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Contemporary Regional Planning Issues

Edited by Seth Appiah-Opoku



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IntechOpen Book Series

Sustainable Development

Volume 35

Aims and Scope of the Series

Transforming our World: the 2030 Agenda for Sustainable Development endorsed by United Nations and 193 Member States, came into effect on Jan 1, 2016, to guide decision making and actions to the year 2030 and beyond. Central to this Agenda are 17 Goals, 169 associated targets and over 230 indicators that are reviewed annually. The vision envisaged in the implementation of the SDGs is centered on the five Ps: People, Planet, Prosperity, Peace and Partnership. This call for renewed focused efforts ensure we have a safe and healthy planet for current and future generations.

This Series focuses on covering research and applied research involving the five Ps through the following topics:

1. Sustainable Economy and Fair Society that relates to SDG 1 on No Poverty, SDG 2 on Zero Hunger, SDG 8 on Decent Work and Economic Growth, SDG 10 on Reduced Inequalities, SDG 12 on Responsible Consumption and Production, and SDG 17 Partnership for the Goals
2. Health and Wellbeing focusing on SDG 3 on Good Health and Wellbeing and SDG 6 on Clean Water and Sanitation
3. Inclusivity and Social Equality involving SDG 4 on Quality Education, SDG 5 on Gender Equality, and SDG 16 on Peace, Justice and Strong Institutions
4. Climate Change and Environmental Sustainability comprising SDG 13 on Climate Action, SDG 14 on Life Below Water, and SDG 15 on Life on Land
5. Urban Planning and Environmental Management embracing SDG 7 on Affordable Clean Energy, SDG 9 on Industry, Innovation and Infrastructure, and SDG 11 on Sustainable Cities and Communities.

The series also seeks to support the use of cross cutting SDGs, as many of the goals listed above, targets and indicators are all interconnected to impact our lives and the decisions we make on a daily basis, making them impossible to tie to a single topic.

Meet the Series Editor



Usha Iyer-Raniga is a professor in the School of Property and Construction Management at RMIT University. Usha co-leads the One Planet Network's Sustainable Buildings and Construction Programme (SBC), a United Nations 10 Year Framework of Programmes on Sustainable Consumption and Production (UN 10FYP SCP) aligned with Sustainable Development Goal 12. The work also directly impacts SDG 11 on Sustainable Cities and Communities. She completed her undergraduate degree as an architect before obtaining her Masters degree from Canada and her Doctorate in Australia. Usha has been a keynote speaker as well as an invited speaker at national and international conferences, seminars and workshops. Her teaching experience includes teaching in Asian countries. She has advised Austrade, APEC, national, state and local governments. She serves as a reviewer and a member of the scientific committee for national and international refereed journals and refereed conferences. She is on the editorial board for refereed journals and has worked on Special Issues. Usha has served and continues to serve on the Boards of several not-for-profit organisations and she has also served as panel judge for a number of awards including the Premiers Sustainability Award in Victoria and the International Green Gown Awards. Usha has published over 100 publications, including research and consulting reports. Her publications cover a wide range of scientific and technical research publications that include edited books, book chapters, refereed journals, refereed conference papers and reports for local, state and federal government clients. She has also produced podcasts for various organisations and participated in media interviews. She has received state, national and international funding worth over USD \$25 million. Usha has been awarded the Quarterly Franklin Membership by London Journals Press (UK). Her biography has been included in the Marquis Who's Who in the World® 2018, 2016 (33rd Edition), along with approximately 55,000 of the most accomplished men and women from around the world, including luminaries as U.N. Secretary-General Ban Ki-moon. In 2017, Usha was awarded the Marquis Who's Who Lifetime Achiever Award.

Meet the Volume Editor



Dr. Appiah-Opoku is a Professor of Geography at the University of Alabama, Tuscaloosa, USA. He teaches Urban Planning and Analysis, Land Use Regulation, World Regional Geography, and a field studies course in Africa. He teaches at both the undergraduate and graduate levels and has served on several thesis and dissertation committees. He is the author of two books and has edited five others. His research focuses on environmental assessment, transportation planning, urban and regional planning, biodiversity conservation and ecotourism, environmental risk assessment, natural resource conservation, indigenous ecological knowledge, and international development. He is a member of the American Institute of Certified Planners and has officially contributed questions to the AICP exam. He has served on the international editorial board of the *Journal of Environmental Impact Assessment* since 2003 and has published scholarly articles in several renowned journals, including *Habitat International*, *Transport Research Part A: Policy and Practice*, *Journal of Urban Planning and Development*, *Journal of Transport and Health*, *Journal of Sustainable Development*, *Environmental Management*, *Environmental Impact Assessment Review*, *Journal of Cultural Geography*, and *Plan Canada*. He served on the Technical Advisory Team that advised the government of Ghana on the preparation of a 40-year development plan for the country in 2015.

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Preface

Regional planning aims to envision a better future for a region and proposes policies to achieve a desired regional development vision. It deals with many facets of the human and biophysical environments, covering large geographical areas or jurisdictions with identifiable common characteristics. One of the early planners to draw attention to the need for regional planning was Patrick Geddes, who coined the term conurbation to describe the interdependent nature of urban spaces. The trend towards regional planning is desirable because of the following developments: (a) socioeconomic and environmental relationships exist between towns and the countryside; (b) urban spaces have become interconnected districts stretching across vast geographical areas; and (c) the need to avoid wasteful duplication of functions in several closely adjoining jurisdictions. Regional planning takes a synoptic approach to areawide problem-solving and coordination with adjoining jurisdictions. It is against this backdrop that this book discusses contemporary regional planning approaches in diverse jurisdictions worldwide.

In editing this book, a clear mission was established: to provide a state-of-the-art examination of how contemporary regional planning problems are being addressed globally. In doing so, we are mindful of planning regions as consisting of areas that are large enough to enable substantial changes in the distribution of population and employment to occur within their boundaries yet small enough for their planning problems to be tackled as a whole. In this regard, this book presents distinct but varied regional planning cases ranging from the planning of capital cities under regional conflicts that use Jerusalem as a model, sustainable planning strategies for a port city in Turkey; lessons from contemporary regional institutions in Arctic landscapes; balancing local autonomy and regional objectives using the case of Winnipeg's Plan 2050; and perspectives on Indonesia's capital city relocation as a national conflicts resolution strategy.

The book is divided into three sections. Section 1 focuses on contemporary regional planning issues associated with capital cities and regional conflict resolution, presenting three chapters. The introductory chapter provides a brief overview of the concept of regional planning. The next chapter discusses the relocation of Indonesia's capital city from Jakarta to Nusantara, as well as the inherent conflict resolution potential. It argues that the relocation of the capital aligns with national decentralization policies designed to empower regional governance, enhance local autonomy, and simultaneously address longstanding regional inequality, historical grievances, and resource management issues. Focusing on Jerusalem, the final chapter in this section discusses the intricacies of planning in contested cities. It highlights the dual role of urban planning as a potential tool for conflict resolution. Using the city of Jerusalem as a case study, it offers lessons on inclusive and equitable planning approaches in regions that are marked by deep-seated socioeconomic and environmental conflicts.

Section 2 focuses on regional planning approaches and presents two chapters. The first discusses Winnipeg's Regional Plan 2050, which aims to strike a balance between local autonomy and regional objectives in urban planning. This chapter critically examines the role of public-private partnerships, delves into the processes of community engagement, and evaluates how these efforts have influenced the plan's outcome. Overall, the chapter contributes to the discourse on urban governance, offering insights into harmonizing local and regional priorities to achieve inclusive and sustainable urban development. The next chapter in this section focuses on river basin development as a sustainable planning strategy for a port city in Turkey.

Section 3 focuses on regional planning in Arctic landscapes and presents a single chapter. The chapter discusses challenges facing regional institutions in the Arctic landscapes. The issues discussed include positioning the region within the global system of growth and development, as well as analyzing the roles of regional land-owner institutions and co-management with indigenous institutions and formal agencies.

The book is insightful and could serve as an essential reference material on rural development for students, planners, NGOs, government officials and international institutions interested in rural development.

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Section 1

Regional Planning and
Conflicts Resolution

Introductory Chapter: The Concept of Regional Planning Revisited

Seth Appiah-Opoku

1. Introduction

Planning has been described as a systematic process of thought and action geared toward effective decision-making regarding the health, safety, and welfare of communities and environmental sustainability [1]. It is a future-oriented, problem-solving activity conducted at all levels of government, including rural, urban, and regional or national. Increasingly, many planning problems impact areas lying beyond a single jurisdiction. In other words, no single jurisdiction is an island unto itself in the discipline of planning because of the interconnectedness of socioeconomic and biophysical activities through space. Regional planning attempts to visualize a better future for a region and proposes policies for achieving a desired regional development vision. It deals with many facets of the human and biophysical environment, covering large areas with one or more jurisdictions but identifiable common characteristics. The trend toward regional planning is rationalized by the following developments: (a) socioeconomic and environmental relationships exist between towns and the countryside, (b) urban spaces have become interconnected districts stretching across vast geographical areas, and (c) the need to avoid wasteful duplication of functions in several closely adjoining jurisdictions. On this basis, regional planning takes a synoptic approach to area-wide problem-solving and coordination with adjoining jurisdictions [2]. Compared to community or city planning, which deals with development within municipal jurisdictions, regional planning deals with many aspects of the human and natural environments over relatively large areas lying beyond cities. It is against this background that this book discusses contemporary regional planning approaches in some jurisdictions around the globe.

1.1 The roots of regional planning

Regional planning emerged in the middle and late nineteenth century in response to rapid suburbanization and the threats of modern capitalism. One of the early planners to draw attention to the need for regional planning was Patrick Geddes, who coined the term conurbation to describe the interdependent nature of urban spaces [1]. Geddes was among the first planners to realize the need for regional planning and proposed the famous trinity of three factors to consider in spatial planning—the *people* (folk), *economy* (work), and *place* (geographical dimension of the region). The interrelationships among these factors formed a basis for regional planning. For instance, the interdependence of the three factors in a geographic unit such as a watershed or river basin dramatized the need for regional planning and the creation of the Tennessee Valley Authority (TVA) in 1933. The TVA has the power to plan and

develop the entire Tennessee River Basin in the Southeastern United States. It has planning jurisdictions in seven states, including Georgia, Alabama, Virginia, North Carolina, Mississippi, and Kentucky. The creation of the TVA epitomized the U.S. government's awareness of a growing trend toward regional planning and the recognition that many of the problems in the Tennessee River Basin could hardly be solved by each of the states within the basin acting alone. Thus, it was necessary to undertake planning for areas large enough to encompass the major effects of development problems simultaneously [3]. In another development, Ebenezer Howard, also deserves credit for the emergence of regional planning, as his publication titled *Garden Cities of Tomorrow* initiated the Garden City Concept [4]. Among other things, the concept illustrates the ideal way to organize the territories around large cities to conserve natural resources, minimize sprawl, and attain a balance between human and natural factors in a regional planning fashion. Thus, regional planning is also done at a metropolitan level, where there exists a core city with noticeable socioeconomic links to the hinterlands. For instance, in the U.S., a typical metropolitan region consists of an average of 104 jurisdictions that may include counties, townships, and municipalities [3]. They also include special-purpose governments such as fire districts, school districts, and industrial districts. The strength of regional planning at the metropolitan level is that it minimizes duplication of planning functions and development efforts, as it forges partnerships.

1.2 Regional planning issues

As noted above, one unique characteristic of regional planning is that it deals with problems in large areas that may encompass several jurisdictions. Several planning issues emanate from this unique characteristic. The issues range from conflicting boundaries, addressing inequities in housing or shelter, education, transportation, health, environmental degradation, air and water quality, watershed pollution, unemployment, and harmonizing conflicting local jurisdictional planning objectives [5]. In all these, regional planning helps local governments gain extra-territorial influence over planning issues. In addition, most regional planning problems cannot be resolved by any local political jurisdiction acting alone. For instance, regional environmental problems such as air or water pollution cannot be tackled alone in a local jurisdiction. In other words, the geographic extent of a problem determines whether the response or solution could be largely local or regional. For instance, if a planning problem falls entirely within the boundaries of a local government, it is reasonably considered a local one. However, if the said problem spreads across the boundaries of two or more local governments, it safely falls within the domain of regional planning.

1.3 Limitations

Regional planning does have limitations. Among them are challenges in drawing appropriate boundaries, difficulties in assigning proper organizational functions and powers, as well as limited funding and expertise. Finally, solutions to regional planning problems are relatively costly and often require a larger tax base than any individual local government can tap, acting alone.


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Chapter 2

Perspective Chapter: Indonesia's Capital City Relocation as Multi-Dimensional National Conflicts Resolution Strategy

Alfath Satria Negara Syaban and Seth Appiah-Opoku

Abstract

This chapter discusses the inherent conflict resolution potential of Indonesia's capital city relocation project. The relocation of Jakarta to Nusantara in East Kalimantan reflects a strategic response to multidimensional national challenges, including Jakarta's overpopulation, congestion, environmental degradation, and land subsidence tendencies. Inspired by global examples like Brasília and Putrajaya, the initiative aims to decentralize governance, redistribute economic activities, and foster sustainable development. Nusantara's development emphasizes environmental sustainability, inclusive urban planning, and equitable resource distribution, symbolizing Indonesia's commitment to national unity and resilience. This chapter argues that the relocation project inherently addresses regional disparities by promoting balanced growth across the archipelago while mitigating socio-economic, political, and environmental conflicts in Indonesia. The relocation aligns with decentralization strategies that empower regional governance and enhance local autonomy, addressing long-standing issues such as inequality, historical grievances, and resource management. As a transformative endeavor, Indonesia's capital relocation represents an opportunity to reimagine governance, strengthen national identity, and address multidimensional conflicts, serving as a model for sustainable urban development and peacebuilding in a large, diverse, and geographically complex nation. Thus, the new capital embodies Indonesia's aspirations for equitable growth, national cohesion, and a sustainable future.

Keywords: Jakarta, Kalimantan, capital relocation, sustainable development, conflict resolution

1. Introduction

Indonesia is an archipelagic country comprising 17,508 islands, including Sumatra, Java, Kalimantan, Sulawesi, and Papua. Its population is 273,879,750, ranking fourth globally [1]. The population is unevenly distributed throughout the archipelago, with

around 57% living in Java. This demographic concentration has created an economic dependency on the island, with around 59% of Indonesia's economic contribution coming from Java. However, due to its limited land area and high population density, Java has become highly crowded, leading to multiple problems, including environmental degradation, traffic congestion, and severe air pollution [2]. Jakarta, the capital city, is situated on Java Island and serves as an economic, social, and political hub on a national and regional scale. Currently, the Indonesian government is relocating the capital from Jakarta to Kalimantan.

According to Hackbarth & de Vries [3], one of the primary reasons for building a new capital city is the environmental problems faced by Jakarta. Every year, the ground level in Jakarta falls by around 3–10 centimeters, leading to severe environmental consequences. Moreover, Jakarta's physiographic location makes it highly vulnerable to natural disasters, with around 50% of the land highly susceptible to flooding, volcanic activities, and earthquakes with the potential for a tsunami. Jakarta's overpopulation, overconcentration, and overdevelopment have resulted in severe adverse effects, underlying the decision to relocate the capital to Kalimantan.

This chapter explores how this relocation has the potential to resolve national socio-economic, political, and environmental conflicts and foster national unity and resilience in Indonesia. To provide context, the chapter begins with a brief review of global capital city relocation experiences, assessing their motivations and outcomes to comprehensively understand the complex dynamics involved in such transformative projects.

2. Capital city relocation

The evolution of national capitals across the globe has been influenced by various factors, including politics, geography, history, culture, and ideology, reflecting the complex interplay between internal dynamics and external forces [4]. Historical events such as World Wars, decolonization, and the collapse of empires have often necessitated the establishment or redefinition of capitals, with architecture and urban planning playing pivotal roles in symbolizing national aspirations, cultural heritage, and ethnic identities. The transition from colonial capitals to those symbolizing national unity and independence marks a significant shift, with many countries opting to relocate their capitals inland, distancing themselves from colonial legacies. This move also illustrates how national development objectives and external influences shape capital mobility, with advances in transportation and military technology reducing the need for strategically positioned capitals. Modern examples like Ankara, Brasília, Putrajaya, and Astana exemplify this trend, showcasing unique urban designs and architectural motifs embodying national pride and identity, tangible representations of nation-building efforts, and cultural legacies [5].

2.1 Capital city relocation in Africa

African capital relocation is influenced by various nation-building factors, including urbanization, economic integration, and ethnic diversity, aimed at fostering national identity and unity. The shift of state capitals from coastal to more central locations is often a gesture of resistance to colonial legacies and a demonstration of independence motivated by geographical, economic, and urban development considerations. Such relocations also address population density, urban congestion, and

the desire to balance regional economic development. Ethnic diversity and regional integration play crucial roles in selecting new capital sites, promoting national unity, and accommodating regional political influences, albeit sometimes clashing with national aspirations [6, 7]. Post-independence, external funding has supported some of these initiatives, though financial and economic realities can temper the pace of capital relocation. Typical examples across Africa, including Nigeria's move from Lagos to Abuja and Tanzania's shift to Dodoma, highlight varied motivations such as urban congestion, security concerns, political dynamics, and environmental factors. Additionally, considerations like overcrowding, natural disasters, and political instability have prompted countries like Ghana, Liberia, and Somalia to explore or execute capital relocations. These movements underscore the intricate interplay between logistical, sociopolitical, and economic factors driving capital relocation decisions in the continent [8, 9].

2.2 Capital city relocation in Asia

The relocation of Asian capitals is driven by a blend of historical, political, and economic considerations, aiming to address issues from colonial legacies to modern challenges. The motivation in Southeast and South Asia includes establishing new national identities, fostering regional integration, and addressing urban congestion [3, 10]. Unlike Africa's emphasis on ethnic diversity, countries like China, Japan, South Korea, and Taiwan focus on alleviating urban issues and economic disparities and promoting decentralization to spur development in lagging regions. These efforts range from Japan's governmental decentralization to China's debates on environmentally motivated relocations [11]. In the Middle East, Turkey and Jordan have built new capitals for reasons spanning political identity to urban planning. At the same time, Iran, Afghanistan, and Egypt, alongside the United Arab Emirates (UAE's) consideration, reflect concerns over overpopulation and infrastructure. Malaysia's move from Kuala Lumpur to Putrajaya exemplifies the balance between national identity and global ambitions, a theme echoed in Thailand and the Philippines' considerations for environmental and congestion reasons. In South Asia, historical, cultural, and anti-colonial sentiments drive capital relocations, as seen in India, Bangladesh, Nepal, Pakistan, and Myanmar, showcasing the diverse and complex motivations behind these significant urban planning decisions [5, 12–14].

2.3 Capital city relocation in Latin America

Urban centralization in Latin America, focusing on capital cities, such as Santiago, Buenos Aires, and Mexico City, is deeply rooted in the region's colonial history, influenced significantly by Spain and Portugal. This historical legacy has led to the development of urban centers central to political, economic, and cultural life, distinguishing them from capitals in North America in terms of size and prominence [15–18]. Scholars like Sebastian Galiani and Sukko Kim highlight the unique impact of being designated as a capital in the region. The colonial era, particularly under Spanish rule, favored administrative centralization over economic considerations, often placing capitals inland for strategic and resource distribution reasons. This was a departure from the British and Dutch preference for coastal locations. The post-colonial era has seen debates on capital relocation to address federalism and regional disparities, with Brazil's creation of Brasília exemplifying efforts to decentralize and

promote inland development. Despite these attempts, Latin America's reluctance to completely break from its colonial past, attributed to enduring linguistic, religious, and ethnic connections with former colonizers, continues to shape its urban development and nation-building strategies [5].

