

**Localizing the Sustainable Development Goals in the Greater Victoria  
Area: “It’s the Little Things that Count”**

by

Stephen Joyce

**A Thesis Submitted in Partial Fulfillment of the Requirements for the Degree of**

**Master of Public Administration**

**In the School of Public Administration**

**©Stephen Joyce, 2025**

**University of Victoria**

**All rights reserved. This thesis may not be reproduced in whole or in part, by photocopy  
or other means, without the permission of the author.**

**We acknowledge and respect the Ləkʷəŋən (Songhees and Xʷsepsəm/ Esquimalt)  
Peoples on whose territory the university stands, and the Ləkʷəŋən and W̱ SÁNEĆ  
Peoples whose historical relationships with the land continue to this day.**

**Localizing the Sustainable Development Goals in the Greater Victoria Area: It's the Little Things that Count".**

**By**

**Stephen Joyce**

**Supervisory Committee**

**Dr. Walter Lepore  
School of Public Administration**

**Dr. Evert Lindquist  
School of Public Administration**

## Abstract

This thesis explores the development and implementation of a Voluntary Local Review (VLR) to localize the Sustainable Development Goals (SDGs) within the Greater Victoria Area (GVA). It examines key challenges and opportunities arising from the region's multi-jurisdictional governance system and provides actionable recommendations for policymakers to advance SDG localization. Four research questions guide this study: 1) What strategies, policies, and best practices from cities that have successfully implemented VLRs can be drawn upon to inform SDG localization in the GVA? 2) How can these lessons be adapted to the specific context of the GVA to enhance SDG localization efforts? 3) How have cities with successful localization efforts integrated stakeholder engagement and collaboration by incorporating multiple municipalities within their city to align their SDGs to create strategies for implementing VLRs? 4) What are the challenges and barriers faced by cities during the process of implementing localized agendas and VLRs for SDG localization, and what mitigation strategies and solutions have been employed to overcome these challenges?

To answer these questions, the study focuses on: (1) analyzing successful VLR models to guide tailored recommendations for the GVA, (2) assessing how localized SDG targets can be developed in complex governance contexts, and (3) offering strategies to implement a territorial approach to the SDGs, contributing to the global agenda. Using a realist synthesis, taxonomic analysis, and key informant interviews, the research provides context-specific insights for the GVA's VLR.

Chapter 1 outlines the research problem, objectives, and the governance context of the GVA and the Capital Regional District (CRD). Chapter 2 reviews the literature on SDG localization, analyzing case studies of cities with VLRs to identify common challenges and best practices. It also presents an analytical framework illustrating the logical flow of the methodology, preliminary findings, and results.

Chapter 3 details the research design, including collective case studies, realist synthesis, and Spradley's taxonomic analysis. The VLRs of 11 cities were initially examined, narrowing to four based on their relevance to the GVA. A typology of governance, measurement, and implementation models was developed to compare these cities' practices with primary data from interviews, assessing the most suitable VLR model for the GVA.

Chapter 4 presents preliminary findings from secondary data analysis, which identified models of VLR development in multi-jurisdictional, medium-sized cities. Chapter 5 provides insights from interviews with GVA stakeholders, shedding light on governance, SDG measurement frameworks, and policy implementation. These findings informed the preferred VLR model for the GVA.

Chapter 6 addresses the research questions. For strategies, policies, and best practices (research question 1), the study recommends a hybrid governance model that integrates local leadership with external support, data-driven mapping with transparent systems, cross-sector

collaboration, and policy alignment with SDG frameworks. Case studies from Thunder Bay and Orlando highlight the importance of combining internal expertise with external guidance, clear indicators, and inclusive stakeholder engagement to drive SDG localization. These practices can be adapted in the GVA to ensure equity and reflect local priorities.

For adapting lessons to the GVA (research question 2), the research emphasizes hybrid governance, data transparency, cross-sector collaboration, comprehensive policy alignment, and equitable approaches as critical components for tailoring SDG localization to the region's unique governance structure.

Regarding stakeholder engagement across multiple municipalities (research question 3), the study finds that cities with VLRs rarely integrate SDG efforts across multiple jurisdictions due to political and logistical challenges. However, consistent metrics and benchmarks could streamline regional coordination, especially on shared priorities like climate action. Another approach involves categorizing SDG thematic areas that align with each municipality's strengths, reducing duplication, and fostering collaboration.

Lastly, on challenges and solutions for VLR implementation (research question 4), the research identifies staffing shortages, financial constraints, political will, and data complexity as significant barriers. In rectifying these challenges, the research suggests applying solutions that involve partnerships with external organizations, hybrid funding models, and collecting localized data on the SDGs to embed municipal planning into the VLR to ensure its long-term commitment and sustainability.

Chapter 7 makes six key recommendations for municipalities in the CRD to implement a VLR. These recommendations address the CRD's multi-jurisdictional governance challenges, align local SDG priorities with global frameworks, and overcome practical barriers such as resource constraints, political will, and stakeholder engagement.

Chapter 8 emphasizes collaborative governance, transparent measurement systems, and Indigenous engagement as crucial to creating a successful VLR. While this study focuses on four municipalities within the GVA, future research should expand to include broader CRD municipalities and Indigenous nations. The GVA is well-positioned to set an example for other medium-sized cities in Canada and globally by localizing the SDGs through a VLR. Policymakers and researchers can build on these findings to advance the 2030 Agenda, ensuring long-term regional benefits from the SDGs.

# Table of Contents

Chapter 1: Introduction.....	1
Chapter 2: Literature Review.....	6
Chapter 3: Methodology, Methods, And Analysis .....	13
Chapter 4: Intermediate Findings to Inform Key Informant Interviews .....	17
Chapter 5: Key Informant Interview Findings.....	26
Chapter 6: Answering the Research Questions.....	37
Chapter 7: Recommendations.....	46
Chapter 8: Conclusion.....	52
Bibliography .....	55
Appendix 1: CRD Demographics.....	72
Appendix 2: UN DESA VLR Select Cities.....	73
Appendix 3: Realist Synthesis Of 11 VLRs.....	77
Appendix 4: Colour-Coded Analysis Of 11 VLR Case Studies .....	94
Appendix 5: Categorization of Colour-Coded Analysis .....	95
Appendix 6: Challenges, Opportunities, Stakeholders, and Policies throughout GVA.....	97
Appendix 7: Swot Analysis Of Select VLR Cities.....	105
Appendix 8: Interview Questions .....	109
Appendix 9: Preliminary Taxonomic Analysis.....	116
Appendix 10: Typology Of 11 VLRs .....	112
Appendix 11: List of Key Concepts and Codes.....	116
Appendix 12: SDG Mapping Of GVA.....	118

## List of Tables:

Table 1: Governance Types .....	20
Table 2: Measurement Types.....	<b>Error! Bookmark not defined.</b>
Table 3: Implementation Types .....	23
Table 4: Preference of Governance Types in the GVA.....	32
Table 5: Preference of Measurement Types in the GVA .....	33
Table 6: Preference of Implementation Types in the GVA.....	35

**List of Figures:**

Figure 1: Conceptual Methodology Framework .....13  
Figure 2: Governance Types in the GVA.....32  
Figure 3: GVA Measurement Preference .....33  
Figure 4: Overall Implementation Type Preference in the GVA .....34  
Figure 5: Discussion and Analysis of Research Questions.....37

## List of Abbreviations:

Administrative Capacity and Burden (ACB)  
Benefits and Impacts of a VLR for CRD (BIVC)  
British Columbia Council For International Cooperation (BCCIC)  
Capital Regional District (CRD)  
Centre International de Formation des Autorités et Leaders (CIFAL)  
Financial Feasibility (FF)  
Greater Victoria Area (GVA)  
Governance Models (GM)  
Implementation Strategies (IS)  
International Institute for Environment and Development (IIED)  
International Institute for Sustainable Development (IISD)  
Key Informant (KI)  
Korean Sustainable Development Goals (K-SDGs)  
Lakehead Region Conservation Authority (LRCA)  
Local Governments for Sustainability (ICLEI)  
Measurement and Evaluation Systems (MES)  
Non-government Organizations (NGO)  
Official Community Plan (OCP)  
Organization for Economic Co-operation and Development (OECD)  
Political Will and Policy Alignment (PWPA)  
Positive Impact and Future Directions (PIFD)  
Social Feasibility (SF)  
Stakeholder Engagement Strategies (SES)  
Sustainable Development Goals (SDGs)  
Sustainable Development Goal Priority Areas (SDGPA)  
Sustainable Development Solutions Network (SDSN)  
Technical Feasibility and Requirements (TF)  
United Cities and Local Governments (UCLG)  
United Nations Department of Economics and Social Affairs (UN DESA)  
United Nations Development Programme (UNDP)  
United Nations Economic Commission for Europe (UNECE)  
United Nations Educational, Scientific, and Cultural Organization (UNESCO)  
United Nations Human Settlement Programme (UN-Habitat)  
United Nations Indigenous Declaration of Rights for Indigenous People (UNIDRIP)  
United Nations Institute for Training and Research (UNITAR)  
United Nations Statistics (UNStats)  
Voluntary Local Reviews (VLR)  
Voluntary National Reviews (VNR)

## Chapter 1: Introduction

The global commitment to the Sustainable Development Goals (SDGs) presents a unique challenge for local governments worldwide. Established in 2015 by the United Nations General Assembly (UNGA), the SDGs aim to address critical issues such as poverty, inequity, and climate change (UN DESA, 2024). While the SDGs are not legally binding, each country is responsible under paragraph 84 of the 2030 Agenda to report and review the progress of implementing the goals through Voluntary National Reviews (VNRs) (United Nations, 2015).

Despite the global commitment to achieving SDGs, there are insufficient engagement strategies to ensure the achievement of these goals beyond the national level at the local level (IIED, 2016). “Localization” is pivotal for achieving these global goals, and involves adapting and implementing the SDGs at the local level to address specific regional or community contexts (Latek, 2021). It emphasizes tailoring the goals to reflect local priorities, challenges, capacities, ensuring participatory approaches, and fostering local ownership. It also requires engaging diverse stakeholders, including governments, civil society, NGOs, academia, and businesses, to enhance the SDGs' effectiveness in diverse settings. Localization also entails formulating and executing strategies at subnational levels, utilizing collaborative policymaking and territorial solutions, while demonstrating political determination to address global challenges (Latek, 2021; Global Taskforce of Local and Regional Governments, 2018).

Local governments often lack the necessary fiscal spaces, capacities, and knowledge to translate the SDGs into actionable plans that reflect the unique challenges and opportunities of their communities and allow for monitoring (UNDP, 2022; Fukuda-Parr & McNeill, 2019). The availability of resources plays a pivotal role in the dynamics of localization. For instance, urban populations residing in smaller to medium-sized cities often grapple with resource limitations (King et al., 2018; Simon et al., 2016; Teoh et al., 2018). As a result, progress toward achieving the SDGs is uneven and slow, with some regions lagging while others make significant strides (UNStats, 2021). This uneven progress not only undermines the credibility of the SDGs but also perpetuates inequalities and exacerbates environmental and social challenges (Gupta and Vegelin, 2016). Following the SDG Summit, as the halfway point of Agenda 2030, the SDGs have only displayed 17% progress toward their targets and demand further action (UN Stats, 2024).

To accelerate the impact of the SDGs, in 2021, the UNECE Committee on Urban Development, Housing, and Land Management endorsed guidelines for developing Voluntary Local Reviews (VLRs) (UNECE, 2022). According to the United Nations Department of Economic and Social Affairs (UN DESA), 211 cities have submitted VLRs (UNDESA, 2024). Several cities have effectively implemented local agendas through VLRs demonstrating their commitment to the SDGs. In 2016, New York City pioneered this approach, aligning its local strategies with the SDGs and setting a precedent for urban sustainability reporting (New York City Mayor's Office for International Affairs, 2016). Similarly, Los Angeles conducted a VLR in 2019, utilizing the SDGs to address local challenges and enhance community well-being (City of Los Angeles,

2019). These initiatives illustrate how urban centres can adopt global frameworks to address local issues, and foster sustainable development at the local level.

Encouraging more municipalities to establish VLRs to meet the objectives of Agenda 2030 remains a challenge. During the Summit of the Future, the Pact for the Future—under Action 55—calls on the Secretary-General to provide recommendations on how local and regional authorities can further localize the SDGs. This signals a growing opportunity for more municipalities to engage in the Voluntary Local Review (VLR) process (United Nations, 2024).

## 1.1. Research Problem

With five years before 2030, the absence of VLRs in Canada is a significant gap in SDG localization and achieving the objectives of Agenda 2030. Only three cities – Thunder Bay, Winnipeg, and Kelowna – have established VLRs. BC’s Capital Regional District (CRD), comprised of 13 municipalities, has not embraced SDG localization. This research explores the potential for creating a VLR for the CRD, highlighting the complexity of localizing SDG efforts in a diverse and multi-jurisdictional region.

The CRD, located on Vancouver Island, encompasses a population of approximately 430,000 across 13 municipalities and 11 First Nations reserves (Capital Regional District, 2024). These municipalities range from urban centers, like Victoria and Saanich, to rural and island communities, creating significant variability in population sizes, geographic landscapes, and local priorities (StatsCanada, 2021). Most urban municipalities – including Saanich, Victoria, Oak Bay, and Esquimalt – are more centrally in the Greater Victoria Area (GVA) and have higher concentrations of visible minorities, Indigenous populations, and immigrants (see Appendix 1). The region faces unique challenges in localizing the SDGs due to its multi-jurisdictional governance structure, diverse demographic composition, and varying levels of capacity among municipalities. Only Saanich’s Official Community Plan (OCP) directly mentions SDGs, while the other municipalities indirectly address sustainability targets (District of Saanich, 2024). The absence of a coordinated approach to developing VLRs in the CRD risks the region’s ability to effectively track and advance local SDG progress, perpetuate inequalities, hinder data-driven decision-making, and undermine the global effort towards sustainable development.

To better address this problem, this research focuses on identifying recommendations to create a VLR for policymakers in four municipalities in the CRD – the City of Victoria, the District of Saanich, the District of Oak Bay, and the Township of Esquimalt (hereinafter referred to as the Greater Victoria Area or GVA) – where SDG localization efforts remain underdeveloped.

## 1.2. Research Questions, Objectives, and Rationale

This study addresses the critical gap in SDG localization in the GVA by focusing on strategies for developing and implementing a VLR in the region through the following research questions:

### Primary Research Questions:

- 1) What strategies, policies, and best practices-from cities that have successfully implemented Voluntary Local Reviews (VLRs) can be drawn upon to inform SDG localization in the Greater Victoria Area (GVA)?
- 2) How can these lessons be adapted to the specific context of the GVA to enhance SDG localization efforts?

### Secondary Questions:

- 3) How have cities with successful localization efforts integrated stakeholder engagement and collaboration by incorporating multiple municipalities within their city to align their SDGs to create strategies for implementing VLRs?
- 4) What are the challenges and barriers faced by cities during the process of implementing localized agendas and VLRs for SDG localization, and what mitigation strategies and solutions have been employed to overcome these challenges?

Localized SDG action is crucial for global success, yet local governments often lack the tools and frameworks to align their policies with the SDGs (Gupta & Vegelin, 2016; King et al., 2018). The absence of a VLR in the GVA presents an opportunity to examine how localized SDG targets can be developed in complex, multi-jurisdictional regions. A comprehensive review of literature on localizing SDGs will be undertaken to learn from multi-jurisdictional medium-sized cities with similar challenges. Key informant interviews with 8 government officials representing the jurisdictions of Victoria, Oak Bay, Esquimalt, and Saanich were undertaken. This study aims to identify options for the GVA jurisdictions collectively or individually to set their VLRs based on agreed-upon targets and indicators.

This project will provide recommendations for policymakers in the GVA for them to consider how to localize the SDGs, establish an action plan, tailor them to their specific needs, and provide the tools by submitting their own VLRs. Furthermore, this study intends to contribute to the ongoing efforts of supporting the GVA to achieve sustainable development by providing practical and actionable recommendations to create VLRs by highlighting strategies, policies, and best practices.

## 1.3. Background and Scope

VLRs are a vital tool for localizing the UN SDGs at the subnational level. Introduced as an extension of VNRs, VLRs enable cities and regions to assess, implement, and report their progress toward the 17 SDGs within local contexts (UN DESA, 2020). These reviews are designed to foster accountability, promote multi-stakeholder engagement, and provide insights into localized challenges and solutions. By aligning municipal priorities with the global SDG framework, VLRs enhance opportunities for collaboration, funding, and policy alignment across levels of government and international networks (UNECE, 2022). VLRs act to address local nuances, such as economic disparities, environmental sustainability, and cultural diversity, that

may not be fully captured in national-level reporting (OECD, 2020). The growing adoption of VLRs by municipalities worldwide underscores their role as a mechanism for bridging the gap between global ambitions and local action.

The Capital Regional District (CRD) in Victoria, British Columbia is comprised of 13 municipalities and several electoral areas, including urban centers like the City of Victoria and the District of Oak Bay, as well as rural regions, and the Gulf Islands (see Appendix 1). The CRD oversees regional services such as water supply, solid waste management, and parks while supporting sustainable development through collaborative planning among its constituent entities (Capital Regional District, 2023). The Greater Victoria Area (GVA), which includes municipalities like Victoria, Oak Bay, Esquimalt, and Saanich, features a diverse population and geographic makeup, blending urban and rural settings. This diversity presents both opportunities and challenges for implementing the SDGs, as municipalities vary significantly in their capacities and priorities (BC Stats, 2022). As a regional governance body, the CRD plays a pivotal role in fostering inter-municipal collaboration to address shared sustainability goals, making it an ideal candidate for advancing the VLR process to strengthen alignment with the SDGs and broader global commitments. In considering these contextual circumstances, this study will now examine the key concepts pertinent to this study's research questions.

The first research question investigates the strategies, policies, and best practices of cities that have successfully localized SDGs through VLRs. Key concepts central to this question include Localization of the SDGs, which refers to the process of adapting and implementing global goals at the local level to address regional or community contexts (Latek, 2021). Cities that have successfully implemented VLRs serve as examples for understanding the underlying mechanisms that drive success, including governance models, measurement models, and implementation models. The comprehensive analysis of exemplar VLR cases will draw insights from key informant interviews with experts and local stakeholders to uncover the complexities of how these models are applied in various settings.

The second research question explores how such successful VLR strategies can be adapted to the Greater Victoria Area (GVA). It examines the challenges of multi-jurisdictional governance in localizing the SDGs and the diverse capacities of local governments in the GVA, acknowledging the complex interactions among the municipalities and their varying priorities, including leadership, institutional settings, and broader social systems. Policy integration strategies are examined to consider how different policy domains, such as environmental, economic, and social policies, interact and align to support SDG localization efforts (Tosun and Lang, 2017; Ortiz-Maya, and Reggiani, 2023). Last, this question explores how monitoring and evaluation tools, including various guidelines for creating VLRs, can support the integration of local policies with international or national frameworks (UNECE, 2021; OECD, 2020; Koike et al, 2020; IISD, 2022).

The third question focuses on the integration of stakeholder engagement and collaboration across multiple municipalities. Stakeholder engagement plays a pivotal role in ensuring that SDG localization efforts are inclusive and reflect different municipal needs (Catzín-Tamayo, et al., 2022; UCLG, 2018). To explore how cities have successfully implemented VLRs, this study

examined the use of multi-jurisdictional governance models (Piattoni, 2009; Stephenson, 2013) that enable municipalities to coordinate and collaborate effectively to achieve common SDG targets.

The last research question delves into the challenges and barriers faced by cities in furthering SDG localization through VLRs. The challenges may include political will, administrative capacity and burden, and financial, social, and technical feasibility barriers, which often stem from the non-linear processes of implementing complex sustainability agendas. The research will investigate VLR models that ensure that SDG implementation can respond to changing circumstances, track progress to inform policymaking, and align with national or international frameworks.

## 1.4. Positionality Statement

This positionality statement reflects a commitment to actively acknowledging and deconstructing the author's privilege and power as a heterosexual, middle-class, able-bodied, Anglophone White male. The author approaches their research with humility, empathy, and a dedication to amplifying the voices and truths of the communities they study. Their experience at the United Nations Institute of Training and Research has reinforced the importance of advancing the SDGs while addressing systemic inequities. By engaging in critical self-reflection, the author seeks to dismantle barriers and promote inclusivity, equality, and justice. The author acknowledges that this journey is continuous and requires an unwavering dedication to self-improvement, advocacy, and allyship. By deconstructing their positionality and leveraging their privilege responsibly, it is the author's hope to be an active agent of change and support the marginalized communities they engage with in their quest for justice and empowerment.

## 1.5 Organization of Thesis

This thesis contains seven more chapters. Chapter 2 reviews the literature on SDG localization, highlighting case studies, challenges, and best practices for VLR implementation. Chapter 3 outlines the research methodologies used to conduct this study, including a realist synthesis, taxonomic analysis, and interviews. Chapter 4 presents preliminary findings of 11 VLR models of VLR to inform GVA's localization efforts. Chapter 5 details thematic findings from key informant interviews on SDG targets, governance, and policy implementation. Chapter 6 discusses strategies and best practices for adapting lessons from successful VLR cities to the GVA's context, based on the key informant findings. Chapter 7 provides strategic recommendations for developing VLRs in the GVA. Last, Chapter 8 synthesizes insights, explores broader implications of SDG localization, and concludes by discussing the long-term benefits of a well-implemented VLR for the GVA by suggesting areas for further research.

## Chapter 2: Literature Review

The purpose of this literature review is to provide a comprehensive analysis of existing research, frameworks, and practices on localizing the SDGs, with a focus on identifying effective strategies, challenges, and gaps in implementing VLRs. By systematically reviewing materials from academic databases and primary sources, the study aims to explore how global goals are adapted to local contexts, emphasizing participatory approaches and regional priorities. The review incorporates a policy-cycle framework encompassing agenda setting, policy formulation, implementation, and evaluation, allowing for a structured examination of the roles and contributions of various stakeholders across governance levels. The literature review also addresses distinctions between context-specific approaches and centralized localization strategies, such as prioritizing SDG 11 on sustainable cities and communities. Additionally, the review supplements findings from academic sources to offer concrete examples of policies and action plans to address identified deficiencies. This dual approach ensures a nuanced understanding of SDG localization, providing actionable insights for developing effective, inclusive, and adaptable VLR frameworks.

To search the literature, keywords such as ‘localizing the SDGs’, ‘SDG workshops’, and “Voluntary Local Reviews” were used on both the University of Victoria’s library database and Google Scholar. Key sources were identified by analyzing common literature referenced throughout the initial review. After selecting key themes in the literature, the search process for materials focused on those themes. In synthesizing the findings, some distinctions were found in literature between setting the agenda between a context-specific approach and centralizing a city’s agenda around SDG 11 ‘Sustainable Cities and Communities’. Accordingly, further searches were applied to select material using keywords such as, ‘context-specific localized strategies’ to ‘SDG 11 localization strategies’. This required acquiring material from primary sources of government databases to identify specific policies and action plans cities had implemented in line with localizing the SDGs. Additional data was sourced from international organizations such as various departments throughout the United Nations, OECD, and the think tank of the International Institute for Sustainable Development, among others to obtain material on strategic action plans used to localize SDGs. This data then acted to complement the findings from the literature review accordingly.

In what follows four thematic areas are explored in this chapter: 1) stakeholder engagement; 2) the practical integration of policies and strategies; 3) policy implementation; and 4) monitoring and evaluating.

### 2.1 Stakeholder Engagement

In the quest to localize the SDGs, various guidelines for communities have been offered (IISD, 2022; UNECE, 2021; OECD, 2020; Koike et al, 2020). A key strategy involves stakeholder mapping to identify actors and plan SDG thematic areas (Granados and Noferini, 2019). This involves ensuring the agenda aligns with community well-being, organizing policy resources, and political will across government levels. To minimize negative interactions between

stakeholders with separate agendas, a 'goal-scoring' scale may be considered to map out various stakeholders and identify different interaction types (Nilsson et al., 2016). These include reviewing trade-offs when agendas and priority conflict—such as assessing the feasibility of timelines to introduce extra regulations, policies, bans, and the investment in technologies that require scaling up solutions—and assessing the overall impact of these trade-offs for different marginalized groups. In the scope of this study, the literature consulted aimed to understand the specific trade-offs that exist when agendas and priorities conflict. Other interactions include those based on addressing whether the policies cause irreversible damage, measuring policies' impact, how definitive the evidence is for that impact, do the policies have a shared interest between goals, i.e., promoting education (SDG 4), doesn't directly ensure poverty reduction (SDG 1). Due to these considerations, it's crucial to examine how stakeholders who want to advance SDGs are connected within their network to address what collective action is required to make progress (Catzín-Tamayo et al., 2022).

When establishing the targets and indicators for stakeholders, there are mixed positions from researchers on the best starting point. From a localized lens, a significant portion of the literature centered around city-level SDG analysis is concentrated on the implementation of Sustainable Cities and Communities (SDG 11) (Ndlovu et al., 2020; Klopp & Petretta, 2017; Parnell, 2016; Wendling et al., 2018). For instance, the role of localization from environmentally sustainable smart cities is one approach through the convergence of technologies (Bibri et al., 2023). By analyzing research trends and driving factors, this study highlights the potential of these technologies in achieving the environmental targets of the SDGs. This research is supported by Japan's Eco-Model City and FutureCity initiatives, which promote low-carbon societies and environmental, societal, and economic sustainability at the local level (Masuda, et al., 2020). Masuda's study promotes the role of making advances in smart cities by leveraging the role of stakeholder partnerships that were identified as effective in addressing deficiencies within municipal governments and enhancing SDG mainstreaming efforts.

Contrary to these approaches, Fox and MacLoud (2019) suggested that many urban areas are ill-equipped and lack the necessary resources to adequately monitor SDG 11 or the comprehensive array of goals. This may be due to indicators not being suitable for their context, an absence of data collection structures, and insufficient resources to tailor them to the SDGs (Fox, MacLoud, 2019).

Other studies adopt more context-specific approaches. Consider these three examples:

- The role of local community participation is explored in sustainable tourism indicators for rural destinations in Mexico (Sosa et al., 2021). The authors conducted a systematic scoping review to assess the literature on sustainable tourism indicators and their relevance to advancing initiatives related to Zero Hunger (SDG 2), Inclusive and Sustainable Economic Growth (SDG 8), Responsible Consumption and Production (SDG 12), and Life Below Water (SDG 14). This study emphasizes the importance of engaging local communities in the development and implementation of sustainable development plans by using cultural tourism indicators to boost the quality of life.

- In Kampala City, Uganda, the LONSEK project exemplifies local engagement for SDGs, targeting the urban waste sector to impact SDGs 1, 3, 7, 10, and 11 (Urban Action Lab, 2023). Utilizing a transdisciplinary research approach, the project collaboratively engaged with local actors to identify and address problems, proposing alternative urban development visions (Schneider et al., 2019; Buyana, 2020). Partnering with the Kasubi Local Community Development Association, LONSEK conducted key informant interviews focusing on transitioning from micro-interventions to a macro approach for SDG localization. This example highlights effective strategies for implementing SDGs at the local level by highlighting how fostering grassroots partnerships can scale community-driven solutions from micro to macro levels.
- In Bangladesh surveys have been employed through a SWOT analysis to assess their operational efficiency, which revealed an inclination among representatives to enhance their knowledge and engagement with SDGs (Sarkar et al., 2022). This study revealed SDGs 1, 2, and 6 (Clean Water and Sanitation) were prioritized and considered most significant in the localized agenda-setting process. This survey-based approach contributes to understanding stakeholder engagement in target setting.

These examples illustrate diverse strategies for localizing the SDGs by emphasizing stakeholder engagement, tailored approaches, and localized priorities. They illustrate that successful SDG localization requires innovative, inclusive, and context-aware methodologies to address the unique challenges and opportunities faced by local governments. These examples also highlight the importance of building partnerships across municipalities to harmonize strategies and align SDG priorities, a critical factor for the Greater Victoria Area's VLR development. By drawing on these lessons, the GVA can foster inclusive, multi-level collaboration to address its unique governance structure and create a roadmap for effective SDG implementation

## 2.2 Practical Integration of Policies and Strategies

To follow how stakeholders have engaged in setting SDG targets for a localized agenda, it is crucial to analyze governance structures at the territorial level (Fox and MaCloud, 2021). Policy integration involves collaboration among actors from different domains, including environmental and climate change policies (Tosun and Lang, 2017; Ortiz-Maya, and Reggiani, 2023). Policy domains consist of groups pursuing common interests, requiring coordination for integration with SDGs (Trein, 2017). Achieving integration across policy areas and the SDGs necessitates the coordination of diverse departments when developing and assessing policy. Coordinating diverse departments in policy development involves prioritizing objectives and using evidence-based methods to identify interconnections between goals and targets (Russel and Jordan, 2009). Regarding the GVA, this process will be particularly useful in finding common targets and indicators involved in the horizontal multilevel governance engagement among relevant municipal actors.

In Quebec City, a multi-service mobilization approach, employing an SDG target prioritization grid (SDGT-PG), was utilized to facilitate collaboration among groups, including the mayor,

resulting in a top-down mobilization strategy (Tremblay et al., 2021). The SDGT-PG was instrumental in evaluating strategic documents and identifying contributions, synergies, and trade-offs related to SDG targets. A subsequent prioritization workshop determined the relative importance of SDG targets, considering stakeholder input, current achievements, and jurisdictional responsibilities. This approach promoted vertical and horizontal integration of SDG targets and encouraged stakeholder participation and inclusion in developing a localized SDG agenda (Tremblay et al., 2021).

Policy integration for SDG localization requires coordinated action across multiple domains and governance levels. By leveraging tools such as Quebec's SDGT-PG, local governments can align their strategies with SDG frameworks, identify synergies, and engage stakeholders. The examples of Quebec, Barcelona, and other cities demonstrates how participatory approaches, evidence-based prioritization, and multilevel governance can bridge policy silos. For the GVA, these examples underscore the importance of aligning municipal objectives, engaging diverse departments, and fostering vertical and horizontal collaborations. Integrated policy frameworks can transform municipal governance into a robust mechanism for achieving the SDGs.

This discussion informs Research Question 1, as it highlights practical strategies and best practices that the GVA can adopt to localize the SDGs and implement a VLR. Quebec's SDGT-PG, for instance, provides a model for prioritizing SDG targets while addressing jurisdictional responsibilities and stakeholder inputs. Such frameworks can inform the GVA's efforts to harmonize policy goals across its municipalities and create cohesive strategies. By drawing on these examples, the GVA can establish evidence-based, participatory processes to craft localized agendas that effectively reflect its diverse governance structure and priorities.

## 2.3 Policy Implementation

For the implementation side of localizing the SDGs, a few approaches will be discussed. Four examples are considered below:

- The role of mapping out the SDGs by using existing city plans and policy initiatives was applied in Helsinki, and New York City (City of Helsinki, 2019; New York City Mayor's Office for International Affairs, 2016). In Helsinki, this involved introducing climate and industrial policies to align with the SDGs, as outlined in the Carbon-neutral Helsinki 2035 Action Plan and other related strategies (City of Helsinki, 2021). New York's PlaNYC, established 16 years ago, incorporated a comprehensive set of policies addressing energy, climate resilience, and environmental justice, among other aspects (The City of New York Mayor Adams, 2023).
- Barcelona employed an inclusive policy-making approach to formulate its 2017-2027 Strategy, with a specific focus on SDG 10 – Reducing Inequalities (Barcelona City Council, 2018) and for implementation, notably the Barcelona Municipal Inclusion Plan, and the subsequent Barcelona Plan for Social Inclusion (Barcelona City Council, 2021). The city further addressed gender equality (SDG 5) by launching a 'Plan for Gender

Justice (2016-2020)', which achieved an impressive 80.6% implementation of its planned actions, leading to the establishment of a subsequent 'Plan for Gender Justice 2021 - 2025' (Barcelona City Council, 2021).

- Germany formally integrated SDGs into its planning and policy processes, overseen by the State Secretaries Committee for Sustainable Development (The Federal Government, 2021). This involved aligning the National Sustainable Development Strategy with the SDGs, facilitated by a multi-stakeholder working group contributing to the development of municipal-level indicators (Bertelsmann Stiftung et al., 2020; Jossin and Peters, 2021). Nine German cities then submitted VLRs, reflecting their commitment to localizing the SDGs through these established indicators (UN DESA, 2024). Germany's approach included a top-down strategy with the appointment of sustainable development leads in each department, complemented by bottom-up engagement through the German Municipal Charter, emphasizing broad civic participation and ownership in embracing the SDGs (Global Taskforce of Local and Regional Governments, 2017; Croese et al., 2020; Granados and Noferini, 2019).
- The Mayor's Office for International Affairs in New York City paved the way in creating an innovative monitoring concept of the VLR to tailor them at a localized level (Mayor's Office for International Affairs, 2018). Since doing so, over 200 local governments have developed declarations for VLRs (Mayor's Office for International Affairs, 2020), from which 211 cities have already submitted VLRs to date (UN DESA, 2024).

Effective policy implementation involves tailoring existing plans and initiatives to align with SDG targets. Cities such as Helsinki, New York, and Barcelona showcase diverse strategies, from adopting climate policies to promoting social inclusion and gender equality. Additionally, Germany's structured approach to municipal-level SDG integration and New York's innovative VLR model highlight how cities can lead in localizing the SDGs through top-down and bottom-up strategies. These examples emphasize the need for comprehensive planning, inclusive policy development, and innovative monitoring frameworks. For the GVA, adopting such practices offers a valuable consideration to systematically integrate SDGs into local governance and policy-making processes.

This discussion informs Research Question 4, which identifies the challenges cities have encountered during SDG localization and VLR implementation, and solutions they have adopted. Cities like New York and Barcelona demonstrate strategies for overcoming barriers such as lack of inclusivity and monitoring challenges through innovative frameworks and inclusive policy design. Germany's multi-stakeholder engagement model addresses issues of coordination across governance levels. By understanding these approaches, the GVA can anticipate potential obstacles, such as aligning policies across municipalities and limited resources, and employ proven mitigation strategies, including participatory planning and localized monitoring frameworks, to enhance its SDG localization efforts.

## 2.4 Monitoring and Evaluating through the Role of VLRs

Once the agenda is set, and the policies and strategies are identified, monitoring and evaluating processes to promote accountability and transparency to the community stakeholders. Despite the importance of striving for policy integration while implementing a localized SDG agenda, the methods for accomplishing are insufficiently explored if they do not account for the role of VLRs of multi-jurisdictions (such as in the GVA) (Ortiz-Maya, and Reggiani, 2023).

Policy evaluation is the conclusive phase of the policy cycle, primarily reliant on appraising anticipated outcomes to gauge whether desired policy impacts were realized. From a public policy standpoint, evaluation involves gauging policies to reach their outcomes and their effects on specific societal aspects, like demographic groups, the environment, and working conditions (Anderson, 2015). One challenge in monitoring the SDGs with 169 underlying targets and indicators is that they are vague and lack clarity, which often leads to varied interpretations among stakeholders (Valencia, et al., 2021). In this context, VLRs provide a practical mechanism for localizing the SDGs. Through participatory, inclusive, and transparent processes, VLRs help translate global aspirations into locally meaningful targets and indicators, thereby clarifying priorities and enhancing accountability (Suri, et al., 2021; Osman et al., 2021).

