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ORIGINAL ARTICLE

SDGs mainstreaming at the local level: case studies from Japan

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Abstract

There has been increasing interest in local-level implementation of the United Nations 2030 Agenda for Sustainable Development and its Sustainable Development Goals (SDGs). Despite the emergence of various initiatives undertaken by local governments, studies on the process of mainstreaming the 2030 Agenda within local contexts remain limited. This study is aimed at identifying possible approaches for supporting local governments in successfully mainstreaming the 2030 Agenda and the SDGs. We developed an analytical framework covering key components for local-level mainstreaming of the SDGs based on our review of recent policy guidelines for implementing the SDGs and the policy integration and coherence literature. Subsequently, we applied this framework within case studies of two designated municipalities under the Japanese government's "SDGs Future Cities" initiative aimed at localizing the SDGs. The analysis demonstrated how local governments could develop and apply key components of the SDGs mainstreaming process. Our findings suggest that the following approaches can facilitate local governments' efforts to mainstream the SDGs: first, municipalities can foster local ownership to address the challenges they face. Second, existing policy resources can be linked with formal procedures. Third, multi-stakeholder partnerships can be developed. Fourth, vertical communication channels can be established with international and national-level organizations. Overall, the article contributes to a growing literature on SDGs implementation at the local level by identifying key components required for their mainstreaming, introducing perspectives derived from Japanese case studies.

Keywords Sustainable development goals (SDGs) · Localization · Mainstreaming · Policy integration

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Introduction

There is growing recognition of the importance of implementing the United Nations (UN) 2030 Agenda for Sustainable Development and Sustainable Development Goals (SDGs) at the local level (UN General Assembly 2019). Achieving these global aspirations requires local commitment and the actions of local governments (Satterthwaite 2017). The increasing global trend toward SDGs mainstreaming within local contexts indicates that the call for sustainable development is being heeded at the local level (Global Taskforce of Local and Regional Government 2018; Local 2030 2020). National governments are also actively promoting initiatives aimed at localizing the SDGs (Allen et al. 2018; Morita et al. 2019). Further, documentation of local initiatives relating to the implementation of the 2030 Agenda is being promoted at the global scale. Such efforts include the Voluntary Local Reviews and recent initiatives for promoting cities' peer learning, including those of the Organisation for Economic Co-operation and Development

(OECD) and the Association of Southeast Asian Nations (ASEAN) that commenced in 2018 (OECD 2019; United Nations 2019).

While there is growing interest in local-level mainstreaming of the SDGs (SDSN 2016; Global Taskforce of Local and Regional Government 2018), there are few policy guidelines for this process (Misselwitz and Villanueva 2015; Reddy 2016; SDSN 2016). Thus, there is a need to advance understanding of various processes for mainstreaming the SDGs based on a review of literature including existing policy guidelines at the international and national levels, and in other areas, supplemented by case studies of SDGs mainstreaming.

In this study, our aim was to identify possible approaches for supporting local governments' efforts to mainstream the 2030 Agenda and the SDGs. We posed the following research questions: (1) What are the key components of successful mainstreaming of the SDGs at the local level? (2) What kind of approaches could support local governments in mainstreaming the SDGs?

By "mainstreaming", we mean the inclusion of relevant concerns about sustainable development into policy-related decision making aimed at realizing the 2030 Agenda and the SDGs. Given our focus on mainstreaming, we examined different policies and actions relating to the implementation of the 2030 Agenda along with practices aimed at SDGs localization, which can be viewed by Sustainable Development Solutions Network (SDSN)as "the process of adapting, implementing, and monitoring the SDGs at the local level" (SDSN 2016, p. 1). The term "mainstreaming" has been linked to other terms such as "policy integration" and "policy coherence", especially in the context of sustainable development.

As noted by Tosun and Lang (2017), the concept of mainstreaming has been used interchangeably with "policy integration". Policy integration has been defined as the "collaboration of actors from two or more policy domains in order to integrate aims and concerns derived from one policy domain into another" (Tosun and Lang 2017) (p. 553), and much of its academic literature has focused on environmental and climate change policies. For example, environmental policy integration (EPI) entails the concept of "environmental mainstreaming", defined as "the informed inclusion of relevant environmental concerns into the decisions of institutions that drive national, local and sectoral development policy, rules, plans, investment and action" (Dalal-Clayton and Bass 2009, p. 20). Following the expansion of the scope of the 2030 Agenda to include a cross-sectoral focus, policy integration has been highlighted as a critical enabler for achieving the SDGs (Karlsson-Vinkhuyzen et al. 2017; Tosun and Leininger 2017; Breuer et al. 2019). Notably, the implementation of the 2030 Agenda requires an integrated approach (UN General Assembly 2015; Biermann et al.

2017) that could entail multilevel governance and horizontal and vertical intersectoral coordination developed through adjustments made to existing institutional structures, decision-making processes, and mainstreaming mechanisms (Oosterhof 2018; Valencia et al. 2019). Moreover, within the literature on development policy in the context of the SDGs, "policy integration" is entangled with the term "policy coherence" (Tosun and Leininger 2017). In light of the OECD's broad definition of "policy coherence," this term has been used in the context of a multi-sectoral approach aimed at interlinking different goals (OECD 2016; Stafford-Smith et al. 2017; Allen et al. 2018) and features specifically within SDG 17 (targets 17.13 and 17.14) in the 2030 Agenda (UN General Assembly 2015). Furthermore, the term has been greatly expanded to include institutional, geographical, temporal, and sectoral dimensions (Breuer et al. 2019, p1). In this paper, our focus is not on specific SDGs; rather, it is on the critical question of how sustainable development can be incorporated holistically into policies when pursuing approaches for mainstreaming these goals.

We conducted a detailed examination of illustrative Japanese case studies of SDGs mainstreaming at the local level. We have chosen to focus on Japan because this country has been actively promoting SDG localization at national and local levels. The Japanese government has prioritized "regional revitalization" as one of the three pillars of the national SDG Action Plan 2020 (Prime Minister of Japan and His Cabinet 2020) to address a declining population and scarce economic opportunities in rural Japan (Nakazawa 2016). The SDGs are viewed as voluntary tools, enabling local governments to leverage change in line with national regional revitalization strategies described under the Act on Revitalization of Cities, People, and Careers of 2017 (Cabinet Office Government of Japan 2017). Accordingly, the policy target established to promote SDGs localization is to enlist up to 60% of all local governments in efforts to accomplish the SDGs by the fiscal year (FY) 2024 (Cabinet Office Government of Japan 2019). So far, 710 local governments have promoted actions aimed at achieving the SDGs (Committee for promotion of evaluation and survey for local governments and the SDGs 2020). Moreover, the "SDGs Future Cities" initiative, which is a national-level initiative for supporting SDGs implementation, was launched by the Office for Promotion of Overcoming Population Decline and Vitalizing Local Economy in Japan (OPOV) and the Cabinet Office in FY 2018, 93 local governments have been designated as SDGs Future Cities as of the end of April 2021. (OPOV Cabinet Office Government of Japan 2020a, b). The accumulated experience of local governments that have established initiatives aimed at localizing the SDGs, which includes multi-stakeholder partnerships and the promotion of national–local and global–local interactions, can provide rich insights and lessons for similar international initiatives.

An in-depth analysis of Japanese case studies could provide valuable inputs for other countries with similar situations wherein local governments have a certain amount of flexibility in their policy-making processes.

To pursue approaches for mainstreaming the 2030 Agenda and the SDGs at the local level and to answer the research questions posed in this study, we begin by reviewing the literature on SDGs mainstreaming and localization and policy integration and coherence for promoting sustainable development. Accordingly, we present our analytical framework, identifying the components of successful mainstreaming. We then demonstrate its application to two Japanese case studies to take stock of experiences of implementing the identified key components of SDGs mainstreaming at the local level. In light of our findings, we propose suitable approaches that can facilitate local governments in mainstreaming the SDGs.

Research methods

Background context and overview of the research methods

The translation of global concepts in local contexts has long been pursued within the field of sustainable development, an example being Local Agenda 21 (Olsson 2009). Within the 2030 Agenda, the local level is considered the optimal level of implementation because local governments are tasked with providing basic services to strengthen local capacities and are expected to review progress through analyses of disaggregated data (Lucci 2015).

Numerous challenges relating to SDGs mainstreaming at the local level have been identified. These challenges include a lack of coordination in the implementation of the 2030 Agenda at international, national, and local levels; fragmented responsibility and ambiguous accountability; weak motivation; limited data sets for conducting monitoring and evaluation activities, including setting indicators; insufficient human and financial resources; and a lack of multi-stakeholder partnerships and consideration of synergies and trade-offs (Lucci 2015; Slack 2015; Reddy 2016; Fenton and Gustafsson 2017; Satterthwaite 2017; Zinkernagel et al. 2018; Hartley 2019; Jones and Comfort 2019; Krellenberg et al. 2019; Jönsson and Bexell 2020). The literature on the localization of the SDGs has highlighted the importance of multilevel governance and the deployment of collaborative and rational approaches (Fenton and Gustafsson 2017). Some of the above-mentioned challenges have also been identified within studies focusing on localization efforts relating to the Millennium Development Goals. For example, the limited capacity of local stakeholders was recognized as one of the main deficiencies affecting their

implementation (United Nations Development Programme and World Bank Group 2016).

