDGs, 105 targets are identified that are particularly relevant to regions and cities in OECD countries. 39 indicators are selected at the regional level (Japan is divided into 10 regions), and 25 indicators are selected at the city level (53 cities are covered in Japan), and the achievement level of the SDGs in each region and city is assessed.
- While this is an extremely important initiative as a method to evaluate the achievement level of the SDGs at the city level internationally, because it focuses on international comparisons, Japanese cities do not have corresponding indicators for some of the goals, and therefore cannot obtain evaluation results.

List of SDG Local Indicators for Promotion of Overcoming Population Decline and Vitalizing Local Economy (August 2019)¹⁹⁾

Cabinet Office, the Government of Japan

- The indicators are based on the 232 global indicators established by the United Nations Statistics Division (UNSD) and localized to consider Japan's national conditions and the status of statistical development at the local government level, making it the indicator system that is comprehensive and faithful to the global indicators.
- It is useful indicators for each municipality to determine KPIs for promoting the SDGs.
- Kawakubo Laboratory at Hosei University is developing a database of indicators for each prefecture and cities in Japan as a local SDGs platform²⁰⁾.

1-4 Purpose and Structure of the Handbook

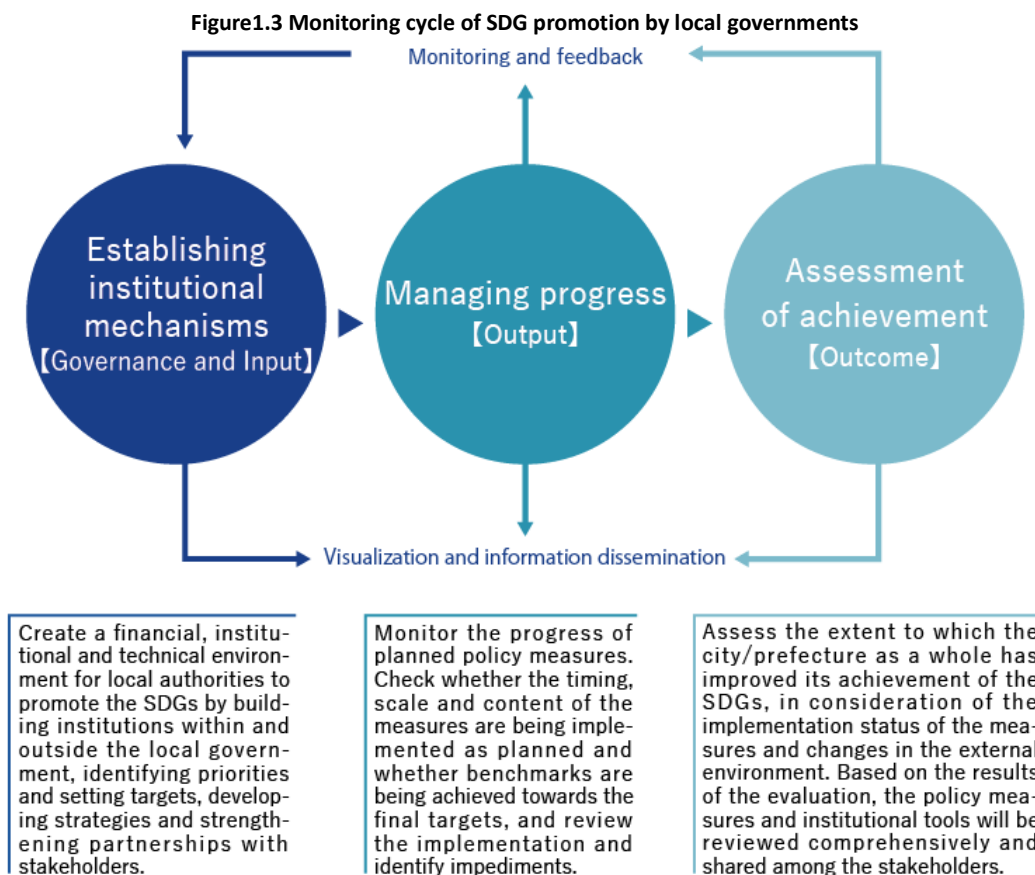
The purpose of this Handbook is to provide various type of monitoring indicators, evaluation methods, and actual examples for Japanese local governments to promote the SDGs in a sustainable manner.

The monitoring process for promoting the SDGs by local governments (figure 1.3) begins with building institutional mechanisms within and outside the local government, identifying priority issues and setting targets, and developing and implementing strategies (Input). Once the policy measures are underway, it is necessary to periodically manage whether the measures are being implemented as planned (Output) and to review the achievement level of SDG implementation (Outcome). By doing so, it is significant to identify the challenges and factors at each stage in detail, strengthen the promotion mechanism again, provide feedback to the measures, and proactively disseminate information to citizens and relevant stakeholders.

In the Part A, the Handbook first proposes an

overview of the “SDG Achievement Assessment,” which has been localized for Japanese local governments to properly identify issues and measure their effectiveness in promoting the SDGs and introduces the analysis results. This set of evaluation index to quantitatively assess and continuously monitor the degree to which Japanese municipalities and prefectures have achieved each goal of the SDGs by utilizing existing statistical data. Moreover, they are highly versatile indicators that can be used by all local governments in Japan.

In the Part B, the Handbook will introduce the methodology of monitoring in the stages of building institutional mechanisms and progress management. Furthermore, the Part C will present numerous examples and tools of information collection and visualization for effectively promoting those monitoring mechanisms and disseminating them to citizens and other related parties.



2. Proposed Indicators for Evaluating the Achievement of SDG Local Actions in Japan

2-1 Introduction

The UN Global SDG Indicators define countries as spatial scales at which the world and national governments need to measure and report progress toward the SDGs and set up 232 indicators. However, the application of the indicators to local scales poses challenges such as the inappropriateness of indicators for the local level and the lack of data. In addition, this framework, which is based on national averages, may overlook local and regional disparities within a country, leading to the undermining of the principle of “no one will be left behind” of 2030 Agenda. As described in the previous chapter, in promoting and monitoring the SDGs at the local level, it is necessary to have indicators that consider the specific context and circumstances of each country and region. It is no longer enough to focus only on Goal 11 “Sustainable Cities and Communities,” but each city and region is required to consider the 17 goals of the SDGs comprehensively.

The local indicators developed so far, such as the frameworks developed by the OECD and the WCCD, seem to solve these issues in terms of focusing on the city/region level. However, those indicators, which are primarily intended for international comparison, are selected from indicators based on data available across the world, and it is often difficult to obtain defined indicators when evaluating cities and regions in specific countries such as Japan. In fact, a number of the indicators set by the OECD are not readily available for all cities in Japan, and thus cannot be properly compared. On the other hand, however, there are many indicators that are not included in the world-wide data because they are not readily available but are maintained at the local level in Japanese statistics.