Monitoring and evaluation play a critical role in the VLR process by ensuring effective implementation and policy integration. Ortiz-Maya and Reggiani (2023) highlight three key motivators for communities to provide VLRs: 1) external influences beyond local governments; 2) internal influences within agencies; and 3) a desire to integrate policies for sustainable development. In the Canadian context, the VLR handbook provides a context-specific approach, offering seven steps to guide municipalities, emphasizing the role of multiculturalism, reconciliation, and ensuring environmental assets are particularly valued (IISD, 2022). The OECD complements this by providing a self-assessment toolkit with five components, including team roles, stakeholder mapping, and accountability mechanisms (OECD, 2020). Further research suggests that key factors in VLR monitoring include data innovation (Fisher and Fukuda-Parr, 2019; OSMAN et al., 2020), inclusive participation (Clark, Biggeri, and Frediani, 2019), strategic planning (Anand et al., 2020), and policy coherence (Biggeri and Ferrannini, 2014), which collectively ensure alignment between local, national, and global SDG strategies.

An alternative approach to localizing the SDGs involves mapping out the connections of SDG 11 targets (Sustainable Cities) with other SDGs for an inclusive and resilient sustainable development approach (Osman et al., 2021). Tailoring international indicators to a localized setting can include sub-indicators like waste management and urban maintenance efficiency for SDG 12 or traffic accessibility and inclusivity for persons with disabilities for SDG 9 (Garau and Pavan, 2018). Osman et al. (2021) identify five key components for monitoring SDG 11: 1) relevance; 2) availability; 3) monitoring; 4) reliability; and 5) non-redundancy. They identify a variety of indicators tailored to the city of Buraidah. This example provides insights for designing the GVA's own VLR by focusing on a group of targeted indicators (Osman et al., 2021).

This theme directly informs Research Question 2 by identifying lessons from global experiences that can enhance the GVA's SDG localization efforts. The frameworks and tools discussed emphasize the importance of context-specific adaptation, inclusive community engagement, and effective monitoring mechanisms, which are crucial for addressing the unique multi-jurisdictional nature of the GVA. Tailoring indicators, fostering collaboration across municipalities, and encouraging data innovation can provide the GVA with a structured approach to developing a VLR that reflects its priorities and ensures progress towards achieving SDGs.

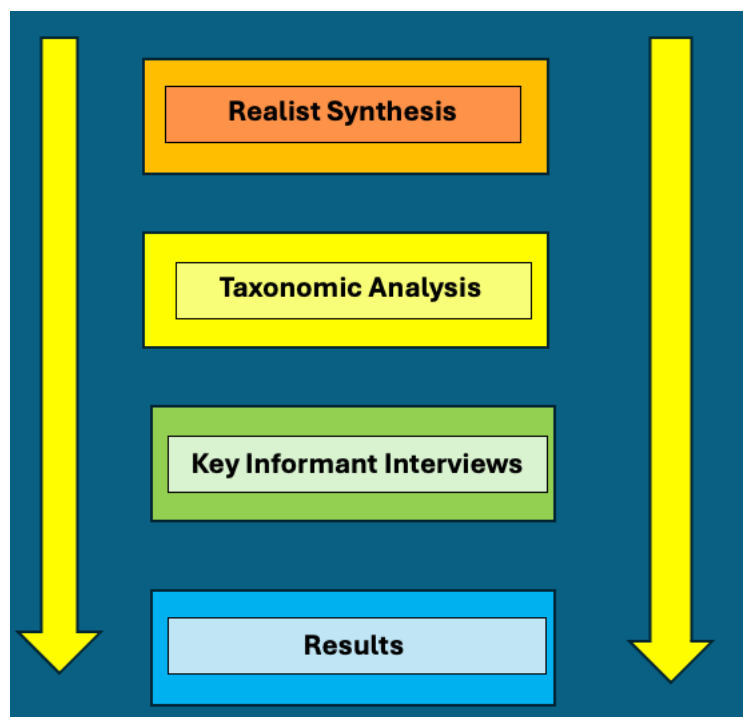
## 2.5 Literature Review Conclusion

Localization in the context of SDGs involves adapting and implementing global goals at the local level, prioritizing specific targets and indicators (Latek, 2021). This literature review emphasized the importance of targets and indicators in creating VLRs to address unique municipal challenges, and provides further resources for the GVA to consider if utilizing the policy cycle framework when localizing the SDGs. Fostering stakeholder engagement, innovative policy implementation, and robust monitoring via VLRs can showcase the GVA's commitment to sustainable development, serving as a model for other cities to follow. Proactive efforts and collaboration within the GVA can contribute to a more sustainable future for residents, aligning with the global agenda for positive change from a localized lens.

## Chapter 3: Methodology, Methods, and Analysis

To address the research questions and explore effective strategies for implementing localized agendas through VLRs in the GVA, this study first conducted a realist synthesis to address part of Research Question 1. Then, an adapted version of Spradley taxonomic analysis was conducted to categorize models of VLRs that municipalities external to the GVA employ to address part of question two. Based on these findings, key-informant interviews were employed in the GVA for key stakeholders to consider the best suitable model to create a VLR in their municipality and to identify themes to inform analysis of findings and make recommendations for GVA municipalities (see Figure 1).

*Figure 1: Conceptual Methodology Framework*



### 3.1. Epistemology, and Ontology

The epistemological position of this research is rooted in realism insofar as it relates to the realist synthesis provided, which emphasizes understanding the underlying mechanisms of social phenomena (Bhaskar, 2008; Pawson et al., 2004; Sayer, 2000). This approach is grounded in the belief that knowledge can be generated by examining not only the outcomes of interventions but also how and why they work in particular contexts for certain groups of people. This method acknowledges complexity and context, aligning with a theory-driven approach to the taxonomic analysis that seeks to reveal not just what works, but under what circumstances and for whom.

The ontology applied in this research acknowledges a critical realist perspective, as social phenomena are seen as complex, context-dependent, and shaped by various forces, including human agency, institutional settings, and broader social systems (Bhaskar, 2008; Pawson et al., 2004; Sayer, 2000). Interventions (like SDG localization and VLR creation) are not linear but involve negotiation, feedback, and adaptation over time. The ontology is also aligned with the understanding that social realities are shaped by multiple interacting factors, including institutional systems, stakeholder relationships, and the local context.

## 3.2. Methods

This research's method focuses on a realist synthesis, Spradley's taxonomic analysis, and key informant interviews to address key research questions about implementing localized SDG agendas through VLRs in the GVA (see Figure ii).

### Realist Synthesis: Understanding How and Why Interventions Work

The realist synthesis focuses on understanding the underlying mechanisms, contexts, and outcomes of interventions (like VLRs), implemented with the assumption that certain actions will produce particular effects (Pawson et al., 2004). For the realist synthesis, data was collected through existing secondary data of VLRs submitted to UN DESA. This methodology aims to systematically gather existing evidence on the success or challenges of localizing SDGs, recognizing the significance of context and interactions between various stakeholders and policies within the multiple municipalities.

The realist synthesis will aim to examine the overall contextual factors in the GVA when identifying appropriate cities for comparison. For instance, taking into consideration the population, city size, key actors, stakeholders, upon other factors that distinguish the multiple municipalities. From the findings of the realist synthesis, four select VLR models (Thunder Bay, Orlando, District of Seodaemun-gu, and Winnipeg) are identified as most relevant to comprehensively examine them within the context of the GVA. These select models are identified using formal checklists and a color-coded framework (outlined in Appendix 2), and additionally assessing the quality of these case studies using 10 categories (as indicated in Appendix 4). Upon identifying these models, these preliminary findings are guided by an adapted version of Spradley's taxonomic analysis as indicated in the methodology section to inform the study on how to best engage with stakeholders in collecting primary data through key informant interviews.

### Taxonomic Analysis: Identifying Different VLR Models

Using Spradley's Taxonomic Analysis, this research categorizes and identifies different VLR models across 11 municipalities, organizing them into a structured classification system. Spradley describes taxonomy as a classification system that organizes the domain or model into a flowchart or another visual representation, aiding researchers in comprehending relationships

within domains (Spradley, 1979). Taxonomic analysis is effective in categorizing data to identify different models of VLRs relevant to the GVA's context and implement data coding according to the established classification (Garrido, 2017; Prirahayu, 2021).

This research establishes a typology for VLRs based on three main categories, governance, measurement, and implementation, offering a clear framework to analyze and compare VLRs in the context of Greater Victoria. These types, derived from the analysis of 11 VLRs from medium-sized cities similar to Greater Victoria, reflect critical elements in the localization of SDGs. The governance type outlines five subtypes, from top-down to bottom-up models, to analyze how VLRs are driven—by government, external support, or local communities. The measurement type classifies how cities monitor and evaluate SDG progress, using score-based systems, color-coded indicators, and tier-based classifications to assess impact. The implementation type focuses on how cities align their VLRs with national or international frameworks, municipal policies, or data-driven approaches, to effectively implement sustainability strategies. These types and subtypes provide a comprehensive framework to explore how VLRs can be replicated and adapted in similar urban contexts, offering insight into governance structures, evaluation mechanisms, and implementation strategies for effective SDG localization. This typology aids in presenting structured categories to key informants during stakeholder interviews, facilitating deeper exploration of VLR adaptations.

## Key-informant Interviews: Identifying Themes for Analysis

The key informant interviews aimed to gather in-depth insights from individuals with first-hand knowledge and expertise in their communities. These interviews provided valuable perspectives and recommendations to inform the study. To achieve this, eight officials were interviewed, including four from the District of Saanich, two from the City of Victoria, one from the Township of Esquimalt, and one from the District of Oak Bay. Participants held diverse roles such as councillors, city planners, chief administrative officers, and sustainability managers.

The four Greater Victoria Area (GVA) municipalities were selected based on four key factors: 1) a mix of municipal (Victoria, Oak Bay, and Esquimalt) and semi-rural (Saanich) contexts; 2) the availability and willingness of key informants to participate; 3) the GVA's strong reputation for environmental sustainability, making a Voluntary Local Review (VLR) an opportunity to highlight existing efforts and best practices aligned with the Sustainable Development Goals (SDGs); and 4) GVA's potential to serve as a model for other mid-sized regions and cities in Canada and globally, demonstrating how mixed urban and rural areas can effectively advance the SDGs.

The participants were selected for their expertise from a public administrative perspective to consider the implications of creating VLR strategies, policies, and best practices within their municipality. To best inform these interviews, a list of criteria-based questions was prepared to identify common themes, priorities, and strategic practices in creating a VLR in the participant's municipality (see Appendix 8).

Once the one-hour interviews were completed via Zoom, the transcripts were thematically analyzed. This process, aligned with cross-examining the select VLR cities, aids in identifying subsets and understanding commonalities and variations in identified targets and indicators. The analysis extends to broader domains like regional governance, policy implementation, and community engagement, ensuring a comprehensive understanding of the GVA context.

### 3.3. Ethics Review

This research adhered strictly to ethical guidelines established by UVIC's Human Research Ethics Board (HREB), ensuring the respect of participants' dignity, privacy, and confidentiality. A Tri-Council Policy Certificate was obtained, and informed consent was secured from all participants, allowing them the freedom to withdraw at any time, and keeping them informed about the harms and benefits of foreseeable low-risk research implications (University of Victoria, 2022).

A contact list of key stakeholders was established, including Mayors, councillors, city managers, community planners, chief administrative officers, chief information officers, and managers of sustainability, along with a preliminary email, was submitted to HREB for approval. After completing the review process, a Certificate of Approval was issued.

Following the HREB guidelines, all collected data has been securely stored, and accessible only to the research team to ensure compliance with ethical standards for low/medium-risk research in the protection of the participant's rights and well-being.

### 3.4. Conclusion

This study integrates a realist synthesis, Spradley's taxonomic analysis, typology, and key informant interviews to provide a comprehensive exploration of how similar municipalities have localized the SDGs through VLRs. The realist synthesis and Spradley's taxonomic analysis were identified as the key methodological foundations, enabling a structured, context-sensitive approach to analyzing secondary data. The integration of key-informant interviews and thematic analysis underscores the importance of stakeholder perspectives in the GVA, allowing for the adaptation of best practices to local contexts, and informed recommendations on how GVA municipalities can best pursue their VLR initiatives.

## Chapter 4: Intermediate Findings to Inform Key Informant Interviews

This chapter presents findings emerging from the realist synthesis aimed at identifying the underlying factors that contribute to the success of VLRs. These findings are further examined through a taxonomic analysis, which informs the development of interview questions intended to explore how VLR models could be adapted to address the Greater Victoria Area's distinctive governance and sustainability challenges.

### 4.1. Analysis of Intermediate Findings

In this chapter, four sections of intermediate findings will be discussed to inform the following findings chapter: 1) realist synthesis; 2) taxonomic analysis; and 3) typology.

#### Realist Synthesis: Approach Taken in this Study

The purpose of a realist synthesis is to identify the underlying causal mechanisms and the specific conditions or contexts under which desired effects are achieved, providing a nuanced understanding of what works, for whom, and under what circumstances. In the context of this study, this means understanding the circumstances in which VLR's are achieved by first reviewing a series of localized SDG strategies that have been implemented in cities with similar contexts as the GVA.

To select cities 174 VLR reports listed on UN DESA's database (at the time of engaging in this study) were first filtered by the following categories: region, country, language, population, and number of municipalities. Between these VLRs, they were then colour-coded using the following categories: green=good; red=bad; yellow=satisfactory; orange=okay; and blue=case studies selected (see Appendix 2). This colour-coded system does not necessitate any moral implications but rather acts to contextualize the CRD based on its population of 383,360 (2016), and its number of municipalities (i.e., 13).

Using this colour-coded system, 59 cities were first filtered as contextually relevant to medium-sized cities based on their population sizes between 150,00-800,000 people. From those 59 cities, 13 cities were additionally filtered on the basis of the number of jurisdictions relevant to the CRD's 13 jurisdictions. Last, between these 13 cities, they were then filtered based on the strategic regional representation of four cities in Europe, two in Canada and Asia, and one in the United States, the United Kingdom, and Africa. On the basis of this selection criteria, the following 11 VLR examples were selected as key models to further collect evidence and review following step 1 of the realist synthesis: Ghent (Belgium), Port Said (Egypt), Bristol (England), Melaka (Malaysia), Turku (Finland), Thunder Bay (Canada), Orlando (U.S.A), District of Seodaemun-gu (South Korea), Winnipeg (Canada), Shkodra (Albania), and Braga (Portugal).

Then we considered how eight themes—SDG targets, partners, partner types, consultation processes, policy alignment, contextual influences, methodologies, and implementation

adaptations —contributed to creating a VLR (details in Appendix 3). Using formal checklists and a color-coded framework (outlined in Appendix 2), the quality of these key examples was assessed across 10 categories (see Appendix 4). The rationale for developing a VLR checklist emphasized aligning SDG targets with local priorities, integrating SDGs across multi-jurisdictional governance, and selecting indicator frameworks for effective monitoring. On this basis, four cities were selected as models of consideration to further examine in relationship with the GVA: 1) Thunder Bay; 2) Orlando; 3) Seodamun-gu; & 4) Winnipeg.

The data collected from these cases revealed that SDGs were not integrated across the individual municipalities within each city. Instead, the reviewed VLRs presented a unified, city-wide strategy rather than distinct approaches for each municipality. Based on this, to assess which models are effective, for whom, how, and under what circumstances in the GVA context, Spradley's taxonomic analysis was applied to conduct an in-depth review of four VLR models (Thunder Bay, Orlando, Seodamun-gu, and Winnipeg).

## 4.2. Taxonomic Analysis

To find the right model for the GVA, Spradley's taxonomic analysis uses a comparison method that looks at how different cities are different or similar by identifying patterns and relationships between them. How different cities' VLR models can serve as reference points for the GVA by reviewing the similar characteristics between them, such as population, size, or multiple municipalities, was then considered. A strengths, weaknesses, opportunities, and threats (SWOT) analysis was conducted on the applicability of each model to the GVA context (see Appendix 7).

A preliminary taxonomy was developed to categorize key elements influencing the creation of VLRs. The elements were first identified as the goals the VLR covers, the process of how the VLR measures specific indicators, how SDGs are integrated into the city policies, and the governance and key stakeholders the municipality interacted with to implement the VLR. The preliminary taxonomy provided in Appendix 9 was established to verify taxonomic relationships that act as structured connections between different cities within a classification system based on shared characteristics. This is helpful to analyze patterns, draw conclusions, and apply new insights to inform the key informant interviews.

Upon examining these four cases, a list of questions was drafted to guide the discussion in the first set of interviews (Yin, 2013). Upon further refinements of these questions, three sets of interview questions were crafted (indicated in Appendix 8). The three sets of interview questions were designed to gather insights from key informants on the feasibility, challenges, and benefits of implementing a VLR in the CRD. The first set of interview questions (for Participants 1 and 2) explored general perceptions of the benefits, challenges, and governance strategies for implementing a VLR in the CRD, focussing on SDG alignment and expected impacts. The second set of questions (for Participants 3-4) examined governance, measurements, and feasibility considerations for VLR implementation, including financial, technical, and political factors, along with stakeholder engagement. The last set of interviews (for Participants 5-8)

delved into detailed feasibility aspects of VLRs, comparing governance models, assessing operational and stakeholder challenges, and evaluating the long-term policy implications.

### 4.3. Typology

This typology categorizes VLRs into governance, measurement, and implementation types, with 14 subtypes derived from 11 medium-sized cities (as described in the subsections below). The rationale for analyzing these cities, instead of the four identified as most contextually relevant to the GVA in Section 4.2, is that it would allow for a more comprehensive understanding of different VLR models and their underlying causal mechanisms. For instance, while many subtypes are not representative of the four GVA-relevant VLRs (as informed based on the selection process of the substitution frame), the remaining seven VLRs provide good examples of understanding the conditions of utilized subtypes.

As a result, these two distinct groups: 1) VLR City's (seven cities); and 2) Select GVA-relevant VLR City's are separated in the analysis provided in Tables 1-3 below. This, in turn, informs the research questions by providing a more diverse set of strategies, policies, and best practices that can be considered for the key informants to independently identify what model works for whom, how, and under what circumstances for their municipality. In total, three general types were created for governance, measurement, and implementation -- along with sub-types in each, and what follows considers each type and its sub-types in turn.

#### Governance Type and Sub-Types

Governance refers to the method for furthering the VLR in the municipal context. For governance, five subtypes have been identified: 1) top-down governance; 2) top-down with external support; 3) bottom-up; 4) bottom-up with external support; and 5) hybrid governance. The rationale for each of these subtypes is as follows, with the results of each of the subtypes from the 11 VLRs being indicated in tables 1-3. The sub-types used for Governance were:

1. **Top-Down Governance:** In this model, the impetus for VLRs originates from municipal or governmental policies and regulations. Local government authorities spearhead the initiation and management of VLRs with minimal involvement from external stakeholders. The key focus lies in seamlessly integrating VLR findings into existing governmental policies and strategies, ensuring alignment with broader governance frameworks and objectives.

2. **Top-Down with External Support:** Here, VLRs are orchestrated by local governments, leveraging support from private sector entities. Collaboration extends to partnerships with non-governmental organizations (NGOs), fostering a multi-faceted approach to VLR facilitation. Importantly, community organizations and residents are actively engaged in the planning and execution of VLRs, reflecting a commitment to inclusive decision-making processes and broader stakeholder involvement.

**3. Bottom-Up Governance:** This approach sees VLRs being instigated and propelled by grassroots community organizations or citizen groups. Central to this model is the active participation of citizens in all facets of VLR processes, from data collection to analysis and decision-making. The emphasis here lies in empowering local communities to champion sustainability initiatives, fostering a sense of ownership and responsibility over local development agendas.

**4. Bottom-Up with External Support:** In this iteration, local communities collaborate with academic institutions to conduct VLRs and analyze resulting data. Academic research and scientific methodologies inform the trajectory of VLRs, enhancing the rigor and depth of insights generated. The partnership between academic experts and local stakeholders facilitates the exchange of expertise and resources, enriching the VLR process and outcomes.

**5. Hybrid Governance Models:** This model embraces a collaborative ethos, bringing together diverse coalitions of stakeholders encompassing government, academia, NGOs, and private sector representatives. VLRs benefit from the integration of insights and resources from multiple sectors, enabling a comprehensive approach to addressing complex sustainability challenges. By combining perspectives from different disciplines, hybrid governance models foster innovation and adaptability in VLR design and implementation, reflecting a holistic and inclusive approach to local governance.

*Table 1: Governance Types*

Governance Type	VLR City's	Select VLR City's
Top-Down	Ghent, Turku	
Top-Down with External Support	Bristol, Braga, Melaka	Thunder Bay, Orlando
Bottom-Up		
Bottom-Up with External Support	Shkodra	Winnipeg,
Hybrid Governance	Port Said	Seodaemun-gu

### Measurement Type and Sub-Types

Measurement refers to what measurement indicators or systems were utilized to monitor and evaluate the progress of the SDGs, their targets, and their relationship to the VLR itself. For measurement, three subtypes have been identified: 1) score-based; 2) color-coded systems; 3) and tier-based. The rationale for each subtype is as follows, with the results for each of the 11 VLRs being indicated in Table 2. The types for measurement were:

**1. Score-based Measurement:** In this measurement, indicators are transformed into scores ranging from 0 to 100, providing a standardized measurement across various metrics. This approach, commonly employed in international assessments, ensures comparability and consistency across different contexts. Each SDG target is evaluated by averaging the scores of

its corresponding indicators, as demonstrated in charts, e.g., SDG 6 can be measured through Drinking Water, Sewerage, and Protecting Watercourses. From these metrics, an SDG index is created to reflect the city's scored performance on each target. These target scores from 0 to 100 are used to evaluate overall progress, providing a standardized method for assessing performance across different indicators and goals. For instance, SDG 6 may achieve a score of 64 based on this methodology, whereas SDG 7 may receive a score of 70 depending on the city's measurements of SDG progress. This score-based measurement does employ a color scheme, however it is different in terms of its complex index scoring. For example, for SDG 6, the index of the overall SDG is represented by blue, whereas SDG 6. A is represented by red, SDG 6. B by green, and SDG 6. C by Yellow. While these have a color basis to them, the index scoring is particularly unique to this measurement type.

**2. Color-coded Systems:** SDGs are being analyzed over a 3-6-year period (depending on the VLR) to establish a specific set of targets and indicators based on localized priorities. These indicators are then tracked using localized data, and nationalized data to quantify the percent change of progress or trends over the period that these targets have been measured. Their overall progress is then evaluated based on a color-coordinated system, i.e., red = negative, yellow = mediocre, and green = good. Alternatively, some VLRs have utilized a color-coordinated system representing other measurements, such as green = positive change, orange = negative change, purple = no change, and yellow = desirability of change is debatable, depending on the VLR. Following these measurements, in alternative cases, these colors are then quantified to have a % change over the period measurement by being represented by overall value, e.g., +40, or -22. Furthermore, another color-coded system that has been employed is by measuring the indicators present in the city by a percentage base, and then measuring if the indicator trend is positive (green), negative (red), or no progress made (nothing indicated), and whether it's following the city's desirable trend on a positive (green), negative (red), or no progress made (nothing indicated) basis. For example, if the city's indicator represents 80% then the indicator trend is considered good (green). If the indicator value is 99%, then the desirable trend is positive (green).

### **3. Tier-based Classification:**

This comprehensive strategy provides a mechanism to create key thematic areas via strategies, which are then organized into categories that represent how to effectively create goals, what SDGs relate to these goals, and further, how they are measured by the SDG indicators. The indicators are then separated into 3 tiers: 1) indicators with ample data to track and verify its findings; 2) indicators with some data, but an insufficient amount to track and verify its findings; & 3) indicators that have inconclusive data to track and verify its findings. These tiers are then mapped out in a table format in relation to the corresponding strategies and indicators to have a visual mapping of tracking their progress or their lack of being able to measure that progress accordingly. For example, in relation to SDG 3: Good Health and Well-Being, Tier 1=7 sources with ample data, tier 2 = 21 sources with some data, but an insufficient amount, and tier 3= 7 sources with insufficient data.

Table 2: Measurement Types

Measurement Type	VLR City's	Select VLR City's
Score-based	Ghent	
Colour-coded	Bristol, Melaka, Port Said, Turku	Orlando, Thunder Bay, Winnipeg
Tier-based		Seodaemun-gu

### Implementation Type and Sub-Types

Implementation refers to what strategy the VLR is applying to measure and accomplish the overall objectives that the governance sets forth. For implementation, six subtypes have been identified: 1) alignment with the national framework; 2) alignment with the international framework; 3) alignment with national and international frameworks; 4) comprehensive municipal policy alignment with SDGs; 5) municipal policy and international frameworks alignment; and 6) localized data-driven mapping and alignment to international frameworks. The rationale for each of these subtypes is as follows, with the results of each of the subtypes from the 11 VLRs being indicated in Table 3. The sub-types used for implementation were”

- 1. Alignment with national framework:** Following a review process of the region's VNR, K-SDGs, Africa 2059, and national policies, and strategies related to sustainable development, the municipality aligns them to localized priorities to establish and implement their own VLR.
- 2. Alignment with international frameworks:** After reviewing international VLR frameworks – such as guides produced by UN-Habitat, UN DESA, OECD, UNECE, Shimokawa Method, IISD, UNESCO Global Network of Learning Cities, Local Governments for Sustainability (ICLEI), UCLG, Sustainable Development Solutions Network (SDSN), Institute for Global Environmental Strategies, among others – municipalities align their own VLR with the strategic guidelines provided by some of these frameworks and contextualize them for their local setting.
- 3. Alignment with national and international frameworks:** This implementation type involves synthesizing the two types listed above by reviewing each VNR, national policies, and international VLR frameworks to align and implement them in a municipality's context.
- 4. Comprehensive municipal policy alignment with SDGs:** Following a thorough review of municipal policy documentation and strategies, VLR is implemented by aligning the strategic SDG areas, targets, and indicators to those policies, and strategies themselves. This process may include alignment of their VLR with OCPs, 5-year plans, annual reports, climate, housing, environment, health, and other policies/strategies related to sustainable development.
- 5. Municipal policy and international framework alignment:** Upon review of relevant international frameworks and guidance from international partners, municipal policy documentation, and strategies, these resources are then used to implement a blended VLR.

**6. Localized data-driven mapping, and alignment to international frameworks:** Using existing data collected, policies, and strategies by the municipality, that information is then analyzed to identify relevant information pertinent to each SDG, targets, and indicators. Once this data is mapped out in relation to the SDGs, indicators are established in reference to particular SDG targets and indicators. These indicators provide a baseline to identify the municipalities' localized priorities and any capacity gaps, and then with the VLR address, how to meet those priorities and capacity gaps accordingly. This type of implementation is distinct from the comprehensive municipal policy alignment with the SDGs, insofar as the localized pre-collected data is thoroughly tracked over a 10-year period to overall manage the well-being of the municipality by aligning it with both municipal policies, and international guidelines.

*Table 3: Implementation Types*

Implementation Type	VLR City's	Select VLR City's
Alignment with National Framework	Port Said	
Alignment with International Frameworks		
Alignment with National and International Frameworks	Braga	Seodaemun-gu
Comprehensive Municipal Policy Coherence with SDGs	Ghent	Thunder Bay
Municipal Policy and International Frameworks Alignment	Bristol, Melaka, Turku	Orlando,
Localized Data-driven Mapping, and Alignment to International Frameworks		Winnipeg

**Looking Across the Types: Diversity in VLR Approaches**

The collective relationship of the VLRs from the 11 cities showcases a diverse landscape in governance, measurement, and implementation approaches, each reflecting unique strategies for the 17 subtypes toward achieving SDGs. This typology is further examined in Appendix 10.

The governance structures across the cities primarily fall into three categories: Top-Down, Hybrid, and Bottom-Up. Most cities, including Braga, Bristol, Melaka, Orlando, Thunder Bay, and Turku, adopt a Top-Down approach with external support, indicating a reliance on higher-level government frameworks and assistance to guide their sustainability efforts. In contrast, Seodaemun-gu employs a Hybrid Governance model, combining top-down and bottom-up strategies, while Port Said also utilizes a hybrid approach but is focused on aligning with

national frameworks. Shkodra and Winnipeg represent Bottom-Up governance, emphasizing community engagement and support in their VLR processes, indicating a more localized focus.

Measurement strategies also vary significantly across the cities. Many cities, such as Bristol, Melaka, Orlando, Port Said, Thunder Bay, Turku, and Winnipeg, utilize colour-coded indicators for easy tracking and communication of progress. This approach facilitates stakeholder engagement and simplifies complex data. Ghent adopts a score-based measurement system, which offers a quantifiable assessment of progress, while Seodaemun-gu implements a tier-based measurement framework that likely allows for a more structured categorization of progress indicators. Notably, Braga and Shkodra do not have a specified measurement strategy, indicating potential areas for development in their VLRs.

For implementation, most cities emphasize alignment with various frameworks, including national and international guidelines, through their municipal policies. Cities like Braga, Melaka, Orlando, and Turku highlight their alignment with both National and International Frameworks, ensuring their strategies are in line with broader sustainability objectives. Ghent and Thunder Bay focus on Comprehensive Municipal Policy Alignment with SDGs, suggesting a thorough integration of sustainability into local governance. Seodaemun-gu also aligns with these frameworks, emphasizing both national and international contexts. On the other hand, Shkodra does not provide details on its implementation strategy, and Winnipeg showcases its unique approach through Localized Data-driven Mapping, illustrating a distinct focus on utilizing local data for effective sustainability implementation.

From this analysis, the relationship among governance, measurement, and implementation across these VLRs reveals a nuanced interplay of approaches tailored to each city's context. While the majority lean towards top-down governance supported by color-coded measurements, variations in implementation strategies and the inclusion of bottom-up approaches in cities like Winnipeg and Shkodra signify a growing recognition of localized needs and community involvement in achieving sustainable development.

#### 4.4. Intermediate Findings Conclusion

This chapter presents intermediate findings in three sections that support the key informant interview analysis in the following chapter: 1) realist synthesis, 2) taxonomic analysis, and 3) typology. The realist synthesis refined 11 VLRs into four selected models, which were then categorized through taxonomic analysis to assess their relevance to the GVA context. This categorization informed the development of a typology that explores how VLRs can be adapted for medium-sized cities like the GVA.

The typology further classified governance, measurement, and implementation approaches, identifying 14 subtypes across 11 medium-sized cities that conducted VLRs. This analysis provides broader insights into best practices, offering a foundation for the key informant interviews. The findings highlight that VLRs typically align with the cities' governance structures rather than multi-municipal collaboration. These insights help shape a targeted approach to

understanding the feasibility, governance, and policy integration strategies necessary for a VLR in the GVA.

The next chapter builds on these findings by examining how key informant interviews further inform the development of a VLR for the GVA.

## Chapter 5: Key Informant Interview Findings

The perspectives and insights shared by key informants from the GVA were instrumental in answering the research questions. The thematic analysis of the interview transcripts helps to acknowledge commonalities and variations in the SDG targets and indicators for the GVA, and additionally examine the broader issues of regional governance, policy implementation, and stakeholder engagement.

Eight stakeholders from the GVA agreed to participate in key informant interviews for this research. Given the challenges in recruiting participants, the study acknowledges the limitation that these eight individuals may not fully represent the broader perspectives of their respective municipalities. These stakeholders consisted of three councillors, three community planners, one manager of sustainability, and one chief administrative officer. Four were from the District of Saanich, two from the City of Victoria, and one each from the District of Oak Bay and the Township of Esquimalt. Additionally, the Township of View Royal was contacted, however no representative expressed interest in engaging in an interview. These participants were selected based on the relevancy of the local government officials' positions to manage municipal affairs, and sustainable-focused initiatives (as indicated in 6.1.1). Based on the chronological order of interviews conducted, each key informant was provided an abbreviated theme chart to ensure their anonymity is respected (e.g., Participant 1, Participant 2, and so on through Participant 8).

### 5.1. Emergent Themes

The following section presents an analysis of emergent themes related to VLRs within the GVA. The data covers topics including: i) the potential benefits and impacts of VLRs on regional coordination and SDG alignment; ii) the prioritization of specific SDGs; iii) preferred governance models; iv) measurement and evaluation systems; v) implementation strategies; vi) political and policy dynamics; vii) financial and administrative feasibility; ix) stakeholder engagement strategies; x) social and technical feasibility; and xi) anticipated future directions. These insights provide a comprehensive understanding of how different municipalities within the GVA view and may consider integrating VLRs into their local frameworks.

#### Benefits and Impacts of a VLR for the CRD

The potential of VLRs to enhance regional coordination and align local efforts with global sustainability goals is a recurring theme. Participant 1 highlighted that VLRs could significantly improve coordination across municipalities. Participant 2 agreed, noting that VLRs would help translate the SDGs into specific, actionable strategies.

Following this position, participant 2 stated *"I think there'd be a benefit in having the Capital Regional District lead a process that ties what we're doing in various municipalities to sustainability goals and sort of mapping out what we can do to further sustainable development [...] A VLR could provide a level of coordination that doesn't currently exist across the municipalities, which would be helpful."*

However, Participant 3 cautioned that a VLR might shift focus from local priorities due to resource constraints and potential distractions. Participant 4 viewed VLRs as a means to foster a global perspective within local discussions but anticipated resistance due to a heightened focus on regional issues. Participants 5 and 6 also saw benefits in a regional approach, with Participant 5 emphasizing climate action and Participant 6 noting the complexity due to political landscapes involving multiple municipalities. Participant 7 expressed skepticism about VLRs, fearing they might be too broad and not meet specific municipal needs, while Participant 8 acknowledged the challenge of translating international goals to local contexts. These insights underline the dual opportunities and challenges of implementing a VLR within the CRD's diverse and politically complex landscape.

## SDG Priority Areas

Climate Action (SDG 13) and Sustainable Cities (SDG 11) are prominent priorities. Participants 1 and 3 identified these as crucial for their municipalities, with Participant 1 also emphasizing Good Health (SDG 3) and Clean Water (SDG 6). Participant 2 noted a broader range of priorities, including Gender Equality (SDG 5) and Partnerships for the Goals (SDG 17). Participant 4 aligned Victoria's priorities with SDGs like Reduced Inequalities and Climate Action. Participant 5 focused on climate action and housing, and stated *"SDGs 11 and 13 are currently local priorities, but there is also a housing crisis underway, which of course means prioritizing SDG 1, over other SDGs"*. In addition, Participant 6 highlighted health, well-being, and climate action, while Participant 7 noted challenges in focusing on actionable goals within the broad SDGs, and Participant 8 aligned with regional growth strategies emphasizing Sustainable Cities and Climate Action. These priorities illustrate the dynamic interplay between municipal needs and global aspirations, underscoring the importance of tailoring SDG efforts to local capacities and contexts.

## Governance Models

A preference for hybrid governance models is evident, balancing local autonomy with external guidance. Participants 1, 5, and 8 support a top-down with an external support approach for its practicality, and Participant 3 also favors a top-down with an external support approach or a hybrid model. Participants 4 and 7 show support for a bottom-up with an external support approach for community buy-in, and Participant 7 also finds value in the hybrid model by claiming *"realistically speaking, bottom-up with external support would be the most reasonable as I think it could practically speaking 'get through the door' with sustained support, but I think honestly from a democratic collaborative process with buy-in from all stakeholders, the hybrid governance model would be the best"*.

Additionally, Participants 2 and 6 show a preference for the hybrid model. Hybrid and top-up with external support models are favored for their flexibility and ability to navigate political challenges. The diverse preferences reflect the varying capacities and governance styles within the CRD municipalities, underscoring the need for flexible approaches that foster stakeholder alignment and adaptability.