In this section, we explore research methods to answer the research questions listed in the introductory section. In addressing the research questions, we focus on components for the mainstreaming of the SDGs at the local level and approaches to support local governments' mainstreaming.

To answer the first question, we conducted a literature review to extract possible components for local-level mainstreaming of the SDGs. Successful mainstreaming of the SDGs by local governments requires the identification of required or recommended components of this process. Thus, the literature review comprised two parts: (1) components for SDGs mainstreaming at the local level and (2) components as influencing factors based on the policy integration and coherence literature. For the first section, we examined the literature focusing on the mainstreaming of the SDGs into policies. We covered international and national policy guidelines because they represent the initial steps in the application of an international framework to domestic frameworks before proceeding to local-level mainstreaming. Next we reviewed the limited available literature on the localization of the SDGs. For the second part of the literature review, we examined the literature on policy integration and coherence in relation to sustainable development, as these concepts have been used in very close association with the term "mainstreaming", as stated in the introduction. Given a paucity of studies on the development of local-level policies to achieve the SDGs (Fenton and Gustafsson 2017; Patole 2018; Oosterhof 2018), we primarily considered studies on policy integration relating to sustainable development to derive lessons from earlier studies, especially on processes that can be applied to localize the SDGs. These policy integration and coherence studies include different types of mainstreaming and influencing factors and barriers. In light of the above literature review, we developed an analytical framework primarily aimed at taking stock of local governments' actions by ascertaining how the key components for successful mainstreaming of the SDGs at the local level have been attained.

To address the second research question, we attempted to identify possible approaches that could support local governments by examining context-dependent processes through which local governments acquired the components identified in the above analytical framework. We subsequently explored applications of the analytical framework, focusing on how the processes, as applied to case studies, could be analyzed, how the above-mentioned components could be attained in mainstreaming processes, and to what extent the existing environmental policy integration (EPI) studies could be applied to the broader sustainable development agendas. We mainly focused on the literature on policy integration and coherence to explore these questions. These

literature could provide valuable inputs for developing suitable approaches for SDGs mainstreaming.

Literature review and analytical framework for identifying components on SDGs mainstreaming at the local level

Components for SDGs mainstreaming at the local level

Suggestions for mainstreaming the SDGs mostly stem from policy guidelines and studies focusing on implementation experiences at international or national levels. The UN and other international organizations have issued various guidelines and recommendations on the components of the SDGs mainstreaming process at the national level (OECD 2016; United Nations Development Group 2017; United Nations Development Programme 2017; Okitasari et al. 2019; UNDESA Department for Economic and Social Affairs 2019). The role of governance structures in SDGs mainstreaming has also been identified within the academic literature (Stafford-Smith et al. 2017; CCIC 2019; Morita et al. 2019). Allen et al.(2018) compiled a comprehensive list of recommended components of SDGs implementation based on a review of the literature encompassing UN guidelines and tool kits as well as academic studies. Their list is divided into two parts. The first part comprises initial steps in SDGs implementation, including developing coordination, stakeholder consultations, mapping, assessing interlinkages, and monitoring and review mechanisms. The second part comprises evidence- and science-based approaches, which include indicator-based assessments and systems thinking and analysis. Analyses of SDGs implementation at the national level highlight progress made in relation to some planning steps and reveal continuing gaps relating to assessments of interlinkages and the adoption of systems thinking.

The provision of practical guidance on the SDGs mainstreaming process at the local level has, however, been limited (Global Taskforce of Local and Regional Governments et al. 2016; SDSN 2016; Global Taskforce of Local and Regional Government 2018). Nevertheless, there is ample literature on localization for achieving SDG 11 (building sustainable cities and communities) and the New Urban Agenda. Moreover, the expected roles of local governments and governance challenges have been extensively discussed (Slack 2015; Parnell 2016; Reddy 2016; Fenton and Gustafsson 2017; Patel et al. 2017; Satterthwaite 2017; Oosterhof 2018; Jones and Comfort 2019). Within the literature, SDSN has developed practical guidelines for local stakeholders, entailing four initial steps for mainstreaming the SDGs: (1) developing a participatory process, (2) setting the local agenda, (3) planning for implementation, and (4) monitoring and evaluation (SDSN 2016). Krellenberg

et al. (2019) further adapted these four steps and proposed a mixed methodology entailing a systemic approach, which they applied to investigate how local SDGs implementation could impact on sustainability. In addition, Valencia et al. (2019) recommended that local actors should consider the following components: delimitation of urban boundaries, integrated governance, relevant actors, synergies and trade-offs, and indicators.

Components as influencing factors within the policy integration and coherence literature

Several types of mainstreaming have been proposed within the policy integration and coherence literature, with a particular focus on climate adaptation, which could be applied to SDGs mainstreaming. They include programmatic mainstreaming (e.g., adjusting the work of the implementing body), managerial mainstreaming (e.g., developing managerial and working structures, including norms, departments, and assets), intra- and inter-organizational mainstreaming (e.g., collaboration and networking), regulatory mainstreaming (e.g., planning procedures and legislation), and directed mainstreaming (e.g., higher-level support) (Wamsler and Pauleit 2016; Runhaar et al. 2018). Runhaar et al. (2018), who analyzed the literature on mainstreaming relating to climate adaptation, found that regulatory mainstreaming was reported most frequently, whereas directed mainstreaming was reported the least.

Influencing factors and barriers to mainstreaming (i.e., facilitators and inhibitors) can be categorized as organizational, political, economic/financial, managerial and instrumental, and behavioral and cognitive factors (Stead and Meijers 2009; Runhaar et al. 2018). In addition, the following governance dimensions that propel or constrain mainstreaming have been identified within the literature: institutional (horizontal and vertical as well as politics and norms), motivational (e.g., interests, values, framing, and leadership), and means (e.g., knowledge, time, and financial resources) (Karlsson-Vinkhuyzen et al. 2017).

Influencing factors include horizontal coordinating structures; consistency of different policy elements, such as goals, instruments, and processes; comprehensiveness relating to time, space, actors, and issues; aggregation as an overall criterion for evaluating different policy elements; the weighting of aims; and the commitments and standards of diverse actors. They also include the provision of normative directions, external support for facilitating longer-term planning, reporting required for accountability and policy development, and resources (know-how and finances) (Lafferty and Hovden 2003; Mickwitz et al. 2009; Karlsson-Vinkhuyzen et al. 2017; Tosun and Lang 2017).

Barriers constraining EPI include lack of public support and assistance from external institutions, actors' diverse

preferences and strategies, limited autonomy of actors, administrative disputes, inappropriate framing of policy problems and inadequate political guidance; predominant norms that constrain the emergence of alternatives; and limited human and institutional capacities and resources (Karlsson-Vinkhuyzen et al. 2017; Tosun and Lang 2017; Runhaar et al. 2018). Runhaar et al. (2018) identified the following major barriers: limited coordination among departments, inadequate financial resources, a lack of explicit mandates, conflicting interests, and competing institutional structures and practices.

Development of an analytical framework

In light of our review of the literature on SDGs mainstreaming as well as the literature on policy integration and coherence, we developed an analytical framework based on a list of key components for SDGs mainstreaming at the local level (Table 1). A total of 26 key components covering specific requirements for SDGs mainstreaming at the local level were identified under the following five categories: governance and coordination mechanisms, mobilization of stakeholders around the SDGs/partnerships, policy mechanisms for SDGs mainstreaming, monitoring and review arrangements, and approaches centering on the SDGs. These five categories are based on the components required for successful SDGs mainstreaming at international/national levels, described by Allen et al (2018). Our first four categories are basically derived from these authors' suggested steps for implementing the SDGs. Our last category, "approaches centering on the SDGs," was formed by combining their recommendation on the assessment of interlinkages as one of the steps in SDGs implementation with evidence- and science-based approaches. Whereas integration of the three pillars of sustainable development (economic, social and environmental) has been on the discussion agenda since the 1992 Rio Declaration on Environment and Development, the "intertwined" nature of these pillars has been highlighted in the 2030 Agenda (Nilsson and Weitz 2019, p.254), indicating new possibilities for policy integration (International Council for Science 2017). In particular, investigations of the interlinkages among the 17 SDGs are expected to take account not only of the above three pillars but also of cross-sectoral and multilevel approaches (Nilsson and Weitz 2019). Accomplishing these goals would require converging these three pillars (International Council for Science 2017).

We subsequently added further components recommended under various guidelines formulated by intergovernmental organizations (United Nations Development Group 2017; United Nations Development Programme 2017; Okitasari et al. 2019; UNDESA [Department for Economic and Social Affairs] 2019) and also described in the academic literature on governance relating to SDGs implementation (Stafford-Smith et al. 2017; Morita et al. 2019). Moreover, we extracted some components from existing guidelines or literature focusing on sustainable development at the local level (Slack 2015; Reddy 2016; SDSN 2016; Fenton and Gustafsson 2017; Satterthwaite 2017; Deloitte 2018). Finally, we added components considered as influencing factors suggested within the literature on policy integration and coherence that relate to sustainable development (Candel and Biesbroek 2016; OECD 2016; Karlsson-Vinkhuyzen et al. 2017; Persson and Runhaar 2018; Runhaar et al. 2018; CCIC 2019).