2.4 Capital city relocation in Europe and Anglo-Saxon countries

The post-Soviet era marked significant capital relocations reflecting efforts to reaffirm national identities, address geopolitical concerns, and establish governance structures for new geopolitical realities [19–21]. Kazakhstan's move to Astana from Almaty aimed to diminish Russian influence and reinforce Kazakh identity, with similar motivations seen in potential capital shifts in Kyrgyzstan and Tajikistan to foster national unity [22–24]. In Europe, Germany relocated its capital to Berlin post-reunification, symbolizing a blend of historical recognition and forward-looking aspirations, a sentiment echoed in Albania's selection of Tirana and discussions in Romania and Poland. Temporary adjustments, like Lithuania's interim use of Kaunas, and broader debates on decentralization underscore the multifaceted influences on capital selection, ranging from historical legacies to contemporary challenges [25–28]. In Anglo-Saxon countries, strategic, symbolic, and compromise-driven factors have guided capital city decisions; Washington, DC, was established to balance US regional interests, Ottawa was chosen as Canada's capital to bridge divides, Canberra ended a rivalry in Australia, and Wellington's central position improved accessibility in New Zealand. These examples from various continents highlight capital cities' crucial roles in crafting national narratives, identity, and governance, emphasizing their symbolic and practical significance in a global context [5, 29–31].

3. The dynamics of Indonesia's capital city relocation

Current Indonesia's capital city, Jakarta, is in the western part of the island of Java, with a land area of 662.33 km² and is dominated by lowlands. Jakarta is the city with the largest population in Indonesia. In 2022, the population of city was 11,075,000, with an annual growth rate of 1.47 percent [1]. It is the center of social, economic, and political activities in Indonesia and Southeast Asia. This makes Jakarta a strong magnet for other Indonesian regions. As the annual rate of urbanization growth keeps increasing, Jakarta's limited land produces high population densities – 16,084 per square kilometer in 2022. In recent years, Jakarta has developed into a center of socio-economic activities and modernization that combines integrated infrastructural development with public transport, the development of a port and waterfront areas, and the conservation of historic areas to improve the quality of city parks. As expected, Jakarta has a spectrum of development complex problems that directly impact the city's future survival. They include social and demographic inequality, traffic congestion, pollution, and land subsidence. Therefore, it is evident that Jakarta's situation as the nation's capital is deteriorating (**Figure 1**).

The history of Jakarta is reflected in its colonial relics and the local communities within the region. Initially known as Sunda Kelapa, the city's name was changed to Jayakarta following its recapture by local rulers. During the Dutch era, the name was altered to Batavia, establishing it as a hub of colonial urban activities. Urban planning incorporated European-style planning methodologies, particularly in terms of water management and the development of urban areas. Several years after the conquest,

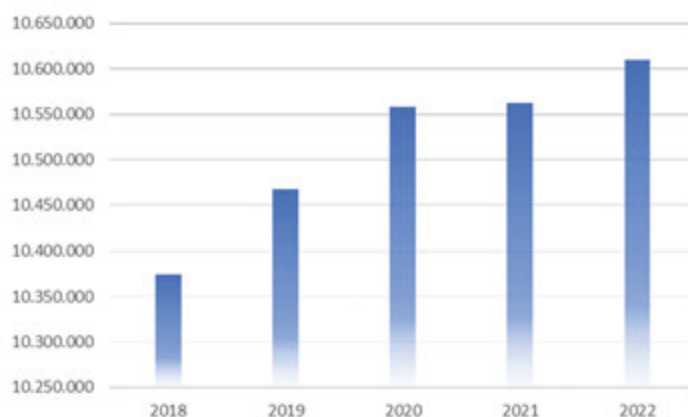


Figure 1.
Jakarta's population (in million). Source: Authors, 2024.

Batavia experienced a setback due to a population boom, and its infrastructure could no longer support it. As slums expanded, pollution increased, and disease outbreaks appeared due to poor sanitation and an overloaded sewer system. To overcome those issues, the Dutch expanded the city further to the south, following along the Ciliwung River. A salient feature of Dutch urbanism was their prowess in hydrological engineering. Given Batavia's intricate riverine ecosystem and maritime interface, the Dutch introduced advanced water structures to the region (**Figure 2**).

After gaining independence, Jakarta tried to shed its colonial past and establish a new urban identity. In 1949, the city's planning was reimagined to create a thriving metropolis that could accommodate a projected population of seven million. However, given Jakarta's geographical constraints and vulnerability to floods, satellite cities were developed on the outskirts to serve primarily as residential areas and alleviate the daily commuter flow into Jakarta [32]. Despite these efforts, remnants of colonialism continue to influence present-day urban challenges in the city.

Jakarta today faces significant challenges due to traffic congestion exacerbated by the growing number of motorized vehicles, particularly motorcycles, contributing to notable congestion in Southeast Asia [33, 34]. The city, a vital center for commerce, government, education, and culture, experiences a daily influx of 3.2 million people, including many commuters from surrounding areas. Despite efforts to introduce mass transit solutions like the Transjakarta Bus in 2004, Jakarta's infrastructure needs to meet demand, leading to severe congestion and pollution. The situation is further aggravated by a reliance on private vehicles, encouraged by national fuel subsidies and road improvement programs, highlighting the need for comprehensive public transportation improvements to alleviate congestion [35–38]. Moreover, Jakarta contends with severe land subsidence, primarily due to excessive groundwater extraction, urbanization, and economic growth, leading to significant environmental challenges and infrastructure damage [39, 40]. The city's northern coastal areas are especially vulnerable to flooding, a situation worsened by monsoon rains and urban development pressures [41–44]. Efforts to mitigate these impacts have included infrastructural adaptations, but challenges persist. The relocation of the capital to Nusantara in East Kalimantan is proposed as a strategic solution to these issues, aiming to alleviate Jakarta's burdens and promote sustainable development. The new capital's development focuses on environmental sustainability, aiming for a minimal carbon footprint

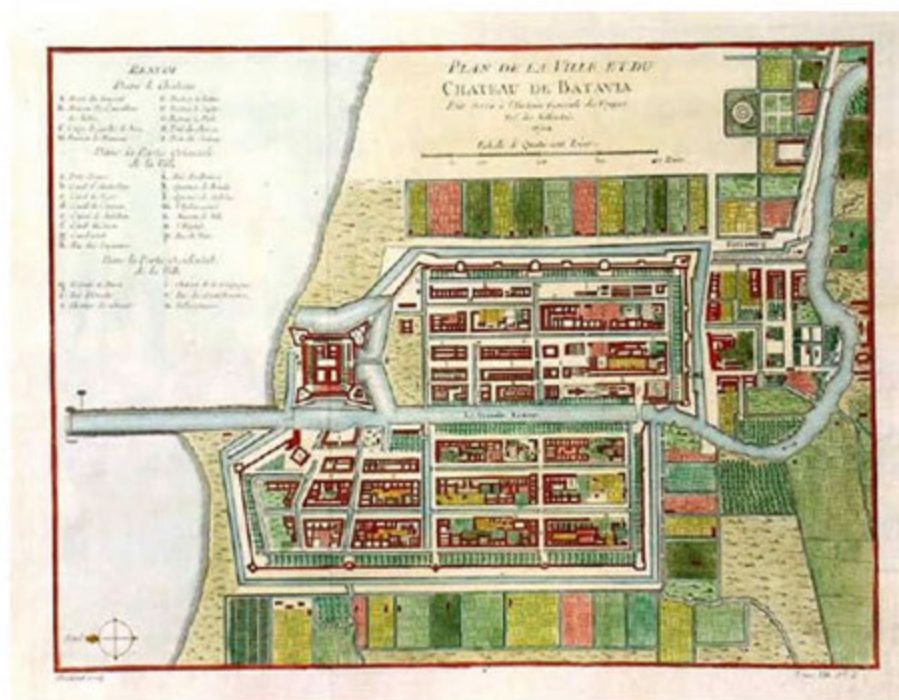


Figure 2.
Old Jakarta (Batavia). Source: Steinberg [32].

and serving as a model for sustainable urban planning while also seeking to redistribute economic activities and reduce regional disparities [45].

The relocation of Indonesia's capital to Nusantara represents a multifaceted effort toward creating a socially inclusive urban model featuring affordable housing, public service accessibility, and inclusive spaces while politically aiming to decentralize power and foster a more equitable distribution throughout the archipelago. This move, envisioned to promote national equity and sustainability, necessitates a gradual transition, engaging all stakeholders to ensure minimal disruption to government functions and resource efficiency. Initially conceptualized by President Sukarno in 1957 with Palangkaraya City, the capital's relocation idea was later deprioritized for Java's agricultural enhancement under President Soeharto. The concept regained traction in the 2000s, advocating for reform and regional autonomy. President Joko Widodo officially announced in 2019 that it would strategically be situated in East Kalimantan to stimulate economic growth and enhance national unity in a region with lower population density. This initiative, supported by the Ministry of National Planning and Development (Bappenas), has led to a design competition for the new capital, Ibukota Negara (IKN) Nusantara, symbolizing Indonesia's ancient name and future aspirations (**Figure 3**).

In addition, the natural environment is quite favorable. The location is a lowland region. Indonesia is located on the Pacific Ring of Fire area as earthquakes and ground movements occur frequently. The proposed location for the capital city offers the lowest potential for natural disasters. Hackbarth & de Vries [3] asserted that one of the

4. The dynamics of conflict

Our ambivalence toward conflict is deeply embedded in our perceptions and reactions to it, recognizing it as natural, inevitable, and necessary for growth, yet often reluctant to acknowledge our involvement in serious disputes, typically downplaying them as mere discussions or avoiding addressing internal conflicts in organizations. This reluctance stems from a perceived admission of failure or an acceptance of a hopeless situation. Effective conflict management requires understanding conflict on multiple levels—emotions, disagreements, interests, worldviews, or behaviors—and exploring underlying causes and motivations. We often carry assumptions into conflicts, some helpful and others limiting, necessitating sophisticated frameworks that challenge these assumptions and broaden our perspective with practical tools for handling conflicts. These frameworks deepen our understanding, improving our ability to manage conflicts in ways that align with our values like peacebuilding. Embracing a more complex thought process about conflict itself is necessary to simplify managing complex situations, utilizing various ‘lenses’ to focus on different aspects of conflict, thus providing a robust set of concepts to understand and navigate conflict dynamics effectively. This integrated approach equips us to handle conflicts more effectively, embracing the complexities involved.

4.1 Dimensions and drivers

Conflict can be analyzed along cognitive, emotional, and behavioral dimensions, offering insights into its complex and sometimes contradictory nature [46]. Cognitively, conflict involves perceptions of incompatible needs, interests, or values between parties, which can be both objectives, like conflicting land use desires, or subjective, such as differing parenting philosophies. Emotionally, conflict is characterized by feelings such as fear, anger, or hopelessness, which define an individual’s experience of being in conflict, regardless of the other party’s awareness or involvement. Behaviorally, conflict is expressed through actions intended to articulate perceptions, express feelings, or meet needs in ways that might hinder another’s ability to meet theirs. These actions can range from confrontational to conciliatory. The interplay between these dimensions explains why conflicts evolve and manifest in varied ways, emphasizing the non-linear and dynamic nature of conflict experiences and expressions, which can persist or change rapidly over time, influencing how conflicts are perceived and managed on individual and systemic levels [47].

Conflict arises from a variety of sources, and while numerous theories exist to explain its origins—from basic human instincts, societal structures, to class struggles—these often do not offer practical solutions for resolving conflicts [48, 49]. A more useful approach might involve integrating the best insights from these theories into a coherent framework that can guide our understanding and management of conflict. Such a framework would help map out the conflict process and inform strategies that acknowledge the diverse motivations behind conflict behaviors. The “wheel of conflict” model, developed through collaborations at collaborative decision resources (CDR) Associates and inspired by Christopher Moore’s “circle of conflict,” serves as a valuable tool in this respect. It identifies human needs as central to all conflicts, suggesting that people engage in conflict to meet either explicit needs or perceived discrepancies in needs among parties. Addressing these needs, embedded within broader social and power dynamics, is crucial for effectively managing and resolving conflicts (**Figure 4**) [46, 47].

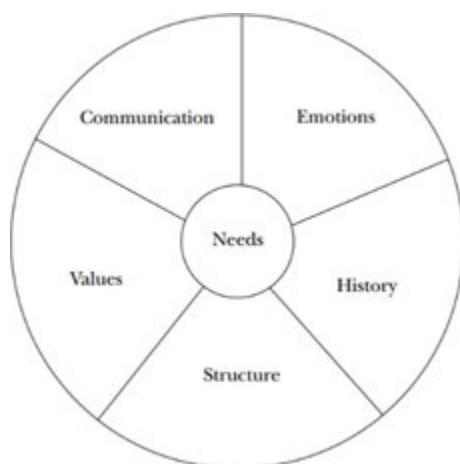


Figure 4.
Wheel of conflict. Source: Mayer [46].

Humans are inherently flawed communicators, which not only often leads to conflicts regardless of significant interest clashes but also complicates their resolution. This imperfection in communication becomes particularly pronounced under emotionally charged or complex situations [50, 51]. Despite these challenges, it is crucial to recognize how easily misunderstandings can occur and escalate conflicts due to incorrect assumptions about successful communication. Factors like cultural backgrounds, gender, age, and social classes can significantly affect communication efficacy, often leading to misconceptions or stereotyping based on previous experiences or incomplete information [52, 53]. Additionally, under stress, effective communication becomes even more critical yet challenging, potentially leading to feelings of hopelessness or frustration in serious disputes. However, through persistent effort and focus, improvements can be made in communication strategies, even in intense conflicts, providing both significant challenges and opportunities for resolution [46].

In the realm of conflict resolution, the Wheel of Conflict model posits that human actions and engagements in conflicts are fundamentally driven by an array of human needs, as elaborated by theorists ranging from Freud to Maslow. These needs are often categorized into various levels, where a common distinction is made between transient, superficial interests and deeper, more enduring needs [46]. Rather than viewing interests and needs as distinctly separate entities, it is more insightful to consider them as existing on a continuum of human needs, paralleling Maslow's hierarchy from basic survival needs to the pursuit of identity and self-actualization. This conceptual framework suggests that resolving conflicts effectively requires more than just addressing the superficial interests; it necessitates engagement with the underlying needs that sustain human motivations. Interests, often seen as the immediate drivers of conflict, are actually mid-range needs that, when addressed, can lead to temporary resolutions [54–56]. However, for a resolution to be meaningful and enduring, it must also engage with identity-based needs, which include the needs for meaning, community, intimacy, and autonomy. These deeper needs are pivotal as they not only define individual identities but also influence interactions in profound ways, embodying desires for purpose, connection, and individual freedom within the social fabric. Conflicts often escalate or persist not merely due to unmet interests but because these fundamental human needs are not adequately acknowledged or

addressed. In practical terms, resolving a conflict thus involves a delicate balance of addressing both the immediate interests and the underlying identity-based needs. This approach ensures that solutions are not only effective in the short term but are also resonant and sustainable, aligning with the deeper personal and collective aspirations of those involved. Engaging with these needs might require expansive strategies that go beyond negotiation to include social change efforts or personal development initiatives, highlighting the complexity and depth of human conflicts and the sophisticated understanding required to resolve them effectively [46, 57].

4.2 An overview of Indonesia's multidimensional conflicts

As a large multicultural country, Indonesia can potentially create conflicts that strive for communal integration. Throughout history, Indonesia has suffered from conflicts across various dimensions. It started from the discriminatory economic system during the colonial era, which led to significant dissatisfaction and resistance to the conflicts among various societal groups after gaining independence in 1945 [58]. In the early years after independence, Indonesia was confronted with disintegration movements such as those that occurred in regions in Sumatra and Sulawesi in the late 1950s, rooted in imbalanced development and a lack of autonomous rights for provinces. Then, the New Order era under the Soeharto regime was marked by conflict between the armed forces and the communist party in 1965, leading to widespread persecution of communist party members, sympathizers, and ethnic Chinese individuals seen as affiliated with the party. The conflicts in Aceh, Papua, Sulawesi, and Maluku were based on struggles over identity, autonomy, and human rights, often culminating in repressive actions and violence. Paradoxically, the Reform era in the late 1990s, which marked the beginning of decentralization and democratization, triggered a new escalation of conflicts, including religious and ethnic disputes, leading to communal violence in several regions of Indonesia. The following is a portrait of several conflicts in the last few decades and potential conflicts that might occur over relocating the capital city to Kalimantan [59–61].

4.2.1 Understanding social conflicts in multicultural societies

Social conflict is frequently observed in societal structures, where divergent interests among social groups generate discord, disagreements, and confrontations. Such conflicts can emerge from various origins, including economic inequality, ideological divergences, ethnic or religious disputes, and struggles over scarce resources. Particularly in pluralistic societies, conflict often manifests when governmental policies or prevailing social norms disproportionately benefit specific groups, thereby engendering perceptions of marginalization and injustice among those who perceive themselves as disadvantaged. This phenomenon is particularly observable in the dynamics between ethnic majority and minority groups, where contentious issues like land rights, language privileges, and equitable access to public amenities are prevalent [62]. Economically, conflict may arise from disparities in wealth distribution and access to opportunities, further deepening divisions between social strata and escalating competition for employment, educational opportunities, and social welfare. Demographic shifts such as urbanization or international migration also frequently catalyze tensions within communities that absorb these migrations, as competition intensifies over local resources and employment, potentially sparking disputes between established residents and newcomers [63, 64]. Absent effective

integration strategies or supportive policies, these interactions can lead to misperceptions and perceived threats, intensifying societal tension. The broader effects of globalization and technological evolution also shape the landscape of social conflict, introducing challenges like rapid economic transitions that not all community segments can adeptly navigate, thereby exacerbating conflicts between those who benefit from and those who are sidelined by global changes. Effective management of social conflicts often involves dialogue and mediation, which facilitate the development of shared understanding and agreements, targeted policy reforms to address root causes of disputes, and developmental initiatives designed to minimize social and economic disparities. These methods necessitate collaborative efforts among diverse stakeholders, including governmental bodies, civil society organizations, and local community groups, ensuring comprehensive engagement and valuation of diverse perspectives in conflict resolution. Consequently, heightened awareness and sensitivity to social dynamics are critical in crafting strategies that mitigate current conflicts and preempt future discord, thereby cultivating a more inclusive and harmonious societal framework [65].

4.2.1.1 Separatist rebellion in Indonesia: The cases of Papua and Aceh

One of the conflicts still occurring today is between the Indonesian government and the separatist West Papua Freedom Movement Organization (OPM). The Act of Free Choice in 1969 has had lasting implications on Papua, Indonesia, mainly due to historical, cultural, and socio-economic disparities that have continued to fuel inter-ethnic conflicts and violence in the region. Papua's rich cultural diversity, over 220 ethnic groups, and significant economic interests, particularly in mining operations like the Grasberg mine, have further complicated these issues. The Indonesian government's security-focused approach and the ineffectiveness of development initiatives in reaching indigenous Papuans have intensified separatist sentiments and ongoing violence. Despite post-1998 political reforms aimed at declaring Papua's special autonomy status and reducing tensions, their implementation has faced challenges, highlighting the conflict's deep-rooted nature in historical grievances, integration disputes, and resource control struggles. A nuanced understanding and commitment to genuine dialogue and reconciliation is critical in addressing these complex issues [66–68]. The ongoing debate over Papua's conflict is underscored by various fundamental issues, such as the contested legitimacy of Papua's integration, political violence, human rights violations, and the effectiveness of autonomy policies, as outlined by research institutions such as the Indonesian Institute of Sciences (LIPI). The disparity in perspectives between Indonesian and Papuan nationalists over the legitimacy of Papua's integration into Indonesia has fueled resistance and demands for self-determination, further complicating the situation. Despite efforts like the introduction of special autonomy in 1999, the division of Papua into multiple provinces, and the establishment of the Papuan People's Assembly, conflicts persist, raising concerns over the effectiveness of these measures. The recommendations for a lasting solution involve inclusive dialogue and development-focused approaches that benefit the local population, emphasizing the importance of mutual trust and commitment to resolving the complex issues for peaceful integration of Papua within Indonesia [69–71].