## Measurement and Evaluation Systems

Color-coded (is overwhelmingly preferred with some advocating for score-based systems and tier-based hybrid approaches (MES04). Participants 2, 5, 7, and 8 show a preference for the color-coded model for nuanced tracking. For instance, Participant 8 stated, *"I think the colour-coded system would probably be the most practical to show at a high level where there is maybe greater need for focus [on the SDGs]. It would be easier to sort of communicate to decision-makers in a more accessible and intuitive way."*

In contrast, Participant 1 highlighted support for either a score-based or tier-based hybrid approach stating, *"I like the score-based method, but tier-based might give more flexibility in dealing with different levels of data availability"*. Moreover, Participant 6 emphasized a preference for a hybrid approach (i.e., score-based and tier-based method), while Participant 3 favors score-based systems for clarity and quantifiable metrics. These preferences suggest that measurement systems must not only facilitate accountability but also enhance usability across diverse stakeholders within the CRD. These preferences suggest that measurement systems must not only facilitate accountability but also enhance usability across diverse stakeholders within the CRD.

## Implementation Strategies

Resource constraints and the integration of VLRs with existing policies are common challenges. Participants 1 and 2 highlight issues with staffing and financial feasibility, while Participants 2 and 3 suggest alignment with national frameworks. Participants 4, 6, and 7 advocate for localized data-driven mapping with international frameworks.

For instance, Participant 4 claimed *"I like localized data-driven mapping and alignment to international frameworks as it privileges more that grassroots kind of positions and I value more bottom-up frameworks using pre-existing data. One of my personal mantras is to work smarter, not harder. If you've already got the data and the data-collecting infrastructure, do that and then apply it to these international frameworks, which are inherently more universalized"*.

Furthermore, Participants 5 and 8 prefer aligning VLRs with municipal policies for practical integration. These insights highlight the critical role of strategic planning and resource allocation in ensuring the successful implementation of VLRs within the CRD.

## Political Will and Policy Alignment

Mixed levels of political support and challenges in policy alignment are noted in this section. Participants 1 and 7 highlighted the need for strong political support, while Participants 5, 6, and 7 suggested that political buy-in is contingent on bottom-up models for greater sustainability. For instance, Participant 5 mentioned, *"political will is crucial, especially in a bottom-up governance model to foster engagement and commitment from all stakeholders regardless of changes in political leadership over time"*.

In contrast, Participant 8 supports top-down models for continuity. Participant 3 suggested that there is a strong philosophical alignment with the SDGs among local politicians, but stressed topics like housing and transportation tend to take precedence over new initiatives like VLRs. Participant 4 suggested political support for the VLRs is mixed for stakeholders who are more locally focused and yet less enthusiastic about global issues. These perspectives underline the importance of building political support that aligns with both municipal priorities and broader sustainability goals.

## Financial Feasibility

Funding sources and cost management are key concerns. Participant 3 expresses concern about the value added by VLRs given existing commitments. Participant 4 was confident that funding is available, noting that *“there’s always money, [it’s] just a question of political will”*. Participants 5 and 7 emphasize the importance of transitioning from external to local funding for long-term sustainability.

Participants 6 and 8 note that while external support is beneficial initially, local funding is essential for ongoing operations. Participant 6 also highlighted the challenge of convincing stakeholders to adopt external resources, and mentioned *“I think in our district, I don’t know if the mayor or Council would just get really excited about something like this unless they were external pressure to do so.”* Participant 1 is confident about available funds but highlights the need for political support. These perspectives reflect the need for robust financial strategies that combine initial external support with sustainable local funding mechanisms.

## Administrative Capacity and Burden

Limited administrative capacity and the need for effective coordination mechanisms are common challenges. Participants 3, 4, 5, 6, and 7 acknowledge the significant administrative burden of VLRs. For instance, Participant 7 said, *“it’s definitely an administrative financial burden on keeping anything going, particularly with a smaller municipality that is really going to struggle with that”*. Additionally, Participant 5 mentioned, *“we don’t have the time and the resources to track progress on these topics.”* Moreover, Participants 3 and 4 note that the burden of integrating VLRs may have an impact on other municipal priorities.

Participant 5 suggests a hybrid governance model that leverages both local and regional efforts to manage workload, while Participants 6, 7, and 8 advocate combining external support with local efforts to reduce strain. Participant 8 further noted that the role of NGOs, or academic institutions may help manage the initial setup and coordination, while governments focus on their core functions by suggesting *“I think there would be an administrative burden, so having an external partner could help alleviate that, allowing local government to focus more on doing the work”*. These insights stress the need for innovative solutions to balance administrative demands with the operational realities of CRD municipalities.

## Stakeholder Engagement Strategies

Diverse engagement methods and stakeholder involvement are emphasized. Participants 5, 6, and 7 support bottom-up governance with external support models for better stakeholder engagement that is more inclusive and generates greater community involvement and buy-in. For instance, Participant 7 held the position that *“I think it’s more about getting a buy-in as opposed to actually fostering a sense of ownership and responsibility”*. Participant 8 notes that while bottom-up with external support models are effective, top-down approaches with external support can also be suitable in communities to ensure that SDG support is sustained long-term. For Participant 8, they held the position that *“it’s better for local government to be driving the VLR rather than just relying on grassroots initiatives, especially where the local government already accepts these ideas”*.

In terms of methods for stakeholder engagements, Participant 1 suggested using surveys, meetings, and group meetings would be useful, while Participant 3 suggested complementing quantitative measures, and more qualitative data to collect community experiences would be useful. These strategies emphasize the importance of tailoring engagement approaches to local contexts to maximize community involvement and ownership.

## Social Feasibility

Public acceptance and cultural considerations are key factors. Participant 3 suggested a majority would support the VLRs, however, there may be marginal resistance from those considering more urgent priorities. This Participant suggested, *“it’s an interesting time because there’s so much urgency around housing and climate, and everyone is so busy [...] being able to take the time to step back and look at something like the SDGs is a luxury we might not have right now”*. Participant 4 held an indifferent position on public opinion, and many residents might consider it a minor concern. Participants 5, 6, and 7 note potential resistance due to cultural norms and skepticism toward international frameworks, with participants 5 and 6 suggesting their communities are influenced by conspiracy theories toward UN-related affairs. For instance, Participant 6 mentioned, *“we have this weird, polarized position from conspiracy theorists that frames anything that’s international as bad”*. Last, participant 8 suggests that public opinion may be polarized, making VLRs relevant to local quality of life and municipal policies to enhance acceptance. Addressing these challenges requires aligning VLR objectives with local quality-of-life improvements to enhance resonance and public buy-in.

## Technical Feasibility and Requirements

Technical capacity and appropriate technology and skills are emphasized. Participants 5, 6, and 7 discuss challenges in implementing a VLR through localized data-driven mapping and aligning with international frameworks. Participant 5 notes the complexity of comparing municipal policies with broader frameworks, Participant 6 highlights the need for detailed local data, and Participant 7 points out the difficulty of finding staff with the necessary skills and states *“most municipalities just don’t have the capacity to create a VLR. Once it’s established, they can run it sure, but really creating and starting a new one is quite difficult”*. Participant 8 felt they did not

have sufficient information and preferred to opt out of answering this question. Participant 4 suggested that a reasonable timeframe to operationalize for their municipality could take 6 months to a year, however, this would be more challenging if it involved the CRD. These insights highlight the importance of investing in technical infrastructure and expertise to support successful VLR implementation.

## Positive Impact and Future Directions

Potential positive impacts and local policy development are frequently mentioned. Participant 2 suggested that having a top-down approach towards SDG reporting would be beneficial in aligning with existing initiatives, such as integrating it to include Indigenous communities into the SDG perspectives. Participant 3 stated that VLRs have offered more tailored approaches to contributing to the 2030 Agenda that are applicable to the municipal context and enhance a culture of solution-oriented governance.

Participants 4 and 5 highlighted the VLRs could drive a significant shift in local policy and development, and foster a more global perspective within a municipal context. For instance, Participant 4 mentioned that *“the biggest impact I see from that is, it [creating a VLR] forces the conversation locally to think globally, and that it forces a culture shift in municipalities within the CRD to think about the scope of its work in a way that I don't believe a lot of my colleagues are ready for”*. Participant 6 held the position that VLRs will provide a valuable tool for data collection, tracking progress, and identifying areas that require attention and improvement. Participant 7 stated that the international guidelines on VLRs provide a justified framework that can help support decision makers in integrating SDG localization into policies; however, the acceptance of supporting VLRs would most likely be influenced by local priorities and politics.

Last, Participant 8 sees the value in VLRs through the long-term impact it will have on sustainability, and climate action, and addresses some of the challenges of the broader goals within daily operations. This participant stated *“I think a local SDG strategy could be beneficial to provide coordination between different local governments by using the SDGs as a kind of North Star [...]. By using it as a tool, it can help identify priority areas to focus on, and could significantly enhance the effectiveness of local governance”*. These reflections illustrate the potential that VLRs have to drive progress on sustainability goals while fostering a culture of solution-oriented governance.

## 5.2. Aligning Existing VLR Evidence with GVA Findings

In this last step of the thematic analysis, the study examined how the governance, measurement, and implementation types analyzed earlier in section 4.3 help to identify strategies policies, and best practices for VLR implementation within the context of the GVA following the insights from key-informants. This section provides key insights into how the governance, measurement, and implementation preferences in the GVA align with strategies, policies, and best practices to support the facilitate of establishing a successful VLR.

## Governance Types

In terms of governance, the data reveals shared support for the hybrid model between the respondents from the municipalities of Saanich, Oak Bay, and Esquimalt (as seen in Figure 2, and Table 4). Those interviewed in Victoria represent opposing views on bottom-up vs top-down external support. Those who indicated top-down with external support, and bottom-up with external support in Saanich and Esquimalt also suggested a hybrid model may be the appropriate choice.

Figure 2: Governance Types in the GVA

### Overall Governance Type Ranking

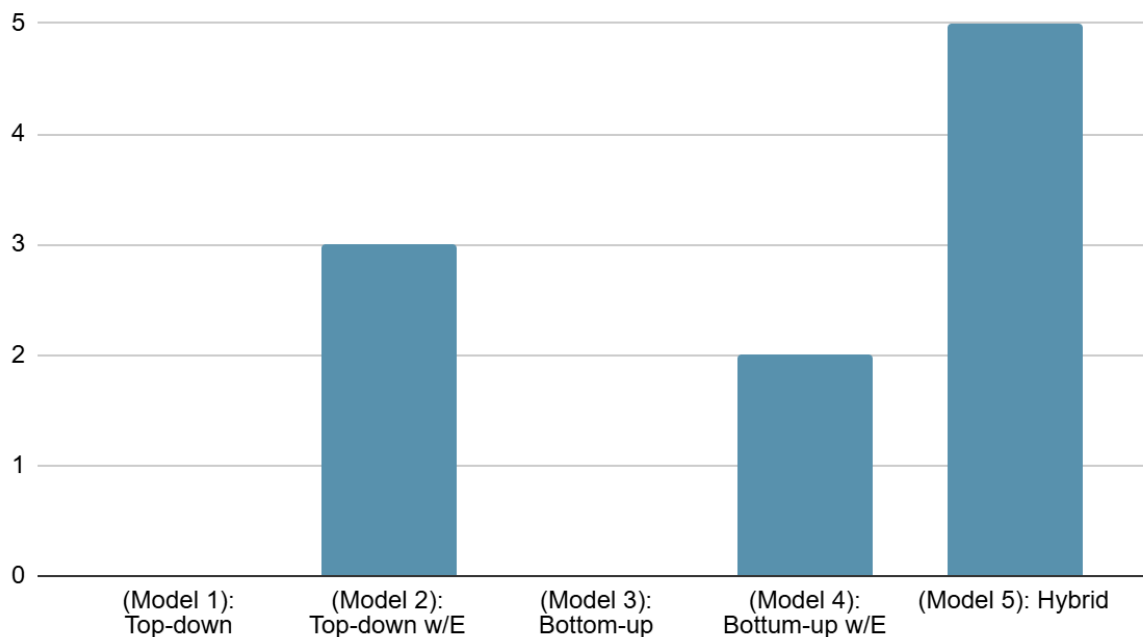


Table 4: Preference of Governance Types in the GVA

<u>Municipality</u>	<u>Governance Choice</u>
Victoria	Bottom-up with External Support or Top-down with External Support
Saanich	Top-down with External Support or Hybrid
Oak Bay	Hybrid
Esquimalt	Bottom-up with External Support or Hybrid

Based on the findings collected, hybrid models that combine the expertise of multiple entities appear most suitable for the GVA, as they balance regional coordination with local priorities and stakeholder engagement.

### Measurement Types

The data indicated that all municipalities favored the color-coded measurement system as seen in Figure 3, and Table 5. In Saanich’s case, those who valued a score-based system also considered the possibility of a hybrid measurement choice by synthesizing the tier-based model to ensure data-driven metrics are clear, rich, and practical.

Figure 3: GVA Measurement Preference

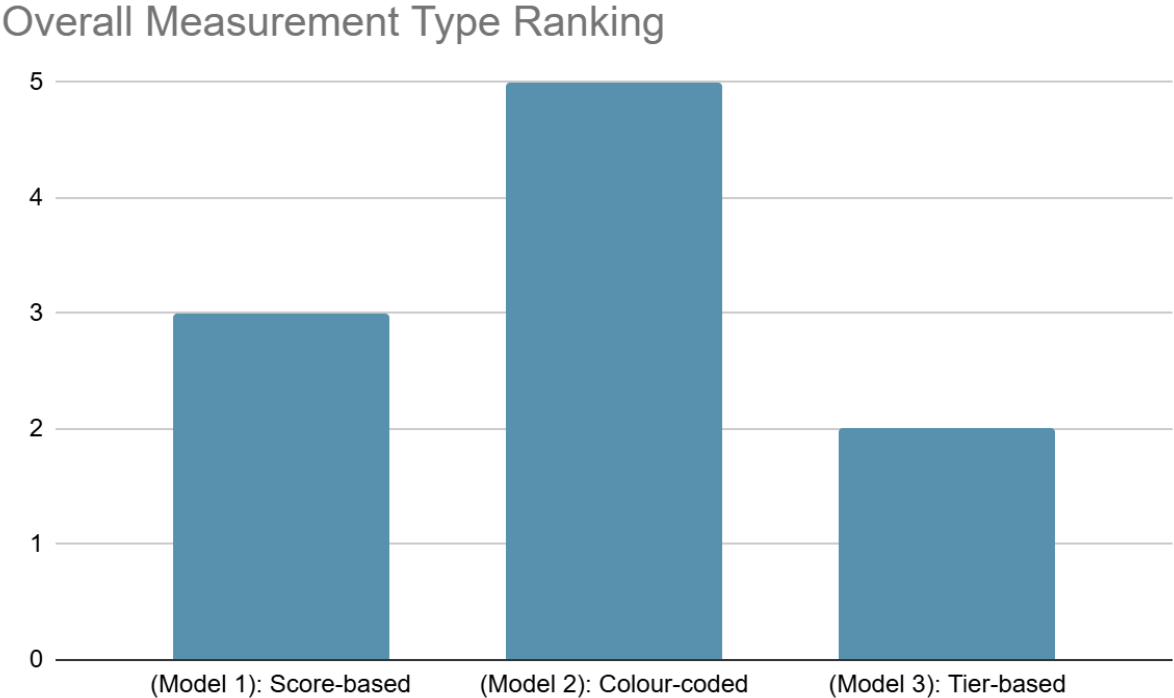


Table 5: Preference of Measurement Types in the GVA

Municipalities in the GVA Measurement Preference

<u>Municipality</u>	<u>Measurement Choice</u>
Victoria	Color-coded System
Saanich	Color-coded System, Score-based, or Hybrid of Score-based and Tier-based
Oak Bay	Color-coded System

Esquimalt	Color-coded System
-----------	--------------------

Color-coded systems are well-aligned with the GVA’s emphasis on public accessibility, though a tier-based classification may also be considered to address concerns about data granularity and operational challenges.

### Implementation Types

The data from the implementation type suggests that, among the six implementation models identified in Chapter 4, the Localized Data Driven Mapping with Alignment to International Frameworks is the most favored implementation model in Victoria, Saanich, and Esquimalt. Oak Bay and Victoria additionally suggest that the comprehensive alignment with municipal policies to the SDGs is the preferred model. Additionally, Saanich is the only municipality to consider alignment with the national framework of the VNRs. In distinction from these preferences, no selections for alignment with international frameworks, alignment with national and international frameworks, or municipal policy and international frameworks alignment were chosen. This information can be further examined following Figure 4 and Table 6 below, which represents the preferences of implementation models from each of the key-informants.

*Figure 4: Overall Implementation Type Preference in the GVA*

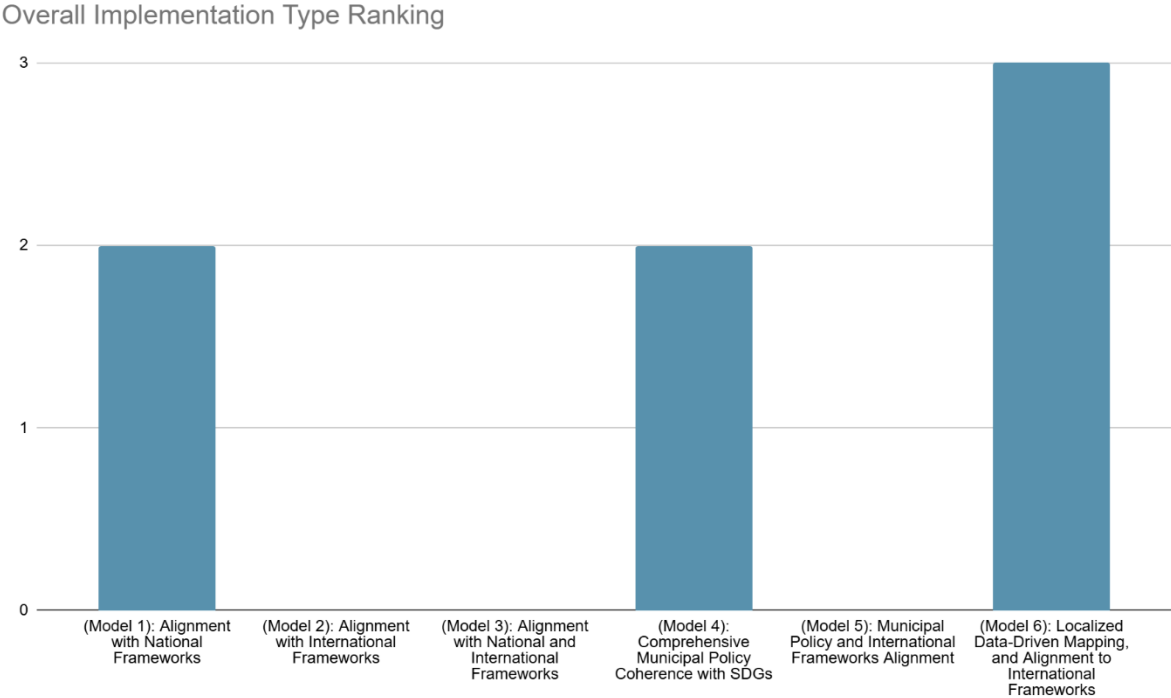


Table 6: Preference of Implementation Types in the GVA

<b><u>Municipality</u></b>	<b><u>Implementation Choice</u></b>
Victoria	Comprehensive Municipal Policy Alignment with SDGs (Model 4), or Localized Data Driven Mapping with Alignment to International Frameworks (Model 6)
Saanich	Alignment to National Framework (Model 1), or Localized Data Driven Mapping with Alignment to International Frameworks (Model 6)
Oak Bay	Comprehensive Municipal Policy Alignment with SDGs (Model 4)
Esquimalt	Localized Data Driven Mapping with Alignment to International Frameworks (Model 6)

This data suggests a combination of localized data-driven mapping, alignment with international frameworks, and comprehensive municipal policy alignment with SDGs is likely to be the most effective strategy for the GVA. This analysis suggests that the GVA should consider a hybrid governance model, utilize a color-coded measurement system, and adopt a combined implementation strategy that includes comprehensive municipal policy alignment and localized data-driven mapping. These approaches will likely address the key themes and issues identified in the thematic analysis, ensuring a successful and sustainable VLR for the GVA.

### 5.3. Conclusion

The findings of this study offer a detailed evaluation of how SDG localization can be effectively pursued in the GVA through the implementation of a VLR. By integrating insights from regional stakeholders and thematic analysis, the research identifies critical priorities, governance structures, and implementation strategies that align with the GVA’s unique governance context while adhering to global sustainability frameworks.

One key insight is that SDG localization in the GVA must be sensitive to the distinct priorities of each municipality. While SDG 11 (Sustainable Cities and Communities) and SDG 13 (Climate Action) are universally emphasized, other goals, such as Saanich’s focus on a broader set of SDGs, and Esquimalt’s prioritization of SDG 1 (No Poverty), point to the need for a flexible, multi-jurisdictional approach in each municipality focussing on the SDGs that align with their priority areas. The study suggests that a one-size-fits-all strategy may not be suitable in the

CRD; instead, a hybrid governance model balancing local autonomy with regional collaboration is recommended to accommodate the interests of all jurisdiction stakeholders. This model ensures flexibility while aligning efforts with both local needs and global sustainability objectives, which is echoed by stakeholder preferences and observed in successful VLR implementations worldwide.

The findings further highlight the importance of adopting a color-coded measurement system, favored for its clarity and accessibility, and was preferred by the majority of key informants consulted in this study. This adaptive approach is consistent with practices seen in Orlando and Bristol and reflects the GVA's need for practical, transparent data-driven tools that can effectively monitor SDG achievements.

In terms of implementation, the preference for localized data-driven mapping aligns with international frameworks, as demonstrated in cities like Winnipeg. However, the coordination of multiple municipalities and limited resources pose significant challenges. Despite these barriers, stakeholders are optimistic that aligning VLR processes with existing municipal policies will facilitate smoother integration. The GVA's approach to SDG localization would benefit from incorporating best practices seen in other cities that have effectively mapped out their policies with the SDGs such as Quebec City, Helsinki, and New York City, where combining local, and international frameworks enhances policy coherence.

The political landscape in the GVA remains a complex factor. Although there is broad philosophical alignment with SDGs, immediate local concerns such as housing and transportation may delay full political support for the VLR. However, political buy-in is expected to grow as the long-term benefits of VLRs emerge, which suggests, that as better regional coordination and improved data are collected, these results will further influence any political reservations. To better establish an impact of VLRs, stakeholder engagement, social feasibility, and technical capacity are crucial to the success of the VLR. If municipalities involve a diverse community of stakeholders in the engagement strategies and are equipped with human resources that have sufficient technical skills and resources, then these factors will be key to ensuring that the VLR is both socially accepted and operationally feasible. In moving forward with how acceptable and feasible a VLR is in the GVA, this study will now provide a discussion and analysis of the findings results in relation to each of the research questions.

# Chapter 6: Answering the Research Questions

This chapter will discuss and analyze the findings in response to the four research questions:

## Primary Research Questions:

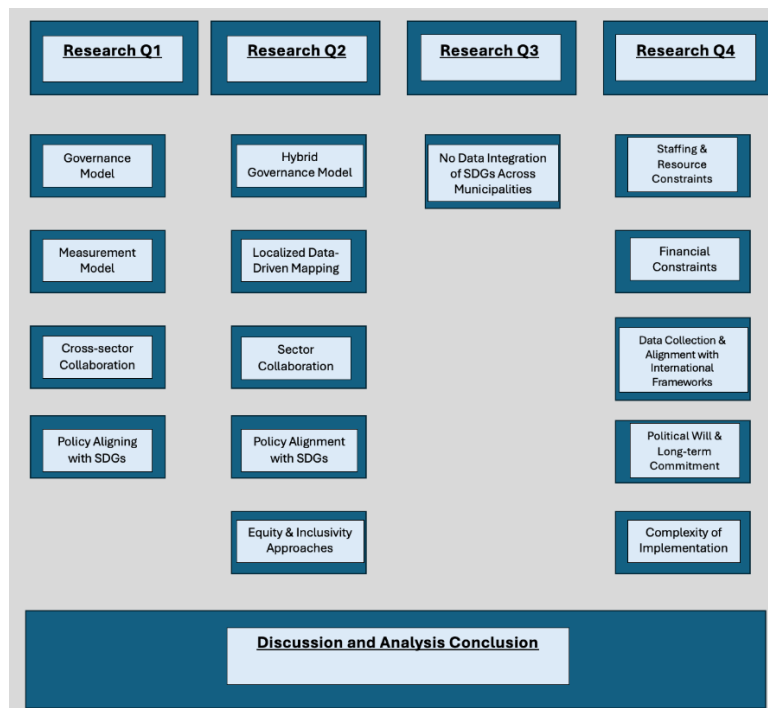
- 1) What strategies, policies, and best practices can be drawn in the GVA from cities that have successfully implemented localized agendas and VLRs? and
- 2) How can these lessons be adapted to the GVA to enhance SDG localization efforts?

## Secondary Questions:

- 3) How have cities with successful localization efforts integrated stakeholder engagement and collaboration by incorporating multiple municipalities within their city to align their SDGs to create strategies for implementing VLRs?
- 4) What are the challenges and barriers faced by cities during the process of implementing localized agendas and VLRs for SDG localization, and what mitigation strategies and solutions have been employed to overcome these challenges?

The next four sections provide responses to each question outlined above (see Figure 5 below).

*Figure 5: Discussion and Analysis of Research Questions*



## 6.1. Strategies, Policies, and Best Practices for the GVA's VLR

In response to Research Question 1, when considering the successful implementation of VLRs, several findings are relevant for the GVA context regarding governance and measurement models, cross-sector collaboration, and policy alignment and mapping of the SDGs.

### Governance Models

Based on the feedback of key informants, key strategies include adopting top-down approaches with external support, or hybrid governance models that combine the expertise of a multi-sectoral approach. Such approaches have been observed in cities like Thunder Bay and Seodaemun-gu (City of Thunder Bay, 2022; District of Seodaemun-gu, 2021). A representative from Saanich suggests that neither a strictly top-down approach nor a purely grassroots method would be effective in the GVA context. Instead, they advocate for a hybrid governance model or a top-down approach with external support, which allows for organizational integration while utilizing external resources. This participant emphasizes the importance of embedding the VLR framework within the local government structure to ensure alignment between planning and practical implementation. Similarly, the participant from Oak Bay suggests that a hybrid model would be the most suitable for their municipality, as it would allow them to incorporate diverse perspectives and expertise. A representative from Victoria also supports the top-down approach with external support, noting that it would be effective if local governments led the process with assistance from NGOs or academic institutions. However, this participant also acknowledges that while the hybrid model may be ideal in theory, its implementation could be challenging due to the complexity of coordinating multiple stakeholders. Within the GVA, Victoria and Saanich have expressed a preference for top-down models with external support, while Oak Bay, Esquimalt, and Saanich are more inclined toward hybrid models. Based on these positions, the hybrid model emerged as the preferred strategy among most key informants and is seen as the most promising approach to guide SDG localization efforts in the GVA.

### Measurement and Data-Driven Mapping

Another best practice is the use of localized, data-driven mapping and publicly accessible measurement systems. Successful examples of this approach can be found in cities like Orlando and Bristol, where color-coded indicators are used to ensure transparency and promote community engagement (City of Orlando, 2020; City of Bristol, 2022). Each municipality within the GVA consulted expressed support for the colour-coded measurement system. A key informant from Victoria particularly favored the color-coded system for its ability to capture nuances and track progress over time, offering a more informative approach than score-based or tier-based systems. Similarly, the Oak Bay representative appreciated the simplicity and ease of communication that the color-coded system provides, stating that it offers a clear sense of progress without overwhelming stakeholders with numerical details. Although this participant acknowledged the comprehensiveness of tier-based systems, they pointed out that such systems might be too complex and less transparent in practice. Given the consensus among key-informants, the colour-coded measurement system is strongly favored, and appears to be the most suitable practice for supporting SDG localization in the GVA.

## Cross-Sector Collaboration

Cross-sector collaboration is another key strategy for successful VLR implementation. In cities like Ghent and Braga, partnerships involving stakeholders from NGOs, businesses, and academic institutions have proven effective in leveraging resources and expertise (City of Ghent, 2021; Braga City Hall, 2022). For the GVA, fostering such collaborations would provide the opportunity to pool knowledge and resources, particularly in areas requiring specialized skills, such as data collection and analysis. This collaborative best practice also helps ensure that VLR initiatives reflect diverse community interests in the GVA when localizing the SDGs to increase the long-term sustainability of its impact.

## Policy Alignment and Mapping out the SDGs

Comprehensive policy alignment ensures that local actions support global SDGs, while equitable approaches ensure that initiatives benefit vulnerable populations. For the GVA, many guidelines for creating VLRs exist (UNECE, 2021; OECD, 2020; Koike et al, 2020) and could support integrating local policies using these international guidelines, or national guidelines following the Canadian VLR handbook (IISD, 2022). Since policy integration involves collaboration among actors from different domains, including environmental and climate change policies (Tosun and Lang, 2017; Ortiz-Maya, and Reggiani, 2023), the GVA may consider building on mapping out the SDGs using existing city plans following the example of initiatives in Helsinki and New York City (City of Helsinki, 2019; New York City Mayor's Office for International Affairs, 2016). Similar to providing an SDG mapping exercise, is employing an SDG target prioritization grid (SDGT-PG), as was established in Quebec City to evaluate strategic documents and identify contributions, synergies, and trade-offs related to SDG targets (Tremblay et al., 2021).

The latter approach may be more suitable in a multi-jurisdictional setting where vertical and horizontal integration of the SDGs is promoted in its stakeholder engagement process. To further consider this SDG mapping or SDGT-PG, this research analyzed municipal OCPs, Climate Action Plans, Annual Reports, and other sustainable initiatives in relationship to the SDGs (see Appendix 12). For the GVA, this strategy emphasizes the importance of integrating local priorities with global sustainability goals through collaborative and transparent methods. Based on the key-informants preferences, this seems to be the most appropriate model to employ in the region to localize the SDGs.

## 6.2. Adapting Lessons of SDG Localization to the GVA

In response to research question 2, to adapt the lessons learned from other cities that have successfully implemented VLRs to enhance SDG localization in the GVA, this research has found based on the key informant interviews the following five lessons as key strategies that can be employed: 1) hybrid governance model and external support; 2) localized data-driven mapping and public measurement systems; 3) cross-sector collaboration; 4) comprehensive policy alignment and SDG mapping; and 5) equitable and inclusive approaches.

## Hybrid Governance Model and External Support

Drawing from cities like Thunder Bay and Seodaemun-gu, the GVA can benefit from a hybrid governance model that balances the expertise of a multi-sectoral approach. This model accommodates the preferences of Victoria and Saanich for a top-down approach with external support, while Oak Bay, Esquimalt, and Saanich may prefer the flexibility of a hybrid model. Adopting a hybrid approach ensures that municipalities can maintain internal integration while leveraging external resources from NGOs, academia, or other organizations. This structure fosters practical implementation by ensuring local governments lead the process, while external support provides expertise and additional capacity (City of Thunder Bay, 2022; Seodaemun-gu, 2022).

## Localized Data-Driven Mapping and Public Measurement Systems

Implementing data-driven mapping tools and transparent measurement systems, as seen in Orlando and Bristol, will allow the GVA to effectively track progress on SDG goals. Using a color-coded system, as supported by all GVA municipalities, will simplify communication and make it easier for the public to understand and engage with the SDG localization process. This approach provides a clear visual representation of progress while avoiding overly complex or technical reporting mechanisms. For example, the simplicity and transparency of color-coded indicators were perceived as valuable for tracking incremental changes and facilitating community engagement in Orlando and Bristol (City of Orlando, 2020; City of Bristol, 2022).

## Sector Collaboration

Following the examples set by Ghent and Braga, the GVA should emphasize collaboration across sectors. By bringing together stakeholders from government, NGOs, businesses, academic institutions, and civil society, the GVA can pool resources and expertise to create a comprehensive approach to SDG localization. Participant 5 suggested that collaboration with regional partnerships can help distribute the workload and make the initiative more manageable for smaller municipalities. In addition to Participant 5's comments, there was a large consensus from key-informant responses that suggested the value of multisectoral collaboration. This inclusive process will allow for diverse perspectives, ensuring that sustainability initiatives are both equitable and effective (City of Ghent, 2021; Braga City Hall, 2022).

## Comprehensive Policy Alignment and SDG Mapping

The GVA should integrate SDGs into existing local policies by aligning them with current municipal frameworks such as OCPs, Climate Action Plans, and Annual Reports. This can be modeled after successful initiatives in cities like Helsinki and New York City, where SDG mapping was aligned with city plans to ensure coherence and clear strategic goals. Incorporating international guidelines from organizations, such as the Canadian VLR handbook, Shimokawa Framework, UNECE, and OECD's VLR guidelines will further enhance policy integration by providing frameworks that ensure local actions align with global goals (IISD, 2022; UNECE, 2021; OECD, 2020; Koike et al, 2020). A participant from Victoria supports this approach by using existing data and applying it to international standards, which they perceived

as being resource-efficient in creating a VLR. Moreover, an informant from Saanich favors this method, as it uses existing data to create relevant indicators and is adaptable by mapping that local data to international standards, which aligns well with the desire for both contextual relevance and adherence to broader guidelines. Furthermore, another representative from Victoria prefers comprehensively aligning municipal policies with the SDGs as a starting point, with the potential for integrating international guidelines later as a complementary strategy. Following these positions, while not all prefer the comprehensive policy alignment and SDG mapping, there is a strong preference from a fair amount of respondents to guide the findings for this research question.

## Equitable and Inclusive Approaches

To ensure that SDG localization in the GVA benefits vulnerable populations, the adoption of equitable approaches is crucial. Cities like Braga and Ghent have successfully prioritized inclusivity in their SDG strategies, ensuring that no group is left behind. A Saanich interviewee stated that to have an impact on the VLRs they expressed a potential for better integration of Indigenous perspectives and collaboration with their communities to be incorporated. This can be achieved in the GVA by designing policies that are explicitly aimed at reducing inequalities and addressing the unique needs of Indigenous communities—a priority consistently emphasized by all interviewed stakeholders. In order to address these needs, further studies may benefit from direct consultations with these communities to determine appropriate methods for localizing the SDGs in the region.

By adopting these strategies for hybrid governance, data-driven transparency, cross-sector collaboration, policy alignment, and equity-focused initiatives, the GVA can enhance its approach to creating a VLR, ensuring that local priorities are met while contributing to global sustainability goals.

## 6.3. Integrating Stakeholder Engagement Across Multiple Municipalities with VLRs

In response to the third research question, the data collected from the VLRs indicated that there was no integration of SDGs across municipalities between each of the 11 international VLR cities examined when creating their VLRs. Instead, the VLRs were published to represent a unified city-wide strategy rather than particular municipalities within the city. Following Research Questions 1 and 2, the key informants expressed their perspectives on whether the CRD would benefit from a unified VLR, and what may be some of the challenges of aligning SDG priorities with their municipal agendas in relation to the horizontal coordination required to create VLR in the CRD region.

Several participants, particularly from Victoria, Saanich, and Oak Bay, emphasized the potential of a regional VLR to coordinate cross-municipal efforts, and align local initiatives with the SDGs. These participants highlighted the importance of a regional approach to address shared priorities such as climate action, land use, water management, and housing while also

advocating for consistent SDG metrics and data collection to support collaboration and policy innovation. Some participants stressed the need for a flexible, context-sensitive strategy that avoids duplication and respects the unique capacities of each municipality. However, another participant from Esquimalt raised concerns about the VLR's relevance, potential political implications, and whether it could address the municipality's immediate priorities effectively. On this basis, the majority of participants representing 3 of the 4 municipalities examined, suggested that a regional VLR may be an appropriate approach when coordinated a cross-municipal SDG localization initiative.