Application of the analytical framework to examine processes for SDGs mainstreaming

Following the development of the analytical framework described above, we explored how it could be applied to formulate approaches that could support local governments' mainstreaming the SDGs. The framework, with criteria for identifying the existing situations of different local governments, could be used by local governments as a checklist when undertaking SDGs mainstreaming initiatives. The listed components are not mutually exclusive, with some overlapping or impacting on others, and their order could be mixed in the process of policy formulation. It should be noted that the framework focuses on trends and activities relating to SDGs mainstreaming at the local level and is not intended to provide an idealized template. We applied the analytical framework to selected case studies to examine the processes implemented by local governments to achieve these components. An understanding of these processes aids in the identification of options for mainstreaming the SDGs that can be shared with other local governments.

We followed the recommendations of intervention theory (Linnér et al. 2012) when interpreting the findings, paying particular attention to underlying objectives, leveraging mechanisms, institutional frameworks, and contextual factors to elucidate specific actions. The question of how to evaluate outcomes in terms of policy integration and coherence has been discussed within the existing literature. For example, Mickwitz, who analyzed policy outputs and outcomes to elucidate cause-and-effect relationships, considered intervention theory as a key conceptual framework for use in EPI evaluations (Mickwitz 2003, 2006). Linner et al. also applied this theoretical framework to evaluate goals and objectives, key leveraging mechanisms, key implementing organizations and institutional frameworks, and contextual factors, in assessing the effectiveness of policies (Linnér et al. 2012). Further, Runhaar et al (2018) characterized the effectiveness of mainstreaming in terms of policy outputs (e.g., procedural tools and organizational structures) and policy outcomes (e.g., the implementation of concrete measures).

Table 1 Analytical framework listing key components required for SDGs mainstreaming at the local level

Components required for SDGs mainstreaming at the local level	Criteria for demonstrating the components	Key references
1 Governance and coordination mechanisms		
1.1 Governing body with a coordinating role	Presence of a key organization leading the coordinating process; Adaptation of an existing organization or the creation of a new governing body	A, B, C, D, E, F, G
1.2 Political leadership	Leadership/support for initiatives provided by a mayor or congress; Involvement of the mayor in decision making within the governing body	B, E, G, I, J, K
1.3 Secretariat or focal point	Presence of a key department or secretariat that is primarily responsible for designing coordination mechanisms and facilitating inter-departmental and external coordination processes	B, F
1.4 Finance department	Involvement of the finance department to enable strategic mobilization of the required resources and to enhance policy feasibility	B, G, J, L, M
1.5 New funding possibilities	Strengthening and diversification of financing resources available to the local government	A, B, C, E, G, H, L, M
1.6 Informal communication within the local government	Presence of informal, interdepartmental communication channels	B, E, K
1.7 Vertical institutional coordination	Linking of national legal frameworks or plans to the local level; Financial or technical support provided by the national government or by international organizations to local governments	B, F, G, L, M, N
1.8 Horizontal institutional coordination within the local government	Interdepartmental collaboration and demonstrated commitment within local governments	B, G, M, N
2 Mobilization of stakeholders around the SDGs/partnerships		
2.1 Multi-stakeholder involvement in planning or vision-setting	At the planning or vision-setting stage, opportunities exist for public consultation and public implementation, involving diverse actors	B, D, E, F, H, L, O
2.2 Multi-stakeholder involvement in project implementation	At the project implementation stage, opportunities exist for public consultation and public implementation, involving diverse actors	B, D, E, F, H, L, O
2.3 Multi-stakeholder involvement in monitoring/review processes	At the monitoring/review stage, opportunities exist for public consultation and public implementation, involving diverse actors and developing alliances for collective monitoring	B, D, F, H, L, O
2.4 Institutional settings for involving multi-stakeholders	Creation of a coordination platform; Relatively high gathering frequency; Equitable partnerships forged outside of the locality	B, E, F, G, I
2.5 Local governments engage in awareness-raising and outreach activities	Establishment of websites, campaigns, and awards relating to the SDGs; Presence of "living labs" (e.g., workshops)	B, M, K, E, P
3 Policy mechanisms for SDGs mainstreaming		
3.1 SDGs mapping and policy alignment	Establishment of existing or new policy linkages to specific SDGs	B, C, D, G, T
3.2 Mainstreaming the SDGs into the top agenda	The SDGs are integrated as (one of) the basic components within the local government's highest-level plan	B, F, S, T
3.3 Mainstreaming the SDGs into existing policies, plans, programs, activities, and documents relating to the SDGs	The SDGs are integrated as (one of) the basic components within existing policy documents	B, C, D, E, F, G, T
3.4 Developing a new SDGs-focused strategy or plan	Formulation of specific strategies, plans, or visions for implementing the SDGs	B, C, D, E, F, G
3.5 Definition, prioritization, and adaptation of goals and targets	Definition, prioritization, or adaptation of specific SDGs selected for implementation	A, B, C, D

Table 1 (continued)

Components required for SDGs mainstreaming at the local level	Criteria for demonstrating the components	Key references
3.6 Definition, prioritization, and adaptation of indicators	Definition, prioritization, or adaptation of specific indicators for taking stock of progress	A, B, D, F, G, O
3.7 Linking of the SDGs to legal or regulatory powers	The SDGs are incorporated within the legal framework	B, E, F, S
3.8 Linking of the SDGs to the budget	The SDGs are incorporated within local governments' budgets	B, E, G, L, P, S, T
4 Monitoring and review arrangements		
4.1 Monitoring and review arrangements	Arrangements exist for the follow-up and review of SDGs implementation. A mechanism exists for reporting to higher levels. Systems that enable the outcomes of the monitoring and review process to feed into the next phase of policy design are in place. There is clarity regarding the organization that will assume a leading role in the monitoring and review process. A formal decision has been made on the frequency of follow-up and review processes	B, D, F, G, I, L, M, O
4.2 Data collection	A data collection mechanism is in place. Data are stored	B, F, G, I, J
5 Approaches centering on the SDGs		
5.1 Assessment of interlinkages between targets and goals and the identification of cross-cutting issues	Assessment conducted on interlinkages between the SDGs' targets and goals. Identification of cross-cutting issues, including synergies and trade-offs	A, C, D, G, H, S
5.2 Integration of the three pillars of sustainable development	Efforts made to integrate the economic, social and environmental pillars of sustainable development into local policymaking	A, C, D, Q
5.3 Introduction of featured approaches for SDGs implementation	Existence of featured approaches for SDGs implementation, such as goal setting and evidence- and science-based approaches (e.g., indicator-based assessment) and systems thinking and analysis	D, M, Q

Sources; A (OECD 2016), B (SDSN 2016), C (United Nations Development Group 2017), D (Allen et al. 2018), E (Runhaar et al. 2018), F (Morita et al. 2019), G (Okitasari et al. 2019), H (UNDESA [Department for Economic and Social Affairs] 2019), I (Slack 2015), J (Satterthwaite 2017), K (Persson and Runhaar 2018), L (Reddy 2016), M (United Nations Development Programme 2017), N (Karlsson-Vinkhuyzen et al. 2017), O (Fenton and Gustafsson 2017), P (Deloitte 2018), Q (Stafford-Smith et al. 2017), S (Candel and Biesbroek 2016), T (CCIC 2019)

We do, however, acknowledge the possible limitations entailed in applying the findings of policy integration and coherence studies to SDGs localization. Moreover, although much of the literature focuses on EPI, we considered policy integration and coherence as an entry point for identifying approaches for successfully mainstreaming the SDGs at the local level. Nilsson and Persson (2017), who assessed the applicability of EPI in the SDGs context, identified several key challenges. First, whereas only environmental objectives are prioritized within the EPI normative framework, the SDGs require the coordination of different policy objectives. A second challenge concerns a necessary change in political will for integrating all SDGs (and not just one goal) into the domestic political agenda. A third challenge relates to the application of systemic knowledge and foresight studies to advance cognitive and analytical capacities. A final challenge relates to the institutional arrangements required to broaden hosting arrangements so as to encompass the entire government (Nilsson and Persson 2017). Moreover, policy integration at the local level could present various challenges, including organizational silos, difficulties in promoting cross-sectoral/departmental cooperation, fragmented policy making, and a lack of resources. These issues need to be resolved through the development of a coordination mechanism, political support, and the inclusion of multi-stakeholders (Valencia et al. 2019; Khan et al. 2020).