The SDG local achievement indicators introduced in this Handbook are intended to assist local governments in Japan, namely municipalities and prefectures, in understanding the status of the achievement level of the SDGs in their respective territories and their position in the world and in

Japan, as well as in examining their initiatives and managing the progress. The following four points are particularly important in designing the indicators.

(1) Localization to match the statistical situation in Japan

All indicators have been thoroughly localized to fit the needs of Japanese local governments. As a result, almost all indicators can be obtained from the statistical information maintained by the Japanese national and local governments. Therefore, there is no need to conduct new surveys to monitor the indicators and they assure that the **data will be available inexpensively, fairly, and continuously, and that changes over time can be analyzed and examined.**

(2) Clear linkage with SDG targets

All indicators are designed to relate to one or more of the 169 SDG targets on a one-to-one or one-to-many basis. All of them set in this Handbook are not indicators that the Research Group or Japan has incorporated based on its own interpretation. Instead, **indicators are based on what is mentioned in the 2030 Agenda.**

(3) Narrowing down to outcomes

To objectively measure the current status of the SDG achievement of regions, **the Research Group has narrowed the list down to only those appropriate ones as outcome indicators, that is, indicators that show the current condition of the city/region, the results of policy measures taken and their effects.** Please refer to the Part B for the evaluation/monitoring of institutional mechanisms and the progress toward the SDGs.

(4) Can be used for both international and domestic comparisons

The normalization of achievement indicator values that can show both the achievement level in terms of international standards and the relative position in Japan, as well as the increase or decrease of values from the base year are shown. In the SDGs, **certain goals are valuable for**

international comparison, while others are important for relative positioning at home. By presenting the results of both in an easy-to-understand manner, all the indicators have been constructed to be used for both being recognition as familiar issues and analysis from an international and long-term perspective.

In developing the indicators, various insights from local indicators developed in Japan and abroad as mentioned in Section 1.3 have been drawn on for developing the index.

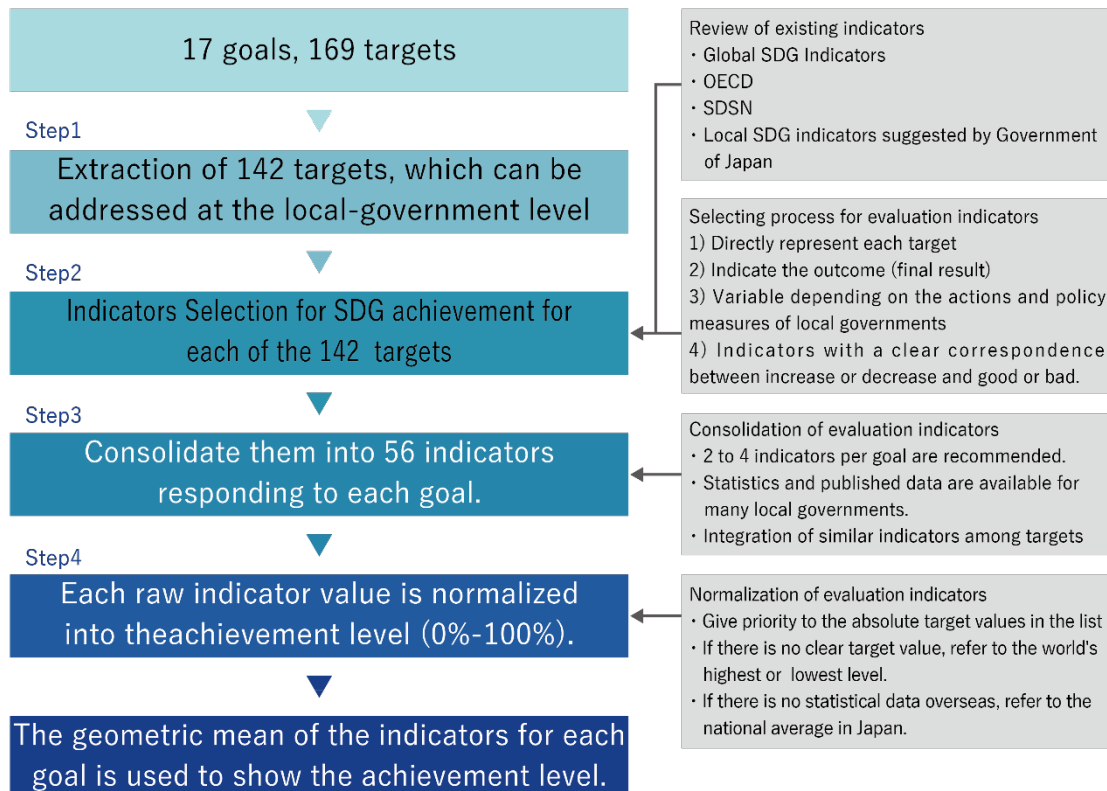
2-2 Identifying Indicators for Evaluating the Achievement of SDG Local Actions in Japan

The process of identifying indicators is shown in figure 2.1. The first step in the process is to narrow down the 169 SDG targets that are relevant to local governments. They include those that can be localized and others that cannot be localized at all, so the 169 targets have been narrowed down to 142 targets that can be addressed at the local level.

target are selected with reference to existing indicators. These are further narrowed down to two to four representative indicators for each goal. Finally, achievement evaluation indicators are specified by defining the target and normalized values for each indicator so that it can be expressed as an achievement level from 0% to 100%.

Then, outcome indicators corresponding to each

Figure 2.1 Selection process for SDG achievement evaluation indicators



2-3 Targets Extracted at the Municipal and Prefectural Levels

First, to narrow down the list of targets relevant to local governments, the process started by eliminating targets from the 169 targets whose relevance is difficult to understand, especially at the local government level. In the SDGs, there are targets that are clearly the subject of the national

government or business, and the targets include not only the tasks to be achieved but also the means of implementation to help achieve them. Since this index is based on an outcome-oriented structure, these targets were excluded, resulting in the selection of 142 targets (table 2.1).