To gather conclusive data on whether a unified approach may be appropriate for the CRD, further research may consider consulting the remaining nine municipalities to identify the best strategies, policies, and best practices that address local concerns, foster consistency in data and policy, and leverage existing collaborations across the CRD when considering creating a unified VLR in the CRD.

## 6.4. Challenges and barriers faced by cities implementing VLR, and how to overcome them

In response to research question 4, cities face several challenges in implementing localized agendas and VLRs for SDG localization, including political resistance, resource constraints, and technical feasibility issues. Based on feedback from key informants, the municipalities in the GVA face several challenges and barriers when implementing the VLRs including 1) staffing; 2) financial constraints; 3) political will; and 4) complexity in implementation. In considering the inputs from the key informants, their insights highlight different challenges, and provide suggested various strategies for overcoming these barriers.

### Staffing and Resource Constraints

Staffing shortages and resource limitations are key barriers to implementing VLRs in the GVA. Two representatives from Saanich both express concerns about the difficulty of allocating sufficient personnel to manage VLR efforts due to existing workloads. Municipal staff are already burdened with ongoing projects, making it challenging to take on new tasks related to the VLR. One of these Saanich representatives further emphasizes that securing additional staff or reallocating current employees could alleviate the strain, but these adjustments are difficult in the context of current administrative structures. On this basis, this concern was raised by only a few of the key-informants when implementing a VLR in the GVA.

To address this issue, both representatives suggest forming partnerships with external organizations, such as NGOs or academic institutions, to supplement local resources. This position is further highlighted in the VLRs of Ghent, Orlando, and Seodaemun-gu where resource constraints were mitigated through innovative financing models like public-private partnerships and grants (City of Ghent, 2023; City of Orlando, 2021; District of Seodaemun-gu, 2021). These external partners can provide technical expertise and support, reducing the workload for municipal staff while ensuring that VLR implementation progresses smoothly.

## Financial Constraints

Financial limitations present another significant challenge to implementing VLRs in the GVA. Representatives from Saanich stress that securing consistent funding for VLR initiatives may be difficult. A representative from Victoria pointed out that, although some funding is technically available, the greater obstacle is the lack of political will to prioritize such initiatives. The Oak Bay participant adds that while external funding and partnerships may be viable for the initial municipal budgets. On this basis, there was a general consensus amongst key-informants that financial constraints may be a difficulty when implementing a VLR in GVA.

To overcome these challenges, the Esquimalt representative proposes a hybrid approach, where external funding is pursued to kickstart VLR efforts, with a gradual transition to municipal funding for ongoing operations. This model would ensure that VLRs can continue beyond the initial stages without becoming a financial burden on local governments.

## Data Collection and Alignment with International Frameworks

The complexity of data collection and alignment with international frameworks is another barrier highlighted by representatives from Saanich and Esquimalt. One of the Saanich representatives notes that data from national sources, such as census reports, may not provide the level of detail needed for effective VLR reporting, particularly when local context is critical. A different representative from Saanich raises concerns about the need for localized data that is often difficult to align with the metrics required by international frameworks like the SDGs. Based on these positions, only a few key informants expressed this concern regarding the implementation of a VLR in the GVA.

To address this challenge, representatives from Victoria, Saanich, and Esquimalt suggest adopting a "localized data-driven mapping" approach. This strategy would rely on existing local data but also integrate it into international frameworks for broader contextual relevance. Establishing partnerships with external organizations, such as academic institutions or data-focused NGOs, could provide access to additional data sources and ease the burden on local governments. For instance, utilizing external partnerships with technical expertise to advise cities on how to manage data collection and monitoring was proven effective throughout Thunder Bay's VLR process through their partnership with Lakehead University (City of Thunder Bay, 2022). For the GVA, addressing these challenges involves adopting flexible governance structures, securing diverse funding sources, enhancing stakeholder engagement, and investing in technical capacity to ensure effective and sustainable SDG localization.

## Political Will and Long-Term Commitment

Political will is often a major hurdle to successful VLR implementation. Representatives from Victoria and Oak Bay argue that even when financial resources and staffing are available, the absence of long-term political commitment can undermine the process. The Victoria representative notes that coordinating multiple municipalities within the CRD adds further complexity, slowing progress. Based on these positions, there was general agreement among

key informants that financial arrangements could pose a challenge for sustaining the political will when implementing a VLR in the GVA.

To overcome this, the Oak Bay representative suggests embedding VLRs within municipal strategic plans, which would ensure they are seen as long-term governance tools rather than one-off initiatives. Building long-term political support by highlighting the practical benefits of VLRs for local development and alignment with global sustainability goals would also help to secure lasting commitment.

## Complexity of Implementation

The complexity of comparing local policies to national and international frameworks increases the difficulty of VLR implementation. Representatives from Oak Bay and Saanich point out that the added complexity often requires additional resources and technical expertise. On this basis, this concern was raised by only a couple of the key-informants when implementing a VLR in the GVA.

To support in resolving these challenges, participants from Victoria and Saanich advocate for a simpler approach, focusing on fewer, more relevant frameworks that can be adapted over time. This would reduce the implementation burden on municipalities while ensuring that efforts remain manageable and practical. By narrowing the scope of VLRs to core priorities and adopting adaptable frameworks, GVA municipalities can mitigate the complexity of the implementation process.

## 6.5. Conclusion: Implications for Recommendations

The discussion and analysis in this chapter highlight key lessons and strategies for the successful development of a VLR in the GVA. Drawing from the experiences of other cities, several critical themes have emerged: governance models, measurement systems, collaboration, policy alignment, and inclusivity.

This research finds that a hybrid governance model that integrates the expertise of a multi-sectoral approach presents a practical approach for the GVA. This structure allows for cross-municipal collaboration and resource sharing while leveraging external support from academic institutions and NGOs, as seen in Thunder Bay and Seodaemun-gu (City of Thunder Bay, 2022; District of Seodaemun-gu, 2021). Adopting data-driven mapping and public measurement tools, such as those used in Orlando and Bristol, are found to enhance transparency and make SDG progress accessible to both stakeholders and the public (City of Orlando, 2020; City of Bristol, 2022). Cross-sector partnerships, like those in Ghent and Braga, are essential for addressing staffing shortages and resource constraints, while also fostering a diverse range of perspectives and expertise (City of Ghent, 2021; Braga City Hall, 2022). Aligning local goals with global frameworks, as demonstrated by Quebec City, Helsinki, and New York City, is crucial for effective SDG localization (City of Helsinki, 2019; New York City Mayor's Office for International Affairs, 2016; Tremblay et al., 2021). This can be achieved by mapping existing local policies

with SDGs or creating SDG priority grids by using global and national VLR guidelines and gathering relevant stakeholders' inputs (IISD, 2022; UNECE, 2021; OECD, 2020; Koike et al, 2020). Additionally, prioritizing equity and inclusivity, particularly Indigenous engagement and the inclusion of vulnerable communities, will reinforce the GVA's commitment to the UN's 2030 Agenda.

While challenges such as staffing, financial constraints, and political will are significant, they are surmountable through strategic collaboration, flexible funding models, and simplifying implementation processes. With these strategies in place, the GVA is well-positioned to advance SDG localization through a successful VLR process. In following this analysis of the overall research, the study will now provide options to consider and recommendations for government officials within the CRD.

# Chapter 7: Recommendations

This section presents six key recommendations for government officials in the CRD to enhance SDG localization through a VLR. The recommendations are structured into three categories:

1. **Structural Changes:** These recommendations focus on overarching governance frameworks that foster consistency and efficiency (Acuto et al., 2020).
2. **Internal Coordination Mechanisms:** These recommendations emphasize tools and policies that enhance local implementation capacity, including governance models and performance-tracking systems (Simon et al., 2020).
3. **External Coordination Mechanisms:** These recommendations ensure broad stakeholder engagement, including Indigenous consultation, and multi-sector collaboration, to align local efforts with national and global sustainability agendas (UN-Habitat, 2020).

This categorization of recommendations ensures a holistic approach to the VLR process, balancing foundational governance changes with operational improvements and external collaboration. Their implementation can drive systemic change by establishing a robust governance structure, enabling efficient data management, and fostering inclusive stakeholder engagement.

These recommendations were selected for the CRD's VLR process to reflect a balance between feasibility, inclusivity, and effectiveness. *Feasibility* considers the practicality of implementation, including financial resources, administrative capacity, and political willingness, to ensure that the chosen approach can be realistically sustained (Ortiz-Maya and Reggiani, 2023). *Inclusivity* assesses the extent to which diverse stakeholders, particularly marginalized and Indigenous communities, are actively engaged in the VLR process to foster equitable and representative decision-making (IISD, 2022). *Effectiveness* evaluates how well an option contributes to achieving SDG localization, ensuring that policies, monitoring mechanisms, and governance structures lead to measurable progress (Tosun and Lang, 2017). Based on these evaluation criteria this study provides six recommendations for government officials in the CRD to consider.

## 7.1. Recommendations

The following recommendations address the research questions by integrating best practices from the VLR models examined, empirical data from the key-informant consultations, and a comparative analysis of successful VLRS globally.

### Structural changes

#### 1) Establish a unified VLR for the CRD

A unified VLR provides a structural foundation for SDG localization by promoting policy consistency, reducing duplication, and pooling regional resources. This structural change helps to enhance the feasibility of VLR implementation by creating a practical solution that

consolidates resources and data management across municipalities, reducing administrative burden and avoiding redundant efforts.

This model enhances visibility on the global stage, fostering collaboration with international partners and attracting funding (Bertelsmann Stiftung, 2020). By fostering collaboration, this recommendation is effective insofar it enhances policy coherence, ensuring that sustainability initiatives align across municipal boundaries and contribute to regional SDG targets. This unified VLR also follows the same methods as the 11 VLRs analyzed in this research, which demonstrated increased efficiency in data management and policy coherence (UCLG, 2018). By creating a regional wide VLR, this recommendation provides an inclusive approach by ensuring that smaller municipalities with fewer resources are not excluded from the SDG localization process and that all voices are represented in sustainability planning.

While consensus-building across municipalities presents challenges, representatives from Saanich and Oak Bay stress the importance of coordination across interconnected issues that span across municipalities such as, climate action, land use, water management, and housing that require a regional VLR approach. As discussed by another Saanich representative, the benefits of streamlined reporting and unified SDG metrics and data collection outweigh the risks of fragmented efforts by streamlining policies that enable municipalities to measure progress on the SDGs collectively. Therefore, this study recommends a unified VLR as the most effective structural mechanism to align sustainability policies across the CRD.

To implement this structural change, this research recommends a regional working group should be formed to facilitate discussions and build consensus among municipalities. Furthermore, this recommendation addresses the primary research questions by drawing from best practices in cities that have implemented regional VLRs, and demonstrated how these strategies can be tailored to the GVA's governance landscape.

## Internal Coordination Mechanisms

### **2) Adopt a hybrid governance model**

To balance municipal autonomy with technical expertise, the CRD should adopt a hybrid governance model, integrating academic and institutional support from organization such as the IISD following the success of Winnipeg's VLR (IISD, 2022). This approach can minimize administrative burdens that many key informants flagged as a concern. This recommendation is the most feasible option insofar it leverages partnerships with academic institutions and external experts, reducing the pressure on local government staff while integrating specialized SDG expertise.

Hybrid governance structures have proven effective in cities like Seodaemun-gu (District of Seodaemun-gu, 2021), where partnerships between local governments and research institutions enhanced SDG implementation (Stephenson, 2013; Piattoni, 2009). Through engaging with research institutions and NGOs, this recommendation ensures an inclusive approach by considering a diverse range of perspectives and expertise, and overall

strengthening participatory decision-making. By adopting this model, the CRD can ensure that SDG localization efforts remain evidence-based and adaptable.

To implement this internal coordination mechanism, this research suggest it should be simultaneously created with the unified VLR initiative to establish governance structures early in the process. This recommendation responds to the secondary research question regarding stakeholder engagement and collaboration by highlighting governance models that integrate multiple municipalities and external partners to support localized SDG implementation.

### **3) Implement a colour-coded measurement system**

To enhance transparency and public engagement, the CRD should introduce a colour-coded measurement system for SDG tracking. This method is effective as it simplifies complex data, making progress easily interpretable for policymakers, stakeholders, and the public (OECD, 2020). Similar frameworks have been effectively used in Orlando, Thunder Bay, and Winnipeg (City of Orlando, 2021; City of Thunder Bay, 2022; IISD, 2022), where simplified reporting mechanisms increased accountability and citizen participation (Simon et al., 2020). While this system may not provide in-depth analytical insights, it serves as an accessible tool to improve monitoring, communication, and trust in SDG reporting.

This recommendation is most feasible insofar it is cost-effective and easily adaptable to existing municipal reporting mechanisms, requiring minimal technical training. This system is further inclusive as it provides transparent reporting to foster public trust and engagement, ensuring that citizens and marginalized groups can understand and contribute to sustainability efforts.

This internal coordination model can be implemented alongside the hybrid governance model to create a strong foundation for monitoring and reporting. This recommendation aligns with the research questions by demonstrating how cities have developed inclusive reporting mechanisms that facilitate SDG monitoring and adaptation, which can be tailored to the GVA context.

### **4) Develop a localized data-driven mapping system**

A data-driven mapping system would allow the CRD to align local policies with global SDG targets, enabling real-time monitoring and data visualization. Cities such as Winnipeg have successfully integrated geospatial data tools to track SDG progress (IISD, 2022), facilitating evidence-based decision-making (Fox and Macleod, 2021).

While the initial investment in infrastructure may be required, this recommendation is most feasible as the long-term benefits outweigh costs, as seen in Winnipeg's successful myPeg initiative. These have the potential to improve policy alignment, adaptive planning, and accountability as they provide real-time data tracking that enhances decision-making, allowing municipalities to identify gaps and adjust policies proactively. This mapping system would support municipal efforts in identifying gaps and ensuring that sustainability initiatives are effectively implemented. Moreover, this system is inclusive as the geospatial mapping involved

will ensure that local SDG efforts consider the needs of diverse communities, including rural and Indigenous populations.

To implement this internal coordination mechanism, this research suggests it should be initiated early, with a phased integration to support ongoing policy alignment and decision-making processes. This recommendation connects to the research questions by addressing how technical innovations from successful VLRs can be adapted to enhance SDG tracking and reporting mechanisms within the GVA.

## *External Coordination Mechanisms*

### **5) Establish Indigenous consultation mechanisms**

Ensuring meaningful Indigenous engagement is critical to aligning SDG localization with reconciliation efforts and UNDRIP (Government of British Columbia, 2024). Given that UNDRIP is enshrined in British Columbia law, this recommendation is feasible as establishing consultation mechanisms aligns with legal obligations and existing reconciliation efforts. This implementation strategy will be effective as Indigenous engagement enhances the cultural relevance and long-term impact of sustainability policies, ensuring alignment with Indigenous knowledge systems. Winnipeg and Thunder Bay's VLRs, and the IISD guidelines of VLR implementation in Canada highlighted the importance of prioritizing Indigenous perspectives, which this study affirms as essential for the CRD (IISD, 2022; IISD, 2022; City of Thunder Bay, 2021). Furthermore, one key informant of Indigenous descent stated that

*“When you’re serving 13 municipalities, let alone First nations, consulting everyone just gets complex. Relationships are difficult to create and maintain on this scale that you would for such a VLR. I am just one person, and even within the municipality I serve there can be pushbacks when it comes to consulting mechanisms. Regardless of that, does it need to be done? Of course”.*

Following UNDRIP being enacted into law in British Columbia, there is a duty to consult First Nations when developing such a localized SDG strategy. Establishing Indigenous consultation mechanisms within VLR planning would help ensure that culturally relevant sustainability strategies and Indigenous knowledge systems contribute to policy development, and make SDG implementation not only effective, but impactful. By formalizing consultation structure, this inclusive approach ensures that Indigenous perspectives are not merely symbolic but meaningfully integrated into SDG decision-making.

To effectively implement this external coordination mechanism, it should be embedded at the beginning of the VLR process to ensure Indigenous perspectives shape its development from the outset.

### **6) Create a Task Force and Advisory Committee**

To coordinate the VLR process and facilitate cross-sector collaboration, it is recommended that the CRD establish a dedicated task force and advisory committee. These bodies would oversee governance, engage stakeholders, and provide technical support for SDG measurement and

evaluation. Moreover, developing these bodies of governance would help address any concerns raised by key informants regarding staffing and resource constraints by forming partnerships with external organizations to help supplement local resources following the examples of the VLR's implementation in Ghent, Orlando, and Seodaemun-gu (City of Ghent, 2023; City of Orlando, 2021; District of Seodaemun-gu, 2021). Based on these successful cases, this approach is most feasible by utilizing task forces to optimize coordination and resources allocation. International examples, such as the European SDG Cities Task Force, have further demonstrated the effectiveness of structured advisory committees in maintaining strategic oversight and fostering multi-stakeholder engagement (UCLG, 2021).

This recommendation is effective by having a dedicated committee that ensures sustained governance and accountability, mitigating the risk of VLR efforts being deprioritized over time. Moreover, this task force demonstrates inclusivity since a multi-stakeholder representation within the task force promotes equity, ensuring that diverse sectors and community voices shape the SDG agenda. Furthermore, upon completion of the VLR, submitting the report to UN DESA would enhance credibility, and ensure alignment with global best practices (UN DESA, 2024).

This research suggests that this external coordination mechanisms should be established concurrently with the unified VLR and hybrid governance model to guide early decision-making and stakeholder alignment. Overall, this recommendation aligns with the research questions by demonstrating how governance structures in cities with successful SDG localization efforts can be adapted to enhance coordination, mitigate challenges, and optimize resource allocation in the CRD.

This last group of recommendations focuses on fostering collaboration beyond the immediate internal structures of the GVA. Recommendations such as Indigenous consultation and the creation of a task force and advisory committee highlight the importance of including external expertise, diverse voices, and cultural perspectives. These mechanisms ensure that the VLR is aligned with provincial and national commitments (e.g., UNDRIP) and benefits from guidance, feedback, and partnerships with key stakeholders like Indigenous Nations, local experts, and global organizations. These mechanisms ensure that the VLR reflects broader societal needs, builds legitimacy, and creates opportunities for collaboration and funding.

In considering this criterion, by prioritizing Indigenous consultation and forming advisory bodies, the GVA can foster inclusivity, cultural relevance, and alignment with global standards. By emphasizing external coordination mechanisms centered on Indigenous engagement, the VLR becomes a model of inclusivity, reflecting global best practices and legal obligations. Furthermore, establishing advisory committees and task forces can further strengthen external collaboration, creating pathways for partnerships and funding while incorporating diverse perspectives. While these efforts require time and careful relationship-building, they position the GVA as a leader in reconciliation-focused sustainability.

## 7.2. Concluding Thoughts on Recommendations

The recommendations outlined in this chapter provide a comprehensive framework for enhancing SDG localization in the CRD through the development of VLR. By examining VLRs from cities that have successfully implemented them, this research identifies key strategies, policies, and best practices that can be adapted to the specific context of the CRD. The proposed structural, internal, and external coordination mechanisms ensure that SDG implementation is cohesive, data-driven, and inclusive, aligning with both local governance structures and international sustainability objectives.

A unified VLR serves as a foundational structural mechanism to streamline SDG efforts across municipalities, ensuring consistency in policy implementation and data reporting. This approach addresses the primary research questions by demonstrating how regional VLRs have improved governance efficiency in other contexts, and how such a model can be tailored to the CRD's governance landscape. Moreover, internal mechanisms such as a hybrid governance model, a colour-coded measurement system, and a localized data-driven mapping system reinforce municipal capacity for evidence-based decision-making. These tools align with the secondary research questions by providing insights into how cities have successfully integrated stakeholder engagement, collaboration, and technical innovation to support localized SDG tracking and reporting.

External coordination mechanisms, including the establishment of Indigenous consultation mechanisms and a dedicated task force and advisory committee, are critical for ensuring broad stakeholder engagement and reconciliation with Indigenous communities. These recommendations respond directly to the challenges and barriers identified in the research, offering strategies to mitigate governance fragmentation, enhance participatory decision-making, and optimize resource allocation.

By adopting these recommendations, the CRD can position itself as a leader in SDG localization, showcasing an innovative and inclusive approach to sustainable governance. The integration of best practices from other multi-municipality based VLRs, empirical key-informant insights, and comparative analyses ensures that the proposed strategies are both practical and adaptable to the unique governance and socio-political context of the CRD.

## Chapter 8: Conclusion

This research aimed to explore strategies, policies, and best practices for developing and implementing a VLR in the GVA to localize the SDGs. Through a realist synthesis, key informant interviews, and the development of taxonomic analysis, this study has addressed the research questions, providing insights that are both contextually relevant and actionable for the GVA. The findings have highlighted critical approaches from other cities that have successfully localized SDGs, offering a comprehensive framework to inform the GVA's pathway toward sustainable development.

Through the literature review, this research identified key elements that inform VLR success, such as the importance of mapping SDGs to existing municipal policies and fostering stakeholder engagement (Latek, 2021). This knowledge shaped the research framework, which incorporated a realist synthesis, and thematic analysis to contextualize the findings. The typology of VLR models developed from VLRs from Orlando, Thunder Bay, Seodaemun-gu, and Winnipeg offered a structured approach for the GVA to consider, demonstrating that flexible, context-sensitive strategies are essential for effective SDG localization in terms of governance, measurement, and implementation approaches (City of Orlando, 2020; City of Thunder Bay, 2022; District of Seodaemun-gu, 2021; IISD, 2022).

The findings from key informant interviews highlighted the GVA's potential to align with global sustainability goals while addressing specific local challenges such as housing, transportation, and climate resilience. Notably, the emphasis on a multi-jurisdictional approach became a recurring theme. Stakeholders identified the need for collaborative governance models that balance local autonomy with regional coordination. The findings support the idea that no single governance model fits all municipalities in the GVA; instead, a hybrid governance approach, one that involves cross-municipal partnerships, is necessary to ensure SDG localization efforts are cohesive across the region.

The research also uncovered several practical barriers that must be addressed, such as limited financial resources, political hesitation, and staffing constraints. Nevertheless, examples from cities like Orlando and Bristol show that with transparent measurement systems and collaborative partnerships, these challenges can be mitigated (City of Orlando, 2020; City of Bristol, 2022). By adopting similar data-driven mapping tools and resource-sharing initiatives as Winnipeg's VLR, the GVA could overcome these obstacles and ensure that SDG progress is accessible to both decision-makers and the public (IISD, 2022).

One of the key contributions of this research is the development of a VLR typology tailored to medium-sized cities like those in the GVA. This typology not only categorizes different approaches to VLR development but also highlights governance, measurement, and implementation strategies that can be adapted to the GVA's distinct political and social landscape. This typology is not a static framework but rather a flexible tool that can evolve as efforts to localize the SDGs in the CRD progress.

The implications of this research extend beyond the CRD. It provides a blueprint for other medium-sized municipalities seeking to localize the SDGs in ways that align with local priorities while contributing to global sustainability objectives. By focusing on regional collaboration, stakeholder engagement, and adaptive governance structures, this study illustrates that localized sustainability agendas can thrive even within complex governance systems.

The strength of this research lies in its comprehensive approach to exploring in-depth how SDG localization efforts within multi-jurisdictional contexts have been implemented. The realist synthesis of 11 exemplary cities worldwide provided valuable insights into how medium-sized cities with multiple jurisdictions of varying demographics, and governance structures have successfully navigated the complexities of SDG implementation. The inclusion of diverse cities (e.g., Seodaemun-gu, Thunder Bay, Winnipeg, and Orlando) provided a rich dataset for analysis, enhancing the robustness of the findings. The varied geographical locations and cultural contexts of these cities contributed to a more nuanced understanding of localized strategies and broadened the applicability of the research insights. This, combined with in-depth qualitative analysis through key informant interviews, enabled a nuanced understanding of the unique challenges faced by the GVA, particularly in terms of governance coordination, stakeholder engagement, and measuring and implementing a VLR. This approach allowed the research to delve into the nuances, perspectives, and experiences of key stakeholders involved in localizing SDGs in the GVA.

While this research has provided valuable insights and practical recommendations, it is important to acknowledge the limitations. The study's sample size limitation chose to focus on four municipalities within the GVA, while necessary for scope management, means that the broader CRD and Indigenous nations are not fully represented in this work. Additionally, the reliance on qualitative data through only eight key informants limits the generalizability of the findings, though it offers rich, in-depth insights. This was important to ensure that the selected Participants represent a diverse range of perspectives and stakeholders involved in local development initiatives in the GVA to obtain a comprehensive understanding of regional VLR implementation in the CRD. Future research could expand the scope to inquire about the insights from other municipalities from the CRD and Indigenous nations, as well as explore the quantitative dimensions of SDG implementation and monitoring. Last, it is important to note that the findings may not be entirely generalizable to all municipalities due to the focus on medium-sized cities and the unique context of each case study. The research acknowledges the specificities of the studied municipalities and would suggest having caution when applying the findings to other municipalities of similar sizes or contexts.

The research has fulfilled its objective of offering strategies for localizing the SDGs in the GVA. These strategies are grounded in evidence from cities that have successfully implemented VLRs through understanding their governance, measurement, and implementation structure such as Orlando, Thunder Bay, Seodaemun-gu, and Winnipeg to consider how they can be tailored to the specific needs of the GVA. The study contributes to the growing body of knowledge on SDG localization by providing a robust framework for other multi-jurisdictional mid-sized cities facing similar challenges. Furthermore, this research has proposed options to

consider for understanding the intersection of SDG localization, multi-jurisdictional governance, and Indigenous collaboration, which merit further exploration in future research. By emphasizing the need for strong horizontal coordination across municipalities and the involvement of Indigenous nations, this research recognizes those perspectives are crucial for a holistic and inclusive VLR. The research has also underscored the importance of stakeholder engagement, particularly in fostering a collaborative environment for the successful alignment of SDG targets with local priorities. These conclusions are significant as they demonstrate how the GVA can lead by example in localizing the SDGs, potentially serving as a model for other regions in Canada and globally.

In conclusion, this research has demonstrated the critical importance of localized SDG action in the GVA. Offering a roadmap for developing and implementing a VLR provides a practical contribution to both the academic discourse on SDG localization and the policy landscape in the region. Moving forward, the CRD is well-positioned to take meaningful action on the SDGs, contributing to both regional sustainability and global progress toward Agenda 2030. Further research could build on this foundation, exploring the long-term impacts of localized SDG efforts and the evolving role of VLRs in multi-jurisdictional governance.

# Bibliography

Acuto, M., Kosovac, A., Pejic, D., & Jones, T. L. (2020). *The city as an actor in UN frameworks: Formalizing 'urban agency' in the international system? Territory, Politics, Governance*, 11(3), 519–536. <https://doi.org/10.1080/21622671.2020.1860810>

Allen, C., Metternicht, G., & Wiedmann, T. (2019). *Prioritizing SDG targets: Assessing baselines, gaps, and interlinkages. Sustainability Science*, 14, 421–438. <https://doi.org/10.1007/s11625-018-0596-8>

Anand, P., Ferrer, B., Gao, Q., Nogales, R., & Unterhalter, E. (2020). *COVID-19 as a capability crisis: Using the capability framework to understand policy challenges. Journal of Human Development and Capabilities*, 21(3), 293–299. <https://doi.org/10.1080/19452829.2020.1789079>

Anderson, J. E. (2015). *Public policymaking: An introduction*. Boston: Houghton. <https://www.kropfpolisci.com/public.policy.anderson.pdf>

Barcelona City Council. (2021, September). *II plan for gender justice 2021–2025*. Barcelona City Council. [https://ajuntament.barcelona.cat/dones/sites/default/files/documents/p\\_4.2\\_plan-for-gender-justice-2016-2020\\_ang.pdf](https://ajuntament.barcelona.cat/dones/sites/default/files/documents/p_4.2_plan-for-gender-justice-2016-2020_ang.pdf)

Barcelona City Council. (2018, April). *The strategy for inclusion and the reduction of social inequality in Barcelona 2017–2027*. Barcelona City Council. [http://www.bcn.cat/barcelonainclusiva/ca/2018/6/strategy\\_inclusion\\_2017-2027\\_en.pdf](http://www.bcn.cat/barcelonainclusiva/ca/2018/6/strategy_inclusion_2017-2027_en.pdf)

Bardot, L., Bizarro, P., Licha, A., Stichelmans, T., & Vineys Marce, L. (2018, June). *Sustainable development goals: How Europe's towns and regions are taking the lead*. PLATFORMA & Council of European Municipalities and Regions (CEMR). [https://issuu.com/platforma4dev/docs/platforma-cemr\\_sdg\\_localisation\\_en-](https://issuu.com/platforma4dev/docs/platforma-cemr_sdg_localisation_en-)

Barrington-Leigh, C., & Escande, A. (2018). *Measuring progress and well-being: A comparative review of indicators*. *Social Indicators Research*, 135, 893–925. <https://doi.org/10.1007/s11205-016-1505-0>

Bates, D. L., & Eldredge, D. L. (1980). *Strategy and policy: Analysis, formulation, and implementation*. William C. Brown Co. <https://archive.org/details/strategypolicyan0000bate>

Bertelsmann Stiftung. (2020, November). *SDG indicators for municipalities: Indicators for mapping the Sustainable Development Goals of the United Nations in German municipalities*. Bertelsmann Stiftung. <https://www.bertelsmann-stiftung.de/de/publikationen/publikation/did/sdg-indikatoren-fuer-kommunen-all>

Bhaskar, R. (2008). *A realist theory of science (3rd ed.)*. Routledge. [https://uberty.org/wp-content/uploads/2015/09/Roy\\_Bhaskar\\_A\\_Realist\\_Theory\\_of\\_Science.pdf](https://uberty.org/wp-content/uploads/2015/09/Roy_Bhaskar_A_Realist_Theory_of_Science.pdf)

Bibri, S., Alahi, A., Sharifi, A., & Krogstie, J. (2023). *Environmentally sustainable smart cities and their converging AI, IoT, and big data technologies and solutions: An integrated approach to an extensive literature review*. *Energy Informatics*, 6, 32. <https://doi.org/10.1186/s42162-023-00259-2>

Biggeri, M., Ferrannini, A. (2014). *Sustainable Human Development (SHD) at the Local Level. In: Sustainable Human Development*. Palgrave Macmillan, London, 10-38. [https://doi.org/10.1057/9781137380296\\_2](https://doi.org/10.1057/9781137380296_2)

British Columbia Council for International Cooperation. (2021, March). *Global goals, local action: Kelowna's voluntary local reviews*. British Columbia Council for International Cooperation. <https://www.bccic.ca/kelowna-sdg-voluntary-local-review/>

Buyana, K. (2020). *Keeping the doors open: Experimenting science–policy–practice interfaces in Africa for sustainable urban development*. *Journal of Housing and the Built Environment*, 35, 539–554. DOI:[10.1007/S10901-019-09699-3](https://doi.org/10.1007/S10901-019-09699-3)

Capital Regional District. (2024, March). *About the region*. Capital Regional District. <https://www.crd.bc.ca/about/what-is-crd/about-the-region>

Capital Regional District. (2017, January). *Capital Regional District: Administrative barriers*. Capital Regional District. <https://www.crd.bc.ca/docs/default-source/crd-document-library/maps/administrative-boundaries/crd-admin-boundaries.pdf>

Catzín-Tamayo, A., Frausto-Martínez, O., & Arroyo-Arcos, L. (2022). *Stakeholder mapping and promotion of Sustainable Development Goals in local management*. *Journal of Environmental Studies and Sciences*, 12, 611–626. <https://doi.org/10.1007/s13412-022-00761-1>

City of Braga. (2019, December). *Smart & trendy city voluntary local review 2019*. City of Braga. [https://sdgs.un.org/sites/default/files/vlrs/2023-04/braga\\_vlr\\_2019.pdf](https://sdgs.un.org/sites/default/files/vlrs/2023-04/braga_vlr_2019.pdf)

City of Bristol. (2022, November). *Bristol and the SDGs: 2022 review of progress, challenges and opportunities*. City of Bristol. [https://sdgs.un.org/sites/default/files/vlrs/2022-11/bristol\\_vlr\\_2022.pdf](https://sdgs.un.org/sites/default/files/vlrs/2022-11/bristol_vlr_2022.pdf)

City of Los Angeles. (2019, July). *Voluntary local review: Los Angeles implementation of the Sustainable Development Goals*. City of Los Angeles. [https://sdgs.un.org/sites/default/files/2020-09/LA%27s\\_Voluntary\\_Local\\_Review\\_of\\_SDGs\\_2019.pdf](https://sdgs.un.org/sites/default/files/2020-09/LA%27s_Voluntary_Local_Review_of_SDGs_2019.pdf)

City of Ghent. (2023, January). *Ghent sustainability report 2023: Focus on Planet: Voluntary local review*. City of Ghent. <https://sdgs.un.org/sites/default/files/vlrs/2024-01/ghent-vlr-2023.pdf>

City of Helsinki. (2019, June). *From agenda to action: The implementation of the UN Sustainable Development Goals in Helsinki 2019*. City of Helsinki.  
<https://www.hel.fi/static/helsinki/julkaisut/SDG-VLR-Helsinki-2019-en.pdf>

City of Helsinki. (2021, July). *From agenda to action: Implementation of the UN Sustainable Development Goals in Helsinki*. City of Helsinki. <https://www.iges.or.jp/sites/default/files/inline-files/2021%20-%20Helsinki.pdf>

City of Melaka. (2022, October). *Melaka City voluntary local review 2022: Implementing the 2030 Agenda in the city of Melaka*. City of Melaka.  
<https://sdgs.un.org/sites/default/files/vlrs/2023-10/melaka-vlr2022.pdf>

City of Orlando. (2021, November). *Orlando and the Sustainable Development Goals: A voluntary local review progress report*. City of Orlando.  
<https://sdgs.un.org/sites/default/files/2021-11/Orlando%20VLR%202021.pdf>

City of Port Said. (2021, February). *Port Said voluntary local review executive summary*. City of Port Said. [https://sdgs.un.org/sites/default/files/vlrs/2024-02/port\\_said\\_executive\\_summary.pdf](https://sdgs.un.org/sites/default/files/vlrs/2024-02/port_said_executive_summary.pdf)

City of Shkodra. (2020, December). *Voluntary local review for Shkodra 2020*. City of Shkodra.  
[https://sdgs.un.org/sites/default/files/vlrs/2021-12/summary\\_of\\_voluntary\\_local\\_review\\_for\\_shkodra\\_2020.pdf](https://sdgs.un.org/sites/default/files/vlrs/2021-12/summary_of_voluntary_local_review_for_shkodra_2020.pdf)

City of Thunder Bay. (2022, October). *Thunder Bay and the SDGs: A voluntary local review*. City of Thunder Bay. <https://www.thunderbay.ca/en/city-hall/resources/Documents/ThunderBayDrugStrategy/VLR-Report-2022---OctoberFINAL---accessible.pdf>

City of Turku. (2022, March). *The 2030 Agenda roadmap for sustainable development: Steps towards a sustainable future*. City of Turku. [https://sdgs.un.org/sites/default/files/vlrs/2023-03/turku\\_vlr\\_2022.pdf](https://sdgs.un.org/sites/default/files/vlrs/2023-03/turku_vlr_2022.pdf)

City of Victoria. (2018, December). *Climate leadership plan*. City of Victoria.  
<https://www.victoria.ca/media/file/climate-leadership-plan>