Case studies

We applied the above analytical framework to case studies selected from Japan's "SDGs Future Cities" initiative, which is a national-level initiative supporting SDGs localization. Under this initiative, all of the designated municipalities have been requested by the national government to publish their SDGs Future City plans using the provided formats and key performance indicators (OPOV Cabinet Office Government of Japan 2020a, b). Given that a number of local governments are already participating in the initiative and that this number will steadily increase, we consider these case

study analyses to be pertinent, offering insights on the process of localizing the SDGs that can be applied elsewhere. There are two national-level initiatives that preceded SDGs Future Cities: the Eco-Model City and the FutureCity. The Eco-Model City is aimed at developing a low-carbon society, while the FutureCity seeks to foster environmental, societal, and economic sustainability at the local level. Multi-stakeholder partnerships that have been promoted under both initiatives have been further strengthened under the SDGs Future Cities initiative, notably through the expanded scope for private sector engagement with the SDGs for Regional Revitalization Public–Private Partnership Platform and a policy aimed at strengthening linkages between the finance sector and the SDGs for Regional Revitalization (OPOV Cabinet Office Government of Japan 2020a, b). Masuhara et al. found that approximately 40% of the 29 SDGs Future Cities (designated in FY2018) overlap with the municipalities designated under the Eco-Model City and FutureCity initiatives, thus sharing common elements with these earlier initiatives (Masuhara et al. 2019).

In this paper, we present case studies of two of the designated municipalities in the SDGs Future Cities initiative that have different characteristics: Shimokawa, which is a small town, and Kitakyushu, which is a major big city (Table 2). There are four main reasons for this selection. First, the proactive efforts of both municipalities in implementing the SDGs have been exemplary, and they are the only local governments to have received the first national-level SDGs Award bestowed by the Japanese government in 2017 (Ministry of Foreign Affairs 2020). They were selected for the first round of the SDGs Future Cities initiative in 2018. Second, both municipalities have developed international linkages, which could facilitate SDGs localization in other parts of the world. Both municipalities also published their Voluntary Local Reviews in 2018, thus disseminating their experiences and progress to an international audience at an early stage of the initiative (UCLG and UN-Habitat 2020). Further, Kitakyushu was selected to participate in a pilot initiative implemented by the OECD to foster a

Table 2 Background information on the selected case studies of designated SDGs Future Cities in Japan

	Shimokawa (town)	Kitakyushu (city)
Prefecture (location)	Hokkaido (north)	Fukuoka (south-west)
Population	3,222 (2020)	946,338 (2020)
Main industry	Forestry	Automobiles, semiconductors, materials industry, and environment and energy
Anticipated local challenges specified in the SDGs Future City plans	Decreasing population with a high aging rate (39.6% in 2017), increasing care costs, and issues relating to vacant houses	Decreasing population with a high aging rate (29.6% in 2017), a declining share of shipments of manufactured goods, a stagnating city image, response to residents with foreign roots

Sources: Hokkaido (2018), Kitakyushu City Government (2018), Shimokawa Town Government (2018a), Kitakyushu City Government (2020a, b) and Shimokawa Town Government (2020a)

"Territorial Approach to the SDGs" (OECD 2019). Third, it is important to examine the experiences of large as well as small municipalities, whose population sizes and resources differ from the perspective of SDGs localization. In Japan, approximately 30% out of the 1,718 municipalities have populations of or below 10,000 (Community Affairs Agency 2019). Thus, the experiences of small municipalities can be disseminated horizontally and shared with others. Large municipalities with huge populations also merit attention, as their promotion and dissemination activities could significantly contribute to SDGs mainstreaming. Fourth, the general policy planning and coordination departments rather than sectoral departments in both municipalities are playing a lead role in SDGs implementation. Because the 2030 Agenda emphasizes an integrated approach, an analysis of the functions of a general policy planning and coordination department could contribute to effective mainstreaming.

From the perspective of historical applications of the sustainable development concept, Shimokawa has experienced population decline since the 1970s. Regional activation initiatives were launched in the late 1980s in response to this trend, and a research group was formed by local actors, which led to formulation of a legal framework titled Shimokawa Fundamental Ordinance of Local Autonomy in 2006, intended to "realize a sustainable local community" (Shimokawa Town Government 2006). The Shimokawa Vision 2030 and Ordinance for the Promotion of Sustainable Development Goals were formulated in 2018, followed by the revision of the municipality's Comprehensive Plan to facilitate SDGs mainstreaming in 2019.

The sustainability concept has followed a different trajectory in Kitakyushu. As one of Japan's four main industrial sites, Kitakyushu has experienced severe environmental pollution, which has prompted citizens' pro-environmental and conservation activities since the 1960s (Loorbach and Shiroyama 2016). Consequently, there has been a shift toward sustainable development, entailing the growth of environmental businesses and the development of international partnerships in these fields, which led to formulation of Agenda 21 Kitakyushu (1996–2006). This agenda formed the basis of Kitakyushu's vision of a "Grand Design for the World Capital of Sustainable Development", published in 2004 along with a Basic Environmental Plan (Agenda 21's successor) that provided an action plan (Kitakyushu City Government 2017). Such activities have attracted international awards, including the Global 500 Award conferred by the United Nations Environment Programme (1990) and the Local Government Honors Award at the Earth Summit in 1992 (Ota et al. 2018). Kitakyushu has also incorporated the SDGs concept within its sectoral plans, for example, the Kitakyushu City Basic Environmental Plan, which was revised in 2017.

We analyzed the documents compiled for each municipality and subsequently held interviews with key actors (Table 3). The documents provided basic information about the sources, availability of key components required for successful SDGs mainstreaming, and how these components are acquired within these municipalities (Table 1). We consulted three main types of documents: relevant ordinances and Comprehensive plans, SDGs-specific plans, and relevant

Table 3 Overview of the compiled data

	Shimokawa (town)	Kitakyushu (city)
Types of documentation		
Relevant ordinances and comprehensive plans	Fundamental Ordinance of Local Autonomy (2006) Ordinance for the Promotion of Sustainable Development Goals (2018) Comprehensive Plan (2019)	Comprehensive Plan (2008)
Specific plans for implementing the SDGs	SDGs Future City Plan (2018)	SDGs Future City Plan (2018)
Relevant sectoral plans	Town master plan (2019)	Kitakyushu City Basic Environmental Plan (2017) Kitakyushu City Education Plan (2019) Kitakyushu City Basic Plan for Gender Equality (2019)
Types and numbers of informants		
Officials in departments with overall responsibility for SDGs mainstreaming (number)	2	3
Officials in departments connected to SDGs mainstreaming (number)	Department of Forestry (1) Town Promotion Department (1)	Department of Environment Policies (1)
Local stakeholder representatives (number)	Agriculture and forestry (1), citizens' sector (2), education (1)	Citizens' sector (2)

sectoral plans. In line with the Japanese Constitution (Article 94) and the Local Autonomy Act (Article 14), local-level ordinances are considered components of the domestic legal system. The Comprehensive Plan, which is a municipality's highest-level plan, is also considered part of the legal framework because its formulation was a basic obligation under the Local Autonomy Law during the period 1969–2011 (Tanaka 2016; Otsuka et al. 2019). Ordinances and Comprehensive Plans are core formal documents, which are adopted following the receipt of public feedback and votes cast within the local parliament. Whereas municipalities decide on the planning period and how frequently they will revise their Comprehensive Plans, the 2030 Agenda has not necessarily been incorporated into these documents because of the timing of its revision. Therefore, we also consulted the SDGs Future Cities plans and recently published sectoral plans developed by the two municipalities.

Although the above documentation yielded most of the data required for the analysis, we also conducted semi-structured interviews, which filled gaps in this material. We conducted and recorded interviews from February 2019 to December 2020 with individuals selected on the basis of their involvement in the SDGs localization process. We especially considered their roles in developing the above policy documents relating to SDGs mainstreaming. Although the number of informants was relatively small, interviewees in each municipality represented the department leading the SDGs mainstreaming process, related departments, and key local stakeholders involved in the development of relevant policies.

Analysis of SDGs mainstreaming in two "SDGs Future Cities"

We conducted case studies of Shimokawa and Kitakyushu to identify approaches that can facilitate the SDGs mainstreaming process for local governments. Our analytical framework, shown in Table 1, enabled us to examine whether or not key components for successfully mainstreaming the SDGs are available for local governments to use and how they are acquired. Table 4 (overview) and Table 5 (detailed) present the results of the analysis. The following sections present a comparative analysis of the results for each category shown in Tables 4 and 5, focusing on similarities or differences in the ways in which the local governments under study acquired key components required for successfully mainstreaming the SDGs.

Governance and coordination mechanisms

On the whole, both municipalities achieved horizontal as well as vertical coordination via their institutional settings.

However, there was greater involvement of the finance department in Shimokawa.

Both municipalities have established coordination bodies headed by their mayors, with representatives from all of the relevant departments. Moreover, given its location within the general policy planning department in each of the municipalities, the secretariat can effectively handle cross-cutting issues and play a leading role in coordinating interdepartmental processes.

Shimokawa's finance department has been more involved in the process of revising the municipality's Comprehensive Plan to incorporate the SDGs. One reason for this difference is that Shimokawa's Comprehensive Plan had reached the scheduled revision time, whereas Kitakyushu's Comprehensive Plan was not yet at this stage. Both municipalities received financial support through the SDGs Future Cities initiative. Moreover, they have developed multi-stakeholder partnerships (see the next section), which may lead to future financing resources. However, partnerships intended solely for financing purposes can be problematic, as agreements must be reached that benefit both the municipalities and the stakeholders (an anonymous Shimokawa government official interviewed on September 2, 2019).