Table 2.1 SDG targets at the local level

Goal	Number of targets	Number of localized targets	Goal	Number of targets	Number of localized targets
Goal 1	7	7	Goal 10	10	6
Goal 2	8	8	Goal 11	10	10
Goal 3	13	13	Goal 12	11	8
Goal 4	10	10	Goal 13	5	3
Goal 5	9	8	Goal 14	10	9
Goal 6	8	8	Goal 15	12	12
Goal 7	5	5	Goal 16	12	12
Goal 8	12	10	Goal 17	19	5
Goal 9	8	8	ALL Goals	169	142

2-4 Setting Outcome Indicators

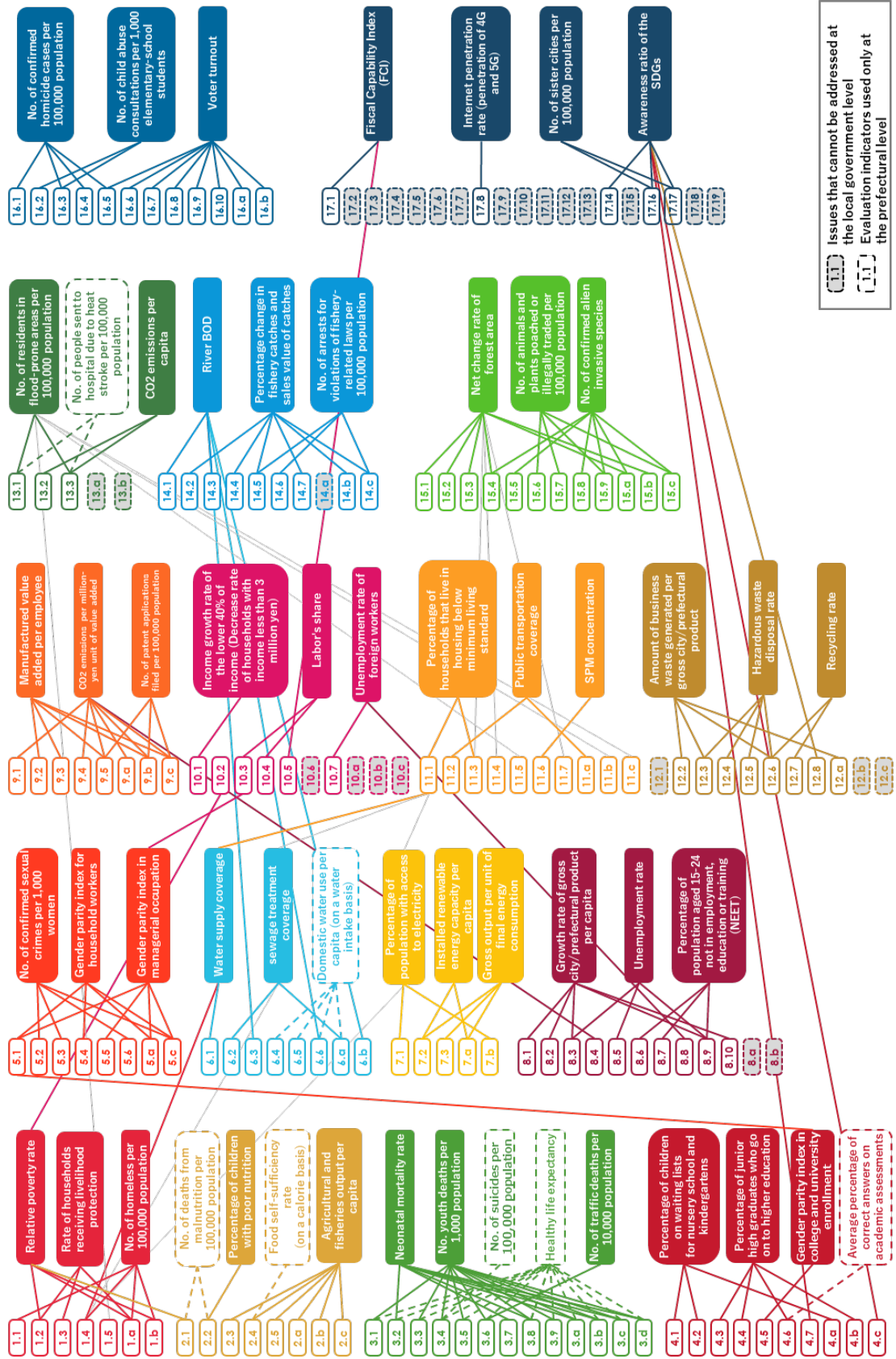
The outcome indicators for each target were selected with particular attention to the following three points: (a) the indicators should directly represent the issues addressed by each target; (b) the indicators should represent the outcome (final result); (c) the indicators should be able to be changed by actions and measures of the local government and the people concerned; and (d) the indicators should have clear correspondence between the increase or decrease of the indicator and the good or bad result. The indicators were selected by referring to the existing literature in box 1.3.

However, those indicators still include duplicates, similar indicators, and indicators that local

governments have neither surveyed nor published in Japan. In addition, excessively large numbers of indicators can also hinder the understanding of policymakers and local officials in conducting their analysis. Therefore, the indicators were narrowed down to 2-4 indicators for each goal by ensuring that the data is available in these municipalities and integrating similar indicators.

As a result, 56 indicators (49 for municipalities) have been identified, as shown in table 2.2. The relationship between indicators and the SDG targets is shown in figure 2.2. Indicators relevant to multiple goals are accounted in each related goal.

Figure 2.2 Correlation between SDG targets and local indicators for SDG achievement



2-5 Normalization of Indicators

Finally, to analyze these indicators, which have various units, in parallel, all indicators have been normalized into achievement levels with values from 0% to 100%, as is done in the SDSN and OECD. As pointed out in these references, some of the 169 targets have clear target values, absolute or relative, while others do not. Therefore, if a clear value is set for the target, or if the indicator has a definite maximum or minimum value, that value should be used as the target or baseline. In the absence of such value, the top and bottom fifth percentile values according to the distribution in each country in the world have been set, referring to SDSN and other sources. In addition, for indicators for which no data is available in each

country, values based on the national average in Japan have been used. The geometric mean of each of these indicators is the achievement level for each goal.

Although the indicator is intended for local governments in Japan, as mentioned above, the normalization for the achievement level is done from an international perspective. Therefore, the achievement level indicated by this indicator tends to indicate the assumed position in the world, rather than the relative position in Japan. If we want to analyze the position in Japan, we can check the relative position by checking the difference and ratio from the national average.