City of Victoria. (2023, January). *Climate strategies and plans*. City of Victoria.  
<https://www.victoria.ca/EN/main/residents/climate-action/climate-strategies-plans.html>

City of Victoria. (2020, December). *Go Victoria: Our mobility future*. City of Victoria.  
<https://www.victoria.ca/media/file/go-victoria>

City of Victoria. (2012, July). *Official community plan*. City of Victoria.  
<https://www.victoria.ca/media/file/ocp-whole-book>

- City of Victoria. (2021, January). *Zero Waste Victoria*. City of Victoria. <https://www.victoria.ca/media/file/zwreport-2021-web-jan-2021pdf>
- Clark, D. A., Biggeri, M., & Frediani, A. A. (2019). *The capability approach, empowerment, and participation: Concepts, methods and applications*. Palgrave Macmillan. <https://link.springer.com/book/10.1057/978-1-137-35230-9>
- Creswell, J. W. (2013). *Qualitative inquiry & research design: Choosing among five approaches (3rd ed.)*. Sage Publications. <https://revistapsicologia.org/public/formato/cuali2.pdf>
- Croese, S., Green, C., & Morgan, G. (2020). *Localizing the Sustainable Development Goals through the lens of urban resilience: Lessons and learnings from 100 resilient cities and Cape Town*. *Sustainability*, 12(2), 550. <https://doi.org/10.3390/su12020550>
- Crowe, S., Cresswell, K., Robertson, A., Huby, G., Avery, A., & Sheikh, A. (2011). *The case study approach*. *BMC Medical Research Methodology*, 11, 100. <https://doi.org/10.1186/1471-2288-11-100>
- Crown-Indigenous Relations and Northern Affairs Canada. (2023, February). *Government of Canada and the duty to consult*. Government of Canada. <https://www.rcaanc-cirnac.gc.ca/eng/1331832510888/1609421255810>
- Danermark, B., Ekström, M., & Karlsson, J. C. (2019). *Explaining society: Critical realism in the social sciences (2nd ed.)*. Routledge. <https://criticalrealismnetwork.org/wp-content/uploads/2022/01/87111-danermark-ekstrom-karlsson-2019-explaining-society-ch-6.pdf>
- De Sas Kropiwnicki-Gruber, Z., & Harris, D. (2020, October). *Localizing the 2030 Agenda in British Columbia*. British Columbia Council for International Cooperation. [https://www.bccic.ca/wp-content/uploads/2020/10/Localizing-the-2030-Agenda-in-British-Columbia\\_2020.pdf](https://www.bccic.ca/wp-content/uploads/2020/10/Localizing-the-2030-Agenda-in-British-Columbia_2020.pdf)
- District of Oak Bay. (2020, February). *Official Community Plan*. District of Oak Bay. <https://www.oakbay.ca/wp-content/uploads/2025/02/2020-OCP.pdf>
- District of Oak Bay. (2023, December). *Annual Report*. District of Oak Bay. [https://www.oakbay.ca/wp-content/uploads/2024/12/DOB\\_2023AnnualReport\\_SinglePg-1.pdf](https://www.oakbay.ca/wp-content/uploads/2024/12/DOB_2023AnnualReport_SinglePg-1.pdf)
- District of Saanich. (2024, January). *Active Transportation Plan*. District of Saanich. [https://www.saanich.ca/assets/Local-Government/Documents/Engineering/Active%20Transportation%20Plan%20FINAL%202024%20\(Web\).pdf](https://www.saanich.ca/assets/Local-Government/Documents/Engineering/Active%20Transportation%20Plan%20FINAL%202024%20(Web).pdf)
- District of Saanich. (2020). *Climate Action Plan*. District of Saanich. <https://www.saanich.ca/assets/Community/Documents/Planning/sustainability/2020-climate-plan-web-v13.0.pdf>

District of Saanich. (2023, May). *Council Strategic Plan 2023–2027*. District of Saanich. <https://www.saanich.ca/assets/Local-Government/Documents/Council%20Strategic%20Plan%202023-2027%20Revision%20May06-2024.pdf>

District of Saanich. (2024, May). *Sustainable Saanich: Official Community Plan*. District of Saanich. <https://www.saanich.ca/assets/Community/Documents/Planning/Strategic-OCP-Update/OCP-adopted-2024%20May-web.pdf>

District of Seodaemun-gu. (2021, July). *Seodaemun-gu Sustainable Development Report*. District of Seodaemun-gu. [https://sdgs.un.org/sites/default/files/vlrs/2022-07/2021\\_seodaemun-gu\\_sustainable\\_development\\_report.pdf](https://sdgs.un.org/sites/default/files/vlrs/2022-07/2021_seodaemun-gu_sustainable_development_report.pdf)

Fisher, A., & Fukuda-Parr, S. (2019). *Introduction: Data, knowledge, politics and localizing the SDGs*. *Journal of Human Development and Capabilities*, 20(4), 375–385. <https://doi.org/10.1080/19452829.2021.1986689>

Fox, S., & MacLeod, A. (2021). *Localizing the SDGs in cities: Reflections from an action research project in Bristol, UK*. *Urban Geography*, 44(3), 326–343. <https://doi.org/10.1080/02723638.2021.1953286>

Fukuda-Parr, S., & McNeill, D. (2019). *Knowledge and politics in setting and measuring the SDGs: Introduction to special issues*. *Global Policy*, 10(S1), 5–15. <https://doi.org/10.1111/1758-5899.12604>

Garau, C., & Pavan, V. M. (2018). *Evaluating urban quality: Indicators and assessment tools for smart sustainable cities*. *Sustainability*, 10(3), 575. <https://doi.org/10.3390/su10030575>

Global Taskforce of Local and Regional Governments. (2017, July). *Roadmap for localising the SDGs: Implementation and monitoring at the subnational level*. UN-Habitat. [https://sustainabledevelopment.un.org/content/documents/commitments/818\\_11195\\_commitment\\_ROADMAP%20LOCALIZING%20SDGS.pdf](https://sustainabledevelopment.un.org/content/documents/commitments/818_11195_commitment_ROADMAP%20LOCALIZING%20SDGS.pdf)

Global Taskforce of Local and Regional Governments. (2018, July). *Statement of the local and regional governments constituency gathered in the global taskforce*. Global Taskforce of Local and Regional Governments. [https://www.global-taskforce.org/sites/default/files/2018-07/gtfstatement\\_HLPF\\_2018.pdf](https://www.global-taskforce.org/sites/default/files/2018-07/gtfstatement_HLPF_2018.pdf)

Government of British Columbia. (2024, August). *Declaration on the Rights of Indigenous Peoples Act*. Government of British Columbia. <https://www2.gov.bc.ca/gov/content/governments/indigenous-people/new-relationship/united-nations-declaration-on-the-rights-of-indigenous-peoples>

Granados, J. G., & Noferini, A. (2019, December). *Subnational governments and the 2030 Agenda: Strengthening policy effectiveness and legitimacy with the localization of the Sustainable Development Goals*. Institut Barcelona d'Estudis Internacionals. [https://issuu.com/artpublications/docs/final\\_report\\_sngs\\_2030\\_agenda\\_granados\\_noferini](https://issuu.com/artpublications/docs/final_report_sngs_2030_agenda_granados_noferini)

Guha, J., & Chakrabarti, B. (2019). *Achieving the Sustainable Development Goals (SDGs) through decentralization and the role of local governments: A systematic review*. *Commonwealth Journal of Local Governance*, 22, Article ID 6855. <https://doi.org/10.5130/cjlg.v0i22.6855>

Gupta, J., & Vegelin, C. (2016). *Sustainable development goals and inclusive development*. *International Environmental Agreements: Politics, Law and Economics*, 16(3), 433–448. <https://doi.org/10.1007/s10784-016-9323-z>

Hogwood, B. W., & Gunn, L. A. (1985). *Policy analysis for the real world*. Oxford University Press. <https://global.oup.com/academic/product/policy-analysis-for-the-real-world-9780198761846?lang=en&cc=fj>

International Institute for Environment and Development. (2016, December). *Mainstreaming biodiversity in development and the Sustainable Development Goals: Sharing and developing workable solutions*. International Institute for Environment and Development. <https://www.iied.org/sites/default/files/pdfs/migrate/G04168.pdf>

International Institute for Sustainable Development. (2022, March). *Five countries yet to conduct voluntary national reviews*. International Institute for Sustainable Development. <https://sdg.iisd.org/news/five-countries-yet-to-conduct-voluntary-national-review/>

International Institute for Sustainable Development. (2022, July). *Voluntary local reviews of progress on the Sustainable Development Goals: A handbook for Canadian communities*. International Institute for Sustainable Development. <https://www.iisd.org/system/files/2022-07/vlr-handbook-canada.pdf>

International Institute for Sustainable Development. (2022, July). *HLPF reviews SDGs 4, 5, 14, and 15, begins discussion of VNRs*. International Institute for Sustainable Development. <https://sdg.iisd.org/news/hlpf-reviews-sdgs-4-5-14-and-15-begins-discussion-of-vnrs/>

International Institute for Sustainable Development. (2022, February). *Winnipeg and the SDGs: A voluntary local review of progress 2021*. International Institute for Sustainable Development. <https://www.mypeg.ca/wp-content/uploads/sites/2/2022/02/Peg-Report-2021-VLR.pdf>

Jiménez-Aceituno, A., Peterson, G. D., Norström, A. V., Wong, G. Y., & Downing, A. S. (2020). *Local lens for SDG implementation: Lessons from bottom-up approaches in Africa*. *Sustainability Science*, 15, 729–743. <https://doi.org/10.1007/s11625-019-00746-0>

Jossin, J., & Peters, O. (2021, April). *Status of the SDG implementation in German municipalities: Municipal contribution to the German Voluntary National Review*. Bertelsmann Stiftung. [https://gold.uclg.org/sites/default/files/germany\\_2021\\_0.pdf](https://gold.uclg.org/sites/default/files/germany_2021_0.pdf)

Juncurt, S., Rosentreter, H., Wiebe, K., Kozolapova, E., & Bonaccorsi, E. (2022, July). *Voluntary local reviews of progress on the Sustainable Development Goals: A handbook for Canadian communities*. International Institute for Sustainable Development. <https://www.iisd.org/publications/guide/vlr-handbook-canada>

Kanuri, C., Revi, A., Espey, J., & Kuhle, H. (2016, July). *Getting started with the SDGs in cities*. UN Sustainable Development Solutions Network. [https://www.researchgate.net/publication/309417493\\_Getting\\_Started\\_with\\_the\\_SDGs\\_in\\_Cities\\_A\\_Guide\\_for\\_Stakeholders](https://www.researchgate.net/publication/309417493_Getting_Started_with_the_SDGs_in_Cities_A_Guide_for_Stakeholders)

Klopp, J. M., & Petretta, D. L. (2017). *The urban sustainable development goal: Indicators, complexity and the politics of measuring cities*. *Cities*, 63, 92–97. <https://doi.org/10.1016/j.cities.2016.12.019>

Koike, H., Ortiz-Moya, F., Kataoka, Y., & Fujino, J. (2020, July). *Shimokawa method for voluntary local review*. Institute for Global Environmental Strategies. <https://unhabitat.org/sites/default/files/2021/07/shimokawamethodfinal.pdf>

Krantz, V., & Gustafsson, S. (2021). *Localizing the sustainable development goals through an integrated approach in municipalities: Early experiences from a Swedish forerunner*. *Journal of Environmental Planning and Management*, 64(14), 2641–2660. <https://doi.org/10.1080/09640568.2021.1877642>

Kroll, C., Warchold, A., & Pradhan, P. (2019). *Sustainable Development Goals (SDGs): Are we successful in turning trade-offs into synergies?* Palgrave Communications, 5, 140. <https://doi.org/10.1057/s41599-019-0335-5>

Ksonzhyk, I., Taran, Y., Monastyrskyi, G., Vasina, A., Sytnytska, O., & Belei, S. (2021). *Implementation of the principles of sustainable development of territorial communities: Decision making*. *Journal of Management Information and Decision Sciences*, 24(3), 1–12. <https://www.abacademies.org/articles/Implementation-of-the-principles-of-sustainable-development-of-territorial-communities-Decision-making-1532-5806-24-3-250.pdf>

Latek, M. (2021, June). *Decentralised cooperation in the context of the 2030 Agenda*. European Parliamentary Research Service. [https://www.europarl.europa.eu/RegData/etudes/IDAN/2017/607258/EPRS\\_IDA\(2017\)607258\\_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/IDAN/2017/607258/EPRS_IDA(2017)607258_EN.pdf)

Leech, N. L., & Onwuegbuzie, A. J. (2007). *An array of qualitative data analysis tools: A call for data analysis triangulation*. *School Psychology Quarterly*, 22(4), 557–584.  
<https://doi.org/10.1037/1045-3830.22.4.557>

Lorenzo-Saez, E., Lerma-Arce, V., Coli-Aliaga, E., & Oliver-Villanueva, J. V. (2021). *Contribution of green urban areas to the achievement of SDGs: A case study in Valencia (Spain)*. *Ecological Indicators*, 131, 108246.  
<https://www.sciencedirect.com/science/article/pii/S1470160X21009110>

Masuda, H., Okitasari, M., Morita, K., Katramiz, T., Shimizu, H., Kawakubo, S., & Kataoka, T. (2021). *SDGs mainstreaming at the local level: Case studies from Japan*. *Sustainability Science*, 16, 1539–1562. <https://doi.org/10.1007/s11625-021-00977-0>

Merriam, S. B., & Tisdell, E. J. (2016). *Qualitative research: A guide to design and implementation (4th ed.)*. Jossey-Bass. <https://download.e-bookshelf.de/download/0003/7195/84/L-G-0003719584-0007575839.pdf>

Miles, M. B., Huberman, A. M., & Saldaña, J. (2014). *Qualitative data analysis: A methods sourcebook (3rd ed.)*. Sage Publications. <https://www.metodos.work/wp-content/uploads/2024/01/Qualitative-Data-Analysis.pdf>

Mills, A. J., Durepos, G., & Wiebe, E. (Eds.). (2010, January). *Encyclopedia of case study research (Volumes I and II)*. Sage Publications.  
[https://www.researchgate.net/publication/230557680\\_15\\_Mills\\_A\\_J\\_Durepos\\_G\\_and\\_Wiebe\\_E\\_Eds\\_2010\\_Encyclopedia\\_of\\_Case\\_Study\\_Research\\_Volumes\\_I\\_and\\_II\\_Thousand\\_Oaks\\_CA\\_Sage](https://www.researchgate.net/publication/230557680_15_Mills_A_J_Durepos_G_and_Wiebe_E_Eds_2010_Encyclopedia_of_Case_Study_Research_Volumes_I_and_II_Thousand_Oaks_CA_Sage)

Moyer, J. D., & Bohl, D. K. (2019). *Alternative pathways to human development: Assessing trade-offs and synergies in achieving the Sustainable Development Goals*. *Futures*, 105, 199–210. <https://doi.org/10.1016/j.futures.2018.10.007>

Nagati, O., Gad, H., El-Didi, A. A., Kihila, J. M., Mbuya, E., & Njavike, E. (2022). *Localising the SDGs in African cities: A grounded methodology*. *Africa Development / Afrique et Développement*, 47(4), 157–184. <https://www.jstor.org/stable/48722445>

New York City's Mayor's Office for International Affairs. (2018, July). *Global vision | urban action: Voluntary local review. New York City's implementation of the 2030 Agenda for Sustainable Development*. New York City Mayor's Office for International Affairs.  
[https://www1.nyc.gov/assets/international/downloads/pdf/NYC\\_VLR\\_2018\\_FINAL.pdf](https://www1.nyc.gov/assets/international/downloads/pdf/NYC_VLR_2018_FINAL.pdf)

New York City Mayor's Office for International Affairs. (2016, April). *New York City, global vision | urban action*. New York City Mayor's Office for International Affairs.  
<https://view.publitas.com/nyc-mayors-office/a-city-with-global-goals-parts-i-and-ii-for-download/page/1>

New York City's Mayor's Office for International Affairs. (2020, May). *International affairs commissioner Abeywardena announces major milestone for NYC declaration on the voluntary local review*. New York City Mayor's Office for International Affairs.

<https://www1.nyc.gov/assets/international/downloads/pdf/vlr-press-release-may-2020-for-final.pdf>

Nilsson, M., Chisholm, E., Griggs, D., Howden-Chapman, P., McCollum, D., Messerli, P., Neumann, B., Stevance, A.-S., Visbeck, M., & Stafford-Smith, M. (2018). *Mapping interactions between the Sustainable Development Goals: Lessons learned and ways forward*. *Sustainability Science*, 13, 1489–1503. <https://doi.org/10.1007/s11625-018-0604-z>

Ndlovu, V., Newman, P., & Sidambe, M. (2020). *Prioritisation and localisation of Sustainable Development Goals (SDGs): Challenges and opportunities for Bulawayo*. *Journal of Sustainable Development*, 13(5), 104–117. <https://doi.org/10.5539/jsd.v13n5p104>

Organization for Economic Cooperation and Development. (2020, February). *A territorial approach to the Sustainable Development Goals*. Organization for Economic Cooperation and Development. <https://www.oecd.org/cfe/a-territorial-approach-to-the-sustainable-development-goals-e86fa715-en.htm>

Oosterom, M. (2019, April). *The implications of closing civic space for sustainable development in Zimbabwe*. Institute of Development Studies. [https://assets.publishing.service.gov.uk/media/5e57dfe486650c53b49c689b/Zimbabwe\\_civic\\_space\\_sustainable\\_development\\_.pdf](https://assets.publishing.service.gov.uk/media/5e57dfe486650c53b49c689b/Zimbabwe_civic_space_sustainable_development_.pdf)

Ortiz-Moya, F., & Reggiani, M. (2023). *Contributions of the voluntary local review process to policy integration: Evidence from frontrunner cities*. *Urban Sustainability*, 3, 22. <https://doi.org/10.1038/s42949-023-00101-4>

Osborn, D., Cutter, A., & Ullah, F. (2015, May). *Universal Sustainable Development Goals: Understanding the transformational challenge for developed countries*. Stakeholder Forum. [https://sustainabledevelopment.un.org/content/documents/1684SF\\_-\\_SDG\\_Universality\\_Report\\_-\\_May\\_2015.pdf](https://sustainabledevelopment.un.org/content/documents/1684SF_-_SDG_Universality_Report_-_May_2015.pdf)

Osman, T., Kenawy, E., Abdrabo, K. I., Shaw, D., Alshamndy, A., Elsharif, M., Salem, M., Alwetaishi, M., Aly, R. M., & Elboshi, B. (2021). *Voluntary local review framework to monitor and evaluate the progress towards achieving Sustainable Development Goals at a city level: Buraidah City, KSA, and SDG11 as a case study*. *Sustainability*, 13(17), 9555. <https://doi.org/10.3390/su13179555>

Parnell, S. (2016). *Defining a global urban development agenda*. *World Development*, 78, 529–540. <https://doi.org/10.1016/j.worlddev.2015.10.028>

Pawson, R., Greenhalgh, T., Harvey, G., & Walshe, K. (2004, January). *Realist synthesis: An introduction*. University of Manchester.

[https://www.researchgate.net/publication/228855827\\_Realist\\_Synthesis\\_An\\_Introduction](https://www.researchgate.net/publication/228855827_Realist_Synthesis_An_Introduction)

Peters, B. G. (1986). *American public policy (2nd ed.)*. Chatham House.

[https://eclass.ekdd.gr/esdda/modules/document/file.php/KST\\_BEID\\_PDYY132/PETERS\\_American\\_public\\_policy.pdf](https://eclass.ekdd.gr/esdda/modules/document/file.php/KST_BEID_PDYY132/PETERS_American_public_policy.pdf)

Piattoni, S. (2009, March). *Multi-level governance: A historical and conceptual analysis*. *Journal of European Integration*, 31(2), 163–180.

[https://www.researchgate.net/publication/247500306\\_Multi-level\\_Governance\\_a\\_Historical\\_and\\_Conceptual\\_Analysis](https://www.researchgate.net/publication/247500306_Multi-level_Governance_a_Historical_and_Conceptual_Analysis)

Pipa, A. F., & Bouchet, M. (2020, June). *Local leadership driving progress on the Sustainable Development Goals*. Brookings Institution.

[https://www.brookings.edu/wp-content/uploads/2022/06/2022\\_Brookings\\_SDG-Leadership-Cities.v4.1.pdf](https://www.brookings.edu/wp-content/uploads/2022/06/2022_Brookings_SDG-Leadership-Cities.v4.1.pdf)

Preiser, R., Biggs, R., De Vos, A., & Folke, C. (2018). *Social-ecological systems as complex adaptive systems: Organizing principles for advancing research methods and approaches*.

*Ecology and Society*, 23(4). <https://doi.org/10.5751/ES-10558-230446>

Polasky, S., Kling, C., Levin, S., Carpenter, S., Daily, G., Ehrlich, P., Heal, G., & Lubchenco, J. (2019). *Role of economics in analyzing the environment and sustainable development*.

*Proceedings of the National Academy of Sciences*, 116 (12) 5233-5238,

<https://doi.org/10.1073/pnas.1901616116>

Ritchie, J., & Spencer, L. (2002). Qualitative data analysis for applied policy research. In A. M. Huberman & M. B. Miles (Eds.), *The qualitative researcher's companion* (pp. 305–329). Sage Publications.

<https://doi.org/10.4135/9781412986274>

Russel, D., & Jordan, A. (2009). *Joining up or pulling apart? The use of appraisal to coordinate policy making for sustainable development*. *Environment and Planning A: Economy and Space*,

41(5), 1201–1216. <https://doi.org/10.1068/a4142>

Sachs, J. D., Schmidt-Traub, G., Kroll, C., Lafortune, G., & Fuller, G. (2019, June). *Sustainable Development Report 2019*. Bertelsmann Stiftung and Sustainable Development Solutions Network.

[https://s3.amazonaws.com/sustainabledevelopment.report/2019/2019\\_sustainable\\_development\\_report.pdf](https://s3.amazonaws.com/sustainabledevelopment.report/2019/2019_sustainable_development_report.pdf)

Sayer, A. (2000, June). *Realism and Social Science*. Sage Publications.

<https://sk.sagepub.com/books/realism-and-social-science>

Sarkar, M. S. K., Okitasari, M., Ahsan, M. R., & Al-Amin, A. Q. (2022). *Localisation of Sustainable Development Goals (SDGs) in Bangladesh: An inclusive framework under local governments*. *Sustainability*, 14(16), 10817. [https://mdpi-res.com/sustainability/sustainability-14-10817/article\\_deploy/sustainability-14-10817-v2.pdf?version=1661924159](https://mdpi-res.com/sustainability/sustainability-14-10817/article_deploy/sustainability-14-10817-v2.pdf?version=1661924159)

Scharpf, F. W. (2011, October). *Governing in Europe: Effective and democratic?* Oxford University Press. <https://academic.oup.com/book/11939>

Schneider, F., Kläy, A., Zimmermann, A. B., Buser, T., Ingalls, M., & Messerli, P. (2019). *How can science support the 2030 Agenda for Sustainable Development? Four tasks to tackle the normative dimension of sustainability*. *Sustainability Science*, 14, 1593–1604. <https://doi.org/10.1007/s11625-019-00675-y>

Schoepf, S., & Klimow, N. (2022). *Collective case study: Making qualitative data more impactful*. In S. Watson, S. Austin, & J. Bell (Eds.), *Conceptual analyses of curriculum inquiry methodologies IGI Global*, 252-266. <https://doi.org/10.4018/978-1-7998-8848-2.ch012>

Shaker, R. R., & Sirodoev, I. G. (2016). *Assessing sustainable development across Moldova using household and property composition indicators*. *Habitat International*, 55, 192–204. <https://doi.org/10.1016/j.habitatint.2016.03.005>

Simon, D., Arfvidsson, H., Anand, G., Bazaz, A., Fenna, G., Foster, K., Jain, G., Hansson, S., Evans, L. M., Moodley, N., Nyambuga, C., Oloko, M., Ombara, D. C., Patel, Z., Perry, B., Primo, N., Revi, A., Van Niekerk, B., Wharton, A., & Wright, C. (2016). *Developing and testing the urban sustainable development goal's targets and indicators—A five-city study*. *Environment and Urbanization*, 28(1), 49–63. <https://doi.org/10.1177/0956247815619865>

Singh, G. G., Cisneros-Montemayor, A. M., Swartz, W., Cheung, W., Guy, J. A., Kenny, T.-A., McOwen, C. J., Asch, R., Geffert, J. L., Wabnitz, C. C. C., Sumaila, R., Hanich, Q., & Ota, Y. (2018, July). *A rapid assessment of co-benefits and trade-offs among Sustainable Development Goals*. *Marine Policy*, 93, 223–231. <https://doi.org/10.1016/j.marpol.2017.05.030>

Sosa, M., Aulet, S., & Mundet, L. (2021). *Community-based tourism through food: A proposal of sustainable tourism indicators for isolated and rural destinations in Mexico*. *Sustainability*, 13(12), 6693. <https://doi.org/10.3390/su13126693>

Spradley, J. P. (1979). *The ethnographic interview*. Harcourt Brace Jovanovich College Publishers. [https://spada.uns.ac.id/pluginfile.php/262424/mod\\_resource/content/1/James%20P.%20Spradley%20-%20The%20Ethnographic%20Interview-Harcourt%2C%20Brace%2C%20Jovanovich%20%281979%29%20%281%29.pdf](https://spada.uns.ac.id/pluginfile.php/262424/mod_resource/content/1/James%20P.%20Spradley%20-%20The%20Ethnographic%20Interview-Harcourt%2C%20Brace%2C%20Jovanovich%20%281979%29%20%281%29.pdf)

Stake, R. E. (2003). *Case studies*. In N. K. Denzin & Y. S. Lincoln (Eds.), *Strategies of qualitative inquiry* (2nd ed.). Sage Publications. <https://www.sfu.ca/~palys/Stake2003-CaseStudies.pdf>

Statistics Canada. (2023, November). *Victoria, CY [Census subdivision], British Columbia (table)*. 2021 Census of Population. Statistics Canada. <https://www12.statcan.gc.ca/census-recensement/2021/dp-pd/prof/details/page.cfm?Lang=E&GENDERlist=1&STATISTIClist=1&HEADERlist=0&DGUIDlist=2021A00055917034&SearchText=victoria>

Statistics Canada. (2023, November). *Saanich, DM [Census subdivision], British Columbia (table)*. 2021 Census of Population. Statistics Canada. <https://www12.statcan.gc.ca/census-recensement/2021/dp-pd/prof/details/page.cfm?Lang=E&SearchText=Saanich&DGUIDlist=2021A00055917021&GENDERlist=1,2,3&STATISTIClist=1,4&HEADERlist=0>

Statistics Canada. (2023, November). *Oak Bay, DM [Census subdivision], British Columbia (table)*. 2021 Census of Population. Statistics Canada. <https://www12.statcan.gc.ca/census-recensement/2021/dp-pd/prof/details/page.cfm?Lang=E&SearchText=Oak%20Bay&DGUIDlist=2021A00055917030&GENDERlist=1,2,3&STATISTIClist=1,4&HEADERlist=0>

Statistics Canada. (2023, November). *Esquimalt, DM [Census subdivision], British Columbia (table)*. 2021 Census of Population. Statistics Canada. <https://www12.statcan.gc.ca/census-recensement/2021/dp-pd/prof/details/page.cfm?Lang=E&SearchText=Esquimalt&DGUIDlist=2021A00055917040&GENDERlist=1,2,3&STATISTIClist=1,4&HEADERlist=0>

Statistics Canada. (2023, November). *Langford, CY [Census subdivision], British Columbia (table)*. 2021 Census of Population. Statistics Canada. <https://www12.statcan.gc.ca/census-recensement/2021/dp-pd/prof/details/page.cfm?Lang=E&SearchText=langford&DGUIDlist=2021A00055917044&GENDERlist=1&STATISTIClist=1&HEADERlist=0>

Statistics Canada. (2023, November). *Colwood, CY [Census subdivision], British Columbia (table)*. 2021 Census of Population. Statistics Canada. <https://www12.statcan.gc.ca/census-recensement/2021/dp-pd/prof/details/page.cfm?Lang=E&SearchText=Colwood&DGUIDlist=2021A00055917041&GENDERlist=1,2,3&STATISTIClist=1&HEADERlist=0>

Statistics Canada. (2023, November). *Central Saanich, DM [Census subdivision], British Columbia (table)*. 2021 Census of Population. Statistics Canada. <https://www12.statcan.gc.ca/census-recensement/2021/dp->

[pd/prof/details/Page.cfm?Lang=E&SearchText=Central%20Saanich&DGUIDlist=2021A00055917015&GENDERlist=1&STATISTIClist=1&HEADERlist=0](https://www12.statcan.gc.ca/census-recensement/2021/dp-pd/prof/details/page.cfm?Lang=E&SearchText=Central%20Saanich&DGUIDlist=2021A00055917015&GENDERlist=1&STATISTIClist=1&HEADERlist=0)

Statistics Canada. (2023, November). *Sooke, DM [Census subdivision], British Columbia (table). 2021 Census of Population*. Statistics Canada. <https://www12.statcan.gc.ca/census-recensement/2021/dp-pd/prof/details/page.cfm?Lang=E&SearchText=Sooke&DGUIDlist=2021A00055917052&GENDERlist=1,2,3&STATISTIClist=1&HEADERlist=0>

Statistics Canada. (2023, November). *Sidney, T [Census subdivision], British Columbia (table). 2021 Census of Population*. Statistics Canada. <https://www12.statcan.gc.ca/census-recensement/2021/dp-pd/prof/details/page.cfm?Lang=E&SearchText=sidney&DGUIDlist=2021A00055917010&GENDERlist=1&STATISTIClist=1&HEADERlist=0>

Statistics Canada. (2023, November). *North Saanich, DM [Census subdivision], British Columbia (table). 2021 Census of Population*. Statistics Canada. <https://www12.statcan.gc.ca/census-recensement/2021/dp-pd/prof/details/page.cfm?Lang=E&SearchText=North%20Saanich&DGUIDlist=2021A00055917005&GENDERlist=1,2,3&STATISTIClist=1&HEADERlist=0>

Statistics Canada. (2023, November). *View Royal, T [Census subdivision], British Columbia (table). 2021 Census of Population*. Statistics Canada. <https://www12.statcan.gc.ca/census-recensement/2021/dp-pd/prof/details/page.cfm?Lang=E&SearchText=VIEW%20ROYAL&GENDERlist=1&STATISTIClist=1&DGUIDlist=2021A00055917047&HEADERlist=0>

Statistics Canada. (2023, November). *Metchosin, DM [Census subdivision], British Columbia (table). 2021 Census of Population*. Statistics Canada. <https://www12.statcan.gc.ca/census-recensement/2021/dp-pd/prof/details/page.cfm?Lang=E&SearchText=Metchosin&DGUIDlist=2021A00055917042&GENDERlist=1,2,3&STATISTIClist=1&HEADERlist=0>

Statistics Canada. (2023, November). *Highlands, DM [Census subdivision], British Columbia (table). 2021 Census of Population*. Statistics Canada. <https://www12.statcan.gc.ca/census-recensement/2021/dp-pd/prof/details/page.cfm?Lang=E&SearchText=Highlands&DGUIDlist=2021A00055917049&GENDERlist=1&STATISTIClist=1&HEADERlist=0>

Statistics Canada. (2023, November). *Salt Spring Island, RDA [Census subdivision], British Columbia (table). 2021 Census of Population*. Statistics Canada. <https://www12.statcan.gc.ca/census-recensement/2021/dp-pd/prof/details/page.cfm?Lang=E&SearchText=salt%20spring%20island&DGUIDlist=2021A00055917027&GENDERlist=1&STATISTIClist=1&HEADERlist=0>

Statistics Canada. (2023, November). *Juan de Fuca, EA [Census subdivision], British Columbia (table). 2021 Census of Population*. Statistics Canada. <https://www12.statcan.gc.ca/census-recensement/2021/dp-pd/prof/details/page.cfm?Lang=E&SearchText=Juan%20de%20fuca&DGUIDlist=2021A00055917054&GENDERlist=1&STATISTIClist=1&HEADERlist=0>

Statistics Canada. (2023, November). *Southern Gulf Islands, EA [Census subdivision], British Columbia (table). 2021 Census of Population*. Statistics Canada. <https://www12.statcan.gc.ca/census-recensement/2021/dp-pd/prof/details/page.cfm?Lang=E&SearchText=southern%20gulf%20island&DGUIDlist=2021A00055917029&GENDERlist=1&STATISTIClist=1&HEADERlist=0>

Stephenson, P. (2013). *Twenty years of multi-level governance: 'Where Does It Come From? What Is It? Where Is It Going?'* *Journal of European Public Policy*, 20(6), 817–837. <https://doi.org/10.1080/13501763.2013.781818>

Sterling, E. J., Pascua, P., Sigouin, A., Gazit, N., Mandle, L., Betley, E., Aini, J., Albert, S., Caillon, S., Caselle, J. E., Cheng, S. H., Claudet, J., Dacks, R., Darling, E. S., Filardi, C., Jupiter, S. D., Mawyer, A., Mejia, M., Morshige, K., Dainoca, W., Parks, J., Tanguay, J., Ticktin, T., Vave, R., Wase, V., Wongbusarakum, S., & McCarter, J. (2020). *Creating a space for place and multidimensional well-being: Lessons learned from localizing the SDGs*. *Sustainability Science*, 15(4), 1129–1147. <https://doi.org/10.1007/s11625-020-00822-w>

Suri, S. N., Miraglia, M., & Ferrannini, A. (2021). *Voluntary Local Reviews as drivers for SDG localisation and sustainable human development*. *Journal of Human Development and Capabilities*, 22(4), 725–736. <https://doi.org/10.1080/19452829.2021.1986689>

Sutton, R. (1999, August). *The policy process: An overview*. Overseas Development Institute. <https://www.files.ethz.ch/isn/104749/wp118.pdf>

Teoh, S., Olsen, S. H., & Gilby, S. (2018, May). *Early views of ASEAN's 'frontrunner cities' on the sustainable development goals (SDGs) and local data management*. Institute for Global Environmental Strategies. [https://www.iges.or.jp/en/publication\\_documents/pub/policyreport/en/6359/IGES+Policy+Brief+-+ASEAN+Cities+Early+Reactions+to+SDGs+%28Final+7May2018%29\\_FINAL.pdf](https://www.iges.or.jp/en/publication_documents/pub/policyreport/en/6359/IGES+Policy+Brief+-+ASEAN+Cities+Early+Reactions+to+SDGs+%28Final+7May2018%29_FINAL.pdf)

The City of New York Mayor Adams. (2023, April). *PlaNYC: Getting sustainability done*. The City of New York. <https://climate.cityofnewyork.us/wp-content/uploads/2023/06/PlaNYC-2023-Full-Report.pdf>

The Federal Government. (2022, August). *Germany's Sustainable Development Strategy*. The Federal Government. <https://www.bundesregierung.de/breg-en/issues/sustainability/germany-s-sustainable-development-strategy-354566>

The Federal Government. (2021). *Structures of sustainability policy*. The Federal Government. <https://www.bundesregierung.de/breg-en/federal-government/structures-of-sustainability-policy-214556>

Tosun, J., & Lang, A. (2017). *Policy integration: Mapping the different concepts*. *Policy Studies*, 38(6), 553–570. <https://doi.org/10.1080/01442872.2017.1339239>

Township of Esquimalt. (2022, July). *Climate Action Plan 2022*. Township of Esquimalt. [https://www.esquimalt.ca/sites/default/files/docs/business-development/Climate\\_Action\\_Plan.pdf](https://www.esquimalt.ca/sites/default/files/docs/business-development/Climate_Action_Plan.pdf)