Both municipalities have established vertical and horizontal institutional coordination mechanisms. They have created coordinating bodies and are promoting informal internal communication to facilitate horizontal collaboration. Vertical coordination is being strengthened as a result of financial and technical support provided by the national-level SDGs Future Cities initiative and by an international program (OECD 2019).

Mobilization of stakeholders around the SDGs/ partnerships

Both municipalities have involved stakeholders from the project implementation stage but have emphasized different ways for their involvement. Whereas stakeholders' involvement has been stronger at the vision-setting and review stages in Shimokawa, their involvement in Kitakyushu has been prominent in the areas of awareness-raising/outreach activities targeting citizens.

In Shimokawa, stakeholders' involvement at the planning or vision-setting stage was encouraged through an open and inclusive process of developing Shimokawa Vision 2030. Kitakyushu was able to elicit stakeholders' involvement to some degree during the revision of its sectoral plans. The difference in the population sizes of the two municipalities may have impacted on their vision development processes.

Both municipalities developed mechanisms for promoting multi-stakeholder involvement at the project implementation stage, such as establishing a partnership center in Shimokawa and an SDGs club in Kitakyushu, thereby

Table 4 Overview of the analysis of key components required for SDGs mainstreaming derived from two case studies

	S	K
1 Governance and coordination mechanisms		
1.1 Governing body with a coordinating role	Present	Present
1.2 Political leadership	Present	Present
1.3 Secretariat or focal point	Present	Present
1.4 Finance department	Present	Present
1.5 New funding possibilities	Present	Present
1.6 Informal communication within the local government	Present	Present
1.7 Vertical institutional coordination	Present	Present
1.8 Horizontal institutional coordination within the local government	Present	Present
2 Mobilization of stakeholders around the SDGs/ partnerships		
2.1 Multi-stakeholder involvement in planning or vision-setting	Present	Partially available
2.2 Multi-stakeholder involvement in project implementation	Present	Present
2.3 Multi-stakeholder involvement in monitoring/review processes	Present	Partially available
2.4 Institutional settings for involving multi-stakeholders	Partially available	Present
2.5 Local governments engage in awareness raising and outreach activities	Present	Present
3 Policy mechanisms for SDGs mainstreaming		
3.1 SDGs mapping and policy alignment	Present	Present
3.2 Mainstreaming the SDGs into the top agenda	Present	Present
3.3 Mainstreaming the SDGs into existing policies, plans, programs, activities, and documents relating to the SDGs	Present	Present
3.4 Developing a new SDGs-focused strategy or plan	Present	Present
3.5 Definition, prioritization, and adaptation of goals and targets	Present	Present
3.6 Definition, prioritization, and adaptation of indicators	Partially available	Partially available
3.7 Linking of the SDGs to legal or regulatory powers	Present	Absent
3.8 Linking of the SDGs to the budget	Present	Present
4 Monitoring and review arrangements		
4.1 Monitoring and review arrangements	Present	Partially available
4.2 Data collection	Partially available	Partially available
5 Approaches centering on the SDGs		
5.1 Assessment of interlinkages between targets and goals and the identification of crosscutting issues	Present	Partially available
5.2 Integration of the three pillars of sustainable development	Present	Present
5.3 Introduction of featured approaches for SDGs implementation	Present	Present

* "S" denotes Shimokawa (town) and "K" denotes Kitakyushu (city), which are two Japanese case studies of SDGs mainstreaming at the local level.

*This table presents an oversimplified visualization of the findings (see Table 5). It should be noted that the findings are based on information collected during interviews held in 2019 and 2020. However, the situation may have changed since that time.

*The framework focuses on how components are achieved, rather than on their availability. "Present", "partially available" and "absent" do not necessarily imply an evaluation.

* Color codes for availability of components

Present	
Partially available	
Absent	

reaching out to various stakeholders (private sectors, citizens, research institutes, other local governments, and international organizations) and promoting stakeholder-led projects. Kitakyushu's SDGs club is a good example of institutionalized stakeholder engagement that provides periodic gathering opportunities, whereas Shimokawa is still in the process of developing its SDGs Partnership Center. Notably, both municipalities have collaborated with private companies (within and outside of the municipalities) to support SDGs mainstreaming through the provision of knowledge and human resources. These initiatives suggest that partnerships may compensate for existing institutional weaknesses.

At the monitoring and review stage, entailing the revision of its Comprehensive Plan, Shimokawa elicited further involvement of stakeholders, thereby ensuring that follow-up procedures were robust. In Kitakyushu, stakeholders were involved to some degree in the process of reviewing the existing sectoral plan. Both municipalities have begun to

Table 5 Analysis of key components required for SDGs mainstreaming derived from two case studies

Components required for SDGs mainstreaming at the local level	Shimokawa (town)	Kitakyushu (city)
1 Governance and coordination mechanisms		
1.1 Governing body with a coordinating role	Present The newly established Shimokawa SDGs Promotion Head-quarters is a key governing body within the municipality. At the operational level, a project team comprising officials representing each policy field has been formed	Present The newly established Kitakyushu City SDGs Future City Promotion Headquarters is a key governing body within the municipality. An internal working group has been formed at the operational level comprising managers from each department
1.2 Political leadership	Present The mayor is in charge of the governing body	Present The mayor is in charge of the governing body and has played an active leadership role in the initiative for mainstreaming the 2030 Agenda at the national level (as the head of "the SDGs for Regional Revitalization Public-Private Partnership Platform") and within international discussions (the 2018 High-level Political Forum on Sustainable Development)
1.3 Secretariat or focal point	Present The secretariat of the SDGs Future Cities initiative is housed in the SDG policy promotion office under the policy promotion department	Present The secretariat of the SDGs Future Cities initiative is housed in the planning and coordination bureau
1.4 Finance department	Present The finance department is a member of the governing body. The process of revising the Comprehensive Plan to incorporate the SDGs encompassed the revision of both the progress management plan and the financial plan and was conducted in collaboration with the finance department	Present The finance bureau is a member of the governing body
1.5 New funding possibilities	Present The municipality acquired a new financing resource for the model project under the SDGs Future Cities initiative. A multi-stakeholder partnership (see the third component) has been expanded to include the private sector, thereby expanding opportunities for the future diversification of financing resources	Present The municipality acquired a new financing resource for the model project under the SDGs Future Cities initiative. A multi-stakeholder partnership (see the third component) has been expanded to include the private sector, thereby expanding opportunities for the future diversification of financing resources
1.6 Informal communication within the local government	Present The secretariat has organized seminars on the 2030 Agenda and the SDGs for its officials. Young officials were involved in organizing outreach activities relating to the SDGs	Present The secretariat has organized seminars on the 2030 Agenda and the SDGs for its officials (there were 300 attendees in total at three seminars held in FY 2018)

Table 5 (continued)

Components required for SDGs mainstreaming at the local level	Shimokawa (town)	Kitakyushu (city)
1.7 Vertical institutional coordination	Present National level: The national strategy formulated under the Act on Revitalization of Cities, People, and Careers as well as the SDGs Action Plan stipulate that the localization of the SDGs should be promoted Designated national initiatives: Eco-Model City (2008), FutureCity (2011), and SDGs Future Cities (2018)	Present National level: The national strategy formulated under the Act on Revitalization of Cities, People, and Careers as well as the SDGs Action Plan stipulate that the localization of the SDGs should be promoted Designated national initiatives: Eco-Model City (2008), Future-City (2011), and SDGs Future Cities (2018) International level: Kitakyushu was selected as a pilot city under an Organisation for Economic Co-operation and Development (OECD) project titled "A Territorial Approach to the Sustainable Development Goals."
1.8 Horizontal institutional coordination within the local government	Present Shimokawa SDGs Promotion Headquarters	Present Kitakyushu City SDGs Future City Promotion Headquarters
2 Mobilization of stakeholders around the SDGs/ partnerships		
2.1 Multi-stakeholder involvement in planning or vision-setting	Present The Shimokawa SDGs Future City Plan includes the Shimokawa Vision 2030, which was adopted in April 2018 based on the SDGs Future City Subcommittee's discussions and public consultations. The Subcommittee was established in 2017 under the auspices of the Shimokawa General Planning Council and its membership comprises residents and mid-career municipality staff. A facilitator was invited to support the advancement of members' understanding of the 2030 Agenda, and ideas for future implementation were elicited through 13 workshops held during 2017 and 2018. The municipality deliberately did not prepare the secretariat's draft at the outset, preferring to support citizens' involvement in drafting ideas from scratch	Partially available Criteria have been met within the relevant sectoral plans, but not within the specific plan for implementing the SDGs. Kitakyushu's SDGs Strategy (Vision) was developed within its SDGs Future City Plan in 2018, which does not have the scope for including procedures for conducting public consultations. Currently, the municipality is planning to revise and incorporate the 2030 Agenda within its Comprehensive Plan titled the "Energetic Kitakyushu Plan," with feedback elicited from the public from the planning stage. Public consultations were conducted when the SDG concept was incorporated into sectoral plans (the Kitakyushu City Basic Environmental Plan and Kitakyushu City Basic Plan for Gender Equality)
2.2 Multi-stakeholder involvement in project implementation	Present Following the vision-setting phase, a residents' voluntary working group was established to bring about the 2030 vision. In 2017, citizen-led activities, such as study groups and field tours, were initiated. In 2018, the municipality launched the SDGs Partnership Center, which will provide a space for developing collaborative projects by matching internal and external stakeholders. The Centre is planning to proactively develop partnerships with stakeholders, including private companies (e.g., an agreement has been signed with Mitsui Real Estate), research institutes, other local governments, and international organizations (e.g., with IGES and Japan International Cooperation Agency [JICA])	Present The municipality has fostered various networks for developing multi-stakeholder partnerships within different fields. The Kitakyushu SDGs Club was established in FY 2018, bringing together internal and external stakeholders. The SDGs Club is expected to promote joint actions undertaken by diverse stakeholders and has publicly called for open proposals to form project teams. The municipality has also developed partnerships with private companies (for instance, agreements have been signed with 15 financial institutions to support small regional companies to approach the SDGs), citizen and youth organizations (e.g., schools), research institutes, other local governments, and international organizations (e.g., JICA and the Japan External Trade Organization (JETRO), and Asian environmental cities