Universal scale (absolute evaluation)
 Universal scale (relative evaluation)
 Domestic Relative Evaluation

Table 2.3 Setting target and normalized values for achievement evaluation

Goal	Local Indicators for SDG Achievement	Data availability by prefecture level	Data availability by city/town/village level	Published indicator	Unit	National Average (Base year)	Target Value		Normalized Value	
							Target Value	See Also	Normalized Value	See Also
SDG 1 No Poverty	Relative poverty rate			-	%	19.2	9.6	SDG Target 1/2 times the national average (2015)	26.7	Global bottom 5th percentile value (corrected value)
	Rate of households receiving livelihood protection			-	%	3.0	1.5	SDG Target 1/2 times the national average (2015)	6.0	Twice the national average (2015)
	Number of homeless per 100,000 population			-	Per 100,000 population	5.1	0.0	SDG Target leave no one behind	25.7	5 times the national average (2015)
SDG 2 Zero Hunger	Number of deaths from malnutrition per 100,000 population	X		-	Per 100,000 population	1.6	0.0	SDG Target leave no one behind	3.3	Twice the national average (2015)
	Percentage of children with poor nutrition			-	%	0.2	0.0	SDG Target leave no one behind	1.1	Global bottom 5th percentile value (corrected value)
	Agricultural and fishery output per capita			+	10,000 yen/person	8.0	16.0	SDG Target Twice the national average (2015)	1.6	1/5 times the national average (2015)
SDG 3 Good Health and Well-Being	Food self-sufficiency rate (on a calorie basis)	X		-	%	39.0	100.0	SDG Target	0.0	
	Neonatal mortality rate			-	per 1,000 births	0.9	12.0	SDG Target	34.8	Global bottom 5th percentile value
	Number of youth deaths per 1,000 population			-	per 1,000 population	1.7	1.2	SDG Target 2/3 times the national average (2015)	28.6	Global bottom 5th percentile value
SDG 4 Quality Education	Number of suicides per 100,000 population	X		-	Per 100,000 population	18.5	2.6	Global top 5th percentile value	21.6	Global bottom 5th percentile value
	Healthy life expectancy			X	year	81.0	84.0	Country average +3 years (2015)	78.0	Country average -3 years (2015)
	Number of traffic deaths per 10,000 population			-	Per 10,000 population	0.31	0.16	1/2 times the SDG Target country average (2015)	3.11	Global bottom 5th percentile value
SDG 5 Gender Equality	Percentage of children on waiting lists for nursery schools and kindergartens			-	%	1.1	0.0	SDG Target leave no one behind	5.6	5 times the national average (2015)
	Percentage of junior high school graduates who go on to higher education			+	%	98.9	100.0	SDG Target leave no one behind	0.0	
	Gender parity index in college and university enrollment			N		0.92	1.00	SDG Target	0.0	
SDG 6 Clean Water and Sanitation	Average percentage of correct answers on academic assessments	X		+	%	63.4	73.4	Country average -10% (2015)	53.4	Country average -10% (2015)
	Number of confirmed sex crimes per 1,000 women			-	per 1,000 women	0.12	0.0	SDG Target leave no one behind	0.24	Twice the national average (2015)
	Gender parity index for household workers			N		0.07	1.0	SDG Target	0.0	
SDG 7 Affordable and Clean Energy	Gender parity index for managerial occupations			N		0.20	1.0	SDG Target	0.0	
	Water supply coverage			+	%	94.7	100.0	SDG Target leave no one behind	0.0	
	Sewage treatment coverage			+	%	85.5	100.0	SDG Target leave no one behind	0.0	
SDG 8 Decent Work and Economic Growth	Domestic water use per capita (based on a water intake basis)	X		-	%	115.3	53.2	OECD Top 5th percentile values	208.3	Global bottom 5th percentile value
	Percentage of population with access to electricity			+	%	100.0	100.0	SDG Target leave no one behind	0.0	
	Installed renewable energy capacity per capita			+	kW/person	0.22	1.08	Five times the national average (2015)	0.04	Five times the national average (2015)
SDG 9 Industry, Innovation, and Infrastructure	Gross output per unit of final energy consumption			+	Million yen/person	43.8	87.6	Twice the national average (2015)	8.8	1/5 times the national average (2015)
	Growth rate of gross city/ prefectural product per capita			+	%	1.4	5.4	OECD Top 5th percentile value (corrected value)	-2.0	Global bottom 5th percentile value (corrected value)
	Unemployment rate			-	%	4.2	0.0	SDG Target leave no one behind	19.3	Global bottom 5th percentile value (corrected value)
SDG 10 Reduced Inequalities	Percentage of population aged 15-24 not in employment, education or training (NEET)			-	%	3.1	2.7	Global top 5th percentile value (corrected value)	8.7	Global bottom 5th percentile value (corrected value)
	Manufactured value added per employee			+	Millions of yen/person	31.1	12.3	Global top 5th percentile value (corrected value)	0.1	Global bottom 5th percentile value (corrected value)
	CO2 emissions per million-yen unit of added value			-	TCO2/million yen	4.2	1.9	Global top 5th percentile value (corrected value)	23.3	Global bottom 5th percentile value (corrected value)
SDG 11 Sustainable Cities and Communities	Number of patent applications filed per 100,000 population			+	per 100,000 people	2066.4	2062.4	Global top 5th percentile value (corrected value)	9.4	Global bottom 5th percentile value (corrected value)
	Income growth rate of the lower 40% of income (Decrease rate of households with income of less than 5 million yen)			+	%	1.6	1.6	The national average (2016)	0.0	Twice the national average (2016)
	Labor's share			+	%	69.6	74.3	Global top 5th percentile value (corrected value)	28.2	Global bottom 5th percentile value (corrected value)
SDG 12 Responsible Consumption and Production	Unemployment rate of foreign workers			-	%	5.4	0.0	SDG Target leave no one behind	18.9	Global bottom 5th percentile value
	Percentage of households that live in housing below the minimum living standard			-	%	7.3	0.0	SDG Target leave no one behind	14.6	Twice the national average (2016)
	Public transportation coverage			+	%	63.6	100.0	SDG Target leave no one behind	0.0	
SDG 13 Climate Action	SPM (Suspended Particulate Matter) concentration			-	µg/m3	13.9	7.1	Global top 5th percentile value (corrected value)	100.0	Environmental standards
	Amount of business waste generated per gross city/ prefectural product			-	t/million yen	20327.6	4065.5	1/5 times the national average (2015)	4065.5	Twice the national average (2015)
	Hazardous waste disposal rate			+	%	75.1	100.0	SDG Target leave no one behind	0.0	
SDG 14 Life Below Water	Recycling rate			+	%	20.4	47.8	Global top 5th percentile value	7.67	Global bottom 5th percentile value
	Number of residents in flood-prone areas per 100,000 population			-	per 100,000 people	29260.7	14630.4	1/2 times the national average (2020)	58521.4	Double the national average (2020)
	Number of people sent to hospital due to heat stroke per 100,000 population	X		-	per 100,000 people	43.6	8.7	1/5 times the national average (2015)	87.1	Twice the national average (2015)
SDG 15 Life on Land	CO2 emissions per capita			-	TCO2/person	9.5	0.2	Global top 5th percentile value	16.8	Global bottom 5th percentile value
	River BOD (Biochemical Oxygen Demand)			-	mg/l	1.6	0.5	Environmental standard (AA)	0.6	Environmental standard (E)
	Percentage change in sales value of fish and fishery products			+	%	1.1	1.0		0.0	
SDG 16 Peace, Justice, and Strong Institutions	Number of arrests for violations of fishery-related laws per 100,000 population			-	per 100,000 people	2.0	0.0	SDG Target	9.8	5 times the national average (2015)
	Net change rate of forest area			+	%	0.0	1.0	Global top 5th percentile value	-1.4	Global bottom 5th percentile value
	Number of animals and plants poached or illegally traded per 100,000 population			-	per 100,000 population	0.2	0.0	SDG Target	1.0	5 times the national average (2015)
SDG 17 Partnerships for the Goals	Number of confirmed alien invasive species			-	no. of kinds	426.0	85.2	1/5 times the national average (2015)	852.0	Twice the national average (2015)
	Number of confirmed homicide cases per 100,000 population			-	per 100,000 population	0.7	0.0	SDG Target leave no one behind	29.4	Global bottom 5th percentile value
	Number of child abuse consultations per 1,000 elementary school students			-	per 1,000 elementary school students	15.8	0.0	SDG Target leave no one behind	31.6	Twice the national average (2015)
	Voter turnout			+	%	43.6	90.4	Global top 5th percentile value	0.0	
	Fiscal capability index (FCI)			+		0.6	1.0	Standard for allocation of local allocation tax (LAT)	0.0	
	Internet penetration rate (penetration rate of 4G and 5G)			+	%	96.0	100.0	SDG Target	0.0	
	Awareness ratio of the SDGs			+	%	15.7	100.0	SDG Target	0.0	
	Number of sister cities per 100,000 population			+	Per 100,000 population	2.7	5.3	Twice the national average (2020)	0.0	