In Aceh, conflict flared between the Indonesian government and the Free Aceh Movement (GAM). This conflict was initially profoundly rooted in historical grievances and a quest for autonomy, exacerbated by the GAM resistance against perceived

injustices by the central government. The region's struggle with Dutch colonialism and subsequent feelings of neglect post-independence, coupled with its rich natural resources, fostered a strong local identity that clashed with the centralization policies of President Suharto's New Order regime. GAM, founded by Hasan di Tiro in 1976, sought independence, primarily driven by political and economic disparities rather than ethnic differences. The Indonesian military's repressive measures further alienated the Acehnese, fueling the conflict that transcended ethnic boundaries and drew a broader base of support for GAM [72, 73]. The resolution of this prolonged conflict came with the Helsinki Peace Accord of 2005, which marked a significant shift from military to political engagement, laying the groundwork for Aceh's governance, human rights, and the reintegration of combatants. The peace process, catalyzed by the destruction of the 2004 Tsunami and facilitated by the Crisis Management Initiative under Finnish President Martti Ahtisaari, led to the establishment of the Aceh Monitoring Mission to ensure compliance with the peace agreement. The subsequent Aceh Governance Law of 2006, granting special autonomy to the region, signified a commitment to democracy and peace. However, the challenges in fully implementing the peace agreement and special autonomy law underscore the complexities of post-conflict governance and the ongoing need for vigilance to sustain peace and address underlying grievances [74–76].

The conflicts in Papua and Aceh provide valuable insights into conflict resolution strategies on a broader scale, illustrating the critical importance of addressing underlying historical grievances, cultural and socio-economic disparities, and legitimacy issues in achieving lasting peace. These cases highlight that effective conflict resolution requires more than just political agreements or autonomy grants; it requires inclusive dialogue that genuinely considers the needs and perspectives of local populations, development initiatives that directly benefit those communities, and a commitment to implementing agreements in a way that respects local identities and aspirations. The success in Aceh following the Helsinki Peace Accord and the ongoing challenges in Papua underscore the need for comprehensive approaches that combine political, socio-economic, and cultural considerations, thereby offering lessons for resolving similar conflicts globally through a focus on mutual understanding, trust-building and ensuring the participation of all stakeholders in the peace process.

4.2.1.2 Sectarian disputes: The cases of Maluku and Kalimantan

In addition to separatism, Indonesia has also experienced sectarian conflicts. One such conflict occurred in Maluku several years ago, where Islam and Christianity – two major religions with similar populations – clashed in a region where both communities had coexisted for years. This historical event, combined with colonial and post-colonial governments' favoritism of certain religious groups, created regional tensions. The islands' struggle for natural resources and political authority often obscured the religiously fueled economic and political tensions. Radical interpretations of religious teachings and external militant groups with extreme ideologies and resources further exacerbated the dispute. Ineffective government action, characterized by security apparatus biases and inadequate law enforcement, only worsened the situation. Addressing this complex conflict in the Maluku Islands requires a multifaceted strategy considering historical, economic, political, and religious factors [77, 78]. In North Maluku, fighting and land disputes severely disrupted societal order, highlighting the need for robust ethical and moral frameworks to promote peace. After the conflict, individuals worked to repair connections and beliefs to

prevent future violence. Religion played a crucial role in uniting and healing communities, demonstrating its importance in peacebuilding. The 2002 Malino Accord involved all stakeholders in ensuring justice, addressing socio-economic inequalities, and rebuilding community trust. This collaboration, compromise, and targeted policy strategy could be applied to resolve similar conflicts worldwide, emphasizing the significance of addressing immediate and underlying issues to achieve lasting peace and harmony [79, 80].

The other case, there was also conflict between local Kalimantan ethnic groups (Dayak) and Madurese migrant groups in Central Kalimantan, which was rooted in historical, cultural, and economic factors exacerbated by the government's transmigration program, which brought Madurese and other migrants into Dayak territories, heightening resource competition and job scarcity. The cultural clash between the Dayaks' traditional, nature-based livelihoods and the Madurese's intensive farming practices deepened the divide, with incidents like land disputes and religious processes occasionally erupting into violence. This conflict is underpinned by a complex interplay of historical segregation, economic disparities, and political manipulation of ethnic identities, pointing to broader challenges of ethnic diversity management, land rights, and cultural preservation within Indonesia's transitioning democracy [81–83]. In response to the violence, reconciliation efforts have focused on community-based strategies, including repatriating Madurese citizens and initiatives to foster peaceful coexistence through dialogue, joint activities, and restoring trust. These are supported by legal and governmental efforts and contributions from NGOs and civil society to address the root causes and manifestations of the conflict. By promoting inclusive dialogue, legal accountability, and socio-economic development, the multifaceted approach to conflict resolution aims to enhance inter-ethnic relations and ensure security, justice, and equality for all communities involved in the region [84–86].

The situations in Maluku and Kalimantan offer valuable insights into conflict resolution strategies applicable globally. These cases illustrate the necessity of addressing the root causes of conflicts, which often include historical grievances, economic disparities, and cultural differences, through comprehensive and inclusive approaches. The emphasis on community engagement, interfaith dialogue, and socio-economic development in these Indonesian conflicts highlights the importance of involving all stakeholders in peacebuilding to ensure lasting harmony. Moreover, these examples underscore the need for legal and institutional reforms to address biases and inequities, demonstrating how multifaceted strategies that combine cultural sensitivity with political and economic interventions can effectively mitigate conflicts and promote coexistence in diverse societies. Thus, the Indonesian experience provides critical lessons on the complexity of conflict resolution and the importance of tailored, inclusive approaches that address both immediate issues and underlying causes.

4.2.2 Economic conflicts and structural inequality in Indonesia

Economic conflicts are frequently perceived as contests over limited resources, yet the reality is considerably more intricate. Such conflicts can stem from divergent interests among individuals, groups, or nations. From an economic standpoint, factors like income inequality, market access, and fiscal policies can be significant triggers [87]. However, to fully grasp the dynamics of economic conflicts, it is essential to go beyond mere competition for resources. We must also consider how government policies, shifts in global strategies, and cultural and historical contexts influence these

complex economic interactions. Economic conflicts extend beyond the struggle for tangible resources such as land or water, including competition for capital, technology, and economic opportunities [88]. For example, income inequality arises from the uneven distribution of natural resources and market structures and regulations that distort prices and access. Fiscal policy also plays a critical role; taxation and government spending can significantly alter the distribution of wealth and opportunities [89]. Economic conflicts are often exacerbated by protectionist policies enacted by countries aiming to shield their domestic industries from global competition. While such measures may foster local economic growth, their long-term consequences frequently lead to heightened tensions between nations vying for the same markets. In times of economic pressure, countries may resort to more aggressive economic actions, further intensifying these conflicts [90].

In the global context, economic conflicts can also be triggered by changes in international trade policies. For instance, import restrictions imposed by one country can provoke a series of retaliatory actions by other nations, which may exacerbate tensions and hinder global economic growth [91]. The effects of trade wars, for example, are often felt by the countries directly involved and the global economy as a whole. Cultural and historical factors also play a crucial role in shaping the dynamics of economic conflicts. Cultural norms and values related to ownership and resource distribution can vary significantly across societies, complicating negotiations and conflict resolution. The history of colonialism, for example, has left a legacy of deep inequalities in many parts of the world, affecting how resources are allocated and how economic policies are formulated and implemented [92, 93].

Indonesia, an archipelagic nation endowed with significant natural resources, has encountered various economic conflicts stemming from resource struggles and tensions arising from differing economic interests among social groups and between the government and private sector entities. These conflicts are often rooted in complex historical, social, and political dynamics [94]. One of the most significant cases concerns Freeport in Papua. Since the 1970s, Freeport's operations have given rise to numerous social and environmental challenges. The indigenous population of Papua expresses concerns over not receiving equitable benefits from exploiting natural resources within their territory while the company and the central government secure substantial profits. This situation has led to prolonged disputes regarding land rights, environmental degradation, and the equitable distribution of wealth generated from mining activities [95, 96].

In Kalimantan, competition for resources such as coal and palm oil often leads to conflicts among corporations, government authorities, and local communities. Land clearing through forest burning has resulted in significant environmental consequences, including deteriorating air quality that adversely affects residents' health and livelihoods. Indigenous communities frequently find themselves deprived of access to their land and resources, resulting in disputes with companies holding land management rights [97]. Further complicating these issues, under the framework of post-Soeharto economic reforms, economic conflicts emerge in response to privatization and economic liberalization efforts. For example, the privatization of state-owned enterprises (BUMN) within essential sectors such as energy and water has sparked controversy and protests among communities concerned about escalating tariffs and reduced access for marginalized groups [98, 99]. These protests often stem from a deep-seated distrust of government and foreign entities, alongside apprehensions that privatization may preferentially benefit a select few.

Economic tensions are also prevalent in land policy. Indonesia has a long-standing history of unresolved land issues, where ambiguous land ownership can lead to conflicts among communities or between communities and government or corporate entities [100–102]. Agrarian reforms intended to address these issues sometimes exacerbate conflicts, particularly when their implementation is perceived as unjust or lacking transparency [103]. These conflicts underscore the intricate relationship between economic factors, social justice, human rights, and environmental sustainability. Regional economic disparities in Indonesia present a complex challenge, revealing significant variations in economic development and resource accessibility across provinces and islands. The nation's archipelagic structure—comprised of over 17,000 islands—presents unique resource distribution and infrastructure development obstacles, often worsening regional economic inequalities [104]. A notable example is the disparity between Java Island and the Eastern Indonesian regions of Papua, Maluku, and East Nusa Tenggara. As the governmental and economic hub, Java enjoys advanced infrastructure development, better public service access such as education and healthcare, and higher per capita income levels. In contrast, Eastern regions often struggle with inadequate infrastructure, limited access to essential services, and higher poverty rates [105].

This disparity not only affects the quality of life of residents but also fosters social and economic tensions. In Papua, uneven development is frequently linked to social issues and instability, with local communities feeling marginalized in processes that tend to benefit newcomers or large corporations more than indigenous populations [106]. The situation in Kalimantan illustrates how natural resource wealth does not always equate to local prosperity. Despite significant contributions to national income from the extractive sector, many local communities in Kalimantan face poverty and insufficient access to essential services, often due to ineffective resource management and inequitable profit distribution, further exacerbating dissatisfaction and social tensions [107]. In Sumatra, land conflicts often arise due to land ownership and resource management inequalities. When large corporations receive concessions for land management related to extensive agriculture or resource extraction, local community evictions may occur, frequently without adequate compensation or viable alternative livelihoods [105–107].

The Indonesian government has initiated various programs to address these regional economic disparities, including transmigration efforts, fiscal decentralization, and infrastructure development in remote and underdeveloped areas. Nevertheless, the effectiveness of these initiatives is frequently impeded by administrative challenges, corruption, and a need for coordination among different levels of government. Achieving more equitable development necessitates policies focusing on economic growth and enhancing local capacities, developing human resources, and fostering sustainable investment in critical infrastructure.

4.2.3 Political conflict and governance challenges in Indonesia

Political conflict is a complex and multifaceted phenomenon inherently connected to the dynamics and transformations within a society. Such conflicts stem from ideological differences, policy disagreements, or power struggles among individuals, groups, or nations. Various interacting factors—including historical contexts, socio-economic conditions, and existing political structures—often shape the ever-evolving nature of these conflicts [46]. Historically, in particular, play a pivotal role in establishing the foundations of political discord. Long-standing conflicts rooted

in historical disputes between ethnic groups or nations can significantly contribute to contemporary tensions. For instance, colonial histories frequently leave a legacy of division and inequality, which can catalyze the emergence of political conflicts in later years [108].

Socio-economic conditions are fundamental in shaping political conflicts and undeniably present challenges and opportunities for meaningful change. Economic inequality catalyzes tension among social classes, compelling marginalized groups to demand a fairer distribution of wealth and a more inclusive policymaking process [109, 110]. This dynamic calls for urgent reforms that ensure diverse voices are considered in decision-making. The political structure of a nation has a profound impact on how conflicts unfold. The type of governance—whether democratic, authoritarian, or hybrid—determines the distribution of power and the management of dissent. In democratic settings, open discourse through elections and public debate allows citizens to engage and express their views actively [111]. In stark contrast, authoritarian regimes often resort to repressive tactics, highlighting the critical need for advocacy and reform to ensure accountability. The pursuit of power is at the center of many political conflicts, as various factions contend for control over governmental institutions and essential resources [112]. This struggle is particularly pronounced during political transitions, whether following coups, elections, or reform initiatives, offering a pivotal opportunity to reassess and reshape existing power structures. Confronting these challenges, head-on is essential to achieve significant governance and social equity progress.

The history of political conflict in Indonesia showcases the intricate interplay of social, economic, and political factors that have developed since the country's independence in 1945. Ideological differences, ethnic tensions, power struggles, and transitions in governance have frequently instigated these conflicts. The initial period of Indonesian independence was characterized by the fight against Dutch colonial forces to secure international recognition of the nation's new-found sovereignty. However, internal political conflicts also arose among various groups with differing views on the preferred form of government and ideology for Indonesia. Rivalries among nationalists, religious factions, and communists emerged, highlighting an ideological conflict that would persist in the following decades [113, 114].

Following the revolutionary period, Indonesia entered the era of Guided Democracy under President Soekarno's leadership. This phase was characterized by highly centralized and often authoritarian governance, as Soekarno integrated elements of nationalism, religion, and communism into Nasakom (Nationalism, Religion, and Communism) [115]. During this time, the Indonesian Communist Party (PKI) gained significant influence, leading to rising tensions and conflicts with religious and military groups. These tensions reached a peak in the 1965 G30S/PKI incident, a coup attempt linked to the PKI that provoked a severe backlash from the military and anti-communist factions spearheaded by Suharto. In a brutal crackdown, hundreds of thousands of individuals identified as communist sympathizers were killed or imprisoned [116]. Suharto subsequently took power and launched the New Order era, marked by politically enforced stability through strict repression, limitations on political parties, and tight control over the press. The fall of Suharto in 1998 ushered in a new chapter in Indonesian political history known as the Reform era, defined by the liberalization and democratization of political life [117, 118]. However, the transition to democracy was not without challenges. Indonesia faced numerous political conflicts, particularly in regions, such as Aceh, Papua, and Maluku, where

issues of autonomy and local discontent incited tensions and violence. Additionally, the ongoing struggle between established and emerging political forces, as well as divisions among ethnic and religious groups, continues to shape Indonesia's political landscape [119, 120].

The political dynamics in Indonesia have recently been shaped by a variety of domestic and international factors. As the 2024 General Election approaches, the domestic political landscape has become increasingly intense, characterized by strong competition among political parties and potential leaders [121, 122]. Key issues in domestic politics include the need for policy reform and the eradication of corruption, with Indonesia striving to improve transparency and accountability within the public sector. High-profile corruption cases often capture public and media attention, significantly influencing perceptions of government effectiveness [123, 124]. At the local level, regional autonomy remains contentious, particularly in areas like Papua, where there are calls for greater recognition of rights in managing natural resources and political autonomy. This situation frequently results in tensions between the central and local governments, necessitating careful handling to avoid conflicts [66, 67, 125]. Internationally, Indonesia holds a unique and strategic position in Southeast Asia. Its relationships with China and the United States—the two major global powers—are pivotal to its foreign policy. The country seeks to balance economic cooperation with China while nurturing security ties with the United States, particularly regarding the South China Sea, where several association of southeast asia nations (ASEAN) nations, including Indonesia, have territorial interests that conflict with China's claims [126, 127].

The surge in military activity in the region has heightened security concerns, underscoring the need for careful diplomacy and regional collaboration. As a member of ASEAN, Indonesia plays a vital role in mediating and negotiating conflicts, asserting its sovereignty while working to uphold regional stability [128]. Indonesia's geopolitical and political dynamics present a complex tapestry of internal and external challenges, necessitating integrated and agile strategies from its leaders and policymakers. Regional geopolitics, domestic policies, and global issues continuously affect Indonesia's political landscape both internationally and within its borders.

4.2.4 Environmental justice and conflict in Indonesia

Environmental conflicts arise from using, managing, or conserving natural resources and the environment. These conflicts often involve stakeholders with differing interests, including local communities, corporations, governments, and environmental advocacy groups. The main factors that lead to environmental conflicts include infrastructure development, resource extraction, pollution, and land use [129, 130]. A prevalent example of such conflicts is clearing land for agriculture or mining, which can be at odds with the interests of local communities that rely on these natural resources for their livelihoods. For instance, mining activities frequently result in significant environmental damage, including water and air pollution, which can adversely impact the health and economy of the local population. Conversely, companies involved in these activities may argue that they contribute to the area's development and employment opportunities [131].

Conflicts can also emerge from conservation efforts, particularly when such initiatives intersect with local community interests or economic activities. For example, establishing national parks or conservation areas may limit local

communities' access to lands and resources they have depended on for generations. While conservation aims to safeguard biodiversity and ecosystems, this approach can conflict with the rights and needs of local communities, leading to tensions [132]. Environmental pollution—from industrial waste, agriculture, or other sources—also often creates conflict. Affected communities may call for remedial action and compensation for the damage suffered, while industrial actors might highlight their compliance with regulations or contest claims regarding these negative impacts [133]. Environmental conflicts in Indonesia are notably complex and have persisted for decades, mainly due to the country's rich natural resources. These conflicts typically involve diverse stakeholders, including multinational corporations, government entities, indigenous communities, and environmental activist groups [134]. One of the most prominent examples is the ongoing forest and land conflicts, where extensive deforestation for palm oil plantations, mining, and logging has led to significant losses in Indonesia's tropical rainforests. This situation has dramatically affected indigenous communities, who find themselves losing access to their traditional natural resources as the lands they depend on for their livelihoods become dominated by commercial interests holding governmental permits [97, 135, 136].

In the mining sector, pollution from operations such as Freeport in Papua has led to ecological damage and health issues for the local population. These instances illustrate how the exploitation of natural resources often conflicts with environmental sustainability and the well-being of local communities [95]. Water resource conflicts also frequently arise, particularly in areas lacking water or contaminated by industrial activities. On Java Island, for example, competition for access to water sources for agricultural irrigation, industrial needs, and human consumption often results in social tensions [137]. Conflicts related to conservation also pose challenges when efforts to protect biodiversity clash with the rights of local communities. Establishing national parks and protected areas often restricts community access to resources utilized for generations, leading to tension and conflict. Additionally, the impact of climate change has exacerbated the frequency of natural disasters such as floods and droughts, sparking new conflicts related to disaster management and the distribution of aid [138].

Jakarta, Indonesia's former capital and urban center, faces numerous complex and interrelated environmental conflicts due to rapid population growth and uncontrolled urbanization. These issues include devastating annual floods caused by high rainfall, inadequate drainage systems, and the reduction of wetlands, which naturally absorb rainwater [139]. Jakarta struggles with water pollution due to improperly treated domestic and industrial waste, often discharged directly into the city's water systems, causing widespread contamination and adverse public health impacts [140]. Air pollution is another serious concern, with increasing emissions from motor vehicles contributing to dangerous pollution levels that affect residents' quality of life and health. Waste management also presents a significant challenge, as inefficient systems and a lack of recycling facilities lead to waste accumulation that negatively impacts the environment and the city's aesthetics [141]. Jakarta is experiencing rapid land subsidence, exacerbated by excessive groundwater extraction for industrial and domestic needs, adding complexity to the flood risk and damaging infrastructure [142]. To address these problems, a comprehensive approach involving all stakeholders, including the government, private sector, and community, is required, focusing on sustainable policies that

enhance infrastructure, reduce environmental impact, and support inclusive and responsible growth. Effective policy implementation and strong inter-sectoral coordination are essential to ensure that Jakarta can overcome these challenges and transform into a greener and more livable city for all its residents.