Table 5 (continued)

Components required for SDGs mainstreaming at the local level	Shimokawa (town)	Kitakyushu (city)
2.3 Multi-stakeholder Involvement in monitoring/review processes	Present A monitoring and review mechanism for SDGs implementation has been incorporated within the revised Comprehensive Plan. It entails follow-up procedures, notably policy assessments conducted by an external committee comprising citizens The municipality is working with internal and external stakeholders (IGES and Hosei University) to establish a monitoring system, including citizens' indicators that are separate from the government's indicators	Partially available Whereas all of the criteria have been met in the relevant sectoral plan, some, notably opportunities for public consultation/implementation, have not been met in the specific plan for implementing the SDGs. Stakeholders are not yet explicitly required to participate in the monitoring and review of Kitakyushu City's SDGs Future City Plan. The municipality has started to engage citizens in the process of developing indicators by requesting the project team within the Kitakyushu SDGs Club to formulate "activity indicators." Indicators are also being established through collaborative efforts involving other research institutes, such as Kitakyushu University, Hosei University, and the OECD program. The SDGs-related indicators that have been established under the Kitakyushu City Basic Environmental Plan (a sectoral plan) will be reviewed annually following the procedure for eliciting public feedback. In the future, the municipality plans to incorporate the 2030 Agenda into its Comprehensive Plan, which will require stakeholders' involvement in the monitoring and review process
2.4 Institutional settings for involving multi-stakeholders	Partially available The SDGs Partnership Center (see 2.2) will serve as the main platform for coordinating SDGs implementation by multi-stakeholders. Up to now, multi-stakeholder partnerships have been led by the municipality and voluntary citizens' activities. In addition, the Shimokawa Town Promotion Department (created within the Shimokawa Industry Revitalization Support Organization) has provided opportunities for developing partnerships between citizens and migrants through its monthly "Tanoshimo Café," thereby supporting the migration of entrepreneurs that is linked to the SDGs	Present Kitakyushu SDGs Club (see 2.2) is a key platform for the coordination of SDGs implementation by multi-stakeholders through the development of collaborative and concrete actions. It has extended an open invitation to the public to join as members and has organized workshops and other convening opportunities for information sharing at least two or three times a year. There were approximately 900 attendees at a launching event held in 2018, and there are around 120–140 participants per event

Table 5 (continued)

Components required for SDGs mainstreaming at the local level	Shimokawa (town)	Kitakyushu (city)
2.5 Local governments engage in awareness raising and outreach activities	Present The municipality's website banner includes the SDGs, and the home page contains a direct link to a web page that provides background information on the municipality's SDGs-related actions The municipality has developed various outreach activities. These activities include supporting citizen-led study groups to develop ideas for the SDGs and local junior high schools to incorporate the SDGs into learning activities. A treasure hunt focusing thematically on the SDGs was also organized during a local festival	Present The municipality has posted a link to its website, which provides background information on its SDGs-related actions. It has also conducted various outreach activities. These activities include Kitakyushu SDGs Club activities, public seminars on the SDGs, training sessions organized for the heads of 130 citizens' centers, the distribution of teaching materials to elementary schools, and support provided to high schools to promote the SDGs. The municipality has also launched the Kitakyushu SDGs Future City Award and the SDGs Citizenship Startup Support Project under which subsidies are available to support citizens' organizations or schools to collaborate and participate in activities to promote the SDGs
3 Policy mechanisms for SDGs mainstreaming		
3.1 SDG mapping and policy alignment	Present The municipality has mapped its policies relating to specific SDGs in the Shimokawa SDGs Future City Plan. Moreover, seven original goals have been identified in the Shimokawa Vision 2030, and their relationships with the 17 SDGs have been clarified	Present The municipality has mapped its policies relating to specific SDGs in the Kitakyushu SDGs Future City Plan
3.2 Mainstreaming the SDGs into the top agenda	Present In 2018, the municipality adopted Shimokawa Vision 2030 and the Shimokawa Ordinance for the Promotion of Sustainable Development Goals (an amendment of the earlier FutureCity ordinance). The SDGs were subsequently incorporated into the Comprehensive Plan, which is the municipality's highest-level plan, in 2019	Absent Kitakyushu Municipality is planning to incorporate the 2030 Agenda into its Comprehensive Plan titled "Energetic Kitakyushu Plan." However, it has not yet been done so because the scheduled review stage has not yet been reached
3.3 Mainstreaming the SDGs into existing policies, plans, programs, activities, and documents relating to the SDGs	Present In addition to revising its Comprehensive Plan, the municipality has incorporated the SDGs into sectoral plans, such as the Town Master Plan (revised in 2019). It also plans to incorporate the SDGs into a local version of the Comprehensive Strategy (FY 2015–FY 2019) and other sectoral plans according to their respective revision schedules	Present Some sectoral plans, such as the Kitakyushu City Basic Environmental Plan (revised in 2017), the Kitakyushu City Education Plan (revised in 2019), and the Kitakyushu City Basic Plan for Gender Equality (revised in 2019), have already incorporated the SDGs. The municipality plans to link all of its administrative plans to the SDGs
3.4 Developing a new SDGs-focused strategy or plan	Present In 2018, both municipalities published their SDGs Future City Plans, entailing three-year action plans, as requested by the national government	Present
3.5 Definition, prioritization, and adaptation of goals and targets	Present Prioritized goals, targets, and key performance indicators, which are supported by the Shimokawa Vision 2030 and its original goals, have been identified within the SDGs Future City Plan	Present Prioritized goals, targets, and key performance indicators have been identified within the SDGs Future City Plan. The prioritized goals within the Plan are SDGs 5, 7, 8, 9, 11, 12, 13, and 17

Table 5 (continued)

Components required for SDGs mainstreaming at the local level	Shimokawa (town)	Kitakyushu (city)
3.6 Definition, prioritization, and adaptation of indicators	Partially Available The municipality is currently developing the "Shimokawa SDGs indicators." Under the revised Comprehensive Plan, indicators will be developed to monitor how close the municipality is to realizing Shimokawa Vision 2030. The revised Comprehensive Plan already includes A list of specific indicators for each identified policy area, which also feature tentatively as key performance indicators in the SDGs Future City Plan	Partially Available The municipality is currently developing SDGs-relevant indicators. The municipality plans to add more indicators to the existing key performance indicators listed in the SDGs Future City Plan. In addition, SDGs-related indicators have been identified within the Kitakyushu City Basic Environmental Plan, which will be reviewed periodically to assess implementation progress
3.7 Linking of the SDGs to legal or regulatory powers	Present The SDGs have been legally incorporated within the Shimokawa Ordinance for the Promotion of Sustainable Development Goals as well as within the Comprehensive Plan (see 3.2)	Absent The municipality has not yet explicitly linked the SDGs to its ordinances or to its Comprehensive Plan, but it is planning to incorporate the 2030 Agenda into the latter (see 3.2)
3.8 Linking of the SDGs to the budget	Present The revised Comprehensive Plan includes a three-year financial plan for all the policies of the municipality	Present The SDGs are included as keywords in Kitakyushu's annual budget documents. Some budget programs, focusing specifically on the SDGs, have also been launched
4 Monitoring and review arrangements		
4.1 Monitoring and review arrangements	Present The Comprehensive Plan includes progress management through follow-up procedures prescribed for all the policies of the municipality. Within the Comprehensive Plan, the Progress Management Plan, which includes a financial plan, will be reviewed annually. Policy assessment, entailing internal and external assessments, will provide inputs for improving subsequent plans. The Shimokawa Town Council for SDGs Promotion and the Advisory Board for SDGs Promotion are required to be actively involved in reviews of the SDGs Future City Plan content and in follow-up activities. Moreover, all of the designated municipalities submit periodic progress evaluation reports to the national-level SDGs Future Cities initiative	Partially Available All of the criteria have been met for some of the SDGs-related policies and the relevant sectoral plans. However, the municipality has not yet linked all of the SDGs-related policies to its formal monitoring/review process. It plans to do so when it amends its Comprehensive Plan. Under the current Comprehensive Plan, the municipality has established a policy evaluation system for conducting annual reviews of the city's key policies' implementation progress. This procedure influences subsequent steps, some of which already include the assessment of SDGs-related policies. Moreover, SDGs-related indicators have been included in the Kitakyushu City Basic Environmental Plan, and the annual assessment process, which can influence subsequent policies. Further, all of the designated municipalities submit periodic progress evaluation reports to the national-level SDGs Future Cities initiative