3. Case Studies

3-1 SDG Achievement Level in Prefectures in Japan, 2020

According to the selected indicators, the achievement level of the SDGs in Japan's 47 prefectures in 2020 ranges from 44% to 97% (figure 3.1). The highest achievement level is in Goal 9 “Industry, Innovation, and Infrastructure,” in which Japan ranks as the world's best in industrialization, environmental efficiency, and patent applications. Likewise, Goal 3 “Good Health and Well-being” and Goal 8 “Decent Work and Economic Growth” also show elevated levels of achievement. In contrast, the attainment level of Goal 5 “Gender Equality” is extremely low at less than 50%. This trend is similar to the results of surveys such as the Gender Gap Index conducted by the World Economic Forum (WEF).

The results for each prefecture have further differences. Even for the goal with the slightest difference, Goal 3, there is still 10% difference in achievement among the prefectures. Meanwhile for the goals with the most considerable differences, Goals 9 and 13, the disparity among

the prefectures is more than 50%. Japan's national averages are not representative of each prefecture's attainment level of the SDGs.

When looking at the distribution of the achievement level of each goal by prefecture (figure 3.2), the difference is obvious. Goals such as Goals 3 and 4 have a high achievement level nationwide (or a low level such as Goal 5), while Goals 2, 12, and 13 have a significant difference among prefectures. Some of these goals tend to be rated higher/lower in prefectures with large populations including Tokyo and Osaka, while others appear random.

In response to the low achievement level in the nation as a whole, it is expected to be significantly effective for all the prefectures to work together to promote initiatives. However, for their initiatives, each prefecture should take finely tuned actions and measures to its local conditions.

Figure 3.1 National average and highest/lowest achievement scores for each goal of 47 prefectures