4.3 Conflict resolution

4.3.1 Defining the depth and process of conflict resolution

Conflict resolution is often seen as mutual agreement on specific issues underlying a dispute, whether a divorcing couple decides on asset division, government, and industry leaders agree on environmental regulations, or communities resolve territorial conflicts [46]. However, such resolutions may only address the immediate issues, leaving underlying or broader conflicts unresolved. For instance, even after agreements are made, the divorcing couple might still harbor unresolved feelings, environmental policies may continue to be debated, and geopolitical tensions might persist, as seen in places like Bosnia. This indicates that while the term “resolution” suggests a complete settlement, the reality often falls short, as conflicts are complex and involve multiple layers that are not always fully addressed through simple agreements. Furthermore, true resolution is not merely about agreement but involves a deeper process of conflict transformation. This process includes a series of activities, often experiencing setbacks, that gradually allow parties to move beyond the conflict. It involves understanding and addressing essential needs, which can lead to personal growth and the liberation of energy previously consumed by the conflict. This transformative journey can be both freeing and challenging, as it may also involve a sense of loss for those who found meaning or identity in their engagement with the conflict. Thus, achieving resolution is a dynamic, multifaceted endeavor that extends beyond mere agreement, requiring continuous effort and adaptation [47].

Conflict resolution is a multidimensional process, involving cognitive, emotional, and behavioral aspects, either from the perspective of the individuals involved or the entire conflict system [143]. The cognitive dimension of resolution hinges significantly on the disputants' perceptions of the conflict. If individuals believe the conflict has been resolved, perceive their concerns as addressed, feel they have achieved closure, and view the conflict as part of their past rather than their future, they have reached a crucial milestone in resolution [144, 145]. This cognitive shift often occurs alongside or as a result of changes in the emotional and behavioral dimensions, reflecting a comprehensive adaptation of their outlook and interactions. In terms of the emotional dimension, resolution is achieved when the intense feelings associated with the conflict subside, indicating a significant decrease in emotional investment. This aspect is volatile as emotions can fluctuate dramatically, and instances like an unexpected event can rekindle old feelings, pulling individuals back into the throes of conflict. The behavioral dimension, typically the most observable, involves changes in actions or agreements that signify an end to conflict behaviors or the start of cooperative behaviors. This could be as formal as signing a peace treaty or as informal as a handshake or cooperative interaction. True resolution, however, requires alignment across all three dimensions, often necessitating a complex interplay of cognitive reassessments, emotional processing, and behavioral adjustments to achieve a lasting peace.

4.3.2 Communication as the foundation of conflict transformation

At the core of both conflict and its resolution lies communication, encompassing both direct and indirect exchanges, verbal and nonverbal cues, and both symbolic and concrete elements [146]. Effective communication is central to understanding and managing conflict, and although communication skills can be developed and improved, mastering them is challenging. Many conflict resolvers consider themselves proficient communicators, capable of articulating the fundamentals of effective communication. However, real-world communication, especially in charged situations, often falls short of ideal, posing significant challenges yet offering substantial opportunities to enhance conflict resolution effectiveness. The key aspects of communication in conflict resolution involve understanding the foundation of good communication, connecting in ways that ensure all parties feel heard, expressing viewpoints constructively, and transforming unproductive exchanges into constructive dialogue [146].

Effective communication is rooted more in intention than in technique. It is about the commitment to genuinely understand and be understood, rather than merely following specific communicative behaviors. This intention must be clear, even if the communication techniques employed are imperfect. Observing genuine connections between people often reveals communication behaviors considered suboptimal, yet these interactions can still result in mutual understanding because the underlying intentions are clear. Techniques like active listening or using “I” statements are tools, but without the right attitude, they may not lead to genuine understanding. Good communication requires focused energy and is a two-way process that involves both speaking clearly and listening effectively. Ultimately, it is about making a concerted effort to understand and be understood, recognizing that no technique can substitute for genuine engagement in the communication process [147].

4.3.3 Negotiation and advocacy in conflict resolution

Negotiation is a fundamental skill that permeates all aspects of daily life, from deciding family chores to professional dealings and social arrangements. Whether we are choosing a movie with a partner or dividing tasks with coworkers, we are constantly negotiating [148]. Despite its prevalence, the term “negotiation” often invokes a sense of tension or complexity, transforming an otherwise routine interaction into a perceived strategic battle where stakes are high and outcomes are seen in terms of winners and losers. This perception might stem from the fear of losing something valuable or the need to compromise on important issues, shifting how openly one might express their needs and alternatives [149]. Commonly held beliefs about negotiation include viewing it as a competitive game, full of sports-like strategies where one must be clever to outmaneuver the opponent. This game mindset highlights both the structured play and the inherent adversarial nature of traditional negotiations, focusing on winning rather than collaboratively solving a problem. Another prevalent view is that negotiation inherently involves significant compromise or a relinquishment of power, which can dissuade people from engaging in or fully committing to the negotiation process [150]. These assumptions can lead to resistance, especially when negotiations become critical or personal, as people may fear that engaging in negotiation signals weakness or a readiness to concede critical ground.

Contrary to common belief, negotiation does not have to be adversarial nor does it always require compromise. It involves advocating for one's needs while recognizing and addressing the needs of others, aiming for solutions that ideally benefit all parties involved. Effective negotiation can occur across a spectrum of interactions, whether they are competitive or cooperative, involving direct or mediated communications. The key is recognizing that negotiation is a tool for problem-solving and decision-making [151]. It is about reaching an agreement that respects the interests of all involved, leveraging a combination of advocacy and diplomacy to navigate personal, professional, and even legal challenges effectively. This understanding encourages a more flexible, open-minded approach to negotiation, reducing the binary perception of winning or losing and fostering a more integrative strategy for resolving conflicts and reaching mutually beneficial outcomes [152].

4.3.4 Reconciliation as transformative conflict resolution

Reconciliation extends beyond simple agreement, delving into the deeper and transformative aspects of resolving disputes, often described as conflict transformation, peacemaking, or reconciliation itself [153]. This multifaceted process involves emotional, cognitive, and behavioral dimensions. While many conflict resolution efforts tend to focus primarily on behavioral changes, true progress requires advancement in the emotional and cognitive realms as well. Without such progress, significant alterations in relationships among disputants are unlikely. Resolving deep-rooted conflicts, such as those seen in violent ethnic disputes or intense personal disagreements, demands multiple, sustained efforts across various levels to achieve genuine reconciliation. Examples from around the world, including regions like Northern Ireland, the Middle East, and South Africa, demonstrate that profound reconciliation is possible, blending optimism with realism and hopefulness with vigilance in the conflict resolution process [154]. Effective reconciliation often requires specific approaches that go beyond immediate conflict resolution efforts. First, individual healing processes are crucial, where support groups enable victims of violence to confront and articulate their experiences, and perpetrators to face their own actions. Secondly, creating safe spaces for communication allows individuals from conflicting groups to see each other as human beings rather than adversaries [155]. This could be facilitated through camps for youths from conflicting regions or initiatives that bring different ethnic groups to collaborate on common projects. One notable example of this was a community center in Banja Luka, Bosnia, where diverse reconciliation activities took place, including a radio station run by teenagers from various ethnic backgrounds who shared their war experiences while collaborating on broadcasts [156, 157].

A third approach involves in-depth dialogue about the conflict, encouraging individuals to take responsibility for their actions and to forgive others. Such dialogues often accompany truth and reconciliation commissions, like those in South Africa, which focus not just on negotiation but on understanding and empathizing with each other's experiences [158, 159]. Additionally, addressing substantive issues such as housing, employment, and personal safety is crucial as these factors significantly impact the effectiveness of reconciliation efforts. Unless these underlying issues are addressed, the reconciliation process may falter. Overall, the art of reconciliation in conflict resolution requires a careful balance between addressing practical problems and facilitating deeper healing and understanding,

demonstrating the necessity of a multifaceted approach to truly transform conflict-laden environments [160, 161].

4.3.5 Implications for Indonesia: Strategies for sustainable peace

Indonesia's multidimensional conflict resolution process involves ethnic tensions, religious disagreements, political unrest, and resource disputes—necessitates an inclusive and comprehensive strategy due to its geographic complexity, with 17,000 islands and a diverse population [162]. The nation leans on dialogue and mediation, fostering an environment for open discussion facilitated by neutral parties, including NGOs, community leaders, and international bodies. Decentralization and regional autonomy address issues of centralized control and regional neglect. At the same time, economic strategies aim at reducing inequality through poverty alleviation, job creation, and equitable resource distribution to mitigate conflict drivers. Legal and institutional reforms enhance justice and accountability, alongside efforts to strengthen the judicial system and ensure fair law enforcement [163]. Recognizing the importance of Indonesia's cultural and religious mosaic, the involvement of local and religious figures in peacebuilding, alongside education programs promoting tolerance and diversity, is crucial. International support plays a role in providing diplomacy, development funding, and technical peacebuilding assistance. The healing process involves formal peace agreements and reconciliation efforts, including truth and reconciliation commissions and memorial projects, aiming for sustainable peace by bridging community divides and fostering mutual understanding and respect [164].

A comprehensive and varied resolution approach that addresses the Papuan community's historical grievances and aspirations while respecting Indonesia's sovereignty is needed to resolve the conflict. A method that acknowledges historical injustices, such as the Act of Free Choice and human rights atrocities, can develop trust and start an inclusive debate facilitated by neutral mediators [165]. We must increase Special Autonomy to meet Papuan needs, eliminate human rights abuses, and improve socio-economic conditions through sustainable development to achieve enduring reconciliation and peace. A long-term commitment to discourse and agreement adaptation and international technical, logistical, and financial assistance are needed. Respecting Papuan cultural identity, reducing military presence, and involving communities in governance processes create a sense of ownership and lasting peace, reaffirming Indonesia's unity and sovereignty [166]. However, the 2004 Indian Ocean tsunami conflict in Aceh, Indonesia, was resolved through humanitarian aid, reintegration, and long-term peacebuilding. This method included infrastructure reconstruction, agricultural and fishery economic recovery, interfaith dialogue, and multicultural education to promote reconciliation and social cohesion. Traditional approaches like Maluku's "Pela" system helped community-based conflict resolution [167]. The Free Aceh Movement (GAM) evolved alongside local support and grievances, impacted by Indonesia's political and economic dynamics, human rights challenges, and natural resource management. The long-term settlement required addressing economic imbalances, granting political autonomy, and rebuilding the Acehese-Indonesian government's confidence [168].

Conflict resolution in Maluku must consider how tradition and change interact in modern culture [169]. Reviving *pela* and *sasi* to improve intercommunity relations

and resource management is needed to resolve religious, social, and political conflicts. This shows historical intercommunity cooperation [170]. This strategy must combine present and ancestral knowledge to meet refugees' needs, restore services, and address conflict's core causes to build long-term societal cohesion. Rebuilding society and attaining sustainable peace requires collaborative and inclusive policies from government and civil society players [171–173]. de Jonge & Nooteboom [169] believe the government should launch the Kalimantan resolution to promote discussion and reconciliation, which has reduced ethnic tensions. To foster mutual respect and understanding across ethnic groups, Susanto [174] and Basit et al. [85] recommend a multifaceted conflict resolution strategy that includes reparations, resilience, and community development. Susanto supports integrative synergy, local, regional, communal action, and Pancasila ideals to promote peace, health, and socio-economic understanding, as does Sumaya [86]. These studies demonstrate the importance of education, socialization, and community forums in helping countries overcome their history and establish inter-ethnic harmony.

According to the discussion, different methods have been utilized to simplify multifaceted conflicts in Indonesia. These frameworks address different social, economic, political, and cultural challenges. These frameworks address the root causes of conflicts, encourage debate and reconciliation, and promote enduring peace and development in impacted areas through a holistic plan.

4.3.5.1 Inclusive political dialogue and reconciliation

Resolving conflicts and building lasting peace in divided societies with a history of injustice hinges on inclusive political dialogue and reconciliation efforts. Engaging a wide range of stakeholders, including conflict parties, local leaders, civil society representatives, and often overlooked groups like women, youth, and indigenous people, in dialogue platforms is critical. These platforms aim to provide a safe, equitable space for expressing concerns and aspirations, laying the foundation for reconciliation by addressing past injustices and exploring self-governance possibilities [175]. The role of neutral mediators, adept in handling complex, emotionally charged discussions, is vital. Merging traditional with modern conflict resolution methods enhances these processes' effectiveness and acceptance. This approach strengthens the reconciliation framework by respecting cultural heritage and utilizing local wisdom alongside modern practices to meet international fairness and inclusivity standards. By integrating indigenous resolution mechanisms with contemporary strategies, this comprehensive approach addresses immediate conflicts and promotes a dialogue culture and mutual understanding, crucial for enduring peace and social unity [176].

4.3.5.2 Human rights restoration and socio-economic development

Restoring human rights is essential for resolving conflicts and building lasting peace, requiring effective accountability for past abuses, justice for victims, and consequences for perpetrators. Creating independent oversight bodies to monitor and address human rights violations is vital, aligning national laws with international human rights standards to protect everyone's rights. This approach fosters trust in legal and governance systems, promoting social cohesion and stability [177]. Simultaneously, addressing root conflict causes through socio-economic development

initiatives is vital. Poverty, unemployment, and lack of access to services like education and healthcare can fuel conflicts. Community-specific initiatives aimed at economic inclusion and sustainable development, such as creating job opportunities and improving infrastructure and access to essential services, can enhance living standards and support a peaceful, rights-respecting environment [178].

4.3.5.3 Decentralization of political power and enhanced local governance

Decentralization and strengthening local governance are critical reforms designed to redistribute power within a country from a centralized to a more localized model, enabling regions and localities to play a more significant role in their management. This redistribution grants local governments increased authority and resources in crucial sectors like resource management, education, infrastructure, and law enforcement, empowering them to tailor policies and solutions to their unique circumstances. The success of decentralization hinges on legal and constitutional changes that empower and hold local entities accountable, ensuring an adaptable, transparent, and sensitive governance structure to the nation's diverse cultural and social fabric. Such reforms aim to enhance local engagement and ownership, reducing feelings of exclusion and fostering a more unified, stable society. Decentralization is thus seen as a fundamental strategy for achieving national unity and peace by making governance more accessible and attuned to a diverse population's varied needs and goals [179, 180].

5. Capital city relocation as a model for multidimensional conflict resolution

Decentralization, recognized for enhancing local governance and mitigating ethnic tensions, redistributes power, responsibilities, and resources from central to lower administrative levels, promoting peace and local autonomy [181, 182]. Originating in the 1990s, this approach counters the inefficiencies of centralized systems by allowing tailored service delivery and addressing complex local issues. Its success in conflict resolution depends on adapting to specific country conditions, indicating the need for diverse models of implementation. Decentralization encompasses administrative aspects—ranging from deconcentration to full devolution—and political aspects, emphasizing local decision-making, citizen participation, and democratic institution building. However, its impact on conflict can be dual; while it can bridge governance gaps and promote inclusivity, potentially reducing conflict likelihood, it may also exacerbate ethnic and regional divisions, fueling disputes. Decentralized governance's ability to empower marginalized groups and promote policy innovation offers a path to addressing immediate conflict precursors, but risks include enabling separatism, increasing social divisions, and fostering authoritarianism or corruption, which could lead to further conflict [183, 184].

Local authorities must implement devolution, deconcentration, and delegation strategies to mitigate conflicts and support fair development. Devolution, the most thorough decentralization, empowers local elected officials with political and practical authority to meet community needs and address potential disputes. Delegation assigns specific management duties, often as a step toward decentralization, and deconcentration enhances service delivery by administrative branches at

the regional level. The efficacy of these measures in diminishing conflicts hinges on a nation's historical context, existing conflict levels, and the extent of decentralization. Democratic settings with accountable institutions prove more successful in curbing ethnic conflicts than non-democratic or corrupt counterparts, which may aggravate such tensions. Hence, decentralization should foster democratic accountability, national cohesion, and local governance tailored to each country's democratization and conflict resolution stage, ensuring political legitimacy and social unity [185]. Decentralization has proven to be an effective way to improve governance and public interests in developing nations. By addressing poverty, institutional weaknesses, and slow economic growth, decentralization has helped enhance public services, promote democracy and citizen engagement, reduce conflict, and boost government legitimacy and institutions. While centralized regimes may have historically implemented policies better, the encouragement of decentralization in the 1990s has proven to be a successful technique for improving government efficiency, accountability, and community conflict management. Decentralized capital flows also contribute to distributing power and prosperity, reducing regional inequities and ethnic tensions. By promoting local fiscal accountability, avoiding regional divides, and lowering power concentration, decentralization has helped boost national unity and state function worldwide [186].

The capital city is a pivotal center for administrative, cultural, and symbolic functions, reflecting the nation's ideal image through its architecture, urban planning, and role in national celebrations and political processes. The concept of capital as the government's seat and a symbol of national identity has evolved since the seventeenth century [187]. However, its core purpose remains where the nation projects itself to the world. Despite some anomalies where the official capital does not house the government, capital is crucial in international relations, and military strategy is often viewed as the nation's heart. Their design and toponymy frequently encapsulate the country's geographical and cultural essence, positioning them as miniature representations of the nation [188]. Relocating a capital city to a different location is a highly intricate undertaking. It involves more than just adjusting geographical coordinates; it involves a complex web of considerations across various sectors. These factors include a wide range of logistical, political, cultural, and economic implications that require delicate navigation to achieve a smooth and successful transition [5].

The decision to relocate to a capital city is multifaceted, driven by economic, political, geographical, cultural, and security considerations. Economically, it aims to stimulate growth in less developed regions, distribute wealth more evenly, and leverage new economic opportunities [187]. Politically, it symbolizes a break from past regimes or ideologies and can centralize power in a strategically beneficial location. Geographical factors include minimizing natural disaster risks, optimizing resource availability, and enhancing logistical connectivity to support sustainable growth. Culturally, moving a capital can reaffirm national identity, respect diverse heritages, and foster unity and pride within the community. This is particularly crucial in nations with varied cultural backgrounds, where a new capital can embody the collective national ethos. Security concerns also play a role, as relocation can address external and internal threats, symbolizing a commitment to national reconciliation. It can help resolve historical disputes, promote social justice, and lay a foundation for equitable development and governance reforms. Additionally, establishing a new capital offers a platform for cultural exchange and dialogue, reinforcing equality and diversity as core national values, thus preventing future conflicts [188–190].

It clarifies that relocating the capital city is a profound statement about a country's aspirations, challenges, and ongoing narrative. This decision encapsulates the past, addresses the present, and sets the course for the future, making it one of the most significant steps a country can take. Relocating a national capital city in a developing country is very challenging, and of course, all lessons from previous relocation projects may have to be considered because of the complexity of national capital structures and functions. Winter [191, 192], Neilson et al. [193], and Ghalib et al. [187] argue that a capital city significantly differs from other cities. The capital is cosmopolitan because of the presence of international diplomatic missions, government agencies, and diverse economic opportunities in the public sector. Thus, technically, the national capital is the seat of a nation's power. Other characteristics of a national capital include a coherent and unified national identity shaped by specific infrastructure and functions such as a service center, government policymaking, and a high level of security.