Table 5 (continued)

Components required for SDGs mainstreaming at the local level	Shimokawa (town)	Kitakyushu (city)
4.2 Data collection	Partially Available The municipality is currently developing the "Shimokawa SDGs indicators" within its Comprehensive Plan (see 3.6). In addition to developing indicators, it is planning to establish the Shimokawa Database as a mechanism for identifying and periodically collecting data. Details and clarification regarding this mechanism are not yet available. The indicators' sources will include existing survey data (e.g., the national census) as well as new data, which will be sourced from the municipality's original surveys	Partially Available The municipality is currently developing relevant indicators for the SDGs (see 3.6), which will be used to strengthen its monitoring and review mechanism. Details and clarification regarding the data collection and storage mechanism are not yet available. Portions of the data on SDGs-related policies are already covered under existing arrangements (see 4.1). The indicator sources will include existing survey data and indicators within sectoral plans as well as new indicators, which will be provided through citizens' activities
5 Approaches centering on the SDGs		
5.1 Assessment of interlinkages between targets and goals and identification of cross-cutting issues	Partially Available One of the two criteria (identification of crosscutting issues) has been met. Explicit references to assessments of interlinkages among the 17 goals and targets are, however, absent in the main SDGs-related policy documents (Shimokawa Vision 2030, the Comprehensive Plan, and the Shimokawa SDGs Future City Plan). However, these documents describe linkages among the seven original locally specific goals that are linked with all 17 SDGs. In addition, the Comprehensive Plan includes a matrix outlining each policy area, with targets linked to the SDGs. Crosscutting issues, including expected synergetic effects achieved through the adoption of an integrated approach, are described in the SDGs Future City Plan	Partially Available One of two criteria (identification of crosscutting issues) has been met. Explicit references to assessments of interlinkages among the 17 goals and targets are, however, absent in the main SDGs-related policy document (the Kitakyushu SDGs Future City Plan). However, the review and follow-up report for the Kitakyushu City Basic Environmental Plan shows how each environmental policy is linked to specific SDGs and how synergies entailing multiple targets can be pursued. Crosscutting issues, including expected synergetic effects achieved through the adoption of an integrated approach, are described in the SDGs Future City Plan
5.2 Integration of the three pillars of sustainable development	Present Since the 1980s, the municipality has pursued an integrated and sustainable approach to town development, encompassing the three pillars of sustainability (the economic, social and environmental). In 2006, "sustainable local community" was included as a keyword in the highest-level local legal framework, the Shimokawa Fundamental Ordinance of Local Autonomy. The revised Comprehensive Plan and the SDGs Future City Plan also highlight the importance of applying integrated approaches	Present Since the 1960s, the municipality has pursued an approach of sustainable city development, given its background of severe environmental pollution and environmental activism. In 2004, it formulated the Grand Design for the World Capital of Sustainable Development, aimed at harmonizing economic, social and environmental aspects of sustainable development. The SDGs Future City Plan also reflects an orientation toward an integrated approach

Table 5 (continued)

Components required for SDGs mainstreaming at the local level	Shimokawa (town)	Kitakyushu (city)
5.3 Introduction of featured approaches for SDGs implementation	Present The formulation of the Shimokawa Vision 2030 entailed a goal-setting approach that has been incorporated into the Comprehensive Plan. The application of an evidence-based approach, including an indicator-based assessment, has been pursued through the development of indicators and data collection linked with the Comprehensive Plan and the SDGs Future City Plan (see 3.6 and 4.2)	Present The application of an indicator-based assessment, has been pursued through the development of indicators and data collection, linked with the municipality's SDGs Future City Plan and its sectoral plans (see 3.6 and 4.2)

Sources: Kitakyushu City Government 2004, 2018, 2019a, b, c, d, e, f, 2020c, d, e, f, g, h, i, ; Shimokawa Town Government 2006, 2018a, b, c, d, e, f, 2019c, 2020a, b, c; Kataoka et al. 2018; Hosei University 2019; IGES 2019; OPOV Cabinet Office Government of Japan 2020a, b; Prime Minister of Japan and His Cabinet 2020). Other sources were interviews held with anonymous officials within the Shimokawa Town Government (September 2, 2019 and December 1,2020), anonymous members of the SDGs Future City Subcommittee in Shimokawa (on September 2 and 3, 2019), and anonymous officials within the Kitakyushu City Government (on February 8, 2019 and May 29, 2020)

develop new indicators based on citizens' needs and collective monitoring systems that include internal and external stakeholders. Both municipalities have also developed awareness-raising and information dissemination activities targeting the public. Outreach efforts have, however, been more prominent in Kitakyushu, entailing the conferral of awards and subsidies to citizens as well as the involvement of schools. The large population size may have affected this aspect, as the city's officials acknowledge that awareness-raising is a key challenge for achieving SDGs mainstreaming (anonymous Kitakyushu government official interviewed on February 8, 2019).

Policy mechanisms for SDGs mainstreaming

Both municipalities have applied some mainstreaming components, such as mapping the SDGs and developing new plans. Shimokawa's mainstreaming process has, however, been stronger, entailing the creation of linkages with the Comprehensive Plan and the legal framework.

Guidance provided through the SDGs Future Cities initiative has also enabled both municipal governments to apply SDGs mapping, formulate new strategies and plans, and prioritize goals and targets for localizing the SDGs (OPOV Cabinet Office Government of Japan 2020a, b). Following the SDGs Future City plan format, they have also tentatively identified relevant indicators.

The procedures applied by the municipalities for other mainstreaming components have differed. Although they have both mainstreamed the SDGs within their existing policies, Shimokawa's government has succeeded in mainstreaming the SDGs into its top agenda by utilizing its existing ordinance and simultaneously revising its Comprehensive Plan. Consequently, the plan, endowed with legal authority, incorporates the SDGs, which could enhance the robustness of the vision-setting process and the implementation and monitoring stages. However, Kitakyushu's government has not yet integrated the SDGs into its Comprehensive Plan, as its review schedule was coincidently planned for 2020 (Kitakyushu City Government 2018).

The processes of establishing linkages with budgets also differ in these municipalities. Whereas Shimokawa's government has incorporated the SDGs in its revised Comprehensive Plan so that they influence all of its policies and programs, Kitakyushu's government has linked the SDGs with specific budget programs (Kitakyushu City Government 2018, 2020). This difference may arguably be attributed to differences in the scheduling of their planning processes. However, in light of scheduling constraints relating to the review of the Comprehensive Plan, the Kitakyushu government has availed of other policy resources (e.g., budget programs).

Monitoring and review arrangements

Both municipalities have established basic but differing systems for reviewing and monitoring their progress, and they are both in the process of developing their respective indicators. While both municipalities have established some monitoring and review systems that can influence future policy making, Shimokawa's government has also succeeded in establishing a formal mechanism within its Comprehensive Plan. By contrast, Kitakyushu's government continues to use the existing system, including its policy evaluation process and sectoral plans. It should be noted that irrespective of SDGs promotion, many Japanese municipalities have already introduced administrative evaluation systems that apply certain indicators and aggregate data sources. Some sections of the municipalities have linked these systems with a long-term vision or with existing plans (Ministry of Internal Affairs and Communications 2017).

Both municipalities are still at the stage of developing indicators and data collection and storage mechanisms, while maintaining a vertical reporting mechanism for communicating with the national government under the SDGs Future Cities initiative. Our analysis revealed that the municipalities experienced difficulty identifying and collecting data. As the secretariats of both municipalities are located within the general policy planning departments, which also compile statistics, the coordination of monitoring and review procedures is expected to proceed smoothly.

Approaches centering on the SDGs

The integration of the three pillars of sustainable development was evident in both municipalities, indicating the effective introduction of evidence- and indicator-based approaches for mainstreaming the SDGs. However, the task of assessing the interlinkages between targets and goals proved difficult for both municipalities.

Although both municipalities identified cross-cutting issues, they experienced difficulty determining interlinkages among the 17 SDGs. Each of the two municipalities was ready to adopt an integrated approach, reflecting the three pillars of sustainable development. This level of preparedness can be partly attributed to their previous adoption of an integrated approach for developing their local visions prior to embarking on SDGs mainstreaming. A second reason is the guidance they received on the synergistic effects of an integrated approach for connecting the three pillars under the SDGs Future Cities initiative. In addition, both municipalities introduced featured approaches for SDGs implementation, that is, evidence- and indicator-based approaches for the SDGs. The introduction of these approaches has been supported through linkages forged with existing planning systems (Comprehensive Plans and sectoral plans) and the use of current survey data and indicators.