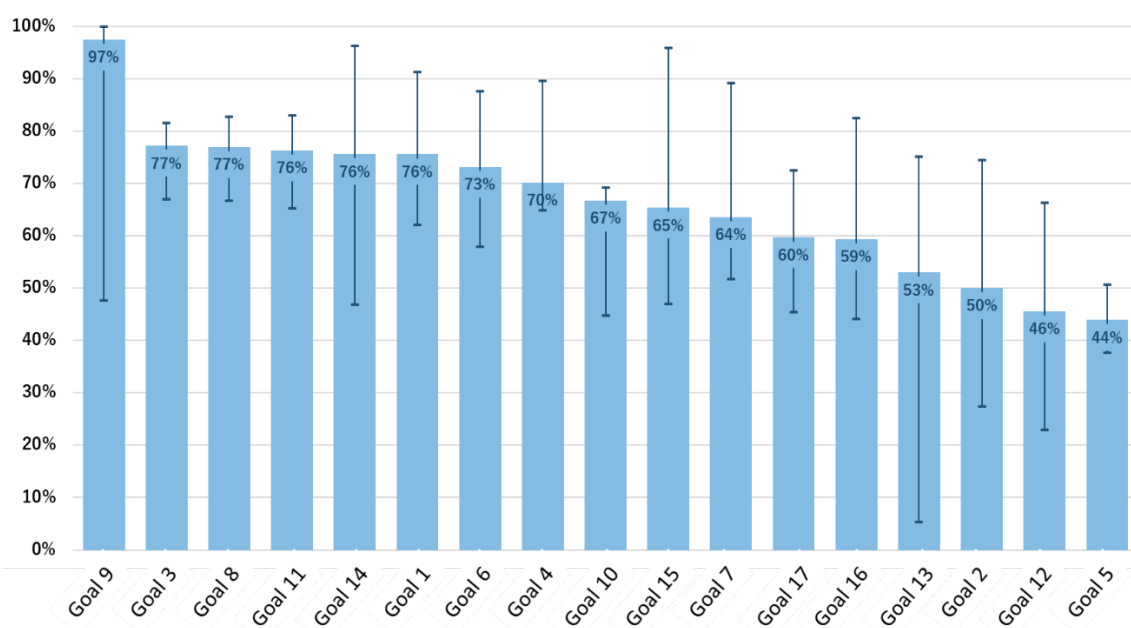
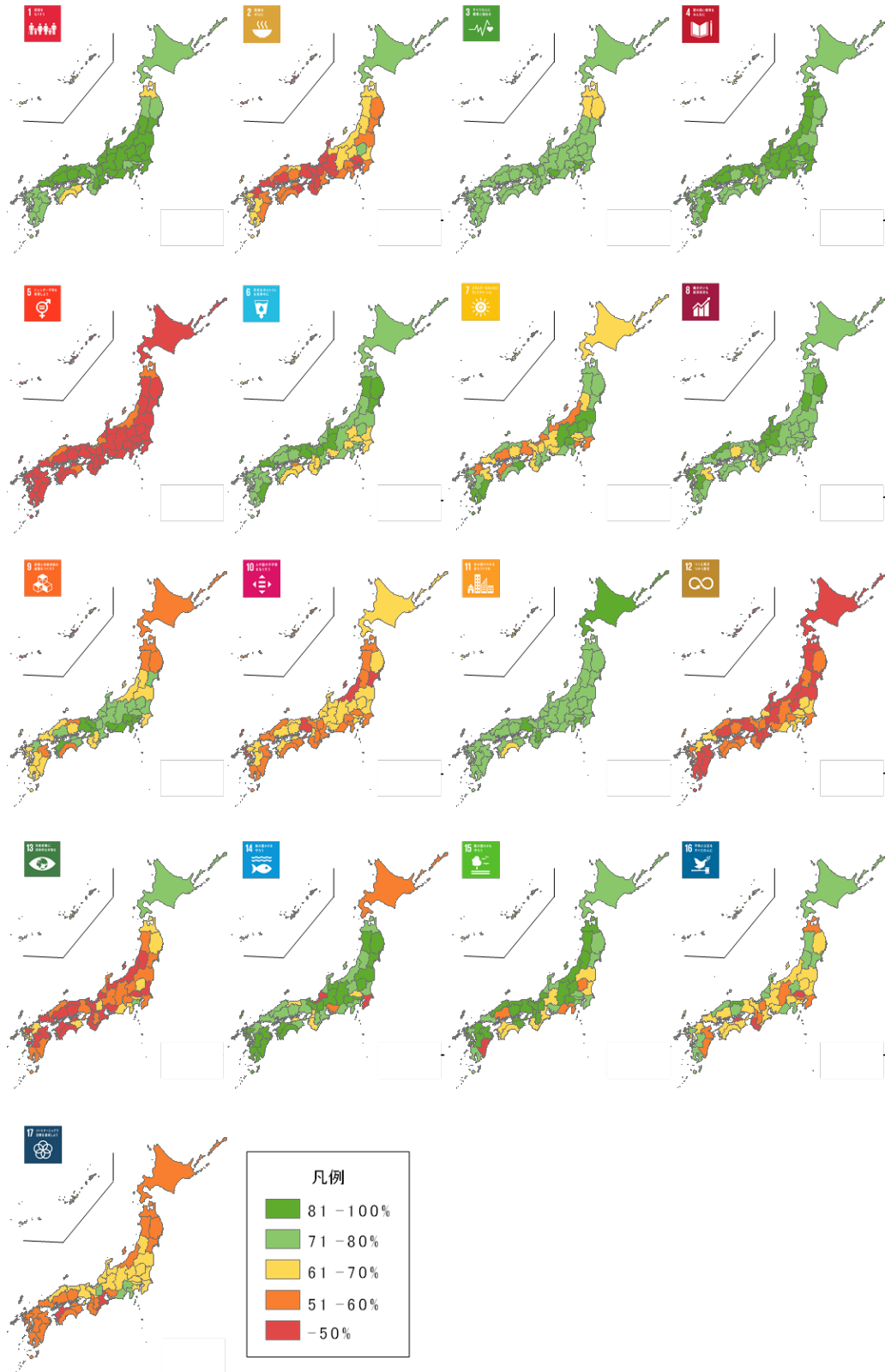


Figure 3.2 Distribution of goal achievement by prefecture



The table 3.1 shows the top five prefectures in terms of achievement for each goal. As shown in figure 3.2, in Goals 3 and 9, prefectures with

relatively large populations have high scores, while in Goals 2 and 15, prefectures with small populations dominate.

Table 3.1 Top five prefectures in terms of achievement for each goal

Goal	1st	2nd	3rd	4th	5th
Goal 1	91% Aichi	91% Shiga	90% Saitama	90% Chiba	90% Shizuoka
Goal 2	74% Tochigi	74% Hokkaido	68% Yamagata	68% Ibaragi	67% Tottori
Goal 3	81% Kyoto	81% Kanagawa	80% Aichi	80% Tokyo	79% Ishikawa
Goal 4	90% Fukui	88% Shizuoka	88% Ishikawa	87% Toyama	86% Niigata
Goal 5	51% Fukui	51% Tokushima	50% Niigata	50% Aomori	50% Shimane
Goal 6	88% Kyoto	84% Yamaguchi	83% Shiga	83% Miyagi	82% Akita
Goal 7	89% Kagoshima	87% Gunma	86% Fukushima	85% Tochigi	81% Yamanashi
Goal 8	83% Saga	83% Shiga	83% Nagasaki	82% Ishikawa	81% Toyama
Goal 9	100% Tokyo	100% Osaka	99% Kyoto	98% Aichi	97% Kanagawa
Goal 10	69% Hiroshima	68% Tokyo	68% Okayama	68% Ibaragi	67% Gifu
Goal 11	83% Nara	81% Hyogo	80% Hokkaido	80% Kanagawa	80% Saitama
Goal 12	66% Yamaguchi	66% Tokyo	64% Fukui	64% Fukuoka	63% Ibaragi
Goal 13	75% Kanagawa	70% Hokkaido	69% Shiga	68% Nagasaki	66% Shizuoka
Goal 14	96% Iwate	94% Kyoto	93% Nagano	93% Miyagi	93% Yamanashi
Goal 15	96% Gunma	90% Fukuoka	89% Tottori	87% Shiga	86% Kagawa
Goal 16	83% Tottori	80% Shimane	79% Yamagata	78% Miyagi	77% Okinawa
Goal 17	73% Yamanashi	71% Shizuoka	71% Shiga	69% Ishikawa	68% Okinawa

3-2 Case Study of Municipalities: Nagoya City and Toyota City, 2020

This section presents a case study of how the index can deepen the understanding of the current situation regarding the SDGs in particular municipalities. For cities, the number of indicators is 49, which is 7 less than that of prefectures (see table 2.2 for details).

The target areas are two municipalities, Nagoya City and Toyota City in Aichi Prefecture, which are also members of this research group. Nagoya is the economic hub of the Chubu region, with a population of approximately 2.3 million. It is also an important city for industry, as it has a largest-level export port in Japan, Nagoya Port, and a commercial center. On the other hand, Toyota City, with a population of 400,000 is the second most populous city in Aichi Prefecture and has a thriving manufacturing industry centered on the automobile industry. The city has the largest value of manufactured goods shipments in Japan and is the industrial center of Japan. Also, Toyota is the largest area in Aichi Prefecture, and has a wide range of topography from plains to mountains, with the Yahagi River as its axis. Nagoya City and Toyota City have been selected as “SDGs Future Cities” by the Cabinet Office since 2019 and 2018 respectively and are actively developing their initiatives.