The decision to relocate to a capital city involves complex considerations, ranging from socio-economic to strategic reasons. While some countries have successfully achieved their intended outcomes post-relocation, others face ongoing challenges, especially regarding adapting and accepting the workforce and citizens to the new environment. Indonesia's intention to do so might be influenced by a combination of these factors, with the hope of harnessing the achievements observed in some countries and learning from the challenges faced by others.

6. Conclusion

To sum up, Indonesia's decision to relocate its capital city from Jakarta to Nusantara in East Kalimantan is not merely an infrastructural undertaking but a strategic move to address a spectrum of entrenched national challenges—ranging from environmental degradation and socio-economic disparities to political centralization and regional discontent. As the chapter has discussed, capital city relocation, if effectively executed, holds the potential to function as a multidimensional conflict resolution strategy. Drawing from comparative experiences globally and the complex realities within Indonesia, it becomes clear that the success of this transition hinges on the government's ability to integrate practical, inclusive, and transformative policy approaches.

First and foremost, a critical pillar of success lies in adopting an inclusive governance framework that fosters active participation from all stakeholders, especially marginalized and indigenous communities. The relocation process should not be top-down; it must incorporate the voices of those directly affected by land acquisition, displacement, and urban integration. This includes implementing transparent compensation schemes and culturally sensitive engagement strategies to avoid social friction and preserve local identities. Furthermore, the relocation must align with a decentralized governance agenda beyond administrative restructuring. This requires empowering regional governments with authority, resources, capacity building, and institutional support to ensure that decentralization does not result in fragmented or ineffective governance.

Environmental sustainability also emerges as a central concern. Jakarta's current condition exemplifies the environmental risks of unchecked urban expansion—subsidence, pollution, and ecological degradation. Nusantara must, therefore, be envisioned and constructed as a model of green urbanism, integrating low-carbon

infrastructure, smart water and waste management, and ecosystem conservation. This is vital for environmental integrity and instrumental in ensuring the long-term viability of the new capital as a livable, resilient city. Equally important is the need for equitable economic development. One of the main justifications for the relocation is to correct Java-centric economic concentration and stimulate growth in underdeveloped regions. However, to prevent the replication of centralism in a new location, national investment policies must ensure equitable access to opportunities, employment, and services for the local population. This includes prioritizing local labor, supporting small and medium enterprises, and providing education and training programs to increase community readiness.

To operationalize these strategies, Indonesia must establish a robust intergovernmental coordination mechanism that aligns national goals with regional implementation. Ministries, local governments, and civil society actors must collaborate within a coherent policy framework prioritizing transparency, accountability, and responsiveness. Moreover, the capital relocation project should serve as a platform for national reconciliation—particularly in regions historically marginalized or affected by conflict. The project can foster a renewed sense of national identity and cohesion by creating inclusive public dialogue forums, integrating traditional conflict resolution mechanisms, and promoting intercultural understanding. Ultimately, Indonesia's capital relocation is a transformative opportunity to distribute development more evenly across the archipelago and reimagine how a nation heals, evolves, and unites. If designed with foresight and governed with integrity, Nusantara can become more than a new administrative center—it can symbolize a national commitment to justice, inclusivity, and sustainable peace.

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Conflict of interest


The authors declare no conflict of interest.

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Chapter 3

Planning Capital Cities under Regional Conflict: Paradoxical Urban Spaces – Jerusalem as a Paramount Model

Raed Najjar

Abstract

The present research chapter delves into the intricacies of urban planning in contested cities, where planning assumes two opposing functions: constructive and peacemaking (progressive) and destructive and exacerbating conflict (regressive). In conflict areas, the notion of regressive planning is not often recognized and requires more examination. This research contributes to the resolution of this significant gap and academic deficiency. It examines the significance of urban planning by presenting several worldwide instances, with particular emphasis on Jerusalem as a prominent exemplar of paradoxical urban environments. The study reveals that regressive planning policies, uneven infrastructure development, and discriminatory resource allocation have created a fragmented urban fabric that mirrors and reinforces the broader socio-political divide in Jerusalem. It highlights the dual role of urban planning as both, a tool for asserting control, and a potential avenue for conflict resolution. By analyzing the paradoxes inherent in Jerusalem's urban spaces—where modernity coexists with neglect, and development with deprivation—the research sheds light on the broader implications for urban planning in other contested capitals around the world. To achieve this, a combination of several research methodologies including descriptive, comparative, analytical, and case study approaches has been employed. This research underscores the need for inclusive, equitable planning approaches that prioritize social cohesion and peacebuilding in regions marked by deep-seated conflict.

Keywords: conflict areas, contested cities, contrasted spaces, Jerusalem, regressive planning, spatial paradox, urban planning

1. Introduction

Theories related to spatial planning and sustainable development have significantly expanded during the latter part of the previous century and continue to receive considerable attention due to the numerous issues they encompass. Nevertheless, both of these themes continue to be undervalued and necessitate additional scrutiny and

even enhancement when examining domains characterized by 'political turbulences' or 'unbalanced powers'; in essence, territories marked by 'conflict areas' [1]. The development process in conflict areas is primarily determined by the power dynamics between the various groups involved. These groups can be categorized as the 'dominant group' and the 'weaker group'. In such situations, sustainability is highly precarious and, if it does exist, it tends to favor the dominant group while neglecting the weaker one. In many cases, the dominant group even exploits the resources and opportunities of the weaker group for its own benefit. This ultimately leads to further marginalization and social degradation. Therefore, recent arguments regarding sustainability in conflict areas suggest that sustainable development in these regions might be seen as a semantic exercise that does not address the previous dispute on growth, but rather conceals it [2, 3].

In conflict zones, spatial planning can lead to rapidly evolving or dynamic spatial policies, which are followed by permanent physical arrangements. These arrangements often provide complex issues for the residents, involving multiple dimensions. Particularly, for the indigenous inhabitants, who are often regarded as a marginalized minority population for many reasons. Hence, elucidating the correlation between spatial planning, power, and politics is a significant concern in this research. Comprehending this correlation unveils the extent of political impact on planning objectives and role. It is an intriguing subject to determine whether planning is a direct result of politics or not, and to investigate whether spatial planning in conflict zones is employed to reduce or escalate conflict.

Regional planning is a comprehensive method that involves multiple disciplines to effectively arrange, develop, and oversee the utilization of land and resources within a particular geographic region. Contrary to local planning, which concentrates on the requirements and expansion of specific communities, regional planning deals with the wider spatial dynamics that impact an entire area. This form of planning seeks to achieve a balance between the varied requirements of urban, suburban, and rural communities in a given region, taking into account aspects such as population expansion, economic progress, ecological sustainability, and transportation infrastructure. The inception of regional planning can be traced back to the early twentieth century. The concept has subsequently developed, incorporating more intricate factors such as climate change, social equity, and technological improvements [4, 5].

Contemporary regional planning entails cooperation across different tiers of government, together with private partners and the general public, to formulate all-encompassing plans that direct sustainable growth. It plays a crucial role in tackling issues like urban sprawl, traffic congestion, and environmental deterioration. Planners can foster equitable development that enhances the economy, society, and environment by emphasizing the interdependencies across various sectors within a given region. Progressive urban planning, when implemented toward positive change, is essential for controlling the spatial allocation of population and resources, ensuring that growth is controlled in a manner that minimizes adverse effects and optimizes favorable results. The goal is to establish robust communities capable of adjusting to evolving conditions, such as economic fluctuations or environmental obstacles, while upholding a superior standard of living for inhabitants [6].

In conflict areas, the interconnections among social, economic, geographical, and political elements are intricate and not readily understood [7]. Urban planning is crucial in disputed cities as it profoundly shapes the social, economic, and political dimensions of the region. The impact of planning in these cities can be either beneficial (constructive and progressive) or detrimental (destructive and regressive),

depending on its implementation and the interests it prioritizes. Therefore, spatial planning in contested cities is a powerful tool that can either foster inclusivity and reconciliation or entrench divisions and inequalities. The outcomes of planning efforts in these cities largely depend on the extent to which they are inclusive, equitable, and sensitive to the complex social dynamics at play. **Table 1** shows the operational mechanisms and the contrasted roles of planning in such intricate environments:

Regressive urban planning in contested communities pertains to urban development strategies that worsen disparities and strengthen divisions within communities characterized by social, political, or ethnic disputes (**Figure 1**) [8]. In metropolitan areas characterized by conflicting interests and power struggles, known as “contested cities,” the practice of urban planning can either mitigate or exacerbate tensions. The fundamental elements of regressive planning are:

1. Segregation and polarization: regressive planning often leads to community division, resulting in certain groups benefiting from development initiatives while others are marginalized and excluded, resulting in disparities in access to resources, services, and infrastructure.

Reflections of planning	Progressive planning (constructive)	Regressive planning (destructive)
Mediation or escalation of conflict; and facilitating or impeding reconciliation	Urban planning promotes inclusive, thoughtful planning that reduces tensions and fosters cooperation among stakeholders, thereby aiding in peacebuilding efforts and fostering dialog and understanding.	Regressive planning strategies and methods worsen conflict and segregation in physical, social, and economic aspects, excluding specific groups, perpetuating existing conflicts and causing social fragmentation and instability.
Power dynamics and control	Planning serves as a beneficial catalyst for change. Governments employ urban planning to consolidate their authority by constructing urban environments in a manner that aligns with their own objectives.	Planning is a control tool used by one group to assert dominance in urban development, leading to physical and symbolic territoriality, with certain areas marked as belonging to them.
Resource distribution and economic development	Urban planning should ensure equitable access to resources like water, electricity, transportation, and public services, fostering economic growth by creating employment, housing, and service opportunities across diverse communities.	Biased agendas and regressive planning result in marginalization of certain groups, inadequate infrastructure, and social divides, while selective development concentrates economic growth on specific groups, exacerbating economic disparities and social tensions.
Identity and memory	Urban planning decisions significantly influence a city’s cultural and historical identity, fostering a shared sense of identity by preserving cultural heritage sites.	Regressive urban planning is utilized to demolish cultural-historical sites, effectively eliminating the existence and recollection of underprivileged populations.
Public participation and governance	Inclusive governance is crucial for effective planning, as it enables all stakeholders to participate in decision-making processes, thereby ensuring the needs of all communities are met.	Regressive planning, characterized by lack of transparency and exclusion of certain groups, can lead to feelings of alienation and distrust toward the government, potentially causing social unrest or resistance.

Table 1. Key attributes and function of planning depending on its classification as progressive or regressive [author].

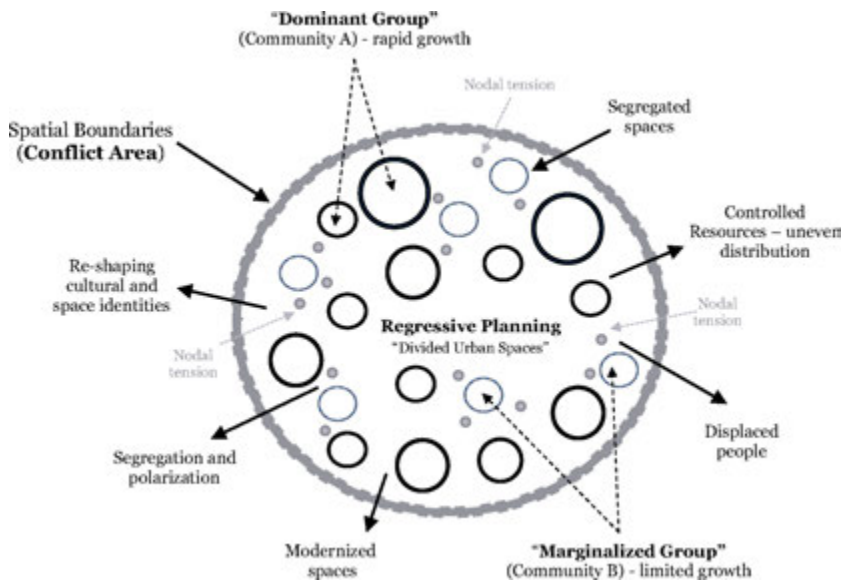


Figure 1. Spatial disparities and urban paradox resulting from regressive planning in conflict areas [author].

2. Gentrification and displacement: urban renovation initiatives in contested spaces can potentially lead to gentrification, causing the displacement of minority neighborhoods by affluent ones, potentially increasing tensions and reducing societal cohesion.
3. Unequal distribution of resources: regressive planning involves biased resource distribution, often favoring those with political or economic influence, potentially leading to underprivileged groups lacking access to services and infrastructure.
4. Erosion of public space: engaging in regressive planning in polarized cities can result in the privatization of public places or the creation of special venues that only serve specific groups. This can worsen social divisions and further deepen existing inequities.
5. Insufficient inclusive participation: regressive planning often neglects marginalized populations, leading to decisions that disregard their needs and preferences, causing disenfranchisement and conflict.

Utilizing regressive planning as a means of control can worsen socioeconomic disparities and solidify unequal distribution of power within urban areas. This strategy frequently places the concerns of a privileged few above those of marginalized people, resulting in the segregation of neighborhoods, restricted access to vital services, and the displacement of vulnerable populations. Regressive urban planning policies can exacerbate existing inequalities in wealth, education, and health by implementing restrictive zoning, discriminating housing laws, and intentionally providing insufficient financing to specific neighborhoods [9]. These planning approaches may also give higher importance to development initiatives that serve the

interests of privileged individuals, such as luxury housing or commercial zones, while disregarding the demands of low-income inhabitants, such as affordable housing or convenient public transportation. As a result, regressive urban planning can deepen social divisions, reduce opportunities for upward mobility, and create unbalanced environments and contrasted spaces where inequality is both spatially and institutionally entrenched.

2. Research methods

Mixed-methods offer a valuable approach to urban planning research in conflict areas by integrating qualitative and quantitative techniques to address the complexities of these environments. Conflict zones often involve rapidly changing conditions, diverse stakeholder perspectives, and limited access to reliable data. By integrating qualitative methods with quantitative tools, mixed-methods research allows for a more nuanced understanding of the social, spatial, and political dynamics at play. This approach enables planners to develop strategies that are both data-driven and sensitive to local contexts, fostering resilience and long-term stability in conflict-affected urban spaces. Moreover, mixed methods that combine qualitative and quantitative data help provide a comprehensive understanding of the complex and fluid nature of conflict environments, supporting the development of adaptive and resilient urban planning strategies. In that sense, different approaches have been used in this research chapter, mainly the historical, geographical, descriptive, comparative, analytical, and case study, as indicated in **Figure 2**.

Using these approaches in urban planning research offers a robust framework for studying complex urban environments. Descriptive methods provide a detailed snapshot of urban conditions, capturing key elements like land use, infrastructure,



Figure 2.
The adopted research methodological approaches [author].

social dynamics, and governance structures. Comparative analysis enables to contrast different cities or urban areas, identifying common patterns and differences that can inform best practices or highlight the impact of varying political, social, and economic contexts. Historical approaches trace the development of urban areas over time, uncovering how past decisions, policies, and events shaped the present urban form and identifying lessons for future planning. The geographical perspective adds another layer by exploring how the physical environment affects urban planning and development. Analytical methods help break down these various factors, providing a deeper understanding of causal relationships, challenges, and opportunities within urban systems. Finally, the case study approach offers a focused, in-depth exploration of specific urban areas, providing a detailed, context-specific analysis that can yield insights applicable to broader urban planning issues. Collectively, these approaches offer a comprehensive toolkit to understand urban complexity and inform more effective, contextually relevant planning strategies.

3. Planning contested cities: A global perspective

Urban planning in contested cities presents unique challenges that extend beyond the typical considerations of infrastructure, zoning, and sustainability. These cities, often characterized by deep-seated ethnic, religious, or political conflicts, require planning approaches that navigate complex social dynamics, territorial disputes, and governance issues [10]. The role of urban planning in these environments is not just about shaping the physical landscape but also about managing and, in some cases, perpetuating the socio-political divisions within the city [11]. This section explores the dynamics of urban planning in contested cities, drawing on examples from Belfast, Sarajevo, and Nicosia, among others, to illustrate the complexities and strategies involved.

3.1 Belfast: Navigating sectarian divides

Belfast, the capital of Northern Ireland, is a vibrant city known for its rich history, cultural heritage, and shipbuilding legacy. It is a city that is subject to dispute, where the management of urban planning is of utmost importance in addressing the sectarian divisions between the Protestant and Catholic sectors. The city has a protracted history of war, commonly referred to as “The Troubles,” which has resulted in a lasting inheritance of entrenched divisions based on religious and political affiliations. The urban development in Belfast has often been shaped by the need to deal with these divisions, leading to the creation of ‘peace walls’ – physical barriers built to separate mainly Protestant and Catholic communities – which are seen as a significant representation and a lasting consequence of the Troubles. The peace walls in Belfast are tangible partitions that segregate Protestant and Catholic districts, intending to mitigate conflict and hostility between the two populations. Although these walls have effectively decreased immediate conflict, they have also strengthened segregation, impeding the city’s progress toward authentic integration [12]. Attempts to tackle these divisions through urban planning have involved endeavors to encourage the use of communal areas and foster interaction between different communities. Nevertheless, the obstacles to addressing long-standing segregation and distrust are substantial, highlighting the constraints of urban planning in resolving entrenched social problems [13].

Efforts have also been made to improve public spaces and transportation networks to better connect different parts of the city and bridge the divides between communities. Regeneration projects, such as those in the areas around the Falls and Shankill Roads, have focused on creating shared public spaces, improving infrastructure, and enhancing community relations. However, the process is delicate, requiring careful consideration of the social sensitivities and the need for ongoing dialog among residents. Urban planning in Belfast, therefore, balances the goal of modernizing and unifying the city with the recognition of its complex, often painful past. Despite these advancements, urban planning in Belfast still faces challenges, such as addressing ongoing socioeconomic disparities and ensuring that new developments are inclusive and sustainable. The city's planners continue to work toward creating a more unified, vibrant, and resilient urban environment.

3.2 Sarajevo: Rebuilding in the aftermath of war

Sarajevo, the capital of Bosnia and Herzegovina, presents a unique approach to urban planning and design in cities affected by conflict, with a particular emphasis on the process of rebuilding after the war. The city underwent severe destruction during the Bosnian War in the 1990s, resulting in the fragmentation of its diverse population due to acts of brutality and prolonged blockade. Since the end of the war, significant endeavors have been made to reconstruct Sarajevo, encompassing both its physical and social aspects. The focus of urban planning in Sarajevo has been to rebuild the city's infrastructure and foster healing among its segregated communities. An important obstacle faced in post-war Sarajevo has been the task of confronting the enduring effects of ethnic segregation that arose during the conflict. The Dayton Peace Agreement, which brought an end to the war, established ethnic differences by constructing an intricate governmental framework that mirrors the territorial dominance of several ethnic groups throughout the war. The urban planning of Sarajevo has had to navigate the complex political situation, often leading to projects that strengthen rather than resolve ethnic differences [14]. Nevertheless, there have been endeavors to utilize urban planning as a means to foster integration and reconciliation. The projects, including the restoration of the city's historic center and the construction of mixed-use properties, have the objective of revitalizing Sarajevo's diverse identity and promoting social unity. The outcomes of these endeavors have been varied, indicating the persistent difficulties of harmonizing a city that still bears profound wounds from past conflicts [15].