Township of Esquimalt. (2025, January). *Council Priority Plan 2023–2026*. Township of Esquimalt. <https://www.esquimalt.ca/sites/default/files/2024-10/Council%20priorities-202409-FINAL.pdf>

Township of Esquimalt. (2018, June). *Official Community Plan*. Township of Esquimalt. [https://www.esquimalt.ca/sites/default/files/docs/business-development/OCP/Esquimalt\\_OCP\\_2020-01-09.pdf](https://www.esquimalt.ca/sites/default/files/docs/business-development/OCP/Esquimalt_OCP_2020-01-09.pdf)

Trein, P. (2017). *Coevolution of policy sectors: A comparative analysis of health care and public health*. *Public Administration*. <https://doi.org/10.1111/padm.12323>

Tremblay, D., Gowsy, S., Riffon, O., Boucher, J.-F., Dubé, S., & Villeneuve, C. (2021). *A systemic approach for sustainability implementation planning at the local level by SDG target prioritization: The case of Quebec City*. *Sustainability*, 13(5), 2520. <https://doi.org/10.3390/su13052520>

United Cities and Local Governments. (2017, February). *German municipalities begin to localize the SDGs*. United Cities and Local Governments. <https://www.uclg.org/en/media/news/insight-german-municipalities-begin-localize-sdgs>

United Cities and Local Governments. (2018, July). *Towards the localization of the SDGs*. United Cities and Local Governments. [https://gold.uclg.org/sites/default/files/uploaded/hlpf\\_2023.pdf](https://gold.uclg.org/sites/default/files/uploaded/hlpf_2023.pdf)

United Nations Department of Economic and Social Affairs. (2020, October). *Global guiding elements for voluntary local reviews (VLRs) of SDG implementation*. United Nations. [https://sdgs.un.org/sites/default/files/2020-10/GlobalGuidingElementsforVLRs\\_FINAL.pdf](https://sdgs.un.org/sites/default/files/2020-10/GlobalGuidingElementsforVLRs_FINAL.pdf)

United Nations Department of Economic and Social Affairs. (2025, April). *Voluntary Local Reviews*. United Nations. <https://sdgs.un.org/topics/voluntary-local-reviews>

United Nations Development Programme. (2022, September). *Budgeting for the SDGs: Modular handbook*. United Nations Development Programme. <https://sdgfinance.undp.org/resource-library/budgeting-sdgs-modular-handbook-0>

United Nations Economic Commission for Europe. (2022, March). *Guidelines for the development of voluntary local reviews in the ECE Region*. United Nations Economic Commission for Europe. <https://unece.org/sites/default/files/2023-03/UNECE%20VLR%20guidelines%20ENG.pdf>

United Nations Human Rights Office of the High Commissioner. (2021, July). *Voluntary National Reviews*. United Nations Human Rights Office of the High Commissioner. <https://www.ohchr.org/en/sdgs/voluntary-national-reviews>

United Nations Human Settlements Programme. (2022, December). *Multilevel governance for SDG localization*. United Nations Habitat. [https://uploads-ssl.webflow.com/624c56b35ab98eb3101d5995/63986d986ba64f50831593f2\\_MLG%20for%20SDG%20localization\\_Final%20report\\_06122022\\_small.pdf](https://uploads-ssl.webflow.com/624c56b35ab98eb3101d5995/63986d986ba64f50831593f2_MLG%20for%20SDG%20localization_Final%20report_06122022_small.pdf)

United Nations Institute for Training and Research. (2024, November). *CIFAL Global Network*. United Nations Institute for Training and Research. <https://www.unitar.org/sustainable-development-goals/people/our-portfolio/cifal-global-network>

United Nations. (2024, September). *Summit of the Future*. United Nations. [https://www.un.org/en/summit-of-the-future?gad\\_source=1&gclid=CjwKCAjwmaO4BhAhEiwA5p4YL4Waw-2KUzHT8ZeNwFj52E1Ca-IA08y7C1KbEJ\\_48BTp-LtgTzqKR0cVWkQAvD\\_BwE](https://www.un.org/en/summit-of-the-future?gad_source=1&gclid=CjwKCAjwmaO4BhAhEiwA5p4YL4Waw-2KUzHT8ZeNwFj52E1Ca-IA08y7C1KbEJ_48BTp-LtgTzqKR0cVWkQAvD_BwE)

United Nations. (2015, September). *Transforming our world: The 2030 Agenda for Sustainable Development*. United Nations. <https://sustainabledevelopment.un.org/content/documents/21252030%20Agenda%20for%20Sustainable%20Development%20web.pdf>

United Nations Press. (2012, April). *Our struggle for global sustainability will be won or lost in cities, ' says Secretary-General, at New York event*. United Nations Press. <https://press.un.org/en/2012/sgsm14249.doc.htm>

United Nations News. (2023, September). *UN General Assembly adopts declaration to accelerate SDGs*. United Nations News. <https://news.un.org/en/story/2023/09/1140857>

United Nations Stats. (2021, September). *The Sustainable Development Goals Report 2021*. United Nations Stats. <https://unstats.un.org/sdgs/report/2021/>

United Nations Stats. (2024, June). *The Sustainable Development Goals Report 2024*. United Nations Stats. <https://unstats.un.org/sdgs/report/2024/>

University of Victoria. (2024, November). *Ranking and Reputation*. University of Victoria.  
<https://www.uvic.ca/about-uvic/rankings-reputation/index.php>

Urban Action Lab. (2023, June). *Urban Action Innovation Lab*. Urban Action Lab.  
<https://www.ual.mak.ac.ug/>

Valencia, S. C., Simon, D., Croese, S., Nordqvist, J., Oloko, M., Sharma, T., Buck, N. T., & Versace, I. (2019). *Adapting the Sustainable Development Goals and the New Urban Agenda to the city level: Initial reflections from a comparative research project*. *International Journal of Urban Sustainable Development*, 11(1), 4–23. <https://doi.org/10.1080/19463138.2019.1573172>

Wendling, L. A., Huovila, A., Castell-Rüdenhausen, M. Z., Hukkalainen, M., & Airaksinen, M. (2018). *Benchmarking nature-based solutions and smart city assessment schemes against the sustainable development goal indicator framework*. *Frontiers in Environmental Science*, 6, 1–18.  
<https://doi.org/10.3389/fenvs.2018.00069>

Yin, R. K. (2011, August). *Applications of case study research*. Sage Publications.  
<https://uk.sagepub.com/en-gb/eur/applications-of-case-study-research/book235140>

Yin, R. K. (2013, April). *Case study research: Design and methods*. Sage Publications.  
[https://iwansuharyanto.wordpress.com/wp-content/uploads/2013/04/robert\\_k-yin\\_case\\_study\\_research\\_design\\_and\\_mebookfi-org.pdf](https://iwansuharyanto.wordpress.com/wp-content/uploads/2013/04/robert_k-yin_case_study_research_design_and_mebookfi-org.pdf)

## Appendix 1: CRD Demographics

<b>Municipality</b>	<b>Population</b>	<b>Median Income</b>	<b>Indigenous Population</b>	<b>Citizenship</b>	<b>Immigrants</b>	<b>Visible Minority</b>
<b>Victoria</b>	91,867	43,200	4,365	80,110	17,580	14,860
<b>Saanich</b>	117,735	44,800	4,015	105,170	26,045	28,845
<b>Oak Bay</b>	17,990	52,400	345	16,550	3,855	2,260
<b>Esquimalt</b>	17,533	44,800	970	16,190	2,640	2,365
<b>Langford</b>	46,584	42,860	2,685	7,285	7,285	7,660
<b>Colwood</b>	18,961	48,800	920	17,990	2,380	1,985
<b>Central Saanich</b>	17,385	49,600	655	16,555	2,780	1,450
<b>Sooke</b>	15,086	43,200	1,065	14,515	1,750	775
<b>Sidney</b>	12,318	44,000	395	11,210	2,675	1,045
<b>North Saanich</b>	12,235	52,000	340	11,795	2,030	790
<b>View Royal</b>	11,575	50,400	670	10,470	2,070	1,980
<b>Metchosin</b>	5,067	46,800	225	4,550	640	190
<b>Highlands</b>	2,482	50,000	120	2,580	310	170
<b>Salt Spring Island</b>	11,635	38,000	415	10,700	2,465	665
<b>Juan de Fuca</b>	5,132	300	5,120	4,915	840	175
<b>Southern Islands</b>	6,101	225	6,040	5,785	1,270	225

Source of demographic information: StatsCan (2021)

## Appendix 2: UN DESA VLR Select Cities

Year	Region	Country	Language	Population	# of Municipalities	Region
2023	Municipality of Agadir	Morocco	English	421,844 (2014)	N/A	
2023	Beheira Governorate	Egypt	English	6,277 million (Jan 2018)		
2023	City of Bergen	Norway	English	271,949 (2014)	8 boroughs	
2023	Brisbane City Council	Australia	English	1,242,825 (2021 census)		
2023	City of Buenos Aires	Argentina	English	15,618,000 (2024)		
2023	Fayoum Governorate	Egypt	English	3,848,708 (2020)		
2023	City of Ghent	Belgium	English	265,086 (2022)		14 Europe
2023	Municipality of Gladsaxe	Denmark	English	69,681 (2019)		
2023	Government of the State of Hawai'i	United States	English	1,439,399 (2023)		
2023	City of Helsinki	Finland	English	631,695 (2016)	4	
2023	City Council of Lviv	Ukraine	English	717,273 (2022)	9	
2023	Municipality of Mafra	Portugal	English	86,515 (2021)	11 Fregesias. = Twin towns	
2023	City of Matosinhos	Portugal	English	172,000 ( 2021)	N/A	
2023	City of Montevideo	Uruguay	Spanish	N/A		
2023	City of Francisco Morato	Brazil	English	177,633 (2020)	N/A	
2023	City of Oslo	Norway	English	634,293 (2014)	N/A	
2023	Government of the State of Pará	Brazil	English	7,792,561 (2012)		
2023	Port Said Governorate	Egypt	English	764,499 (2019)	8 regions	Africa
2023	Government of the State of Puebla	Mexico	Spanish	N/A		
2023	Municipality of Sepang	Malaysia	English	325,244 (2020)	N/A	
2023	Government of the State of Mexico	Mexico	Spanish	N/A		
2023	City of Tizayuca	Mexico	Spanish	N/A		
2023	Tokyo Metropolitan Government	Japan	English	40.8 million (2023)		
2023	Municipality of Utrecht	Netherlands	English	367,951 (2023)	26 TBC	
2023	City of Vantaa	Finland	English	216,973 (2016)	N/A	
2022	City of Alor Gajah	Malaysia	English	21,267 (2010)		
2022	City of Amman	Jordan	English	4,008 million (2015)		
2022	City of Amsterdam	Netherlands	English	821,752 (2015)		30
2022	City of Barcelona	Spain	English	1.62 million (2018)		

31	2022 City of Barueri	Brazil	English	276,982 (2020)	N/A	
32	2022 Basque Country Government	Spain	English	2,222,164 (2023)		
33	2022 City of Bonn	Germany	English	327,258 (2019)		4
34	2022 City of Buenos Aires	Argentina	English	15,618,000 (2024)		
35	2022 City of Cascais	Portugal	English	214,124 (2023)	N/A	
36	2022 Cordoba Province Government	Argentina	English	3.86 million (2023)		
37	2022 City of Montevideo	Uruguay	Spanish	N/A		
38	2022 City of Bristol	United Kingdom	English	467,099 (2019)		10 United Kingdom
39	2022 City of Dortmund	Germany	English	587,010 (2019)	N/A	
40	2022 City of Dusseldorf	Germany	English	619,294 (2019)	10 boroughs	
41	2022 Municipality of El Alto	Bolivia	Spanish	N/A		
42	2022 Municipality of Filadelfia	Paraguay	English	1,576 million (2021)		
43	2022 City of Ghent	Belgium	English	265,086 (2022)		14
44	2022 Municipality of Gladsaxe	Denmark	English	69,681 (2019)		
45	2022 City of Kiel	Germany	English	247,548 (2019)	N/A	
46	2022 City of Kuala Lumpur	Malaysia	English	1,808 million (2017)		
47	2022 Municipality of La Paz	Bolivia	Spanish	N/A		
48	2022 Region of Lombardy	Italy	English	10.06 million (2019)		
49	2022 City of Melaka	Malaysia	English	579,000 (2019)		4 Asia
50	2022 City of Melbourne	Australia	English	5.078 million (2019)		
51	2022 City of Mixco	Guatemala	Spanish	N/A		
52	2022 City of Mwanza	Tanzania	English	1,378,014 (2024)		
53	2022 Government of the State Oaxaca	Mexico	Spanish	N/A		
54	2022 Government of the State of Pará	Brazil	English	7,792,561 (2012)		
55	2022 Municipality of Partido de la Costa	Argentina	Spanish	N/A		
56	2022 City of Pereira	Colombia	Spanish	N/A		
57	2022 Municipality of Rio Grande	Argentina	Spanish	N/A		
58	2022 Municipality of San Justo	Argentina	Spanish	N/A		
59	2022 City of San Justo	Argentina	Spanish	N/A		
60	2022 Municipality of Santa Cruz de la Sierra	Bolivia	Spanish	N/A		
61	2022 Municipality of Santa Fe	Argentina	Spanish	N/A		
62	2022 City of Santa Fe	Argentina	Spanish	N/A		
63	2022 Government of the State of São Paulo	Brazil	English	44,420,459 (2022)		
64	2022 State of Selangor	Malaysia	English	7,205,300 (2022)		
65	2022 City of Tampere	Finland	English	226,696 (2016)		8
66	2022 Province of Tierra del Fuego	Argentina	Spanish	N/A		
67	2022 City of Toyota	Japan	English	422,542 (2015)	N/A	
68	2022 City of Turku	Finland	English	186,756 (2016)		11 Europe
69	2022 City of Vicuña Mackenna	Argentina	Spanish	N/A		
70	2022 Municipality of Villa María	Argentina	Spanish	N/A		
71	2022 City of Yangzhou	China	English	2,131,000 (2023)		
72	2022 Municipality of Yerba Buena	Argentina	Spanish	N/A		
73	2022 Thunder Bay	Canada	English	110,172 (2017)		6 Canada
74	2021 City of Subang Jaya	Malaysia	English	205,000 (2017)	N/A	
75	2021 Pará State Government	Brazil	English	7,792,561 (2012)		
76	2021 Asker municipality	Norway	English	58,338 (2014)		
77	2021 City of Helsinki	Finland	English	631,695 (2016)		4
78	2021 City of Ghent	Belgium	English	265,086 (2022)		14
79	2021 Government of the State of Tabasco	Mexico	Spanish	N/A		
80	2021 Municipalidad de Lima	Peru	Spanish	N/A		
81	2021 Government of the State of Durango	Mexico	Spanish	N/A		
82	2021 City of Los Angeles	United States	English	3,849 million (2021)		
83	2021 Government of Mexico City	Mexico	Spanish	N/A		
84	2021 City of Orlando	United States	English	309,154 (2021)	7 districts, 13 municipalities	United States
85	2021 Government of the State of Merida	Mexico	Spanish	N/A		
86	2021 Government of the State of Mexico	Mexico	Spanish	N/A		
87	2021 City of Vantaa	Finland	English	216,973 (2016)	N/A	
88	2021 Municipality of Gladsaxe	Denmark	English	69,681 (2019)		
89	2021 City of Shah Alam	Malaysia	English	189,000 (2017)	N/A	
90	2021 Tokyo Metropolitan Government	Japan	English	40.8 million (2023)		

91	2021 City of Barcelona	Spain	English	1.62 million (2018)		
92	2021 Basque Country Government	Spain	English	2,222,164 (2022)		
93	2021 Municipality of Bragado	Argentina	Spanish	N/A		
94	2021 City of Buenos Aires	Argentina	Spanish	N/A		
95	2021 City of Cape Town	South Africa	English	4.618 million (2020)		
96	2021 Province of Catamarca	Argentina	Spanish	N/A		
97	2021 Province of Chaco	Argentina	Spanish	N/A		
98	2021 Province of Chubut	Argentina	Spanish	N/A		
99	2021 Province of Corrientes	Argentina	Spanish	N/A		
100	2021 Province of Entre Rios	Argentina	Spanish	N/A		
101	2021 Guadalajara	Mexico	Spanish	N/A		
102	2021 Province of DKI Jakarta	Indonesia	English	10.56 million (2020)		
103	2021 Province of La Pampa	Argentina	Spanish	N/A		
104	2021 Province of La Rioja	Argentina	Spanish	N/A		
105	2021 City of London	United Kingdom	English	8.982 million (2019)		
106	2021 Province of Misiones	Argentina	Spanish	N/A		
107	2021 Province of Neuquén	Argentina	Spanish	N/A		
108	2021 City Council of Penang Island	Malaysia	English	794,313 (in 2020)	N/A	
109	2021 Province of Salta	Argentina	Spanish	N/A		
110	2021 Province of San Juan	Argentina	Spanish	N/A		
111	2021 Province of Santa Fe	Argentina	Spanish	N/A		
112	2021 City of São Paulo	Brazil	English	12.33 million (2020)		
113	2021 District of Seodaemun-gu	South Korea	English	317,209 [2020]	14 *administrative don Asia	
114	2021 City of Stuttgart	Germany	English	634,830 (2019) or 2.7 mil region	23 districts	
115	2021 City of Surabaya	Indonesia	English	3,088,748 (2024)		
116	2021 City of Suwon	South Korea	English	1,241 million (2019)		
117	2021 Province of Tucumán	Argentina	Spanish	N/A		
118	2021 Viken County	Norway	English	1,213 million (2019)		
119	2021 City of Winnipeg	Canada	English	749,534 (2017)	17 Canada	
120	2021 City of Yokohama	Japan	English	3,725 million (2015)		
121	2021 City of Malmo	Sweden	English	344,166 (2019)		5
122	2021 City of Stockholm	Sweden	English	975,551 (2020)		
123	2021 City of Helsingborg	Sweden	English	112,496 (2019)		31
124	2021 Government of Yiwu	China	English	1,859,390 (2023)		
125	2021 Kelowna	Canada	English	132,084 (2017)		4
126	2020 Basque Country Government	Spain	Basque	N/A		
127	2020 City of Bonn	Germany	English	327,258 (2019)		4
128	2020 City of Barcelona	Spain	English	1.62 million (2018)		
129	2020 City of Espoo	Finland	English	272,193 (2016)		5
130	2020 City of Ghent	Belgium	English	265,086 (2022)		14
131	2020 City of Stuttgart	Germany	English	634,830 (2019)		23
132	2020 Montevideo City Government	Uruguay	English	1,774,000 (2023)		
133	2020 Government of Wallonia	Belgium	French	N/A		
134	2020 City of Pittsburgh	United States	English	300,431 (2021)	7 counties	
135	2020 São Paulo City Hall	Brazil	English	12,400,232 (2020)		
136	2020 City of Skiathos	Greece	English	4,883 (2011)		
137	2020 City of Pittsburgh	United States	English	300,431 (2021)	7 counties	
138	2020 City of Turku	Finland	English	186,756 (2016)		11
139	2020 City of Guangzhou	China	English	15.31 million (2019)		
140	2020 City of Buenos Aires	Argentina	English	15,490,000 (2023)		
141	2020 City of Dangjin	South Korea	English	168,955 Population [2020]	N/A	
142	2020 City of Hanover	Germany	English	532,163 (2016)		3
143	2020 State of Hawai'i	United States	English	1,442 million (2021)		
144	2020 Municipalities of Mozambique	Mozambique	English	6.1 million people (2020)		
145	2020 Shkodra	Albania	English	200,007 (2020)	11 Europe	
146	2020 Government of the State of Pará	Brazil	English	7,792,561 (2012)		
147	2020 Government of the State of Yucatan	Mexico	English	2,320,898 (2020)		
148	2019 São Paulo State Government	Brazil	English	46,004,000 (2022)		
149	2019 Basque Country Government	Spain	English	2,222,164 (2022)		
150	2019 City of Los Angeles	United States	English	3,849 million (2021)		

151	2019 Bristol City Council	United Kingdom	English	479,0001 (2021)		10
152	2019 City of Helsinki	Finland	English	631,695 (2016)		4
153	2019 City of Mexico	Mexico	English	N/A		
154	2019 City of New York	United States	English	8.468 million (2021)		
155	2019 Government of the State of Santana de Parnaiba	Brazil	Portuguese	N/A		
156	2019 City of Mannheim	Germany	English	309,370 (2019)		6
157	2019 City of Braga	Portugal	English	193,324 (2021)		14 Europe
158	2019 City of Buenos Aires	Argentina	English	15,490,000 (2023)		
159	2019 Government of the State Oaxaca	Mexico	English	4,132,148 (2020)		
160	2018 Basque Country Government	Spain	English	2,222,164 (2022)		
161	2018 Basque Country Government	Spain	English	2,222,164 (2022)		
162	2018 City of Kitakyushu	Japan	English	961,286 (2015)		
163	2018 Municipal Autonomous Government of La Paz	Bolivia	Spanish	N/A		
164	2018 Town of Shimokawa	Japan	English	3,836 (2008)		
165	2018 The generaliat Valencia	Spain	English	791,413 (2018)	34 comarcas, 542 municipalities and 3 provinces	
166	2018 Toyama City Government	Japan	English	413,938 (2020)	N/A	
167	2018 City of New York	United States	English	8.468 million (2021)		
168	2018 City of Suwon	South Korea	English	1.241 million (2019)		
169	2017 Local Government Unit - Cauayan City	Philippines	English	143,403 (2022)	25 barangays	
170	2017 Government of Wallonia	Belgium	English	3,658,975 (2022)		
171	2017 City of Sydney- Local Government	Australia	English	211,632 people (2022) or 5.3 n		33
172	2017 Basque Country Government	Spain	English	2,222,164 (2022)		
173	2017 Barcarena Municipality	Brazil	Portuguese	N/A		
174	2016 Ministry for Climate Protection, Environment, Agric	Germany	English	N/A		

## Appendix 3: Realist Synthesis of 11 VLRS

### Ghent VLR

<b><u>Ghent VLR:</u></b> (City of Ghent, 2023)	<b><u>Description:</u></b>
<b>SDG Targets:</b>	6, 13,14,15
<b>Partners:</b>	The City of Ghent collaborated with many stakeholders such as civil society, citizens, businesses, and knowledge institutions. These stakeholders are dependent on which SDG targets for strategic partnerships, e.g., De SLOEP vzw, Enchanté, Children First, etc.
<b>Partner Type, i.e., (Public sector, private sector, academia, NGO, etc:</b>	Civil society, constituents, private sector, and NGOs.
<b>Consultation Process:</b>	Note by the Mayor: “In Ghent, we leave no one behind, and together we move our city and its residents forward [...] Thank you to everyone who has contributed and is committed to our city and the people of Ghent.” Despite this statement regarding these contributions, how they were received is not transparent in this report.
<b>Policies/Strategies of Alignment:</b>	Integrating past policies, strategies, and best practices into creating a 5-year plan.
<b>Contextual Influence of Interventions:</b>	Ghent VLRS are based on the 4 thematic areas of the SDGs, i.e., Planet, People, Prosperity, and Partnerships. -2023 VLR is based on SDG Targets: 6, 13,14,15 (Focus on the Planet) Ghent's past sustainability reports focus areas: People (2021) and Prosperity (2022) The final report (2024) will show the evolution of the figures.
<b>Methodology:</b>	The City of Ghent plans to release an annual sustainability report over the 2020-2025 period, covering five editions. Each report will focus on specific Sustainable Development Goals (SDGs) aligned with the "5 Ps": People, Planet, Prosperity, Partnerships, and Peace. The approach includes:  <ol style="list-style-type: none"> <li>1. Establishing priorities for each SDG target.</li> <li>2. Identifying relevant collaborators to achieve these targets.</li> <li>3. Monitoring indicators sourced from various data sets, such as internal monitoring of CO2 emissions from 2013 to 2020.</li> </ol>

	<p>4. Employing an index scoring methodology (0-100) to gauge progress toward targets.</p> <p>5. Calculating an average score for each SDG based on individual target scores. For example, SDG 6 achieved a score of 64.</p> <p>6. Additionally, the report showcased notable projects in collaboration with diverse stakeholders, including community-based organizations, NGOs, the private sector, regional entities, other nations, and international organizations, all contributing to meeting SDG targets.</p>
<b>Implementation Adaptation:</b>	This is the 3rd VLR Ghent has released. Their final report in 2024 will show the evolution of the figures from the past 3 reports.

Port Said VLR

<b>Port Said VLR:</b> (City of Port Said, 2021)	<b>Description:</b>
<b>SDG Targets:</b>	All SDGs
<b>Partners:</b>	Municipality of Port Said, National Ministry of Planning and Economic Development, Beheira Governorate, United Nations Development Program, Egypt
<b>Partner Type, i.e., (Public sector, private sector, academia, NGO, etc):</b>	National government, and UNDP.
<b>Consultation Process:</b>	Create workshops and focus groups to identify objectives per goal, identify partner entities in goal implementation, and conduct a SWOT analysis per goal.
<b>Policies/Strategies of Alignment:</b>	Review the degree of coverage of indicators at the national level, and local level based on the SDG localization report issued by the Ministry of Planning and Economic Development.
<b>Contextual Influence of Interventions:</b>	Review SDGs at the national level to create localized indicators
<b>Methodology:</b>	Adoption of Methodology from Rapid Integrated Assessment tool (RIA), and UNDP (4-stages)
	<p><b>4 Steps:</b></p> <p>1. <b>Preparatory Stage:</b></p>

	<ul style="list-style-type: none"> <li>Identifying the responsible party for preparing the report</li> <li>Stakeholder mobilization</li> <li>Identifying the scope of the VLR Preparatory</li> </ul> <p><b>2. Data Collection:</b></p> <ul style="list-style-type: none"> <li>Review of the SDG targets and indicators</li> <li>Review of the Voluntary National Reviews and other local reports</li> <li>Review of local SD indicators</li> <li>Organizing consultations, workshops and focus groups Data Collection</li> </ul> <p><b>3. Data Analysis and Report Writing:</b></p> <ul style="list-style-type: none"> <li>Data analysis</li> <li>Preparing a draft report</li> <li>Presenting the draft report to stakeholders</li> <li>Preparation of the final draft</li> </ul> <p><b>4. Showcasing and Report Publication:</b></p> <ul style="list-style-type: none"> <li>Final approval of the draft report</li> <li>Report publication</li> </ul>
<b>Implementation Adaptation:</b>	No implementation adaptations noted

Bristol VLR

<b>Bristol VLR:</b> (City of Bristol, 2022)	<b>Description:</b>
<b>SDG Targets:</b>	All SDGs
<b>Partners:</b>	Collaboration between University of Bristol students, staff from the Cabot Institute for the Environment, and the City Office hosted by Bristol City Council, and further consultations with the SDG Research and Engagement Associate and the SDG Alliance to create One City Plan.
<b>Partner Type, i.e., (Public sector, private sector, academia, NGO, etc):</b>	Academia, Public Sector, Education Charity
<b>Consultation Process:</b>	<ul style="list-style-type: none"> <li>Conducting interviews for identifying challenges faced by local authorities and cities in adopting and delivering the SDGs, interviews with council officers from a number of the UK's Core Cities and other local authorities active on the SDGs were</li> </ul>

	<p>undertaken.</p> <ul style="list-style-type: none"> <li>• A survey of SDG Alliance members was undertaken</li> </ul>
<b>Policies/Strategies of Alignment:</b>	Adaptation of One City Approach to create the One City Plan by linking it to the SDGs to establish a long-term vision and objectives.
<b>Contextual Influence of Interventions:</b>	Having already established a One City Approach, the Mayor said, 'If we didn't have a One City Approach, we would have had to create one.'
<b>Methodology:</b>	<p>The Bristol City Council's VLR is structured into two parts:</p> <p><b>1. Data Analysis:</b></p> <ul style="list-style-type: none"> <li>• Utilizing both quantitative and qualitative data, a team of researchers at the University of Bristol, supported by Bristol City Council staff, updated measurements for as many of the original 140 indicators from Bristol's 2019 VLR as possible.</li> <li>• Quantitative data was primarily sourced from publicly available datasets, including those from the Office for National Statistics, Public Health England, Department for Environment, Food and Rural Affairs, Nomis, and Bristol City Council.</li> <li>• The team accessed additional data through the Bristol City Council data team and used alternative datasets when necessary to indicate trends, particularly during the COVID-19 pandemic.</li> <li>• A data annex in the appendices presents data sources and trends from 2011 to 2022, although changes in statistical boundaries pose challenges, notably due to incorporating a wider area into datasets.</li> </ul> <p><b>2. Interviews and Surveys:</b></p> <ul style="list-style-type: none"> <li>• Interviews were conducted with council officers from various UK Core Cities and local authorities active on the SDGs to understand the challenges in adopting and delivering the SDGs.</li> <li>• Insights from these interviews shaped recommendations in the report on how local authorities can be better supported in SDG delivery.</li> <li>• A survey of SDG Alliance members and desk-based research provided information on partnership approaches used to deliver the SDGs, including projects independent of Bristol City Council.</li> </ul> <p>This approach provides a comprehensive analysis of both data-driven insights and stakeholder perspectives, informing recommendations for SDG implementation at the local level.</p>

<b>Implementation Adaptation:</b>	Bristol’s report mentioned potential challenges for Local Action such as an unstable fiscal context, data deficits to report on the SDGs, and the power of partnership coordination on a national/international level to coordinate and deliver action on the SDGs.
-----------------------------------	---

Melaka VLR

<b>Melaka VLR:</b> (City of Melaka, 2022)	<b>Description:</b>
<b>SDG Targets:</b>	3, 8, 11, 13, 14, and 16
<b>Partners:</b>	The City of Melaka VLR has been collaboratively prepared by Majlis Bandaraya Melaka Bersejarah (Melaka Historical City Council) and Urbanice Malaysia
<b>Partner Type, i.e., (Public sector, private sector, academia, NGO, etc):</b>	Public Sector (National, and Municipal)
<b>Consultation Process:</b>	The development of the report involves extensive stakeholder engagement, including the City Council, technical departments of Melaka State agencies, civil society, the private sector, and academicians. This engagement encompasses consultation sessions, data collection, analysis, verification, and validation to ensure a comprehensive understanding of various inputs and information. Additionally, a survey is conducted to assess sustainability performance perception, highlighting areas for improvement and identifying strengths within the city.
<b>Policies/Strategies of Alignment:</b>	The Alignment to the National Malaysia SDG Cities program reinforces Malaysia’s sustainable development policies. This initiative prioritizes transformative commitments, emphasizing governance structure and spatial development. The program provides a framework for local policies, encouraging a bottom-up approach by local and regional governments to support SDG achievement in Malaysia.
<b>Contextual Influence of Interventions:</b>	VLR Contains a section on city profiling, the historical context of the city, demographic profile, land use, economics, employment, connectivity (roads), public facilities, governance, urban finance, city strengths, and challenges section
<b>Methodology:</b>	The methodology comprises six key steps:  <b>A. City Baselines:</b>

	<ul style="list-style-type: none"> <li>● Define the boundaries and scope of the city's sustainability efforts.</li> <li>● Develop an SDG database to monitor progress.</li> <li>● Customize local indicators to measure sustainability performance.</li> <li>● Evaluate performance using both objective measures and perception surveys.</li> </ul> <p><b>B. Enabling A Sustainable Ecosystem:</b></p> <ul style="list-style-type: none"> <li>● Review existing policies, frameworks, and institutions.</li> <li>● Evaluate the effectiveness of the ecosystem in supporting sustainable development.</li> </ul> <p><b>C. Mapping and Alignment:</b></p> <ul style="list-style-type: none"> <li>● Identify stakeholders involved in SDG implementation.</li> <li>● Align city governance and initiatives with relevant frameworks (NUA, SDGs, RMK-12, Melaka State framework).</li> <li>● Identify areas for alignment improvement.</li> </ul> <p><b>D. Gap Analysis:</b></p> <ul style="list-style-type: none"> <li>● Recognize gaps between the current state and sustainable targets.</li> <li>● Analyze system challenges, strengths, and weaknesses.</li> <li>● Identify opportunities to address gaps and enhance performance.</li> </ul> <p><b>E. Collaboration Expertise:</b></p> <ul style="list-style-type: none"> <li>● Engage stakeholder experts, consultants, and institutions.</li> <li>● Leverage technical expertise for specialized knowledge and data.</li> </ul> <p><b>F. Review and Integration:</b></p> <ul style="list-style-type: none"> <li>● Solicit feedback from stakeholders on VLR findings.</li> <li>● Allow for periodic reviews and updates to maintain the VLR as a dynamic document.</li> </ul>
<b>Implementation Adaptation:</b>	No adaptations noted.

Turku VLR

<b>Turku VLR:</b> (City of Turku, 2022)	<b>Description:</b>
<b>SDG Targets:</b>	All SDGs

<b>Partners:</b>	The City of Turku, Sitra (public foundation), ICLEI (NGO), the University of Turku, and Valonia, but Broad Partnerships: National partners, European Partners, International Partners, and community-based partners.
<b>Partner Type, i.e., (Public sector, private sector, academia, NGO, etc):</b>	Public Sector (Municipal, Regional, International), NGO, Academia.
<b>Consultation Process:</b>	The report was a collaborative effort involving key stakeholders responsible for the city's steering documents, including the director of strategy, service experts, the spearhead project director, and information services and communications personnel. The content of the report was accepted by the Mayors and City Board on June 6, 2022.
<b>Policies/Strategies of Alignment:</b>	A Mayor's Programme was developed alongside the City Strategy to outline priorities for the 2021–2025 Turku Council term. Additionally, city-level steering documents detail the implementation of strategic objectives, encompassing the Voluntary Local Review (VLR), ownership policy, master plan, climate and environmental program, procurement strategy, housing and land use program, and water management development plan.
<b>Contextual Influence of Interventions:</b>	Based on many indicators, Finland has already made significant progress on the SDGs. However, some challenges persist, especially in the areas of responsible consumption and production, climate action, life below water, biodiversity loss, and global responsibility.
<b>Methodology:</b>	The assessment of the first VLR highlighted the absence of a jointly agreed city-level set of indicators. Efforts were made to align the VLR with the City Strategy and Mayor's Programme, which define priorities for the 2021–2025 Turku Council term. Additionally, alignment with various steering documents and spearheaded projects was emphasized. The aim is to align the VLR report with strategic documents to create a comprehensive roadmap for achieving all 17 SDGs by 2030.
<b>Implementation Adaptation:</b>	The implementation adaptation involves creating the 2nd VLR with a focus on the future. Significant changes have occurred in the city, including reforms to the management system and organizational structure, updates to the city's strategy, development of a new Mayor's Programme, and creation of new spearhead projects and plans. The second VLR report functions as the city's roadmap for the 2030 Agenda.