Case 1: Case Study in Nagoya City

◆ Achievement level for each goal

The results of the evaluation for Nagoya City, Aichi Prefecture, are shown in figure 3.4. Goals 3 and 9 show 100% achievement, but as with the national average, achievement is low for Goals 5 and 13, and Goal 16 is also below 50%.

◆ Difference from the national average

Looking at the difference from the national average, the first item that is particularly higher than the national average is Goal 12. This may be because the whole of Aichi Prefecture, including Nagoya City, has started to tackle the waste problem early on, and has thoroughly implemented sorting and recycling, including the introduction of a charge for waste bags. Goal 9 also shows an elevated trend, although the increase is small due to the high national average. This suggests that the city has a high economic base, particularly around the manufacturing sector.

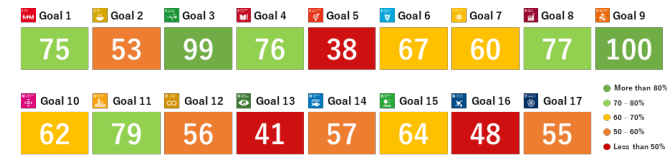
On the other hand, Goals 6, 13, 14 and 16 are lower than the national average. For Goal 13, it is suggested that the per capita CO2 emissions are not high, but that there is concern about the risk of water-related disasters, which are likely to increase due to future climate change. For Goals 6 and 14, river water quality issues tend to reduce the level of achievement. For Goal 16, child abuse and (most recent) electoral turnout is below the national average, contributing to lower achievement.

◆ Changes since 2015

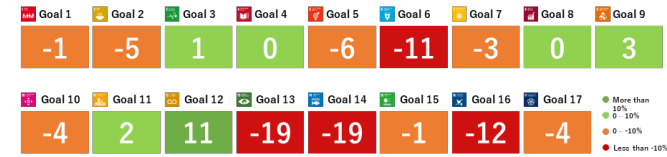
The data collected from 2015 shows that while there has been an improvement in Goal 1, but there are regressive trends in several goals, partly due to the impact of the COVID-19 pandemic. It is suggested that improvement in these items may be a crucial point for enhancing the level of achievement of the SDGs in the future overall.

Figure 3.3 Case study results for Nagoya City

Achievement level for each goal



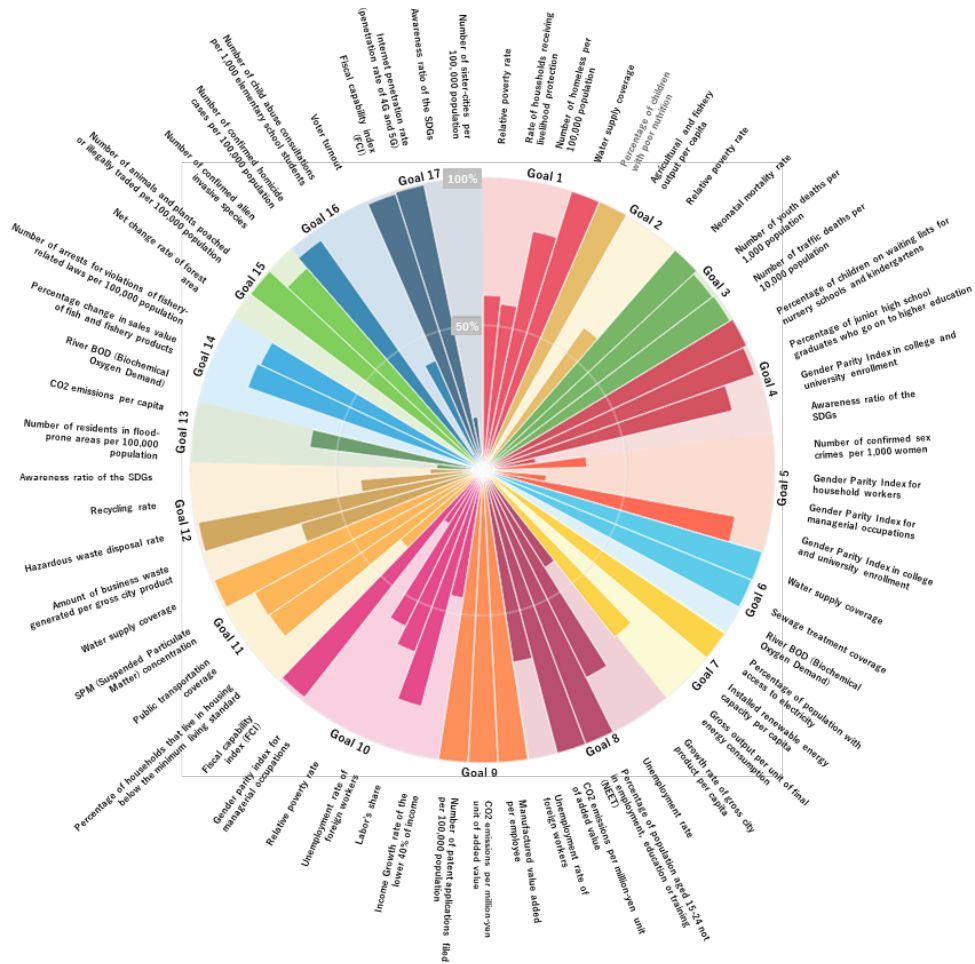
Difference from the national average



Changes since 2015



Achievement level for each indicator



Case 2: Case Study in Toyota City

◆ Achievement level for each goal

The results of the evaluation for Toyota City, Aichi Prefecture, are shown in figure 3.4. Goals 1, 3, 9 and 14 show a high level of achievement of over 90%, but as in the rest of the country, Goal 5 tends to have a low level of achievement.

◆ Difference from the national average

Looking at the difference from the national average, Goals 1 and 12 are listed as remarkably higher items than the national average by more than 20 points. The significant achievement in Goal 1 was due to Toyota City's strong industrial and employment performance, which contributed to the low rate of relative poverty as well as a small proportion of households receiving livelihood protection in comparison with the rest of Japan. The achievement of Goal 12 may be influenced by the fact that hazardous waste is properly disposed of, and that the amount of business waste generated per gross municipal production is small. Furthermore, the city's wide range of rural areas and its active implementation of initiatives to link these areas together to preserve biodiversity has contributed to the high level of achievement of Goals 14 and 15.