3.3 Nicosia: A divided capital

Nicosia, the capital of Cyprus, is one of the world's last divided cities, where the legacy of conflict and division is deeply embedded in its urban planning and development. The Green Line, a United Nations buffer zone, cuts through the heart of Nicosia, separating the Greek Cypriot south from the Turkish Cypriot north. The split of Nicosia has had a profound impact on urban planning in the city. The city's efforts to control and plan its growth have faced challenges due to the presence of the Green Line, which has hindered the integration of the city's infrastructure and services both physically and symbolically. This division, which has persisted since 1974 following a coup and subsequent Turkish invasion, has resulted in two distinct urban environments with separate governance, infrastructure, and social services. Urban planning on both sides has developed independently, often reflecting the political realities and

economic conditions unique to each community. In the south, efforts have focused on modernization and integration with the European Union, while the north has been shaped by Turkish influence and a more constrained economic environment. The buffer zone itself, a mix of abandoned buildings and military installations, serves as a stark reminder of the city's division. Despite numerous peace talks and initiatives aimed at reunification, urban planning in Nicosia continues to grapple with the challenges of fostering cohesion in a divided city. Cross-border cooperation on issues like waste management, transportation, and heritage preservation has been limited, often stalling due to the broader political impasse [16]. The future of Nicosia's urban landscape hinges on the potential for a political solution that could bridge the divide, allowing for more integrated and inclusive urban planning that benefits all its residents. Nevertheless, the partition of the city still poses substantial challenges to integrative urban planning.

3.4 Beirut: A segregated capital

Beirut, the capital of Lebanon, is a city deeply marked by sectarian divisions that have profoundly influenced its urban planning and development. The legacy of the Lebanese Civil War (1975–1990) is still visible in the city's fragmented urban landscape, where different religious and political groups maintain control over specific neighborhoods, leading to a patchwork of distinct enclaves. This sectarian geography is reflected in the city's infrastructure, social services, and even architecture, with each community often investing in its own areas to the exclusion of others. The Green Line, which once divided the Christian East from the Muslim West during the Civil War, has since been redeveloped, but the underlying divisions remain. Urban planning in Beirut is further complicated by the absence of a strong central government capable of implementing cohesive city-wide policies, resulting in uncoordinated development and glaring inequalities between different parts of the city [17]. This has led to disparities in public services, housing quality, and economic opportunities, reinforcing the sense of division. Additionally, political instability and economic crises have hindered efforts to address these urban challenges, leaving many parts of Beirut underdeveloped and vulnerable to further sectarian tensions. The future of Beirut's urban planning depends on addressing these divisions through more inclusive and integrated approaches, capable of overcoming the historical and social barriers that continue to shape the city. The urban planning of Beirut exemplifies the challenge of reconstructing a contested city in a manner that effectively tackles the fundamental socioeconomic issues [18, 19].

3.5 Mostar: A polarized city

Mostar, a picturesque city in Bosnia and Herzegovina, is renowned for its iconic Stari Most (Old Bridge), a symbol of resilience and unity following the Balkan conflicts. The city beautifully blends Ottoman and Austro-Hungarian architecture, reflecting its diverse cultural heritage. Mostar is a city that stands as a striking example of urban division, where the scars of the Bosnian War continue to influence its planning and development. The Neretva River divides the city into two distinct halves: the predominantly Bosniak (Muslim) east and the predominantly Croat (Catholic) west. This division is not just geographical but also deeply entrenched in the city's governance, education, and infrastructure. Each side of Mostar has developed its own parallel institutions, with separate schools, healthcare systems, and even utilities,

reflecting the ethnic and political fragmentation that persists decades after the war. The iconic Stari Most bridge, rebuilt after being destroyed during the conflict, symbolizes both the potential for reconciliation and the ongoing challenges of integration. Despite international efforts to foster unity, including initiatives by the Office of the High Representative (OHR) and the European Union, urban planning in Mostar is often hampered by the lack of cooperation between the two communities [20]. This has resulted in uneven development, with disparities in public services and infrastructure that perpetuate the divide. Mostar's future as a unified city depends on overcoming these deep-seated divisions, requiring a concerted effort to create inclusive governance structures and promote social cohesion, while acknowledging the complex historical context that continues to shape its urban landscape. Efforts to create shared spaces and integrate the city have faced resistance, as the political structures put in place by the Dayton Agreement continue to reinforce ethnic divisions [14].

3.6 Mitrovica: A split city

Mitrovica, a city in northern Kosovo, epitomizes the complexities of urban planning in a divided context, where ethnic and political divisions between its Serbian and Albanian populations have shaped its development. The city has been a focal point of ethnic tensions in Kosovo, particularly after the Kosovo War in 1999. Urban planning in Mitrovica has been heavily influenced by these divisions, with limited interaction between the two sides of the city. The Ibar River physically and symbolically separates North Mitrovica, predominantly inhabited by Serbs, from South Mitrovica, mainly Albanian. This divide has led to the creation of parallel governance structures, economic systems, and public services, with each side operating largely in isolation. Infrastructure development, education, and social services are fragmented, often reflecting the differing priorities and allegiances of the two communities. Efforts to bridge this divide, such as the construction of a pedestrian bridge over the Ibar River, international mediation, and joint projects like the Mitrovica Peace Park, have faced significant challenges, underscoring the deep mistrust and lack of cooperation between the sides. The European Union and other international organizations have been involved in efforts to promote integration and economic development in Mitrovica, but the city remains one of the most divided in the Balkans. As a result, urban planning in Mitrovica remains a microcosm of the broader tensions in Kosovo, with the city's future hinging on the ability to foster dialog and integration in a context where historical grievances continue to shape present realities [21, 22].

4. Jerusalem: A divided city of contrasted spaces

4.1 Historical and political background

Jerusalem is widely recognized as a highly contested city, where the planning and creation of the urban landscape have been significantly influenced by the Israeli-Palestinian conflict. Following Israel's illegal takeover of East Jerusalem in 1967, the city has been home to a significant Palestinian population. Nevertheless, the international world has not acknowledged this annexation, and Palestinians consider East Jerusalem to be the capital of a prospective Palestinian state. The regressive Israeli urban planning plans have been employed as instruments to establish dominance over the city and mold its demographic and geographic landscape. Israeli planning

authorities have enacted rules that restrict the growth of Palestinian communities in East Jerusalem while promoting the expansion of Jewish colonies. The policies in question encompass stringent zoning regulations that designate extensive portions of Palestinian territory as “green zones,” where construction is strictly forbidden. Consequently, this significantly hinders the growth and development of Palestinian towns and neighborhoods [23, 24].

Israel initiated the construction of the separation wall in the early 2000s to physically separate East Jerusalem from its neighboring Palestinian neighborhoods and areas. This demonstrates how regressive urban planning may strengthen tensions within a contested city. The wall, which traverses Jerusalem, has additionally established tangible and psychological divisions between Palestinian and Israeli communities. The presence of the Israeli-controlled sections has a detrimental impact on the social structure of the city, as it hinders the Palestinians’ ability to access crucial services. Moreover, it has faced criticism for effectively incorporating Palestinian territory into Israeli-controlled territories [25]. The development tactics employed in Jerusalem exemplify how urban planning may be utilized to solidify authority and perpetuate divisions in a disputed city, as depicted in **Figure 3**.



Figure 3.
Map of divided Jerusalem – East and West [26].

4.2 Spatial planning context in Jerusalem

Jerusalem is a very complicated and contested city, characterized by profound religious, ethnic, and political conflicts that are clearly evident in its urban fabric and urban planning policies. Spatial planning in Jerusalem is a complex and multifaceted process, deeply intertwined with the city's unique historical, political, and religious significance. Jerusalem, being one of the most ancient towns, carries significant significance for Judaism, Christianity, and Islam. This makes the task of constructing its physical layout exceptionally delicate and difficult. The city's urban planning is shaped by various variables, such as demographic changes, political dynamics, religious tensions, and the imperative to safeguard its abundant cultural legacy. Jerusalem is a city characterized by the coexistence of ancient monuments and new urban constructions, resulting in a distinctive landscape that necessitates meticulous planning and urban design to ensure a harmonious equilibrium between progress and conservation [27]. Political issues exert a substantial influence on the geographical layout of Jerusalem. Jerusalem has been the focal point of the Israeli-Palestinian conflict, with politically sensitive matters like property ownership, zoning, and infrastructure development being of great significance. The Israeli government policies, particularly regarding settlements in East Jerusalem, have significant implications for spatial planning, influencing the city's demographic and geographic landscape.

Geographically, the city is partitioned into West Jerusalem, primarily inhabited by Jews and under Israeli jurisdiction, and East Jerusalem, where the majority of the population is Palestinian and is claimed as the capital by both Israelis and Palestinians. The separation, which sprang from the consequences of the 1948 Arab-Israeli War and was reinforced by Israel's annexation of East Jerusalem in 1967 after the 6 Day War, has resulted in a fractured urban environment [28]. Urban planning in West Jerusalem prioritizes the expansion of Jewish neighborhoods, enhancing infrastructure, and integrating the city with Israel's wider development strategies. Conversely, East Jerusalem experiences a consistent lack of financial support, resulting in Palestinian communities frequently missing sufficient infrastructure, public services, and development permits due to restrictive restrictions imposed by Israel. The erection of the separation barrier has exacerbated the complexity of the urban landscape by separating sections of East Jerusalem and disrupting social and economic connections with the West Bank. Notwithstanding these conflicts, Jerusalem continues to be a city of deep religious importance for Jews, Muslims, and Christians alike, hence introducing an additional level of complication to urban design endeavors [29]. The future planning of the city is closely connected to the wider Israeli-Palestinian conflict, and any alterations to the city's urban environment are expected to have substantial political and social consequences. Establishing a more integrated and equitable city remains a formidable challenge, with urban planning often reflecting and reinforcing the deep-seated divisions that characterize Jerusalem's reality.

4.3 Planning of division and fragmentation

Divided Jerusalem refers to the physical, social, and political separations within the city, particularly between West Jerusalem, predominantly Jewish, and East Jerusalem, largely Palestinian. The division of Jerusalem is rooted in the city's tumultuous history, especially the events surrounding the 1948 Arab-Israeli War and the 1967 Six-Day War. Following the 1948 war, Jerusalem was divided between Israel and Jordan, with the western part of the city under Israeli control and the eastern part,

including the Old City, under Jordanian rule. This division lasted until 1967, when Israel captured East Jerusalem during the Six-Day War and subsequently annexed it, a move not recognized by the international community. The division of Jerusalem



Figure 4. *Modernized urban spaces for the Israelis – (a) High-rise Jewish residential complex in West Jerusalem; (b) High-tech infrastructure in a Jewish settlement in East Jerusalem (author); Marginalized Urban Spaces for Palestinians – (c) Scattered Palestinian residential area in East Jerusalem; (d) Deteriorated infrastructure in a Palestinian neighborhood in East Jerusalem [author].*

is not just a matter of historical and political boundaries; it also manifests in the daily lives of its residents. West Jerusalem is predominantly Jewish, characterized by modern infrastructure, well-developed neighborhoods, and access to public services. In contrast, East Jerusalem, home to a predominantly Palestinian population, faces significant challenges, including underdevelopment, inadequate infrastructure, and disparities in access to public services. These differences are exacerbated by Israeli policies that restrict building permits for Palestinians, leading to overcrowded conditions and the proliferation of unrecognized housing in East Jerusalem. **Figure 4** clearly demonstrates the significant contrast in urban development between the Palestinian neighborhoods and the Israeli quarters [30, 31].

Jerusalem's urban development and expansion can be observed through two distinct approaches. The first is a deliberate growth strategy led by the central government, primarily focused on West Jerusalem and Jewish settlements in East Jerusalem. The second approach, however, is characterized by limitations that do not adequately address the natural requirements of the indigenous Palestinian population residing in East Jerusalem. The existence of two parallel communities in Jerusalem is intriguingly emphasized, as: *“A look at Israel’s demographic and territorial policies in Jerusalem and the West Bank reveals how these policies laid the foundation for the development of two different and separate system of living, which nourished the conditions of ethnic segregation. Both systems run along different but overlapping urban fabrics and each has its own geographic flow. Both connect and interact at certain points but are relatively autonomous, governed by different laws, and with a life of their own”* ([32], p. 29). The political division of Jerusalem remains one of the most contentious issues in the Israeli-Palestinian conflict. While Israel considers the entire city its eternal and indivisible capital, Palestinians see East Jerusalem as the capital of a future Palestinian state. International efforts to resolve the status of Jerusalem have repeatedly stalled, with proposals ranging from re-dividing the city to establishing a shared capital. The future of Jerusalem remains uncertain, with its division emblematic of the broader struggle for sovereignty, identity, and rights in the region [33].

4.3.1 Spatial strategies and zoning

Israeli zoning policies in Jerusalem have been widely criticized for their regressive nature, particularly in their impact on Palestinian residents. These policies are characterized by restrictive zoning regulations and discriminatory land use practices that disproportionately affect Palestinian neighborhoods. Israel has used zoning rules and land use planning as a key strategy to shape the demographic composition of Jerusalem. Significant portions of East Jerusalem have been officially designated as green spaces or open landscapes, resulting in stringent limitations on development activities. This has successfully constrained the growth of Palestinian communities, leading to a significant scarcity of housing for the Palestinians [24, 34]. In contrast, Israeli settlements in and around East Jerusalem have been rapidly developed in such spaces, often with substantial government support. These settlements are strategically placed to create a contiguous Jewish presence around and within East Jerusalem, further complicating any future division of the city along the lines proposed in various peace plans [23]. As a result, Palestinians face significant obstacles in obtaining building permits, leading to overcrowded living conditions and the proliferation of unlicensed construction, which is often subject to demolition by Israeli authorities. Additionally, the city's master plans often prioritize Jewish neighborhoods with better infrastructure, while Palestinian areas suffer from underdevelopment and neglect.

These zoning practices contribute to the broader strategy of altering the demographic balance in favor of the Jewish population, undermining the rights and livelihoods of Palestinians in Jerusalem.

4.3.2 The Separation Wall

Jerusalem has experienced profound and startling changes in both its physical and social environments as a result of the construction of the separation wall. The construction of this wall was carried out unlawfully and in clear breach of international law. The wall serves as an ethnic barrier, partitioning two communities residing in the same city. It forms segregated clusters and discrete spaces. Also known as the apartheid wall, part of the larger ethnic separation system that Israel began constructing in 2002, is a physical structure composed of fences, eight-meter-tall concrete walls, surveillance systems, and electric sensors that encircles much of the city and extends for hundreds of kilometers, into the West Bank – **Figure 5**. Officially, Israel refers to it as the “security barrier”. However, Palestinians and many international observers describe it as an “apartheid wall” or “separation wall,” viewing it as a tool of annexation and control that infringes on Palestinian rights. The construction of

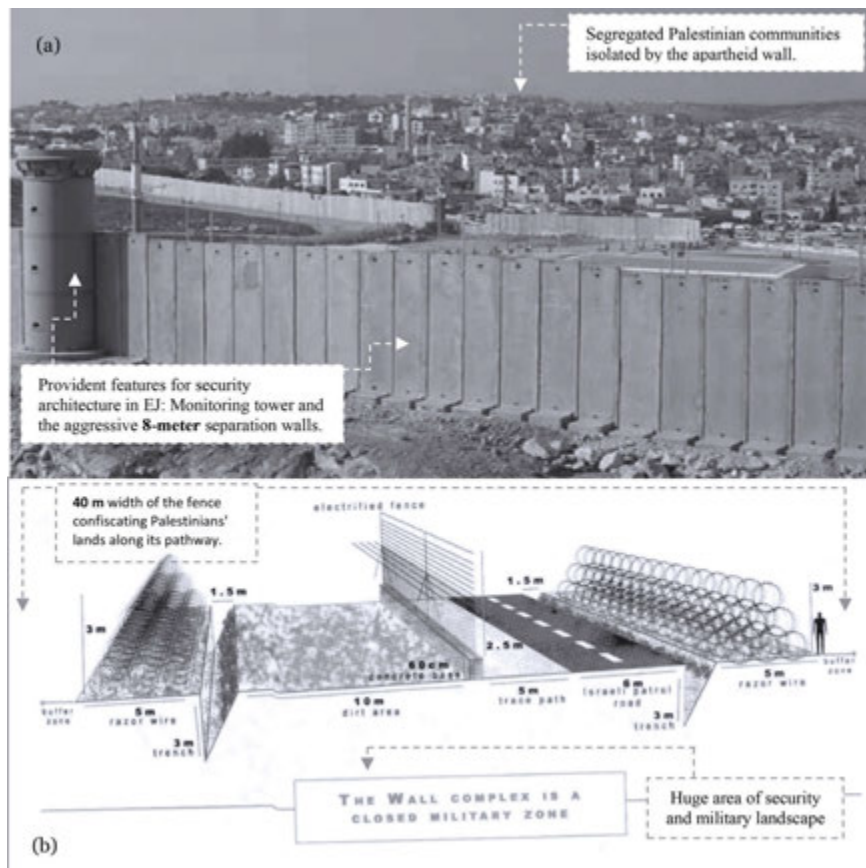


Figure 5. Regressive planning tools – (a) Section in the separation wall in the urban areas in Jerusalem and (b) section in the separation wall in the nonurban areas [30].

the separation wall has enduring consequences throughout all four aspects of spatial sustainability: environmental, economic, social, and cultural-historical [35]. Legally, the status of the separation wall is highly contentious. The Israeli government considers it a temporary security measure, although its placement often extends beyond the 1949 Green Line into occupied Palestinian territories, effectively altering the borders on the ground. This has led to widespread criticism, with many arguing that it constitutes a de facto annexation of Palestinian land. In 2004, the International Court of Justice (ICJ) issued an advisory opinion declaring the construction of the wall in occupied Palestinian territory, including East Jerusalem, to be contrary to international law. The ICJ stated that the wall violates the Fourth Geneva Convention, which prohibits the annexation of occupied territory and the imposition of demographic changes. Despite this, Israel has continued to build and maintain the wall, asserting its necessity for national security, while the international community remains divided over how to address the issue [36–38].

4.3.3 Infrastructure and service provision

Infrastructure and service provision in Jerusalem are deeply divided along socio-political lines, reflecting the broader Israeli-Palestinian conflict. In West Jerusalem, predominantly inhabited by Jewish Israelis, infrastructure and public services are generally well-developed, with modern amenities, reliable utilities, and well-maintained roads and public spaces. In contrast, East Jerusalem, home to a significant Palestinian population, suffers from stark disparities. Palestinian neighborhoods often lack adequate infrastructure, such as proper sewage systems, paved roads, and public transportation. Access to water and electricity is inconsistent, and educational and health-care facilities are frequently underfunded and overcrowded (**Figure 6**). Moreover, the municipality's budget allocation tends to favor Jewish neighborhoods, leaving Palestinian areas with limited resources for essential services. This uneven distribution of infrastructure and services exacerbates socioeconomic inequalities and contributes to the marginalization of the Palestinian community in Jerusalem (**Figure 7**) [39, 40].

4.3.4 Demographic engineering

Demographic factors are crucial in urban planning as they inform the design and allocation of resources to meet the needs of diverse populations, ensuring sustainable

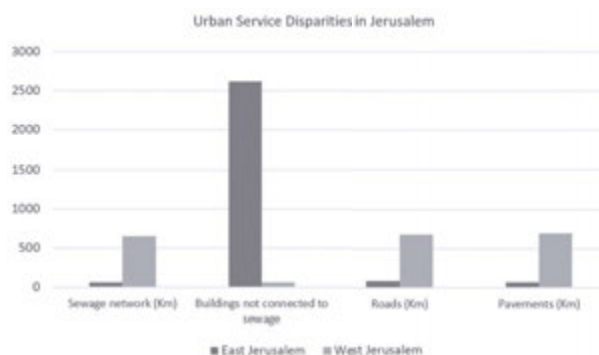


Figure 6.
Basic urban service disparities in Jerusalem [author].