<b><u>Thunder Bay VLR:</u></b> (City Thunder Bay, 2022)	<b><u>Description:</u></b>
<b>SDG Targets:</b>	All SDGs
<b>Partners:</b>	Funded by the Social Sciences and Humanities Research Council of Canada, and Lakehead University.
<b>Partner Type, i.e., (Public sector, private sector, academia, NGO, etc):</b>	Public Sector (Federal), and Academia.
<b>Consultation Process:</b>	The VLR was assembled after many months of development and regular meetings with core partners.
<b>Policies/Strategies of Alignment:</b>	<u>After</u> indicators were established, contextual information and comparisons to Provincial or National level data were established where applicable.
<b>Contextual Influence of Interventions:</b>	A historical, demographic, and overall quality of life section is provided to establish a contextual understanding.
<b>Methodology:</b>	The Thunder Bay VLR process commenced with a thorough review of academic and gray literature to gather insights into strategies, processes, and methods for conducting and reporting VLRs. Additionally, VLR reports from other locations and guides for conducting VLRs were examined to distill useful information for assembling a VLR in Thunder Bay. Subsequently, an environmental scan was conducted to identify existing data sources relevant to the SDGs, utilizing data from various partners and organizations. Data gaps were identified and further investigated with partner support. The team then selected local data representative of the 17 SDGs and their targets, assessing them for relevance to global targets, equity and diversity commitment, and local applicability. In cases where global targets were unsuitable for the local context, efforts were made to adapt or establish new targets specific to Thunder Bay. This process yielded a preliminary set of localized SDG indicators for the region. Each indicator underwent evaluation based on five quality assurance criteria: validity, reliability, credibility, preciseness, and accessibility.
<b>Implementation Adaptation:</b>	Statement: “We believe that this, and future iterations of the VLR, will be of great value to the community not only as a resource but also as a

	creator of opportunities for municipal and civic engagement to make Thunder Bay a healthier, happier, safer, and more sustainable place for all to live, learn, work, and play”. In addition, Thunder Bay provides 6 recommendations for future adaptations of the VLRs to consider.
--	--

Orlando VLR

<b>Orlando VLR:</b> (City of Orlando, 2021)	<b>Description:</b>
<b>SDG Targets:</b>	2, 3, 6, 7, 10, 12, 13, 15, and 17
<b>Partners:</b>	The City of Orlando and ICLEI-Local Governments for Sustainability USA (ICLEI)  Additionally, non-profits, academia, governments, and corporations have assisted in advancing Orlando’s sustainability through partnerships and collaborations.
<b>Partner Type, i.e., (Public sector, private sector, academia, NGO, etc):</b>	Public Sector (Municipal, and State), NGO, Non-for-profit, Academia, Private Sector
<b>Consultation Process:</b>	Over the years, community members and business representatives actively engaged in the Mayor’s Green Works Orlando Task Force through roundtable discussions, public workshops, and online community-wide surveys. The Task Force convened quarterly between 2017-2018 to review goals and strategies, addressing areas such as transit, air travel, and collaboration with academia. Their input contributed to refining focus areas and recommending strategies. The Task Force maintains its involvement in the implementation of these strategies, ensuring ongoing collaboration and progress towards sustainability goals.
<b>Policies/Strategies of Alignment:</b>	Following step 4 of the VLR methodology, alignment with existing City commitments and coordinating with policy owners and community stakeholders. Additionally, in the City’s Pledge, they stated: “to identify how existing strategies, programs, data, and targets align with the SDGs”.

<p><b>Contextual Influence of Interventions:</b></p>	<p>Orlando became part of the SDG Leadership Cities group in 2018, joining international communities committed to advancing the Global Goals locally. The city furthered its engagement by attending the UN High-level Political Forum in New York the following year, representing a local consortium of SDG actors alongside ICLEI-Local Governments for Sustainability USA. Partnering with ICLEI, Orlando conducted an SDG mapping process to enhance the focus of its Green Works Orlando initiative on global contributions. Orlando's Voluntary Local Review (VLR) draws inspiration from its peers in the SDG Leadership Cities while introducing its own innovative approaches. Notably, Orlando's VLR is among the first developed by a medium-sized city in the US, demonstrating leadership and paving the way for communities of all sizes to contribute to the Global Goals.</p>
<p><b>Methodology:</b></p>	<p>The methodology for the Orlando VLR involves adapting UN indicators used by national governments to track progress on the SDGs. These indicators cover various metrics related to health, economic prospects, environment, equality, and more, providing a comprehensive framework for monitoring progress. The VLR process in Orlando follows the City of Los Angeles's <u>4-step approach</u> to localize the SDGs. This process identified a set of 47 indicators for 9 priority SDGs that are both locally relevant and have available data. The steps include:</p> <ol style="list-style-type: none"> <li><b>1. Sorting:</b> Assessing whether the target as written applies to the city.</li> <li><b>2. The Golden Rule:</b> For targets not directly applicable, determining if they can be made relevant through language or contextual adjustments while preserving the original intent and vision.</li> <li><b>3. Revision or Replacement:</b> Modifying target language as necessary to reflect local values and context.</li> <li><b>4. Validation:</b> Ensuring the revised targets align with existing city commitments and coordinating with policy owners and community stakeholders for validation.</li> </ol>
<p><b>Implementation Adaptation:</b></p>	<p>Future iterations may consider focussing on a VLR for the remaining unexplored SDGs, i.e., 1, 4, 5, 8, 9, 11, 14, and 16.</p>

Seodaemun-Gu VLR

<p><b>Seodaemun-gu VLR:</b> (District of Seodaemun-gu, 2021)</p>	<p><b>Description:</b></p>
<p><b>SDG Targets:</b></p>	<p>SDG 2, 3, 8, 11, 12, and 16</p>
<p><b>Partners:</b></p>	<p>Sustainable Development Committee, composed of 41 members (Ex-</p>

	<p>officio: 8, Commissioned: 33) as organized by the Seodaemun-gu District.</p> <p>Positions of the ex-officio: Governor (Co-chairman), Director of Civil Administration Bureau, Director of Planning and Finance Bureau, Director of Environment and Life Bureau, Director of Welfare and Culture Bureau, Director of Urban Regeneration Bureau, Director of Safety, Construction, and Traffic Bureau, and Director of Public Health Center - Commissioned positions: Anyone with profound knowledge and experience in sustainable development among the members of district council, civil organizations, educational sector, industrial sector, etc.</p> <p>The Seodaemun-gu Sustainable Development Committee consists of four divisions: 1) Public Health and Welfare; 2) Systems and Economy; 3) Climate and Environment; and 4) Education and Culture.</p>
<p><b>Partner Type, i.e., (Public sector, private sector, academia, NGO, etc):</b></p>	<p>Public Sector (Municipal, and Federal), Academia, Private Sector, Civil Society</p>
<p><b>Consultation Process:</b></p>	<ul style="list-style-type: none"> <li>● Conduct a survey to gather opinions from citizens on the SDGs</li> <li>● Operate a site to have an open discussion on SDG topics</li> <li>● Subscribe to interested parties for sustainability discussion and communication, e.g., newsletter</li> </ul>
<p><b>Policies/Strategies of Alignment:</b></p>	<p>The Seodaemun-gu Fundamental Plans for Sustainable Development was established to set sustainability as the common principle of the Seodaemun-gu administration from 2019 to 2023 (5 years) to suggest the directions for major policies and programs.</p>
<p><b>Contextual Influence of Interventions:</b></p>	<p>The Korean Sustainable Development Goals (K-SDGs) were introduced in 2018 to complement the 3rd Sustainable Development Framework Plan, aligning with the UN SDGs adopted in 2015. Many local governments, including Seodaemun-gu, also embraced the SDGs to advance local sustainability efforts. Seodaemun-gu established its Sustainable Development Framework Plan in September 2019, followed by the Sustainable Development Implementation Plans in December of the same year. These plans included vision, strategies, implementation targets, unit targets, and sustainable development indicators. Additionally, Seodaemun-gu enacted the Seoul Seodaemun-gu Sustainable Development Framework Ordinances in April 2020 and formed the Sustainable Development Committee in 2021. However, a comparison of Seodaemun-gu's indicators with the UN SDGs <u>revealed</u></p>

	<p><u>inconsistencies with six goals</u>, necessitating a revision of the existing framework to better monitor progress toward sustainable development.</p>
<p><b>Methodology:</b></p>	<p><b><u>3 Step Methodology:</u></b></p> <p><b>1. Contents of SDGs:</b></p> <ul style="list-style-type: none"> <li>● Explanation of Seodaemun-gu's SDGs establishment system and process, including its significance and limitations.</li> <li>● Comparative analysis of SDGs systems, implementation governance, and evaluation systems of local governments in Korea and abroad.</li> <li>● Description of Seodaemun-gu's vision, core-oriented strategies, goals, targets, indicators, and policy challenges for sustainable development.</li> <li>● Discussion and communication among Seodaemun-gu's interested groups regarding the draft SDGs.</li> <li>● Survey of citizen priorities concerning the draft SDGs.</li> <li>● Finalization and identification of future challenges for the SDGs.</li> </ul> <p><b>2. How to Establish SDGs:</b></p> <ul style="list-style-type: none"> <li>● Conducting case studies and research to compare SDGs establishment systems of local governments in Korea and abroad.</li> <li>● Holding expert advisory meetings to review and gather opinions on Seodaemun-gu's draft sustainable development vision, strategies, goals, targets, indicators, and policy challenges.</li> <li>● Utilizing a discussion and communication platform for interested groups to provide feedback.</li> <li>● Conducting a survey to ascertain citizen priorities regarding the SDGs.</li> <li>● Finalizing the draft of Seodaemun-gu's SDGs for the period 2019-2023, including vision, strategies, goals, targets, indicators, and policy challenges.</li> </ul> <p><b>3. Seodaemun-gu SDGs Establishment System and Process:</b></p> <ul style="list-style-type: none"> <li>● A detailed explanation of the specific system and process employed by Seodaemun-gu for establishing its SDGs.</li> </ul>
<p><b>Implementation Adaptation:</b></p>	<p>The Seodaemun-gu Framework Ordinances on Sustainable Development established a new evaluation system aimed at renewing framework plans every five years, updating implementation plans, and producing sustainability evaluation reports every two years. Five</p>

	<p>improvement measures for Seodaemun-gu sustainable development have been proposed:</p> <ol style="list-style-type: none"> <li>1. Emphasizing the expansion of value as a common goal.</li> <li>2. Transitioning to a goal-oriented system.</li> <li>3. Strengthening the role of network governance.</li> <li>4. Developing indicators and platforms for evaluation.</li> <li>5. Segregating the evaluation system.</li> </ol> <p>The sustainability of Seodaemun-gu hinges on the separate and collective efforts of its people, administration, and Sustainable Development Committee to implement and assess these suggested measures.</p>
--	---

Winnipeg VLR

<b>Winnipeg VLR: (IISD, 2022)</b>	<b>Description:</b>
<b>SDG Targets:</b>	1, 2, 3, 4, 8, 10, 11, 13, 16, and 17
<b>Partners:</b>	Peg Advisory Committee, VLR Advisory Committee, The Peg partnership benefits from IISD’s scientific expertise on research and data, and United Way Winnipeg’s expertise in inspiring social progress and connection to a network of community organizations.
<b>Partner Type, i.e., (Public sector, private sector, academia, NGO, etc:</b>	Think Tank, Non-for-profit, Civil Society,
<b>Consultation Process:</b>	Peg engaged with various stakeholders, including an Advisory Group and over 800 Winnipeggers, to select indicators tracking well-being across eight thematic areas. These consultations involved policymakers, data providers, and civil society members to ensure the chosen indicators were measurable, shareable, sensitive, stable, and continuously available. Additionally, Peg conducted interviews with key civil society organizations to understand the challenges of sustainable development progress in Winnipeg. Throughout the process, Winnipeg sought advice from its advisory committee on data availability, relevant legislation, and where to seek further guidance.
<b>Policies/Strategies of Alignment:</b>	Peg conducted a policy review of federal, provincial, and municipal policies associated with each relevant SDG.

<p><b>Contextual Influence of Interventions:</b></p>	<p>The report utilizes data from Peg, Winnipeg's community indicator system, to highlight the city's progress and identify areas for improvement in addressing policy challenges. While Peg's indicators have limitations, particularly concerning Indigenous people's human rights and well-being, they offer a unique perspective on life in Winnipeg. Winnipeg's VLR will be among the first in Canada, aligning with global efforts to localize the SDGs. The report emphasizes Peg's commitment to truth, reconciliation, and collaboration, aiming to address gaps in reflecting Indigenous perspectives and experiences. It provides a portrait of Winnipeg and its people, covering demographics, cultural diversity, historical context, economy, and the natural environment, with a specific focus on the Indigenous population.</p>
<p><b>Methodology:</b></p>	<p>The methodology for Winnipeg's Voluntary Local Review (VLR) involved several key steps:</p> <ol style="list-style-type: none"> <li><b>1. Localization of SDGs:</b> The Peg team cross-listed 57 local indicators with the 231 SDG indicators to align them with the global framework, ensuring each indicator corresponded with one or two SDGs.</li> <li><b>2. Review of International Best Practices:</b> The team examined international guidelines, particularly the United Cities and Local Governments/UN-Habitat's VLR Guidelines and the Shimokawa Method, to inform their approach.</li> <li><b>3. Unique Approach:</b> <ol style="list-style-type: none"> <li>i) Arms Length Approach: Winnipeg's VLR was developed independently of the municipal government, led by two NGOs, the International Institute for Sustainable Development and United Way Winnipeg, ensuring a level of independence.</li> <li>ii) Utilization of Local Data Platform: Instead of starting from scratch, the VLR utilized Peg, an existing local data platform aligned with the SDGs, providing a solid foundation for the report.</li> </ol> </li> <li><b>4. Data Collection and Analysis:</b> The methodology included a comprehensive policy review of relevant federal, provincial, and municipal policies associated with each SDG. Additionally, interviews with civil society organizations provided insights into the challenges faced in advancing sustainable development in Winnipeg.</li> </ol>

	<p><b>5. Consultation and Advisory Committee:</b> Throughout the process, advice and guidance were sought from an advisory committee to ensure alignment with local priorities, data availability, and legislation.</p> <p>Winnipeg's VLR is characterized by its data-driven approach, leveraging a well-established community indicator system to connect local priorities with the global SDGs while maintaining independence from the municipal government.</p>
<b>Implementation Adaptation:</b>	<p>Peg, Winnipeg's community indicator system, <u>currently lacks sufficient data coverage for seven of the SDGs</u>, notably SDG 14 and SDG 15, which hold significance from an Indigenous perspective. Despite their importance to Winnipeggers, these SDGs were not included in Peg's consensus on indicators developed in 2013. However, there are plans to engage with the community to update Peg's scope and mandate, with expectations that Peg's indicators will evolve to align with the SDGs. Furthermore, Peg indicators are proposed to form the basis of the preliminary evaluation framework for the City's long-term development strategy, OurWinnipeg 2045.</p>

Shkodra VLR

<b>Shkodra VLR:</b> (City of Shkodra, 2020)	<b>Description:</b>
<b>SDG Targets:</b>	1, 2, 3, 4, 5, 11, 12, and 17
<b>Partners:</b>	Municipality of Shkodra, Association of Albanian Municipalities, Hanns Seidel Foundation (Research Foundation)
<b>Partner Type, i.e., (Public sector, private sector, academia, NGO, etc):</b>	Public Sector (Municipal), Research Foundation/Think Tank
<b>Consultation Process:</b>	N/A (Unknown)
<b>Policies/Strategies of Alignment:</b>	Applies General local plans to create indicators
<b>Contextual Influence of Interventions:</b>	Note: only the Executive Summary was available in English, therefore, limited data was available.
<b>Methodology:</b>	To monitor the progress of these goals, Shkodra applies general local plans as a mechanism to create indicators that meet the objectives of the goals.

<b>Implementation Adaptation:</b>	No adaptations noted.
-----------------------------------	-----------------------

Braga VLR

<b><u>Braga VLR:</u></b> (City of Braga, 2019)	<b><u>Description:</u></b>
<b>SDG Targets:</b>	All SDGs
<b>Partners:</b>	The municipality of Braga has developed with various organizations, from universities, and associations, in addition to the important collaboration with NGOs, among others. Additionally, e Centro de Estudos e Sondagens da Universidade Católica (CESOP) helped implement the Municipal Sustainability Index in 2018.
<b>Partner Type, i.e., (Public sector, private sector, academia, NGO, etc):</b>	Public Sector (Municipal), Academia, NGOs, Civil Society
<b>Consultation Process:</b>	Stakeholder engagement to list citizens, associations, representatives of local governments, business sectors, institutions of higher education, and education to establish thematic priorities of the SDGs. How this “listening” was conducted remains unknown.
<b>Policies/Strategies of Alignment:</b>	The Municipality of Braga adapted its Annual Sustainability Report to monitor progress on the SDGs by implementing the Municipal Sustainability Index in 2018. This index identified 97 indicators related to 61 SDG targets to assess the degree of implementation and evaluate policy performance. In 2019, the project showed that Braga had already achieved 69% of the SDGs, indicating significant progress towards sustainable development goals.
<b>Contextual Influence of Interventions:</b>	Since the launch of the SDGs in 2015, Braga has aligned its activities with the 2030 agenda, viewing it as an opportunity for the city to address global challenges. This alignment is reflected in the implementation of sectoral action plans corresponding to specific SDGs, demonstrating Braga's commitment to contributing to sustainable development on a local level.
<b>Methodology:</b>	The methodology involves three key steps:  <b>1. Stakeholder Engagement:</b> This process entails actively listening to thematic priorities and SDGs aligned with the Municipality's strategy. It engages various stakeholders, including citizens, associations, local government representatives,

	<p>businesses, and educational institutions. The engagement process is designed to be multi-stakeholder, continuous, and collaborative over time.</p> <p><b>2. Annual Sustainability Report/Review:</b> This document serves as a reference for assessing the Municipality's performance and direction in achieving the SDGs. It reflects the control systems aligned with the Municipality's strategy and aggregates good practices related to sustainability and the SDGs, including the VLR.</p> <p><b>3. Strategic Plan for Sustainable Development 2030:</b> Collaborating with the University of Minho, multidisciplinary and intersectoral teams are developing strategic initiatives to accelerate the achievement of the SDGs. This plan aims to guide efforts towards sustainable development aligned with the SDGs over the next decade.</p>
<p><b>Implementation Adaptation:</b></p>	<p>No adaptations noted</p>

# Appendix 4: Colour-coded Analysis of 11 VLR Case Studies

VLR City	Goals	Depth	Indicator Process	Integration Across Municipalities	Bottom-Up/From SCOs	Standardized Reporting Format	Methodology	Adaptation	Policy Framework and Governance Structure	Policy Coherence	Stakeholder Engagement	Reference/Tank	Score
Osaka	4, 12, 14, 15	B	G	B	G (Based on 4 formal SCOs and 3	M (Adapt NBS to U.S.)	G	G	M	G	G	Civil society, consultants, private sector and NGOs.	21
Portland	All SCOs	B	M (color coded system)	B	B	M (Adapt NBS to U.S.)	G	B	M	G	G	National government, and DNDP	19
Boston	All SCOs	G	G (color coded system)	B	M	B	G	M	G	G	G	Academy, Public Sector Education Charly	22
Melaka	All SCOs	B	G (RMST approach)	B	G	M (Adapt NBS to U.S.)	G	B	G	G	G	Public Sector (National and Municipal)	20
Turku	All SCOs	B	B	B	M	B	B	M	M	G	G	Public Sector (Municipal, Regional, International), NGO, Academia, Community-based	17
Thunder Bay	All SCOs	G	G (color coded system)	B	G	M (Adapt other U.S. to TB)	M	M	G	G	G	Public Sector (Federal and Academic)	25
Osaka	SCOs 2, 3, 4, 7, 10, 12, 13, 15, and 17	B	M	B	M	G (Adapt NBS and U.S. to U.S.)	G	G	G	G	G	Public Sector (Municipal and State), NGO, Non-profit, Academia, Private Sector	24
Saskatoon	All SCOs	B	G (for based relation)	B	G	G (Adapt M-SCOs, and other frameworks)	G	G	G	G	G	Public Sector (Municipal and Federal), Academia, Private Sector, Civil Society	31
Winnipeg	All SCOs	B	G	B	G	G (Adapt M-SCOs and Spinaway U.S.G)	G	G	G	G	G	Think Tank, Non-profit, Civil Society	31
Shanghai	All SCOs	B	B	B	B	B	B	B	B	B	B	Public Sector (Municipal), Research Foundation/Think Tank	16
Bangkok	All SCOs	B	B	B	M	B	M	B	M	G	B	Public Sector (Municipal), Academia, NGO, Civil Society	15

Colour	Meaning	Score
Green	Good	3
Yellow	Moderate	2
Red	Poor	

## Appendix 5: Categorization of Colour-Coded Analysis

<u>Category</u>	<u>Rationale</u>
<b>SDG Targets</b>	The identification of SDG targets provides clear benchmarks to evaluate progress at the local level. Selecting relevant SDG targets ensures that the VLR addresses priority areas for sustainable development specific to the region, such as affordable housing, sustainable cities, and climate action. The depth and breadth of SDG targets mentioned reflect the VLR's alignment with both local challenges and global objectives.
<b>Type of Indicator Framework</b>	The choice of indicator framework is critical for monitoring progress effectively. An indicator framework that is adaptable, locally relevant, and aligns with national and international SDG indicators ensures consistent data collection and reporting. This allows for comparisons across municipalities and regions, facilitating evidence-based decision-making.
<b>Integration of SDGs across Multiple Municipalities</b>	Given the multi-jurisdictional governance structure of the GVA (Victoria, Saanich, Oak Bay, and Esquimalt), the integration of SDGs across municipalities is key to achieving collective progress. A successful VLR must demonstrate effective coordination across different municipalities, ensuring shared goals, collaborative planning, and the pooling of resources for common initiatives.
<b>Rationale Behind the Selection of SDGs</b>	A clear rationale for selecting specific SDGs ensures that the VLR focuses on the most relevant sustainability challenges facing the GVA. This selection should be informed by local priorities, stakeholder input, and an assessment of where the GVA can make the most meaningful contributions. It also ensures that resources are allocated to areas with the greatest impact potential.
<b>Inclusion/Exclusion of Standardized Reporting Framework</b>	The inclusion of a standardized reporting framework, such as VLR guidelines from UN-Habitat, UN DESA, OECD, UNECE, Shimokawa Method, IISD, UNESCO Global Network of Learning Cities, Local Governments for Sustainability (ICLEI), UCLG, Sustainable Development Solutions Network (SDSN), Institute for Global Environmental Strategies, upon others, ensures comparability, transparency, and accountability. If a municipality chooses to exclude such frameworks, there should be a clear rationale—likely based on the need for greater local customization or the development of a unique framework tailored to the region's context.
<b>Methodology</b>	The VLR's methodology should outline clear processes for data collection, stakeholder engagement, and SDG localization. The methodology should account for the diversity of the region and the availability of local data. Transparent, rigorous, and replicable methods ensure that the VLR can be

	updated regularly and serve as a model for other cities in BC or Canada.
<b>Adaptations post-VLR Completion;</b>	VLRs are living documents that should evolve based on new challenges, data, and policy developments. A quality VLR should include recommendations for periodic updates and adaptations, ensuring that the review remains relevant over time and responsive to new issues or opportunities. This enhances long-term sustainability planning.
<b>Policy Framework and Governance Structure;</b>	A solid policy framework and clear governance structure are critical for VLR implementation. Through aligning the VLR to local priorities, ensures that VLR recommendations can be operationalized within the region's existing governance framework.
<b>Policy Coherence</b>	The VLR should assess how well local policies are aligned with each other and with the SDGs, identifying any gaps or inconsistencies that need to be addressed.
<b>Stakeholder Engagement</b>	Broad stakeholder engagement—including municipal governments, Indigenous groups, civil society, academia, and the private sector—is essential for the VLR's legitimacy and success. For the GVA, effective engagement ensures that the VLR reflects diverse perspectives and needs. Continuous engagement throughout the VLR process builds community ownership and commitment to achieving the SDGs.

## Appendix 6: Challenges, Opportunities, Stakeholders, and Policies throughout GVA

### City of Victoria: Challenges, Opportunities, Stakeholders, and Policies

<p><b>Challenges:</b></p>	<ol style="list-style-type: none"> <li>1. <u>Financial and Policy Support:</u> Achieving ambitious goals, such as reducing greenhouse gas emissions by 80% below 2007 levels by 2050, requires significant financial and policy support. The documents mention that reaching these targets is unlikely without such support.</li> <li>2. <u>Behavioral Change:</u> Encouraging behavioral change among residents, businesses, and visitors to the city to support initiatives like waste reduction, renewable energy adoption, and sustainable transportation is a challenge.</li> <li>3. <u>Infrastructure and Technology:</u> Implementing infrastructure for renewable energy, waste management, and sustainable transportation, as well as integrating technology for data collection and analysis, poses logistical and technological challenges.</li> <li>4. <u>Interagency Cooperation:</u> Coordinating efforts among different agencies, both within the city and regionally, to align policies and actions towards common sustainability goals can be complex.</li> </ol>
<p><b>Opportunities:</b></p>	<ol style="list-style-type: none"> <li>1. <u>Innovative Solutions:</u> The City of Victoria has an opportunity to pioneer innovative solutions in areas such as renewable energy, waste management, and transportation, setting an example for other cities to follow.</li> <li>2. <u>Community Engagement:</u> Engaging the community through public consultations, surveys, and educational campaigns presents an opportunity to foster support for sustainability initiatives and encourage active participation.</li> <li>3. <u>Partnerships:</u> Collaborating with regional partners, businesses, non-governmental organizations, and academic institutions can leverage resources, expertise, and networks to accelerate progress toward sustainability goals.</li> <li>4. <u>Policy Alignment:</u> Aligning local policies with provincial, federal, and international commitments, such as the Paris Climate Agreement and the SDGs, can provide a framework for action and facilitate access to funding and support.</li> </ol>
<p><b>Stakeholders:</b></p>	<ol style="list-style-type: none"> <li>1. <u>City Government:</u> The City of Victoria plays a central role in setting policies, implementing programs, and providing leadership on climate action and sustainability.</li> <li>2. <u>Residents:</u> The residents of Victoria are key stakeholders whose behavior and choices impact the city's sustainability outcomes. Engaging residents in sustainability initiatives and promoting behaviour change is essential.</li> <li>3. <u>Businesses:</u> Local businesses have a role to play in adopting sustainable practices, reducing emissions, and supporting community initiatives.</li> <li>4. <u>NGOs:</u> NGOs often provide expertise, advocacy, and community engagement on sustainability issues, complementing the efforts of government and other stakeholders.</li> <li>5. <u>Academic Institutions:</u> Universities and research institutions can contribute expertise, research, and data analysis to support evidence-based decision-making and innovation in sustainability initiatives.</li> </ol>

<b>Policies:</b>	<ol style="list-style-type: none"> <li>1. <u>Climate Leadership Plan</u>: Sets ambitious targets for reducing greenhouse gas emissions, transitioning to renewable energy, and promoting sustainable building practices (City of Victoria, 2018).</li> <li>2. <u>Waste Management Plan</u>: Aim to reduce waste and emissions by implementing strategies such as organic waste diversion, single-use item reduction, and recycling initiatives (City of Victoria, 2020).</li> <li>3. <u>Official Community Plan (OCP)</u>: Guides long-term land use and development decisions, emphasizing sustainable transportation, housing, and climate change mitigation (City of Victoria, 2012).</li> <li>4. <u>Transportation Strategies</u>: Focus on increasing public transit ridership, promoting active transportation, and transitioning to zero-emission vehicles to reduce emissions and improve mobility (City of Victoria, 2020).</li> <li>5. <u>Partnership and Collaboration Initiatives</u>: Encourage collaboration with regional partners, businesses, and community organizations to leverage resources and expertise for sustainability initiatives.</li> </ol>
------------------	---

Oak Bay: Challenges, Opportunities, Stakeholders, and Policies

<b>Challenges:</b>	<ol style="list-style-type: none"> <li>1. <u>Affordable Housing</u>: While there have been efforts to enable the creation of more diverse and affordable housing, the need remains significant. Addressing housing affordability while ensuring compatibility with existing neighborhood character poses a challenge.</li> <li>2. <u>Infrastructure Funding</u>: The Sustainable Infrastructure Replacement Plan highlights the challenge of funding infrastructure replacement adequately. There is a need to balance funding levels with the pace of infrastructure replacement to avoid unacceptable risks.</li> <li>3. <u>Climate Change Mitigation</u>: Despite achievements in reducing GHG emissions, continued efforts are necessary to meet aspirational targets and adapt to climate change impacts.</li> </ol>
<b>Opportunities:</b>	<ol style="list-style-type: none"> <li>1. <u>Community Engagement</u>: The involvement of the Community Climate Action Working Group and other advisory bodies presents opportunities for community engagement in decision-making processes related to climate action and sustainability.</li> <li>2. <u>Innovative Housing Solutions</u>: Encouraging diverse housing options, including shared ownership and mixed-market projects, provides opportunities to address housing needs creatively.</li> <li>3. <u>Transportation Infrastructure</u>: Investing in low-carbon and active transportation infrastructure presents opportunities to enhance mobility, accessibility, and environmental sustainability.</li> </ol>
<b>Stakeholders:</b>	<ol style="list-style-type: none"> <li>1. <u>Local Government</u>: The Oak Bay Municipal Government plays a central role in setting policies and priorities related to housing, transportation, climate action, and other areas addressed in the documents.</li> <li>2. <u>Community Groups</u>: Advisory bodies like the Community Climate Action Working Group and the Urban Forest Management Strategy group involve community members in decision-making processes.</li> <li>3. <u>Residents and Businesses</u>: Engagement and education efforts target residents and businesses to encourage behavior changes and support sustainable practices.</li> </ol>

<b>Policies:</b>	<ol style="list-style-type: none"> <li>1. <u>Housing</u>: Policies aim to encourage the development of diverse and inclusive housing options while respecting neighborhood character and addressing affordability concerns (District of Oak Bay, 2020).</li> <li>2. <u>Transportation</u>: Policies focus on promoting active transportation modes, improving infrastructure, and reducing reliance on single-occupancy vehicles (District of Oak Bay, 2023).</li> <li>3. <u>Climate Action</u>: Policies emphasize reducing GHG emissions, integrating climate considerations into decision-making processes, and fostering community engagement and education (District of Oak Bay, 2023).</li> </ol>
<b>Indicators and Targets</b>	<ol style="list-style-type: none"> <li>1. <u>GHG Emissions Reduction</u>: Indicators such as GHG emission levels and energy consumption provide measurable targets for assessing progress in climate action.</li> <li>2. <u>Infrastructure Maintenance</u>: Metrics related to infrastructure spending, replacement rates, and funding levels serve as indicators to track progress in addressing infrastructure challenges.</li> </ol>

District of Saanich: Challenges, Opportunities, Stakeholders, and Policies

<b>Challenges:</b>	<ol style="list-style-type: none"> <li>1. <u>Technological Innovation</u>: Meeting the ambitious targets set by the District of Saanich requires significant technological advancements, particularly in renewable energy, transportation, and building infrastructure.</li> <li>2. <u>Behavioral Change</u>: Encouraging individuals and businesses to adopt climate-friendly practices may face resistance and require extensive educational campaigns.</li> <li>3. <u>Equitable Distribution</u>: Ensuring that the benefits and burdens of climate action are shared equitably among all residents may pose challenges, particularly in vulnerable communities.</li> <li>4. <u>Financial Resources</u>: Implementing the proposed actions will require substantial financial resources, and securing funding may be challenging, especially for initiatives with long-term benefits.</li> <li>5. <u>Policy Alignment</u>: Coordinating actions across different departments and levels of government to align with the District's climate plan and the SDGs can be complex and require robust policy frameworks.</li> </ol>
--------------------	---

<p><b>Opportunities:</b></p>	<ol style="list-style-type: none"> <li>1. <u>Local Innovation</u>: The District of Saanich is well-positioned to drive local innovation in renewable energy, transportation, and sustainable infrastructure, which can serve as a model for other communities.</li> <li>2. <u>Economic Growth</u>: Investing in climate action can stimulate economic growth by creating green jobs, fostering innovation, and attracting investment in clean technologies.</li> <li>3. <u>Community Engagement</u>: Engaging residents, businesses, and institutions in climate action initiatives can build community resilience, foster a sense of ownership, and promote social cohesion.</li> <li>4. <u>Partnerships</u>: Collaborating with other municipalities, government agencies, academic institutions, and community organizations can leverage resources, expertise, and best practices to achieve common climate goals.</li> <li>5. <u>Policy Integration</u>: Integrating climate considerations into existing policies, plans, and programs across various sectors can enhance synergies and maximize co-benefits, leading to more effective and efficient outcomes.</li> </ol>
<p><b>Stakeholders:</b></p>	<ol style="list-style-type: none"> <li>1. <u>Government Departments</u>: Various departments within the District of Saanich are responsible for implementing specific actions related to climate mitigation, adaptation, transportation, building infrastructure, food systems, ecosystems, community well-being, and leadership.</li> <li>2. <u>Residents</u>: Individual residents play a crucial role in reducing emissions, adopting sustainable practices, and contributing to community resilience.</li> <li>3. <u>Businesses</u>: Businesses have the opportunity to innovate, reduce their carbon footprint, and contribute to a green economy through sustainable practices and investments.</li> <li>4. <u>Community Organizations</u>: Non-profit organizations, advocacy groups, and community associations can mobilize resources, raise awareness, and advocate for climate action at the local level.</li> <li>5. <u>Academic Institutions</u>: Universities and research institutions can provide expertise, conduct research, and develop innovative solutions to address climate challenges.</li> <li>6. <u>Indigenous Communities</u>: The MoU is called ÁTOL, NEUEL formalizes commitments to reconciliation and to pursuing opportunities for collaboration with WSÁNEĆ Leadership Council.</li> </ol>
<p><b>Policies:</b></p>	<ol style="list-style-type: none"> <li>1. <u>Official Community Plan</u>: The draft of the OCP (February 2024) builds upon previous versions (2008) to integrate community values and provide guidance in several key areas: Responding to climate change and increasing community resilience while living within the planet's capacity; Moving towards reconciliation with First Nations people; Accommodating growth and guiding change to create a 15-minute community with convenient access to services and amenities; Fostering livability and community well-being; Incorporating and retaining biodiversity and ecosystem services while enhancing the urban forest; Integrating land use with sustainable transportation options; Protecting agricultural land and supporting food security; Creating vibrant mixed-use centers and villages; Promoting diversity, equity, and inclusiveness; Increasing housing supply, diversity, and affordability (District of Saanich, 2024).</li> </ol>

	<ol style="list-style-type: none"> <li>2. <u>Climate Plan</u>: The Climate Plan outlines specific goals, strategies, and actions to reduce emissions, transition to renewable energy, prepare for climate impacts, and promote community well-being. It emphasizes principles such as boldness, evidence-based decision-making, equity, collaboration, and efficiency (District of Saanich, 2020).</li> <li>3. <u>Mobility Plan</u>: The Mobility Plan sets targets for active transportation, public transit, and electric mobility, along with strategies and indicators to achieve these targets. It aligns with SDG 11 (Sustainable Cities and Communities) and SDG 7 (Affordable and Clean Energy) (District of Saanich, 2024).</li> <li>4. <u>Building &amp; Infrastructure</u>: The Building &amp; Infrastructure Plan focuses on energy-efficient buildings, renewable energy, climate resilience, and sustainable infrastructure. It aligns with SDG 7 (Affordable and Clean Energy) and SDG 11 (Sustainable Cities and Communities).</li> <li>5. <u>Food &amp; Material Strategies</u>: These strategies aim to reduce emissions from food production and consumption, promote waste reduction, support local agriculture, and enhance the resilience of the food system. They align with SDG 12 (Responsible Consumption and Production) and SDG 2 (Zero Hunger).</li> <li>6. <u>Ecosystem Strategies</u>: Ecosystem strategies focus on protecting biodiversity, enhancing ecosystem services, and promoting nature-based solutions to climate change. They align with SDG 15 (Life on Land) and SDG 13 (Climate Action).</li> <li>7. <u>Community Well-being Strategies</u>: These strategies aim to ensure adequate emergency and health services, empower residents and businesses to take climate action, and promote community resilience. They align with SDG 3 (Good Health and Well-being) and SDG 13 (Climate Action) (District of Saanich, 2023).</li> <li>8. <u>Leadership in District Operations</u>: This plan aims to integrate climate considerations into municipal operations, reduce emissions from municipal facilities and fleets, and promote climate-friendly practices. It aligns with SDG 13 (Climate Action) and SDG 7 (Affordable and Clean Energy).</li> </ol>
--	---