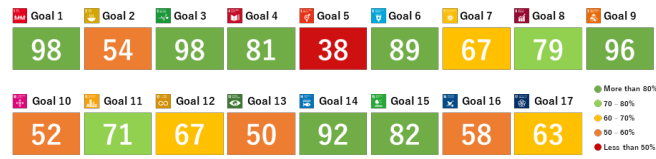
On the other hand, the achievement on Goals 10 and 13 are lower than the national average. The large proportion of the manufacturing industry for Goal 10 may contribute to the city's lower labor share than the national average. This result is consistent with the high-level of achievement for Goal 1. For Goal 13, the large scale of the manufacturing sector is the significant factor for the high level of CO2 emissions per capita.

◆ Changes since 2015

The data collected from 2015 shows that Goals 7 and 15 have shown a trend of improvement, but there are regressive trends in several goals, partly due to the impact of the COVID-19 pandemic. It is suggested that improvement in these items may be key to increasing the achievement of the SDGs in the future overall.

Figure 3.4 Case study results for Toyota City

Achievement level for each goal



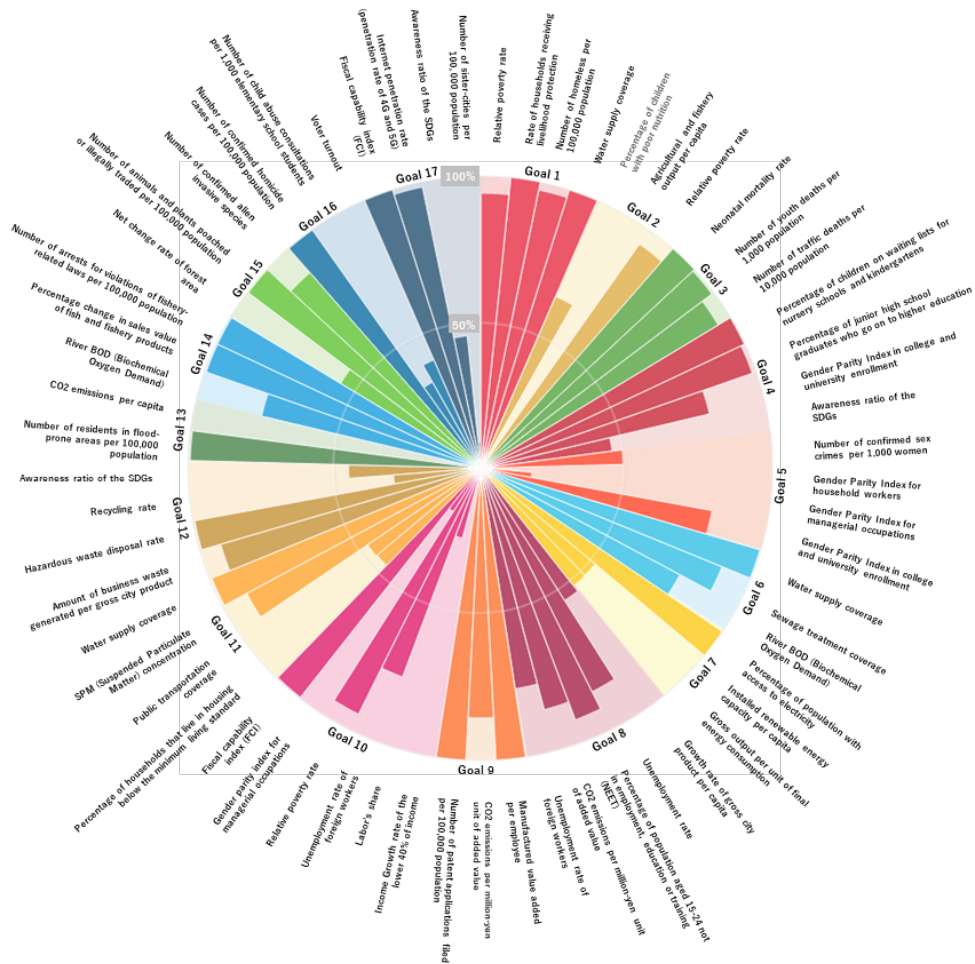
Difference from the national average



Changes since 2015



Achievement level for each indicator



4. Possibility of Using Indicators for Evaluating the Achievement of SDG Local Actions and Points to Keep in Mind

The SDG local achievement index introduced in this Handbook enables to investigate the achievement level of each goal in prefectures and cities throughout Japan, and to understand what strengths and weaknesses, potentials and challenges each region has. In particular, the ability to easily understand the differences among regions in Japan is great advantage.

The evaluation results for each prefecture in Japan, shown in figure. 2.3, not only confirm the trend of the degree of achievement in each prefecture. They also show the possibility of structurally understanding the achievement status of the SDGs throughout Japan. In addition, there is a possibility of analyzing hidden structures such as socio-geographical characteristics and interrelationships among goals. By conducting more detailed analysis and research in the future, the national government will be able to discover knowledge that will lead to the consideration of measures that will be more effective for each region, rather than a uniform approach nationwide.

The analysis results focusing on Nagoya City and Toyota City provide concrete examples of how the SDGs have been achieved in the regions that can be analyzed with this index. It is possible to analyze not only the achievement level of each goal, but also the aspects of the results, and whether they are brought about by structural factors (such as industry and geographical features) or superficial factors that measures can easily improve. In addition, through the analysis, there is a possibility that the measures and culture that the region has been implementing ahead of time and on an ongoing basis, such as the high evaluation of Goal 12 in both cities, will be brought into the limelight by using the perspective of the SDGs. Such initiatives are not immediately effective. Yet, it has been shown that they are steadily effective when developed on an ongoing basis. Disseminating such initiatives from one region to another is also an important initiative.

There are four major points to keep in mind when using indicators. First, it is important to note that while this index technically allows for relative comparisons to be made between regions, this is not its purpose. Relative comparisons with other regions should not be used to assign superiority or inferiority among regions, but to deepen our understanding of the position and challenges of our own region.

Secondly, because of the outcome nature of this index, it does not produce results overnight, and it can fluctuate greatly depending on external social factors (such as the international political situation, the economy and the COVID-19 pandemic that has been occurring since 2020). It is hoped that the results will be utilized in planning for the SDGs and regional policies through analysis of the factors behind the results, rather than just being happy or sad about changes in the indicators.

Third, as shown in this Handbook just as the national averages are not representative of the situation in each prefecture, the results for each municipality are also not representative of the state of affairs in each local community. For the prefectures, please make an effort to investigate and analyze the differences especially among the constituent municipalities, and for the municipalities, please do so in more detailed local categories, for instance, school districts or mesh units.

Fourth, this index aims to evaluate each municipality and prefecture in Japan with the same index. Therefore, it does not necessarily use sufficient indicators to evaluate each goal. For more detailed analysis and consideration of measures, please make full use of the data and survey results that each region possesses on its own. It is hoped that the results will provide feedback for improvement and review of the indicators.

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