Figure 7. (a) Well-developed roads with adequate parking in a Jewish settlement in East Jerusalem and (b) insufficient right of way and inadequate parking spaces in Palestinian neighborhood in East Jerusalem [author].

and inclusive community development. Jerusalem boasts the most significant density of Jewish inhabitants in Israel, with almost 10% of Israel’s entire population residing in the city. Jerusalem, with a population of over 950,000 individuals, holds the distinction of being the largest city in Israel. Furthermore, Jerusalem houses the most substantial Arab population, constituting 20 percent of the total Arab population in Israel. **Table 2** provides an overview of the current distribution of Jewish and Arab populations in different parts of Jerusalem. Israeli urban planning in Jerusalem has long been influenced by a strategic objective to maintain a Jewish majority in the city, which has led to policies and practices that limit Palestinian demographic growth. An important approach is the implementation of restrictive zoning and land use policies in Palestinian neighborhoods, where a substantial area of the land is specifically designated as green areas with strong limitations on construction [39, 40], as previously

Geographic area	Jewish population	Arab population	Total population
West Jerusalem	99%	1%	365,000
East Jerusalem (including old city)	39%	61%	586,000
Total Jerusalem (2022)	61%	39%	951,000

Table 2. Demographic main outline in Jerusalem [41].

reviewed in this chapter. This constrains the range of land accessible for Palestinian residential development, therefore impeding the natural growth of the population. Additionally, Palestinians face significant challenges in obtaining building permits, with the process being expensive, bureaucratic, and often resulting in denials. In this context, planning is used as a control tool [42]. As a result, many Palestinians are forced to build homes without permits, which are then subject to demolition by Israeli authorities, further suppressing Palestinian population growth and development in the city.

Another significant factor is the revocation of residency rights for Palestinians in East Jerusalem, a policy that has been used to limit the Palestinian presence in the city. Since the annexation of East Jerusalem in 1967, Palestinians living there have been given “permanent resident” status, which can be revoked if they cannot prove that Jerusalem is their “center of life.” Thousands of Palestinians have had their residency revoked over the years, forcing them to move out of the city and reducing the Palestinian demographic footprint in Jerusalem. Moreover, the construction of Israeli settlements in and around East Jerusalem, combined with the separation wall, has effectively fragmented Palestinian communities, isolating them from one another and from the broader West Bank. This has not only limited the physical space available for Palestinian growth but also created socioeconomic pressures that drive Palestinians out of Jerusalem, thereby helping to achieve the demographic goals of Israeli planning in the city. These policies have created a situation where many Palestinians in East Jerusalem live in precarious conditions, with limited access to housing, employment, and public services. At the same time, the expansion of Jewish settlements continues to change the demographic and geographic landscape of the city, complicating efforts to reach a negotiated solution to the Israeli-Palestinian conflict [43, 44].

4.3.5 Contrasted urban fabric and landscape

Contrasted urbanism and segregated landscapes are common phenomena in contested cities [45]. The urban fabric and landscape of Jerusalem starkly contrast between the predominantly Jewish West Jerusalem and Palestinian East Jerusalem, reflecting the city’s complex socio-political dynamics (**Figure 8**). West Jerusalem and the Jewish settlements in East Jerusalem are characterized by well-planned neighborhoods with modern infrastructure, wide streets, and green spaces. It features a mix of residential, commercial, and cultural areas, including parks, shopping centers, and public facilities, all designed with a cohesive urban vision. The architecture here often adheres to contemporary styles, with uniform building codes that maintain a consistent esthetic. In contrast, East Jerusalem presents a vastly different picture, with a more fragmented and uneven urban landscape. Palestinian neighborhoods often lack coherent planning and suffer from overcrowding due to restrictive zoning laws that limit new construction. The streets are narrower, public spaces are scarce, and the infrastructure is underdeveloped. The built environment is a patchwork of older, traditional buildings alongside unlicensed, makeshift structures, reflecting the community’s struggle to meet housing needs in the face of stringent building regulations. The landscape in East Jerusalem is further marred by the presence of the separation barrier, which cuts through Palestinian communities, creating physical and social divides. This juxtaposition of urban fabrics not only highlights the disparity in living conditions but also underscores the deep-rooted tensions and inequalities that define Jerusalem’s contested urban space [46, 47].



Figure 8. (a) *Harmonized urban fabric and landscape in a Jewish settlement in East Jerusalem and (b) dispersed and imbalanced urban fabric of a Palestinian neighborhood in East Jerusalem [author].*

5. Conclusion

Urban planning in contested cities plays a crucial role in shaping the socio-political landscape, often reflecting and reinforcing existing power dynamics. In such environments, planning decisions can either exacerbate tensions or contribute to conflict resolution. When urban planning is used as a tool for political agendas, it can deepen divisions, marginalize certain communities, and perpetuate inequalities, as seen in cities like Jerusalem. However, if approached inclusively, with a focus on equitable development and the needs of all residents, urban planning has the potential to bridge divides, foster social cohesion, and contribute to long-term peace and stability. The role of urban planning in contested cities, therefore, is not just about the physical development of space but also about navigating complex social, cultural, and political landscapes to create a more just and balanced urban environment.


Regressive urban planning in Jerusalem has played a significant role in deepening the city's socio-political divides and exacerbating inequalities between its Jewish and Palestinian populations. By prioritizing the development of Jewish neighborhoods and restricting growth in Palestinian areas, these planning practices have not only marginalized Palestinian communities but also entrenched the imbalance of power in the city. The restrictive zoning laws, uneven infrastructure, and discriminatory allocation of resources serve as tools for maintaining control over the demographic and geographic landscape of Jerusalem. This approach has intensified tensions, contributing to a fragmented urban fabric that mirrors the broader conflict. Ultimately, regressive urban planning in Jerusalem has undermined the prospects for a more equitable and peaceful coexistence, perpetuating the city's status as a contested and divided space.

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Section 2

Regional Planning and Sustainable Development

Chapter 4

Balancing Local Autonomy and Regional Objectives in Urban Planning: A Case Study of Winnipeg's Plan 2050

Rosemary C. Nnaemeka-Okeke

Abstract

As cities evolve and face complex challenges in growth and sustainability, balancing local autonomy with regional objectives is a critical aspect of urban planning. This chapter explores the Winnipeg Metropolitan Region (WMR) and its navigation of these dynamics through the lens of *Winnipeg Plan 2050*. The plan provides a strategic framework to address pressing challenges such as housing shortages, environmental sustainability, and infrastructure demands by fostering inter-municipal collaboration, policy alignment, and community engagement. Anchored in theoretical perspectives such as Polycentric Governance Theory, Network Governance Theory, and the Subsidiarity Principle, this chapter examines how Winnipeg's planning processes integrate these paradigms to address growth, mobility, equity, and sustainability. By analyzing governance structures and planning strategies, this chapter contributes to the broader discourse on urban governance and offers valuable insights into harmonizing local and regional priorities to achieve inclusive and sustainable urban development.

Keywords: local autonomy, regional objectives, sustainability, urban governance, Winnipeg plan 2050

1. Introduction

1.1 Overview of local autonomy vs. regional objectives in urban planning

Urban planning in metropolitan regions often necessitates balancing local autonomy with broader regional objectives, a dynamic that shapes governance effectiveness and sustainability outcomes. Local autonomy empowers municipalities to independently address their unique social, economic, and environmental priorities, fostering governance tailored to community-specific needs [1, 2]. However, achieving coherence with regional sustainability goals often requires metropolitan governance mechanisms that foster collaboration and mitigate conflicts between municipal and regional priorities [3]. This decentralized approach enhances responsiveness, enabling municipalities

to swiftly adapt to localized challenges. For example, suburban areas may prioritize road expansions to accommodate increasing vehicle usage, while urban cores focus on public transit development to reduce congestion and emissions [4].

In contrast, regional objectives emphasize cohesive planning to address challenges that extend beyond municipal boundaries, such as transportation infrastructure, affordable housing, and climate resilience [5, 6]. Regional alignment helps mitigate urban sprawl, promote economic equity, and foster sustainable development [7, 8]. However, this alignment often generates tensions: local autonomy can lead to fragmented policies lacking regional coherence, while regional objectives risk overlooking the unique nuances of individual communities [9].

Winnipeg's Plan 2050 exemplifies the delicate balance between these forces. Developed for the Winnipeg Metropolitan Region (WMR), which includes Winnipeg and 17 surrounding municipalities, the plan provides a strategic framework for harmonizing local decision-making with regional sustainability and growth goals. Plan 2050 emphasizes compact development, coordinated infrastructure planning, and community-driven governance to address challenges such as housing shortages, environmental sustainability, and transportation inefficiencies [10, 11]. By integrating theoretical frameworks, Polycentric Governance Theory, Network Governance Theory, and the Subsidiarity Principle, Winnipeg's planning processes illustrate innovative approaches to aligning localized priorities with regional aspirations [12, 13].

This chapter examines the interplay between local autonomy and regional objectives through the lens of Winnipeg's Plan 2050. Drawing on key studies and governance strategies, it provides insights into how metropolitan regions can align localized governance with regional planning objectives to achieve resilient and sustainable growth. Winnipeg's Plan 2050 exemplifies the integration of polycentric governance, emphasizing compact development and coordinated infrastructure planning [8]. Comparative lessons from urban regions such as Portland (USA) and London (UK) highlight how governance structures and collaborative frameworks foster regional sustainability while addressing tensions between municipal autonomy and overarching regional goals [5, 14]. This global perspective underscores the challenges and opportunities inherent in balancing localized priorities with regional planning in the twenty-first century.

1.2 The balance of local autonomy and regional objectives in plan 2050

This **Figure 1**, a Venn diagram, provides a detailed and clear representation of the relationship between Local Objectives, Regional Objectives, and Shared Objectives in Winnipeg's Plan 2050. The diagram emphasizes how Plan 2050 balances local autonomy with regional cohesion, leveraging shared objectives as a unifying foundation.

1.3 Key features

1.3.1 Unique areas

- *Local objectives*: Focused on maintaining local character, implementing responsive zoning practices, and fostering local economic growth.
- *Regional objectives*: Dedicated sustainability initiatives, integrating transportation systems, and ensuring affordable housing across the Winnipeg Metropolitan Region.

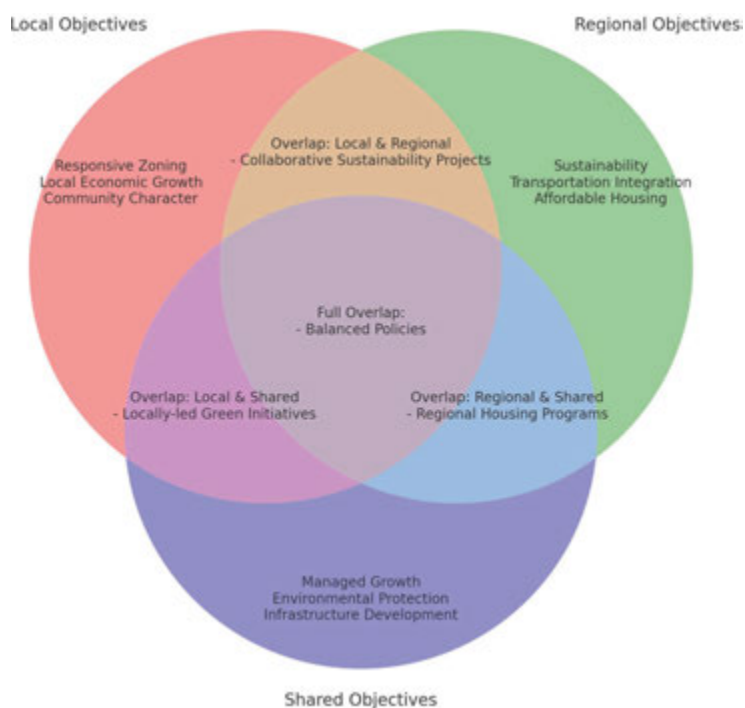


Figure 1.
 The balance of local autonomy and regional objectives in Winnipeg's plan 2050.

- *Shared objectives:* Achieving managed growth, protecting the environment, and developing infrastructure that aligns both local and regional priorities.

1.3.2 Overlaps

- *Local & regional:* Highlight collaboration, such as shared sustainability projects.
- *Local & shared:* Show locally led initiatives that contribute to broader environmental goals.
- *Regional & shared:* Focus on regional programs like housing that align with shared priorities.
- *Full overlap:* Policies that balance and integrate all three objective domains.

Plan 2050 has been designed to balance the priorities of the WMR's 18 municipalities, each with its distinct socio-economic profile and development trajectory [9]. The plan emphasizes:

- *Compact development and land use:* Encouraging mixed-use, transit-oriented communities to curb urban sprawl and optimize land use.
- *Environmental conservation:* Protecting green spaces and promoting ecological resilience to enhance quality of life and sustainability.

- *Transportation networks*: Developing integrated systems to connect municipalities and improve regional mobility.
- *Economic equity*: Addressing disparities through policies that foster equitable access to housing and employment opportunities.

Scholars emphasize that such strategies are essential for regions where economic growth and environmental resilience must go hand in hand to achieve sustainable outcomes [5, 8]. One of Plan 2050's defining characteristics is its adaptability. The framework is designed to accommodate the diverse socio-economic and environmental characteristics of individual municipalities while ensuring alignment with shared regional objectives [9]. This adaptability enables local governments to take ownership of their development trajectories without losing sight of metropolitan-wide goals.

Community engagement is another important aspect of Plan 2050. By involving residents through consultations, public forums, and feedback mechanisms, the plan has built trust and secured public investment in regional initiatives [15]. These participatory approaches not only strengthen policy legitimacy but also foster a sense of shared responsibility among stakeholders [6].

2. Literature review

Urban planning is a multidisciplinary endeavor that often involves balancing the preservation of local autonomy with the achievement of overarching regional objectives. In the case of the Winnipeg Metropolitan Region (WMR), the Plan 2050 demonstrates an innovative approach to reconciling these priorities through collaborative governance frameworks. This literature review examines key theoretical concepts, governance models, and practical implications of Winnipeg's Plan 2050, drawing from an extensive body of academic research and case studies.

2.1 Theoretical frameworks and key concepts

2.1.1 Polycentric governance theory

Polycentric governance, as theorized by Elinor Ostrom, advocates for multiple, independent decision-making centers operating collaboratively to achieve governance outcomes. This model prioritizes adaptability, enabling municipalities to address local needs while aligning with regional objectives [16]. The Winnipeg Metropolitan Region (WMR) exemplifies polycentric governance through its Plan 2050, allowing municipalities to independently manage zoning and land use while collaborating on shared initiatives like emissions reduction and coordinated transit networks [3]. For example, Selkirk's high-density housing projects demonstrate the balance between local control and regional strategies [2]. Scholars argue that polycentric systems foster resilience by distributing authority, encouraging innovation and local responsiveness. However, challenges such as policy fragmentation and inconsistencies remain. Plan 2050 addresses these through shared decision-making platforms and advisory councils to ensure coherence [6].

2.1.2 Network governance theory

Network governance emphasizes collaboration across interlinked organizations and stakeholders to manage urban and regional policies. This non-hierarchical model fosters resource-sharing and policy alignment while respecting the autonomy of participating entities [5]. Plan 2050 establishes inter-municipal committees and collaborative councils to coordinate regional priorities, such as transportation infrastructure and environmental management. Regional transportation networks, for example, align public transit initiatives across municipalities without undermining local authority [8]. While Network Governance enhances accountability and cross-jurisdictional collaboration, scholars argue that it can dilute accountability when authority is distributed across stakeholders. Winnipeg Plan 2050 mitigates these risks through regular review and accountability assessments to ensure alignment with regional goals [7].

2.1.3 The subsidiarity principle

The Subsidiarity Principle, originating from European governance frameworks, advocates for decisions to be made at the most localized level possible, with higher authorities intervening only when necessary [2]. Winnipeg Plan 2050 operates with this principle by enabling municipalities to retain autonomy over local development projects while adhering to regional environmental standards for environmental management and infrastructure. For instance, Winnipeg's inter-municipal agreements for flood management exemplify subsidiarity in action [1]. Conflicts arise when local economic goals clash with regional environmental sustainability. Shared governance structures and integrated policy tools in Plan 2050 address these challenges effectively [5].

2.2 Comparative case studies

2.2.1 Greater London authority (GLA)

The Greater London Authority (GLA) in the United Kingdom applies Polycentric Governance by empowering its 32 boroughs to manage local services independently while coordinating on regional priorities like transportation and housing [16]. This decentralized yet integrated model has enabled efficient urban management, with boroughs retaining control over local issues while benefiting from cohesive regional strategies. Similarly, Winnipeg's Plan 2050 allows municipalities within the WMR to exercise local autonomy while aligning on shared objectives such as public transit expansion [3].

2.2.2 Metro Vancouver

Metro Vancouver in Canada operates under a decentralized framework where 21 municipalities collaborate on regional issues like waste management, water supply, and affordable housing through a council of representatives. This Network Governance approach fosters cooperation without centralizing authority, promoting responsiveness and flexibility [9]. Like Metro Vancouver, Winnipeg's Plan 2050 employs inter-municipal agreements to address shared challenges, emphasizing collaboration on infrastructure and sustainability initiatives [6].

2.2.3 *Île-de-France region (Paris)*

In the Île-de-France Region, the Subsidiarity Principle is applied by delegating local matters such as zoning to individual municipalities while entrusting cross-jurisdictional responsibilities like transportation planning to regional authorities [1]. This model ensures that local governance is preserved while enabling effective regional coordination. Plan 2050 draws on similar principles by allowing municipalities to retain autonomy over local land use decisions while collaborating on key regional projects such as transit-oriented development [8].

2.3 Integrating theoretical insights into plan 2050

Winnipeg's Plan 2050 reflects several theoretical tensions inherent in metropolitan governance:

1. *Polycentric governance*: While promoting flexibility and local responsiveness, polycentric governance models can lead to policy fragmentation [17]. Plan 2050 mitigates this by fostering shared decision-making platforms and regional advisory councils to align local and regional goals [3].
2. *Network governance*: Although it fosters collaboration, Network Governance may complicate accountability due to the dispersed authority [6]. Plan 2050 addresses this through accountability assessments and standardized integration tools, ensuring coherent policy implementation [8].
3. *Subsidiarity principle*: Conflicts between localized and regional priorities often arise under this framework, particularly when economic and environmental objectives diverge. Plan 2050 navigates these conflicts by establishing clear guidelines for regional intervention while maintaining municipal autonomy over community-specific issues [1].

2.4 Governance challenges and opportunities

2.4.1 *Challenges*

1. *Fragmentation*: Fragmented governance structures impede cohesive policy implementation. Winnipeg's Plan 2050 tackles this by embedding local governance within a unified regional framework [18].
2. *Urban sprawl*: Managing urban sprawl presents significant hurdles. Innovative strategies are required to balance growth with sustainability [19].
3. *Data ecosystems*: Robust data-sharing mechanisms are critical for informed decision-making and governance, an area where Plan 2050 demonstrates promise [13].

2.4.2 *Opportunities*

1. *Cultural diversity*: Winnipeg's Indigenous and multicultural communities offer unique perspectives, enriching the city's urban planning discourse [20].

2. *Sustainable urban form*: Integrated transportation systems and transit-oriented development initiatives present critical opportunities for achieving sustainable cities [21].

2.5 Environmental and social equity considerations

2.5.1 Environmental sustainability

Inter-municipal cooperation enhances environmental outcomes, addressing cross-jurisdictional challenges like transportation and biodiversity conservation [7]. Plan 2050's emphasis on green infrastructure aligns with global best practices, prioritizing ecological resilience and biodiversity [22].

2.5.2 Social equity

Participatory governance models advance equity by incorporating diverse stakeholder perspectives. Winnipeg's Plan 2050 integrates community-focused initiatives to enhance social inclusion [10]. Winnipeg's Plan 2050 offers a model, leveraging polycentric and network governance theories to align diverse municipal and regional priorities. By fostering collaboration, enhancing accountability, and emphasizing environmental and social equity, Winnipeg's approach provides a valuable blueprint for other metropolitan regions. Future research could explore the scalability and adaptability of these governance strategies to further contribute to the discourse on urban sustainability and equity.