Discussion

Our analysis of two Japanese municipalities revealed the presence and sources of key components for successful SDGs mainstreaming, highlighting context-based similarities and differences that may have influenced this process. Most of the key components for successful SDGs mainstreaming were available to both municipalities through the application of various tools. In this section, we will identify approaches that could facilitate SDGs mainstreaming by local governments based on the findings of our analysis.

Fostering local ownership to address the challenges that municipalities face

Although regional revitalization and SDGs localization are considered voluntary initiatives within the national legislation, our findings revealed proactive efforts to mainstream the SDGs within both municipalities, which demonstrated high levels of local ownership in developing the SDGs mainstreaming processes. These findings confirm that both municipalities view the SDGs as opportunities for overcoming locally encountered challenges, such as depopulation, migration of youth, and a changing local identity (anonymous Shimokawa and Kitakyushu government officials interviewed on September 2, 2019 and February 8, 2019, respectively). Both municipalities have presented the SDGs as tools for resolving such challenges to local sustainability within their policy documents. Moreover, they provide a rationale for new policies, such as establishing institutional settings and multi-stakeholder partnerships as well as policy realignments. In the process of SDGs mainstreaming, local ownership is essential for addressing the challenges that municipalities face. This finding accords with those of previous studies on the SDGs, which suggest that local ownership fosters commitment and accountability regarding the implementation of the SDGs (Reddy 2016). The policy integration and coherence literature has also pointed to organizational factors, including "mandates and statutes" and "clarity about responsibilities" (Runhaar et al. 2018) (p1203).

Availing of existing policy resources linked to formal procedures

Our analysis of policy mechanisms and monitoring arrangements revealed that the incorporation of the SDGs into policy mechanisms that are linked with formal procedures could significantly contribute to the robust implementation of related policies and the development of improved

monitoring and review arrangements. In particular, legal frameworks are important instruments for maintaining the centrality of the SDGs concept within policymaking in the mid- to long-term and ensuring its stability in the context of short-term changes induced, for example, by political contests. This finding endorses the emphasis within the policy integration literature on the facilitating role of "formal requirements or incentives" or a "supportive regulative framework" (Runhaar et al. 2018, p 1203).

Our findings suggest that availing of existing policy resources linked with formal procedures is a pragmatic approach that could facilitate the municipalities' efforts to mainstream the SDGs without necessarily requiring them to enact specific regulations for the SDGs. Existing policy resources include legal frameworks (ordinances and Comprehensive plans), plans and administrative systems (either SDGs-specific or sectoral plans relevant to the SDGs), institutions (committees or councils), partners, and the municipalities' historical backgrounds. With its orientation toward the use of an integrated approach supported by the highest form of local-level legal framework, Shimokawa's government applied the existing ordinance and Comprehensive Plan and the monitoring and review system to accommodate the SDGs. The application of existing overarching frameworks is in alignment with a finding within the policy integration and coherence literature on the "existence of a strategic policy framework that helps to ensure that sectoral policies are consistent with overall governmental objectives and priorities" (Stead and Meijers 2009, p 325). Even in the absence of legal support, streamlining activities and budgets can play a compensatory role (Wamsler and Pauleit 2016). Kitakyushu's government has attempted to reflect the SDGs within various policies, including existing sectoral plans and a policy evaluation system as well as to incorporate them within its budget. However, the Comprehensive Plan has not yet reached the scheduled review stage. It should be noted that the policy mechanisms for SDGs mainstreaming can be constrained by the planning schedule and review cycle, as the frequency of reviews is stipulated within existing plans and may sometimes prevent municipalities from making swift adaptations to changing global agendas. The Kitakyushu case study reveals that pragmatic responses, including the adjustment of existing policies, could overcome such challenges.

Developing multi-stakeholder partnerships

Our analysis revealed that expanding partnerships with stakeholders is another critical approach that can facilitate the SDGs mainstreaming process within municipalities. This finding accords with a finding within the policy integration literature emphasizing the need to promote cooperation with multi-stakeholders and establish open networks that encourage the building of trust among relevant actors (Stead and Meijers 2009; Karlsson-Vinkhuyzen et al. 2017; Runhaar et al. 2018). The two municipalities have adopted various approaches for engaging multi-stakeholders in planning, implementation, and monitoring processes, thus demonstrating how organic connections can be forged with internal and external stakeholders. The general department has played a focal role in this process, coordinating the activities of various departments within the municipalities.

Our findings also indicate that multi-stakeholder partnerships can help to address deficiencies within municipal governments, notably limited human and financial resources that impact on SDGs mainstreaming. There are challenges entailed in SDGs mainstreaming, for example, in the implementation of new projects involving diverse stakeholders, establishing robust monitoring and review systems (specifically establishing indicators and collecting data), and assessing interlinkages among the 17 goals. However, the number of staff working on SDGs promotion was found to be limited within both municipal governments, as many employees have to cover several policy fields (anonymous Shimokawa and Kitakyushu government officials interviewed on September 2, 2019 and February 8, 2019, respectively). Our findings indicate that municipalities can address the challenge of limited capacities through the introduction of multilevel governance and a collaborative approach, as recommended in the 2030 Agenda (UN General Assembly 2015). This finding concurs with the suggestion within the policy integration and coherence literature that limited capacity could prompt the involvement of other actors, which could lead to the development of enhanced capacities across sectors (Zinkernagel et al. 2018).

Vertical communication with organizations at international and national levels

We found that vertical communication with international and national-level organizations, especially those located within the national government, facilitated the process of SDGs mainstreaming within the municipalities. The Japanese government has promoted SDGs localization using the framework of the Act on Revitalization of Cities, People, and Careers and the SDGs Action Plan, and specifically within the SDGs Future Cities initiative. The provision of guiding inputs by national-level actors has enabled municipalities to access and apply some key components for successful SDGs mainstreaming. Designated municipalities under the SDGs Future Cities initiative have been requested to publish their SDGs Future City plans describing some basic components that have facilitated policy mapping, the development of new projects, and the identification of priority goals and indicators. Municipalities are being encouraged to apply an integrated approach as well as featured approaches

for SDGs mainstreaming in these plans. Moreover, these two municipalities have accumulated experience in vertical communication, including that gained within previously launched national initiatives such as the Eco-Model City (commenced in 2008) and FutureCity (commenced in 2011). FutureCity entails an integrated approach encompassing the three pillars of sustainable development, which could be a preparatory approach applied prior to SDGs mainstreaming. Our findings suggest that such experiences may facilitate access to external resources and the development of effective coordination mechanisms by encouraging further discussions within municipalities on how they can connect with the global agenda. This finding accords with the recommendation within the policy integration literature of providing access to knowledge and expertise and to subsidies offered by higher levels of government as drivers for EPI (Stead and Meijers 2009; Runhaar et al. 2018).

Conclusion

It is widely acknowledged that local actors play a critical enabling role in the realization of the 2030 Agenda. Drawing on the findings of previous studies, policy guidelines for SDGs implementation, and discussions on policy integration and coherence, this study has identified a wide range of components that could serve to leverage local governments' actions toward accomplishing successful SDGs mainstreaming at the local level. These key components could be considered within in-depth analyses of existing practices for SDGs mainstreaming at the local level. Through two case studies of SDGs Future Cities in Japan, we have demonstrated the presence and use of these key components and examined how municipalities have developed and applied these components. We have further suggested approaches that local governments could adopt for effectively mainstreaming the SDGs. First, they could promote local ownership to overcome the challenges they face. Second, they could utilize and integrate existing policy resources (legal frameworks, plans, administrative systems, institutions, stakeholders, and historical backgrounds) with formal procedures. Third, they could foster partnerships with multiple internal and external stakeholders during the planning, implementing, and monitoring stages. Finally, they could establish vertical relationships with organizations at the international and national levels.

Our framework could be useful for identifying key components for mainstreaming the SDGs at the local level, exploring their application, and determining which ones could be applied in other contexts of SDGs localization. However, the study did have some limitations, particularly the need to improve the analytical framework (Table 1) and to conduct more case studies. Specifically, the current

analytical framework needs to be strengthened through the inclusion of more components of successful SDGs mainstreaming processes derived from the literature on SDGs localization. Many of the existing components have been established based on national-level implementation criteria. Therefore, further discussion is required to develop criteria for SDGs mainstreaming at the local level, assessing their possible effects, and clarifying how criteria can be met. For instance, our findings have pointed to the difficulties faced by municipalities when they are attempting to address the interlinkages among the 17 goals. More studies on policy integration and coherence relating to the application of the 2030 Agenda to local contexts are required to operationalize these concepts through the examination of interlinkages among the goals. Second, we acknowledge that we applied this framework to a limited number of case studies (two out of 93 designated SDGs Future Cities in Japan). Moreover, there are many more examples of SDGs localization from other countries, and local contexts, entailing different geographical, historical, and cultural conditions that should be incorporated within the framework. Therefore, practical tools need to be developed and more case studies need to be conducted to assess mainstreaming processes for SDGs localization on a wider scale. While we recognize the above limitations, we believe that the analytical framework could be useful for analyzing existing practices, and its application to Japanese cases entailing SDGs localization could advance knowledge on SDGs mainstreaming at the local level.

Declarations

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