Township of Esquimalt: Challenges, Opportunities, Stakeholders, and Policies

<b>Challenges:</b>	<ol style="list-style-type: none"> <li>1. <u>Data Availability and Monitoring</u>: Ensuring accurate data collection and monitoring mechanisms to track progress towards SDG localization targets might pose a challenge, especially for indicators related to emissions reduction, infrastructure resilience, and community health.</li> <li>2. <u>Coordination and Collaboration</u>: Effective collaboration among various stakeholders, including local government, businesses, residents, and Indigenous communities, may be challenging due to diverse interests and priorities.</li> <li>3. <u>Financial Resources</u>: Implementing initiatives to achieve SDG targets requires adequate financial resources. Securing funding for projects related to climate action, infrastructure development, and community resilience might be challenging.</li> <li>4. <u>Behavioral Change</u>: Encouraging behavioral change among residents and businesses to adopt sustainable practices, such as reducing energy consumption or shifting to alternative modes of transportation, could be challenging.</li> <li>5. <u>Policy Alignment</u>: Ensuring alignment between local policies, such as land use regulations and development plans, with SDG targets might require revisions and adjustments to existing frameworks.</li> </ol>
--------------------	--

<p><b>Opportunities:</b></p>	<ol style="list-style-type: none"> <li>1. <u>Community Engagement</u>: Engaging the community in the SDG localization process can create opportunities for education, awareness, and collective action towards common goals.</li> <li>2. <u>Innovation and Technology</u>: Leveraging technological advancements and innovative solutions, such as renewable energy technologies or smart infrastructure, can facilitate progress towards SDG targets.</li> <li>3. <u>Partnerships</u>: Building partnerships with neighboring municipalities, regional organizations, academic institutions, and private sector entities can provide access to expertise, resources, and funding opportunities.</li> <li>4. <u>Economic Development</u>: Pursuing sustainable development initiatives can stimulate economic growth, create job opportunities, and enhance the overall quality of life in the township.</li> <li>5. <u>Policy Integration</u>: Integrating SDG targets into existing policy frameworks, such as land use planning, transportation planning, and economic development strategies, can promote holistic and coordinated approaches to sustainable development.</li> </ol>
<p><b>Stakeholders:</b></p>	<ol style="list-style-type: none"> <li>1. <u>Local Government</u>: Township officials, including elected representatives and municipal staff, play a central role in setting policies, allocating resources, and implementing initiatives to achieve SDG targets.</li> <li>2. <u>Community Groups</u>: Non-profit organizations, community associations, and advocacy groups can contribute to SDG localization efforts through grassroots initiatives, awareness campaigns, and community-led projects.</li> <li>3. <u>Business Community</u>: Local businesses have a stake in sustainable development, as they can benefit from a supportive regulatory environment, access to green technologies, and opportunities for innovation and market expansion.</li> <li>4. <u>Residents</u>: Engaging residents in the SDG localization process is essential, as they are directly impacted by local policies and initiatives. Empowering residents to adopt sustainable practices and participate in decision-making processes strengthens community resilience.</li> <li>5. <u>Indigenous Communities</u>: Building meaningful partnerships with Indigenous communities, such as the Esquimalt and Songhees Nations, are crucial for honoring traditional knowledge, respecting Indigenous rights, and advancing reconciliation efforts.</li> </ol>

<p><b>Policies:</b></p>	<ol style="list-style-type: none"> <li>1. <u>Climate Action Plan</u>: Setting targets for greenhouse gas reduction, promoting renewable energy, and enhancing climate resilience are key components of the township's Climate Action Plan (Township of Esquimalt, 2022).</li> <li>2. <u>Official Community Plan (OCP)</u>: The OCP outlines objectives related to environmental protection, energy conservation, infrastructure resilience, and community well-being, providing a policy framework for achieving SDG localization targets (Township of Esquimalt, 2020).</li> <li>3. <u>Land Use Regulations</u>: Development permit areas focused on protecting the natural environment, promoting energy and water conservation, and reducing greenhouse gas emissions align with SDG objectives related to sustainable cities and communities (SDG 11).</li> <li>4. <u>Housing and Residential Land Use Policies</u>: Encouraging diverse housing options, supporting affordable housing, and enhancing neighborhood livability contribute to SDG 11 (Sustainable Cities and Communities) and SDG 1 (No Poverty) (Township of Esquimalt, 2023).</li> <li>5. <u>Transportation Policies</u>: Promoting active transportation, expanding public transit, and reducing reliance on private vehicles align with SDG 11 (Sustainable Cities and Communities) and SDG 3 (Good Health and Well-being).</li> </ol>
-------------------------	---

Overall Challenges, Opportunities, Stakeholders, and Policies in the GVA

<p><b>Challenges:</b></p>	<ol style="list-style-type: none"> <li>1. <u>Financial Support and Policy Alignment</u>: Achieving ambitious sustainability goals across the GVA requires significant financial resources and policy alignment among municipalities to ensure coherent and effective action.</li> <li>2. <u>Behavioural Change</u>: Encouraging behavioural change among residents, businesses, and visitors to adopt sustainable practices poses a common challenge across all municipalities.</li> <li>3. <u>Infrastructure and Technology Implementation</u>: Developing infrastructure for renewable energy, waste management, and sustainable transportation, as well as integrating technology for data collection and analysis, is a logistical and technological challenge shared by all municipalities.</li> <li>4. <u>Inter-stakeholder Cooperation</u>: Coordinating efforts among different agencies within municipalities and regionally to align policies and actions towards common sustainability goals presents a complex challenge. Additionally, gathering input from academic, NGO, private sector, and other stakeholders that may be of regional interest.</li> </ol>
<p><b>Opportunities:</b></p>	<ol style="list-style-type: none"> <li>1. <u>Innovative Solutions</u>: Collaboration among municipalities provides an opportunity to pioneer innovative solutions in renewable energy, waste management, and transportation, setting an example for other regions.</li> <li>2. <u>Community Engagement</u>: Engaging the community through public consultations, surveys, and educational campaigns can foster support for sustainability initiatives across the GVA.</li> <li>3. <u>Partnerships</u>: Collaborating with regional partners, businesses, non-governmental organizations, academic institutions, and Indigenous communities can leverage resources, expertise, and networks to accelerate progress towards sustainability goals.</li> <li>4. <u>Policy Alignment</u>: Aligning local policies with provincial, federal, and international commitments, and external VLR models, can provide a framework for action and facilitate access to funding and support for localizing the SDGs in the GVA.</li> </ol>

<p><b>Stakeholders:</b></p>	<ol style="list-style-type: none"> <li>1. <u>Local Governments:</u> Municipalities in the GVA play a central role in setting policies, implementing programs, and providing leadership on climate action and sustainability.</li> <li>2. <u>Residents and Businesses:</u> Engaging residents and businesses in sustainability initiatives and promoting behavior change is essential for achieving sustainability goals.</li> <li>3. <u>NGOs:</u> NGOs provide expertise, advocacy, and community engagement on sustainability issues, complementing the efforts of government and other stakeholders.</li> <li>4. <u>Academic Institutions:</u> Universities and research institutions contribute expertise, research, and data analysis to support evidence-based decision-making and innovation in sustainability initiatives. In particular, the University of Victoria could be a strategic stakeholder with its Times Higher Education Impact Rankings of being rated 3rd in Canada for university contributions to the United Nations' SDGs (University of Victoria, 2024).</li> <li>5. <u>Indigenous Communities:</u> Building meaningful partnerships with indigenous communities, such as the Esquimalt, Songhees, and W̱SÁNEĆ Nations, is crucial for honouring traditional knowledge, respecting indigenous rights, and advancing reconciliation efforts.</li> </ol>
<p><b>Policies:</b></p>	<ol style="list-style-type: none"> <li>1. <u>Official Community Plan (OCP):</u> Guides long-term land use and development decisions, emphasizing the integration of key priority areas in OCPs, such as plans on climate action, mobility, building and infrastructure, land use regulations, waste management, transportation, housing, and the role of partnerships.</li> <li>2. <u>Climate Action Plans:</u> Ambitious climate action plans set targets for reducing greenhouse gas emissions, protecting natural environments through promoting energy and water conservation, transitioning to renewable energy, and promoting sustainable practices across the GVA.</li> <li>3. <u>Waste Management Plans:</u> Strategies for waste reduction and recycling initiatives are essential components of sustainability efforts in all municipalities.</li> <li>4. <u>Transportation Strategies:</u> Following Mobility Plans, focus on promoting public transit, active transportation, and zero-emission vehicles to reduce emissions and improve mobility aligns with sustainability goals.</li> <li>5. <u>Housing and Infrastructure:</u> Encourage diverse housing options supporting affordable housing, and sustainable infrastructure.</li> <li>6. <u>Partnership and Collaboration Initiatives:</u> Encourage collaboration with regional partners, businesses, and community organizations to leverage resources and expertise for sustainability initiatives.</li> </ol>

## Appendix 7: SWOT Analysis of Select VLR Cities

### SWOT Analysis for Thunder Bay VLR Model

<p><b>Strengths</b></p>	<ul style="list-style-type: none"> <li>● Comprehensive assessment covering all SDGs, and specific targets provides a holistic view of sustainability.</li> <li>● Utilization of colour-coded indicators enhances communication of progress to stakeholders.</li> <li>● Diverse data sources ensure a robust evaluation of progress and challenges.</li> <li>● Strong governance and implementation mechanisms, including partnerships with academia and the public sector, ensure policy coherence and stakeholder engagement.</li> </ul>
<p><b>Weaknesses</b></p>	<ul style="list-style-type: none"> <li>● Reliance on a five-year threshold for indicator measurement may limit real-time assessment.</li> <li>● Lack of specific targets may make it challenging to prioritize actions for improvement.</li> <li>● Adaptation recommendations may not fully address the unique context of the GVA.</li> <li>● Funding dependency on external sources may affect sustainability and continuity.</li> </ul>
<p><b>Opportunities</b></p>	<ul style="list-style-type: none"> <li>● Potential for following Thunder Bay recommendation for future VLRs to accommodate Indigenous perspectives.</li> <li>● Opportunity to incorporate more localized indicators to address specific regional challenges.</li> <li>● Collaboration with local institutions and organizations can enhance data collection and stakeholder engagement.</li> <li>● Potential for knowledge exchange and collaboration with Thunder Bay on VLR best practices.</li> </ul>
<p><b>Threats</b></p>	<ul style="list-style-type: none"> <li>● Difficulty in aligning Thunder Bay's model with the unique context and priorities of the GVA.</li> <li>● Limited availability of funding for implementing and sustaining VLR initiatives.</li> <li>● Potential resistance from stakeholders to adapt Thunder Bay's model without significant modifications.</li> <li>● Competition with other sustainability assessment frameworks or initiatives in the GVA.</li> </ul>

## SWOT Analysis for Orlando VLR Model

<p><b>Strengths</b></p>	<ul style="list-style-type: none"> <li>● Focus on specific SDGs relevant to the local context ensures targeted action.</li> <li>● Utilization of colour-coded indicators simplifies the tracking of progress for stakeholders.</li> <li>● Comprehensive data collection from various sources ensures a holistic assessment.</li> <li>● Strong governance structure and stakeholder engagement mechanisms enhance policy coherence and collaboration.</li> </ul>
<p><b>Weaknesses</b></p>	<ul style="list-style-type: none"> <li>● The lack of specific targets may hinder prioritization and goal-setting efforts.</li> <li>● Limited coverage of SDGs may overlook important sustainability aspects.</li> <li>● Dependency on partnerships with external organizations may affect sustainability and continuity.</li> <li>● Adaptation of Orlando's model may require significant modifications to suit the GVA's context.</li> </ul>
<p><b>Opportunities</b></p>	<ul style="list-style-type: none"> <li>● Potential for aligning Orlando's model with regional priorities and initiatives in the GVA.</li> <li>● Collaboration with local institutions and organizations to enhance data collection and stakeholder engagement.</li> <li>● Opportunity for knowledge exchange with Orlando on best practices in sustainability assessment.</li> <li>● Flexibility to explore additional SDGs in future iterations to provide a more comprehensive assessment.</li> </ul>
<p><b>Threats</b></p>	<ul style="list-style-type: none"> <li>● Difficulty in adapting Orlando's model to suit the unique context and priorities of the GVA.</li> <li>● Limited availability of funding for implementing and sustaining VLR initiatives.</li> <li>● Potential resistance from stakeholders to adopt Orlando's model without significant modifications.</li> <li>● Competition with other sustainability assessment frameworks or initiatives in the GVA.</li> </ul>

## SWOT Analysis for Seodaemun-gu's VLR Model

<p><b>Strengths</b></p>	<ul style="list-style-type: none"> <li>● A comprehensive strategy involving seven main strategies and corresponding indicators provides a structured framework for tracking progress.</li> <li>● Alignment with the K-SDGs and Seoul Seodaemun-gu Sustainable Development Framework offers insights into the successful localization of SDGs.</li> <li>● Emphasis on stakeholder engagement and partnerships ensures inclusivity and collaboration in sustainable development efforts.</li> </ul>
<p><b>Weaknesses</b></p>	<ul style="list-style-type: none"> <li>● VLR is quite comprehensive and may face feasibility difficulties for funding/ human resources in the context of the GVA.</li> <li>● Dependency on regional district local government administrations for data collection may limit data availability or reliability.</li> <li>● Contextual differences between Seodaemun-gu and the GVA may require significant adaptation to ensure relevance.</li> </ul>
<p><b>Opportunities</b></p>	<ul style="list-style-type: none"> <li>● Adoption of Seodaemun-gu's approach to categorizing indicators based on data availability can facilitate effective tracking of progress in the GVA.</li> <li>● Exploration of adaptation from the K-SDGs and Seoul Seodaemun-gu Sustainable Development Framework can provide valuable insights into successful localization strategies.</li> <li>● Leveraging partnerships with the Sustainable Development Committee and other stakeholders can enhance collaboration and knowledge exchange.</li> </ul>
<p><b>Threats</b></p>	<ul style="list-style-type: none"> <li>● Differences in demographics, socio-economic environments, and policy contexts between Seodaemun-gu and the GVA may pose challenges in adaptation and implementation.</li> <li>● Limited flexibility in the framework may hinder customization to local priorities and strategies.</li> <li>● Resistance or lack of engagement from certain stakeholders may impede the progress and effectiveness of the VLR process.</li> </ul>

## SWOT Analysis for Winnipeg's VLR Model

<p><b>Strengths</b></p>	<ul style="list-style-type: none"> <li>● Utilization of a local data platform like Peg ensures consistency and reliability in reporting progress towards SDGs.</li> <li>● Focus on addressing all SDGs aligns with the comprehensive approach to sustainable development in the GVA.</li> <li>● Independence from municipal government and reliance on NGOs for VLR development provide flexibility and innovation in implementation.</li> </ul>
<p><b>Weaknesses</b></p>	<ul style="list-style-type: none"> <li>● The lack of specific targets may limit the ability to measure progress quantitatively.</li> <li>● Dependency on Peg for data collection may limit the scope or reliability of available data.</li> <li>● Contextual differences between Winnipeg and the GVA may require significant adaptation to ensure relevance.</li> </ul>
<p><b>Opportunities</b></p>	<ul style="list-style-type: none"> <li>● Adoption of Peg's methodology for cross-listing local indicators with global SDG indicators can facilitate alignment with the global framework in the GVA.</li> <li>● Exploration of Peg's approach to stakeholder engagement can enhance collaboration and buy-in from diverse stakeholders.</li> <li>● Leveraging Winnipeg's experience in developing partnerships with NGOs and civil society organizations can foster collaboration and innovation in sustainable development efforts.</li> </ul>
<p><b>Threats</b></p>	<ul style="list-style-type: none"> <li>● Differences in demographics, socio-economic environments, and policy contexts between Winnipeg and the GVA may pose challenges in adaptation and implementation.</li> <li>● Limited data availability or reliability from Peg may hinder the accuracy of the assessment and tracking of progress.</li> <li>● Potential resistance or lack of engagement from stakeholders unfamiliar with the VLR approach may impede progress.</li> </ul>

## Appendix 8: Interview Questions

<u>Interviews KI1-2</u>	<u>Interviews KI3-4</u>	<u>Interviews KI5-8</u>
<p><b>Introduction:</b> 1. Do you think the Capital Regional District (CRD) would benefit from having a Voluntary Local Review (VLR), and what are the potential impacts of creating a localized SDG strategy?</p> <p><b>Common Themes and Priorities:</b> 2. In your perspective, what SDG targets and indicators are common priorities within your municipality, and how do you think those thematic areas align with other CRD municipalities?</p> <p><b>Localization Strategies:</b> 3. Based on the ‘types’ I’ve provided to you to review how other cities have successfully created localized SDG strategies to submit VLRS, which type for governance, measurement, and implementation would you envision being best to adapt to your municipality’s unique contexts?</p> <p>4. Based on your selection, can you please elaborate on why you would consider this type of governance to be most suitable within the context of your municipality?</p> <p>5. How will the success of the VLR be measured and reported depending on what type of measurement you</p>	<p><b>1. Introduction to VLR Benefits and Impacts</b> Do you believe the Capital Regional District (CRD) would benefit from having a Voluntary Local Review (VLR)? What potential impacts do you foresee from creating a localized SDG strategy?</p> <p><b>Common Themes and Priorities</b> 2. SDG Priorities and Alignment In your perspective, what SDG targets and indicators are common priorities within your municipality? How do these thematic areas align with the priorities of other CRD municipalities?</p> <p><b>Localization Strategies</b> 3. Governance Type Selection Based on the governance types I’ve provided (top-down, top-down with external support, bottom-up, bottom-up with external support, hybrid), which do you think would be the best fit for your municipality’s unique context? Why?</p> <p><b>4. Measurement Type Selection</b> Which measurement system (score-based, color-coded, tier-based) do you consider most suitable for your municipality? How will this system help in accurately measuring and reporting the success of the VLR?</p> <p><b>5. Implementation Challenges and Strategies</b></p>	<p><b>1. Introduction to VLR Benefits and Impacts</b> Do you believe the Capital Regional District (CRD) would benefit from having a Voluntary Local Review (VLR)? What potential impacts do you foresee from creating a localized SDG strategy?</p> <p><b>Common Themes and Priorities</b> 2. SDG Priorities and Alignment In your perspective, what SDG targets and indicators are common priorities within your municipality? How do these thematic areas align with the priorities of other CRD municipalities?</p> <p><b>Localization Strategies</b> 3. Governance Type Selection Based on the governance types I’ve provided (top-down, top-down with external support, bottom-up, bottom-up with external support, hybrid), which do you think would be the best fit for your municipality’s unique context? Why?</p> <p><b>4. Measurement Type Selection</b> Which measurement system (score-based, color-coded, tier-based) do you consider most suitable for your municipality? How will this system help in accurately measuring and reporting the success of the VLR?</p>

<p>consider to be most suitable for your municipality?</p> <p><b>Challenges:</b></p> <p>6. Based on the type of implementation chosen, what challenges do you anticipate in the process of implementing the VLR in your municipality, and how will they be addressed?</p> <p><b>Closing:</b></p> <p>7. In your opinion, what impact do you think having a localized SDG agenda, and creating a VLR in your municipality would have for the municipality itself?</p>	<p>Based on the implementation types provided (alignment with national framework, alignment with international frameworks, alignment with both, comprehensive municipal policy alignment with SDGs, municipal policy and international frameworks alignment, localized data-driven mapping, and alignment to international frameworks), which do you think is most appropriate for your municipality? Why?</p> <p><b>6. Impact and Future Directions</b></p> <p>In your opinion, what impact would having a localized SDG agenda and creating a VLR have on your municipality? How do you envision it influencing local policy and development?</p> <p><b>Criteria-Based Questions</b></p> <p><b>7. Technical Requirements and Complexity</b></p> <p>Do you believe your municipality has the necessary technology, skills, and infrastructure to implement the chosen VLR model? How complex do you anticipate the implementation to be, and do you think existing systems can handle it?</p> <p><b>8. Financial Feasibility</b></p> <p>What are the estimated costs (initial and ongoing) associated with implementing the VLR in your municipality? Is there sufficient funding available from government budgets, grants, or other sources?</p> <p><b>9. Political Will and Policy Alignment</b></p>	<p><b>5. Implementation Challenges and Strategies</b></p> <p>Based on the implementation types provided (alignment with national framework, alignment with international frameworks, alignment with both, comprehensive municipal policy alignment with SDGs, municipal policy and international frameworks alignment, localized data-driven mapping, and alignment to international frameworks), which do you think is most appropriate for your municipality? Why?</p> <p><b>Criteria-Based Questions:</b></p> <p><b>6. Political Feasibility (Political Will)</b></p> <p>How might the political will differ between top-down governance models and bottom-up governance models in terms of initiating and sustaining VLR initiatives in your municipality?</p> <p><b>7. Financial Feasibility</b></p> <p>What do you think are the financial implications of implementing a VLR with external support compared to one that relies solely on local government funding, and how does this impact the feasibility of long-term sustainability?</p> <p><b>8. Administrative Feasibility (Time and Human Resources)</b></p> <p>Do you think there would be an administrative burden, in terms of time and human resource allocation to develop and manage VLRs, and would this administrative burden be alleviated by either the hybrid governance model or a purely top-down or bottom-up approach?</p>
---	--	---

	<p>What is the level of support from key political figures and stakeholders for implementing a VLR? How well does the VLR align with existing policies, laws, and strategic goals?</p> <p><b>10. Administrative Capacity and Coordination</b> Does your municipality have the administrative capacity and enough qualified personnel to manage and implement the VLR? How well can different government agencies coordinate and collaborate on this initiative?</p> <p><b>11. Social Feasibility: Public Acceptance and Cultural Considerations</b> How do you gauge public opinion and acceptance of the proposed VLR? Are there cultural norms and values that might affect its acceptance and effectiveness?</p> <p><b>12. Operational Feasibility</b> Can the VLR be implemented within a reasonable timeframe? How scalable is the proposed model to accommodate future needs and results?</p> <p><b>13. Stakeholder Engagement Strategies</b> What strategies will be used to involve various stakeholders, including government agencies, NGOs, the private sector, academia, and the community, in the VLR process? How will feedback be collected and integrated into the data collection and analysis processes?</p>	<p><b>9. Stakeholder Engagement</b> In what ways do bottom-up governance models with external support enhance stakeholder engagement compared to top-down governance models, and how does this impact the effectiveness and inclusivity of VLR initiatives?</p> <p><b>10. Social Feasibility (Public Acceptance)</b> How do you gauge public opinion and acceptance of the proposed VLR? Are there cultural norms and values that might affect its acceptance and effectiveness in supporting these initiatives?</p> <p><b>11. Technical Feasibility (Operational Capabilities)</b> What do you think are the operational challenges and technical expertise requirements for implementing localized data-driven mapping and alignment to international frameworks, compared to aligning VLRs with national and international frameworks, in your municipality?</p> <p><b>Closing Question:</b></p> <p><b>12. Impact and Future Directions</b> In your opinion, what impact would having a localized SDG agenda and creating a VLR have on your municipality? How do you envision it influencing local policy and development?</p>
--	--	--

## Appendix 9: Preliminary Taxonomy

<u>VLR</u>	<u>Goals</u>	<u>Process of Measuring Indicators</u>	<u>SDG Integration</u>	<u>Governance &amp; Stakeholder Implementation</u>
<u>Thunder Bay</u>	The primary goal of the Thunder Bay VLR is to assess progress across all SDGs, focusing on localized priorities and targets. By analyzing specific indicators, Thunder Bay aims to track its performance and contribute to global sustainability efforts.	Indicators are measured using a threshold of 5% percent change over five years, or the closest available timeframe if five years of data are unavailable. Results are color-coded (green, orange, purple) to indicate positive, negative, or no significant change, respectively.	Thunder Bay integrates all SDGs to provide a comprehensive report on the city's progress. The methodology involves literature reviews, data analysis, stakeholder engagement, and the establishment of localized indicators to assess Thunder Bay's performance.	The Thunder Bay VLR process involves collaboration with partners from academia and the public sector, ensuring policy coherence and stakeholder engagement throughout the assessment. Funding support is provided by the Social Sciences and Humanities Research Council of Canada and Lakehead University, highlighting the importance of partnerships in conducting VLRs. Regular meetings with core partners facilitate the development and assembly of the VLR report.
<u>Orlando</u>	The VLR aims to address SDGs 2, 3, 6, 7, 10, 12,	Orlando's VLR quantifies progress through	Orlando's VLR integrates SDGs into the city's	The VLR process involves policy

	<p>13, 15, and 17, reflecting the city's commitment to sustainable development across various sectors.</p>	<p>indicators of strategic metrics, reflecting local priorities and strategies. Color-coded systems are utilized to track progress.</p>	<p>policy framework through initiatives like Green Works Orlando, adapting UN indicators to track progress and following a four-step approach to localize the SDGs.</p>	<p>coherence, stakeholder engagement, and partnerships with public and private sectors, NGOs, academia, and community members. Roundtable discussions, workshops, and surveys ensure ongoing collaboration and progress toward sustainability goals.</p>
<p><b><u>Seodaemun-gu</u></b></p>	<p>The VLR aims to address all SDGs, highlighting Seodaemun-gu's commitment to comprehensive sustainable development across various sectors.</p>	<p>Indicators are categorized into three tiers based on data availability, allowing for effective progress tracking or the lack thereof. Visual mapping is used to track progress concerning corresponding strategies and indicators.</p>	<p>Seodaemun-gu focuses on SDGs 2, 3, 8, 11, 12, and 16, aligning with the Korean Sustainable Development Goals (K-SDGs) and the Seoul Seodaemun-gu Sustainable Development Framework.</p>	<p>Policy coherence is ensured through the Seodaemun-gu Fundamental Plans for Sustainable Development, while partnerships with the Sustainable Development Committee and stakeholder engagement initiatives facilitate collaboration and progress toward SDGs. Various engagement</p>

				methods, including surveys and open discussions, involve citizens in the sustainable development process.
<b><u>Winnipeg</u></b>	The VLR aims to address all SDGs, reflecting Winnipeggers' priorities identified over a decade ago when the Peg initiative was established.	The VLR utilizes Peg, a local data platform, to track indicators across various SDGs. The data is organized to show a five-year percentage change and provide detailed insights into trends shaping Winnipeggers' well-being.	Winnipeg focuses on SDGs 1, 2, 3, 4, 8, 10, 11, 13, 16, and 17, aligning with local priorities identified through the Peg initiative. The VLR aims to make this information accessible to an international network of peer cities, contributing to global SDG reporting efforts.	Policy coherence is ensured through Peg's policy review of relevant federal, provincial, and municipal policies associated with each SDG. Partnerships with NGOs and civil society organizations facilitate stakeholder engagement and collaboration in tracking well-being indicators.

## Appendix 10: Typology of 11 VLRs

City	Governance	Measurement	Implementation
Braga	Top Down with External Support	N/A	Alignment with National and International Frameworks
Bristol	Top Down with External Support	Colour-coded	Municipal Policy and International Frameworks Alignment
Ghent	Top Down	Score-based	Comprehensive Municipal Policy Alignment with SDGs
Melaka	Top Down with External Support	Colour-coded	Municipal Policy and International Frameworks Alignment
Orlando	Top Down with External Support	Colour-coded	Municipal Policy and International Frameworks Alignment
Port Said	Hybrid Governance	Colour-coded	Alignment with National Framework
Seodaemun-gu	Hybrid Governance	Tier-based	Alignment with National and International Frameworks
Shkodra	Bottom-Up with External Support	N/A	N/A
Thunder Bay	Top Down with External Support	Colour-coded	Comprehensive Municipal Policy Alignment with SDGs
Turku	Top Down	Colour-coded	Municipal Policy and International Frameworks Alignment
Winnipeg	Bottom-Up with External Support	Colour-coded	Localized Data-driven Mapping, and Alignment to International Frameworks

**(Note:** N/A where indicated due to insufficient data on the VLR as only the executive summary is available to read in English).

# Appendix 11: List of Key Concepts and Codes

## 1. Benefits and Impacts of a VLR for CRD (BIVC)

- Coordination and Integration (BIVC01)
- Regional Coordination (BIVC02)
- Global Sustainability Goals (BIVC03)
- Local Priorities (BIVC04)
- Resource Constraints (BIVC05)
- Political Backlash (BIVC06)

## 2. SDG Priority Areas (SDGPA)

- Common SDG Priorities (SDGPA01)
- Climate Action (SDGPA02)
- Sustainable Cities (SDGPA03)
- Clean Water (SDGPA04)
- SDG Alignment (SDGPA05)
- Municipal Alignment (SDGPA06)
- SDG Gaps (SDGPA07)

## 3. Governance Models (GM)

- Governance Models (GM01)
- Hybrid Models (GM02)
- Top-Down Approach (GM03)
- Bottom-Up Approach (GM04)
- Political Resistance (GM05)
- Coordination Issues (GM06)

## 4. Measurement and Evaluation Systems (MES)

- Measurement Systems (MES01)
- Score-Based Systems (MES02)
- Color-Coded Systems (MES03)
- Hybrid Measurement Approaches (MES04)
- Metric Detailing (MES05)
- Public Accessibility (MES06)

## 5. Implementation Strategies (IS)

- Implementation Strategies (IS01)
- Local vs. International Frameworks (IS02)
- Resource Constraints (IS03)
- Policy Integration (IS04)
- Practical Integration Issues (IS05)

## **6. Political Will and Policy Alignment (PWPA)**

- Political Support (PWPA01)
- Policy Alignment (PWPA02)
- Governance Model Impact (PWPA03)
- VLR Sustainability (PWPA04)

## **7. Financial Feasibility (FF)**

- Funding Sources (FF01)
- External Funding (FF02)
- Local Funding (FF03)
- Cost Management (FF04)
- Funding Transition (FF05)

## **8. Administrative Capacity and Burden (ACB)**

- Administrative Burden (ACB01)
- Resource Allocation (ACB02)
- Coordination Mechanisms (ACB03)
- Governmental Coordination (ACB04)

## **9. Stakeholder Engagement Strategies (SES)**

- Engagement Methods (SES01)
- Stakeholder Involvement (SES02)
- Governance Model Impact on Engagement (SES03)

## **10. Social Feasibility (SF)**

- Public Acceptance (SF01)
- Cultural Considerations (SF02)
- Community Engagement (SF03)
- Resistance (SF04)

## **11. Technical Feasibility and Requirements (TF)**

- Technical Capacity (TF01)
- Technology and Skills (TF02)
- Operational Challenges (TF03)
- Data Granularity (TF04)
- Framework Alignment (TF05)

## **12. Positive Impact and Future Directions (PIFD)**

- Positive Impacts (PIFD01)
- Local Policy Development (PIFD02)
- Structured Decision-Making (PIFD03)
- Resistance Factors (PIFD04)
- Implementation Challenges (PIFD05)

## Appendix 12: SDG Mapping of GVA

SDG Targets	Victoria	Saanich	Oak Bay	Esquimalt
SDG 1	1.5			
SDG 2	2.4	2.3		2.2, 2.3, 2.4,
SDG 3	3.9	3.9	3.6	3.9,
SDG 4			4.7	4.7, 4.a
SDG 5				
SDG 6				6.3, 6.6
SDG 7	7.2, 7.3, 7.a	7.1, 7.2, 7.3, 7.a	7.3	7.2, 7.3
SDG 8	8.5			8.2, 8.3, 8.9
SDG 9	9.1		9.1	
SDG 10			10.2	
SDG 11	11.1, 11.2, 11.3, 11.5, 11.6	11.2, 11.5, 11.6, 11.7	11.1, 11.2, 11.3, 11.4, 11.5, 11.6, 11.7	11.1, 11.2, 11.3, 11.6, 11.7
SDG 12	12.2, 12.3, 12.5	12.3, 12.5	12.2	12.3, 12.5, 12.b
SDG 13	13.1, 13.2,	13.1, 13.2, 13.3,	13.1, 13.2, 13.3	13.1, 13.2, 13.3
SDG 14			14.2, 14.7	14.7
SDG 15	15.1	15.1	15.1, 15.2	15.1, 15.5
SDG 16				16.7
SDG 17	17.14, 17.16		17.16	17.16

SDG Targets	Victoria	Saanich	Oak Bay	Esquimalt
SDG 1	1			
SDG 2	1	1		3
SDG 3	1	1	1	1
SDG 4			1	2
SDG 5				

<b>SDG 6</b>				2
<b>SDG 7</b>	3	4	1	2
<b>SDG 8</b>	1			3
<b>SDG 9</b>	1		1	
<b>SDG 10</b>			1	
<b>SDG 11</b>	5	4	7	5
<b>SDG 12</b>	3	2	2	3
<b>SDG 13</b>	2	3	3	3
<b>SDG 14</b>			2	1
<b>SDG 15</b>	1	1	2	1
<b>SDG 16</b>				1
<b>SDG 17</b>	2		1	1

**Victoria SDG Priorities:** SDG 7, 11, 12, 13, 17

**Saanich SDG Priorities:** SDG 7, 11, 12, 13

**Oak Bay SDG Priorities:** SDG 11, 12, 13, 14, 15

**Esquimalt SDG Priorities:** SDG 2, 8, 11, 12, 13

**View Royal SDG Priorities:** SDG 8, 11, 13, 16, 17

<b>SDG Targets</b>	<b>Greater Victoria Area (5 Municipalities)</b>
<b>SDG 1</b>	1.5,
<b>SDG 2</b>	2.2, 2.3, 2.4,
<b>SDG 3</b>	3.6, 3.9,
<b>SDG 4</b>	4.7, 4.a
<b>SDG 5</b>	
<b>SDG 6</b>	6.3, 6.6
<b>SDG 7</b>	7.1, 7.2, 7.3, 7.a
<b>SDG 8</b>	8.2, 8.3, 8.5, 8.9
<b>SDG 9</b>	9.1
<b>SDG 10</b>	10.2

<b>SDG 11</b>	11.1, 11.2, 11.3, 11.4, 11.5, 11.6, 11.7,
<b>SDG 12</b>	12.2, 12.3, 12.5, 12.b
<b>SDG 13</b>	13.1, 13.2, 13.3,
<b>SDG 14</b>	14.2, 14.7
<b>SDG 15</b>	15.1, 15.2, 15.5
<b>SDG 16</b>	16.7
<b>SDG 17</b>	17.1, 17.14 17.16, 17.17

<b>SDG Targets</b>	<b>Greater Victoria Area (5 Municipalities)</b>
<b>SDG 1</b>	1
<b>SDG 2</b>	3
<b>SDG 3</b>	2
<b>SDG 4</b>	2
<b>SDG 5</b>	
<b>SDG 6</b>	2
<b>SDG 7</b>	4
<b>SDG 8</b>	4
<b>SDG 9</b>	1
<b>SDG 10</b>	1
<b>SDG 11</b>	7
<b>SDG 12</b>	4
<b>SDG 13</b>	3
<b>SDG 14</b>	2
<b>SDG 15</b>	3
<b>SDG 16</b>	1
<b>SDG 17</b>	4
<b>GVA Priority SDGs</b>	SDG 2, 7, 8, 11, 12, 13, 15, 17