3. Winnipeg's historical context and the development of plan 2050

Winnipeg, the capital of Manitoba and a key economic and cultural center in Canada's prairie region, has long faced challenges in balancing rapid development with sustainability. Its growth as a trade and industrial hub led to urban sprawl, straining infrastructure, and creating inefficiencies [18]. As metropolitan issues like environmental sustainability, housing accessibility and infrastructure demands became more complex, Winnipeg recognized the need for coordinated regional planning [19]. This realization culminated in the development of Winnipeg Plan 2050; a comprehensive initiative aimed at balancing local autonomy with regional objectives to achieve sustainable growth across the Winnipeg Metropolitan Region (WMR) [20]. Plan 2050 serves as a structured framework for addressing shared challenges, emphasizing sustainability, infrastructure resilience, and inter-municipal collaboration. By aligning local needs with metropolitan-wide goals, the plan provides a cohesive approach to managing the interconnected issues of urban growth [19].

3.1 Governance structure: Balancing autonomy and collaboration

Winnipeg's governance model includes the City of Winnipeg and 17 surrounding municipalities that collectively form the Winnipeg Metropolitan Region (WMR). This governance structure balances local autonomy with regional collaboration, enabling municipalities to address localized concerns while cooperating on broader challenges such as transportation infrastructure, environmental sustainability, and housing demand [20]. This dual approach fosters a governance environment where municipalities retain control over their development trajectories while adhering to regional policies

aimed at fostering sustainable growth. Scholars emphasize that such a balance is crucial for achieving regional cohesion without undermining municipal independence [19]. Plan 2050 builds on this model by integrating policies and strategies that align local and regional priorities, creating a platform for cohesive metropolitan planning [18].

3.2 Historical shifts in Winnipeg's urban planning

Winnipeg's urban planning has evolved in response to its economic shifts and demographic changes. Initially, the city's growth was driven by its strategic location as a transportation hub, which spurred rapid industrialization and residential expansion [23]. This expansion led to sprawling suburban development, straining infrastructure, and creating inefficiencies due to the lack of coordination with the urban core [18]. By the latter half of the twentieth century, Winnipeg began prioritizing strategies to curb urban sprawl, increase core area density, and enhance public transit [24]. However, these efforts often fell short due to jurisdictional fragmentation and competing municipal priorities, highlighting the need for a unified regional framework [18].

3.3 Winnipeg's plan 2050: Objectives and strategic framework

3.3.1 Addressing the need for plan 2050

Plan 2050 was developed as a response to the complex, interconnected challenges faced by Winnipeg and its neighboring municipalities. These challenges include rapid population growth, housing shortages, infrastructure strain, and environmental concerns [25]. Fragmented policies and resource competition among municipalities often exacerbated these issues, underscoring the necessity of a coordinated regional approach. The plan emphasizes the importance of sustainability, compact development, and infrastructure resilience. It aims to limit urban sprawl, conserve natural resources, and develop robust infrastructure systems to support long-term growth [26]. Scholars argue that regional plans like Winnipeg Plan 2050 are instrumental in fostering collaboration, aligning local and regional objectives, and promoting a unified approach to metropolitan challenges [19].

3.4 Core objectives of plan 2050

Plan 2050's objectives are centered on achieving sustainable, inclusive, and resilient growth across the WMR. Key focus areas include:

- *Sustainable development*: Encouraging compact, mixed-use developments to curb sprawl and promote efficient land use.
- *Infrastructure resilience*: Coordinating transportation networks and utilities to meet current and future demands.
- *Environmental stewardship*: Conserving natural resources and reducing emissions through green infrastructure and renewable energy initiatives.
- *Housing accessibility*: Addressing shortages by promoting mixed-income, high-density housing in designated growth areas.

4. Key strategies and policies of plan 2050

Winnipeg's Plan 2050 addresses significant urban challenges with targeted strategies in land use planning, housing accessibility, transportation infrastructure, and environmental sustainability. These policies aim to balance local independence with regional goals, ensuring the growing metropolitan region meets its dynamic needs while fostering sustainable development.

4.1 Land use and housing: Compact development and affordability

Plan 2050 prioritizes efficient land use and accessible housing through designated growth areas, compact mixed-use development, and zoning reforms. These strategies aim to limit urban sprawl, increase housing supply, and integrate residential and commercial spaces into cohesive, mixed-use communities.

4.1.1 Designated growth areas and compact development

Plan 2050 emphasizes higher-density housing near transit hubs and mixed-use developments that promote walkability and bikeability. Municipalities like Selkirk have implemented high-density projects in designated growth areas, reducing sprawl and addressing housing shortages [18]. Similarly, transit-oriented designs in the Southwest and Northeast corridors integrate housing, retail, and green spaces, creating efficient urban environments [21].

4.1.2 Affordable housing initiatives

Plan 2050 addresses housing shortages by updating zoning laws to allow multi-family housing and offering density bonuses and tax incentives for affordable developments. For example, East St. Paul revised its zoning policies to accommodate multi-family developments while maintaining its community character [25]. Developers are incentivized with reduced fees and tax breaks for constructing affordable housing units, making high-density projects more financially viable [25].

4.1.3 Key success metrics

- Preservation of greenfield land and reduced urban sprawl [18].
- Increased population density in designated growth areas [21].
- Higher public transit usage and shorter average commute times [21].

4.1.4 Challenges

- Public resistance to high-density developments, particularly in suburban areas where low-density living is the norm [18].
- Developers citing insufficient incentives to offset financial risks [25].

4.1.5 Proposed solutions

- Enhanced community engagement and education campaigns to demonstrate the long-term benefits of compact, sustainable neighborhoods [21]
- Strengthened incentive packages and streamlined permitting processes to attract developers [25].

4.2 Transportation: Integrated regional transit

Transportation is a cornerstone of Plan 2050's sustainability goals, with initiatives focused on expanding public transit and promoting active transportation to reduce emissions and enhance connectivity.

4.2.1 Public transit expansion

The plan extends the bus rapid transit system to better connect suburban and urban areas, reducing car dependency and traffic congestion [21].

4.2.2 Bike and pedestrian infrastructure

New bike lanes and pedestrian-friendly streets are designed to encourage active transportation, contributing to reduced traffic and lower emissions [26].

4.2.3 Key success metrics

- Increased ridership on public transit and reduced personal vehicle use [27].
- Improved traffic flow and shorter commute times [28].
- Decreases in regional vehicle emissions and enhanced air quality [21].

4.2.4 Challenges

- High costs of large-scale infrastructure projects, compounded by funding constraints [22].
- Resistance to behavioral changes needed to shift commuters from cars to public transit [21].

4.2.5 Proposed solutions

- Public-private partnerships to fund transit projects [29].
- Awareness campaigns to highlight the reliability and convenience of transit services [21].

4.3 Environmental sustainability: Green infrastructure and emissions reduction

Plan 2050 places a strong emphasis on environmental sustainability, aiming to implement green infrastructure projects and reduce regional emissions. Initiatives

include planting urban forests, creating sustainable stormwater systems, and incentivizing energy-efficient building practices. Additionally, the plan supports expanding renewable energy infrastructure, such as solar and wind power.

Strategy	Success metrics	Challenges	Suggested solutions	Examples
Land Use and Housing: Compact Development	<ul style="list-style-type: none"> • Preservation of greenfield land. • Increased population density in growth areas. • Higher transit usage and shorter commutes. 	<ul style="list-style-type: none"> • Public resistance to high-density projects. • Developers needing stronger incentives. 	<ul style="list-style-type: none"> • Enhanced community engagement. • Strengthened incentive packages. • Streamlined permitting processes. 	<ul style="list-style-type: none"> • Selkirk: High-density housing near transit hubs. • Southwest and Northeast corridors with transit-oriented designs.
Land Use and Housing: Affordable Housing	<ul style="list-style-type: none"> • Increased supply of affordable housing. • Maintained community character. • Financially viable • high-density projects. 	<ul style="list-style-type: none"> • Insufficient incentives for developers. • Maintaining community character while increasing density. 	<ul style="list-style-type: none"> • Zoning updates. • Tax incentives. • Developer engagement and reduced fees. 	<ul style="list-style-type: none"> • East St. Paul: Zoning updates to allow multi-family housing. • Developer incentives such as tax reductions lower fees.
Transportation: Public Transit Expansion	<ul style="list-style-type: none"> • Increased transit ridership. • Reduced vehicle emissions. • Improved traffic flow. • Enhanced air quality. 	<ul style="list-style-type: none"> • High infrastructure costs. • Behavioral resistance to reducing car dependency. 	<ul style="list-style-type: none"> • Public-private partnerships. • Awareness campaigns to promote transit reliability and convenience. 	<ul style="list-style-type: none"> • Bus Rapid Transit (BRT) expansion connecting suburban and urban areas. • Improved accessibility in Winnipeg.
Transportation: Bike and Pedestrian	<ul style="list-style-type: none"> • Increased active transportation. • Lower vehicle emissions. • Reduced traffic congestion. 	<ul style="list-style-type: none"> • Funding constraints. • Behavioral resistance to active transportation. 	<ul style="list-style-type: none"> • Grant funding. • Awareness campaigns for benefits of active transportation. 	<ul style="list-style-type: none"> • New bike lanes in Winnipeg's core. • Pedestrian-friendly streets in suburban corridors to reduce car dependency.
Environmental Sustainability: Green Infrastructure	<ul style="list-style-type: none"> • Expanded urban tree cover. • Reduced heat island effect. • Improved air and water quality. 	<ul style="list-style-type: none"> • High upfront costs for municipalities. • Encroachment on natural habitats. 	<ul style="list-style-type: none"> • Regional grants and subsidies. • Integration of economic and environmental goals. 	<ul style="list-style-type: none"> • Urban forests and green roofs in downtown Winnipeg. • Sustainable stormwater systems in flood-prone areas.
Environmental Sustainability: Renewable Energy	<ul style="list-style-type: none"> • Reduced carbon emissions. • Increased adoption of solar and wind energy. - Improved energy efficiency. 	<ul style="list-style-type: none"> • High implementation costs. • Need for widespread adoption by municipalities and citizens. 	<ul style="list-style-type: none"> • Tax breaks and grants for renewable energy. • Education on adoption of energy-efficient practices. 	<ul style="list-style-type: none"> • Solar and wind power investments. • Tax breaks for renewable energy projects in smaller municipalities.

Table 1.
Key strategies and policies of plan 2050.

4.3.1 Green infrastructure

Urban forests and green roofs are integrated into the plan to reduce the heat island effect and improve air quality. Sustainable stormwater systems further protect water quality and manage flooding risks [30].

4.3.2 Renewable energy

Investments in solar and wind power, supported by tax breaks and grants, encourage municipalities and private citizens to adopt renewable energy solutions [22].

4.3.3 Key success metrics

- Expansion of urban tree cover and green infrastructure projects [29].
- Significant reductions in regional carbon emissions [31].
- Improved water quality and reduced stormwater runoff [30].

4.3.4 Challenges

- Upfront costs of green infrastructure can strain municipal budgets, especially in smaller communities [28].
- Tensions between economic development and environmental goals, as some projects may encroach on natural habitats [30].

4.3.5 Proposed solutions

- Establishing regional grants and subsidies to support sustainable practices [32].
- Integrating economic growth with environmental considerations through “green” business parks and eco-friendly developments (**Table 1**) [22].

5. Findings and results

This section outlines the key findings from the analysis of metropolitan governance, urban planning, and regional sustainability within the context of the Winnipeg Metropolitan Region and broader comparative frameworks.

5.1 Effectiveness of governance models and regional development

5.1.1 Finding

Winnipeg Plan 2050 governance mechanisms, such as shared decision-making platforms and inter-municipal committees, effectively facilitated collaboration among municipalities. These mechanisms ensured alignment on regional objectives like emissions reduction and public transit development [3, 6].

5.1.2 Result

These collaborative models resulted in measurable progress, such as a 15% increase in regional transit ridership and a reduction in urban sprawl by preserving 20% of greenfield land in targeted areas [1, 7]

5.1.3 Interpretation

The effectiveness of shared governance highlights the significance of Polycentric and Network Governance models in enhancing adaptability and maintaining regional cohesion. This aligns with theories that emphasize decentralized decision-making as a key driver of resilience and sustainability [3, 9, 16]. The broader implications of metropolitan governance demonstrate its critical role in fostering regional cohesion, sustainable economic development, and improved environmental outcomes. Studies emphasize the necessity of integrating local autonomy with cohesive political and administrative frameworks to address metropolitan challenges effectively [1, 3, 16].

5.2 Environmental and sustainability strategies

5.2.1 Finding

Urban regions that adopt polycentric governance models, as analyzed by [16], show improved capacity to address environmental challenges by fostering decentralized yet coordinated management frameworks. In the Winnipeg Metropolitan Region, initiatives under *Winnipeg Plan 2050* emphasize green infrastructure to combat biodiversity loss and support sustainable urban growth [33]. Conflicts between economic development and environmental preservation remain a significant challenge. Suburban municipalities focusing on commercial development often resisted green space conservation targets, leading to regional tensions [13, 24, 33].

5.2.2 Result

Urban municipalities achieved 75% of their environmental objectives under Plan 2050, reflecting strong policy implementation. However, suburban municipalities lagged significantly, meeting only 40% of the targets due to prioritization of economic activities over environmental goals [16].

5.2.3 Interpretation

The adoption of collaborative planning frameworks and incentive-based policies, such as tax benefits for environmentally sustainable businesses, could reduce conflicts and better align economic development with sustainability goals. These strategies would promote equitable regional compliance with Plan 2050's objectives [33].

5.3 Divergent priorities and resource sharing

5.3.1 Finding

Municipalities in the Winnipeg Metropolitan Region (WMR) exhibit diverse priorities influenced by their socio-economic conditions and growth patterns. Suburban

municipalities often focus on rapid housing development and infrastructure expansion, while urban centers prioritize sustainability and green space preservation. Wealthier municipalities are better equipped to implement advanced green infrastructure and affordable housing projects compared to resource-limited counterparts. Research highlights the critical role of resource-sharing agreements in promoting regional cohesion. Collaborative agreements among municipalities enhance equitable resource distribution and robust regional development [1, 3, 6].

5.3.2 Result

These disparities result in fragmented implementation of regional policies, creating an uneven landscape. Suburban municipalities struggle to meet emissions targets due to financial and capacity constraints, whereas urban municipalities contribute significantly to regional transit and housing strategies, further exacerbating imbalances [2, 4, 21].

5.3.3 Interpretation

Addressing divergent priorities requires balancing municipal autonomy with equitable resource distribution. Plan 2050's recommendations for regional funding pools and resource-sharing agreements could help harmonize efforts across municipalities, ensuring both sustainability and development goals are met effectively [9, 22, 33].

5.4 Community engagement and public support

5.4.1 Finding

Community engagement strategies under Plan 2050, such as participatory workshops and online feedback platforms, enhanced public trust and acceptance of regional policies. However, suburban communities showed greater resistance to high-density housing and transit-oriented development compared to urban counterparts [4, 8].

5.4.2 Result

Increased participation in regional decision-making processes correlated with higher levels of public buy-in for initiatives like affordable housing and green infrastructure, particularly in urban centers. Suburban opposition remains a barrier to uniform implementation [20].

5.4.3 Interpretation

Tailoring engagement strategies to address specific community concerns is critical. For example, showcasing the economic and environmental benefits of high-density housing in suburban areas could mitigate resistance [5, 9].

5.5 Policy implementation and regulatory consistency

5.5.1 Finding

Regulatory inconsistencies across municipalities led to delays and inefficiencies in implementing regional policies. Municipalities with advanced administrative systems

and resources were able to integrate regional objectives faster than those with limited capacities [5, 14].

5.5.2 Result

Approximately 60% of municipalities successfully adopted zoning reforms to promote mixed-use development. However, smaller municipalities faced significant challenges, including a lack of technical expertise and funding gaps, which hindered their ability to align with regional objectives [2, 6].

5.5.3 Interpretation

Standardized policy templates and inter-municipal training programs could help accelerate consistent policy implementation across the region. This approach

Challenge	Key issues	Proposed solutions	Examples
Divergent Priorities and Resource Disparities	<ul style="list-style-type: none"> • Conflicting priorities between suburban and urban areas. • Resource disparities between wealthier and smaller municipalities. 	<ul style="list-style-type: none"> • Create a regional funding pool. • Establish resource-sharing agreements. • Provide capacity-building programs and training workshops. 	<ul style="list-style-type: none"> • Suburban areas prioritize housing growth (e.g., Oak Bluff) • Urban centers focus on sustainability and transit, (e.g., Winnipeg).
Regulatory Inconsistencies and Implementation Challenges	<ul style="list-style-type: none"> • Diverse regulatory frameworks leading to inconsistent policy implementation • Limited expertise in smaller municipalities 	<ul style="list-style-type: none"> • Develop standardized policy templates. • Offer regulatory guidance and technical support. • Conduct inter-municipal training programs 	<ul style="list-style-type: none"> • Winnipeg adopts green infrastructure while smaller municipalities (e.g., West St. Paul) face regulatory challenges.
Engaging Communities and Securing Public Buy-In	<ul style="list-style-type: none"> • Resistance to ‘top-down’ policies, • Differing priorities between urban and suburban populations. 	<ul style="list-style-type: none"> • Community workshops, participatory decision-making platforms, and feedback mechanisms. 	<ul style="list-style-type: none"> • Urban residents favor transit policies. • Resistance to public transit expansion in suburban areas, due to road infrastructure focus.
Balancing Economic Growth with Environmental Goals	<ul style="list-style-type: none"> • Tensions between commercial expansion and sustainability goals; • Conflicting land use priorities. 	<ul style="list-style-type: none"> • Collaborative planning platforms, • Long-term strategies, and balanced decision-making mechanisms. 	<ul style="list-style-type: none"> • Conflicts in transit corridor development affecting green space conservation.
Ensuring Accountability and Equitable Decision-Making	<ul style="list-style-type: none"> • Economic and population disparities lead to unequal influence. • Lack of inclusivity in decision-making processes 	<ul style="list-style-type: none"> • Establish rotating leadership or weighted voting systems. • Increase transparency with public records and audits. 	<ul style="list-style-type: none"> • Larger municipalities like Winnipeg dominate decision-making, marginalizing smaller towns like East St. Paul. • Uneven resource distribution creates power imbalances.

Table 2. Key findings in balancing local autonomy and regional objectives.



Figure 2.
Showing the overlapping complexity in balancing local autonomy and regional objectives.

aligns with the Subsidiarity Principle, which emphasizes regional bodies supporting municipalities without infringing on their local autonomy [16, 17].

The findings outlined in **Table 2** above are interconnected, reflecting the complexity of balancing local autonomy with regional objectives. **Figure 2** illustrates how these challenges overlap:

- Local autonomy intersects with regional objectives, reflecting conflicting municipal priorities and regulatory inconsistencies.
- Community engagement overlaps with both autonomy and regional goals, emphasizing the need for tailored strategies.
- The central overlap illustrates complexities in governance, accountability, and equitable decision making.

6. Implications and contributions of Winnipeg’s plan 2050 to urban governance

The findings from Winnipeg’s Plan 2050 highlights the interplay of local autonomy and regional objectives in metropolitan governance, offering valuable lessons for global urban planners. Its adaptable governance structures and equitable policies provide a model for balancing sustainability, economic growth, and community priorities.

6.1 Key implications of findings

6.1.1 Interdependence among municipalities

The interconnectedness of municipalities necessitates shared accountability for regional progress. Delays in achieving environmental targets in suburban areas, for example, can derail regional sustainability efforts. *Winnipeg Plan 2050* exemplifies how coordinated governance can mitigate fragmentation by promoting inter-municipal collaboration and shared responsibilities.

6.1.2 Resource equity and capacity building

Resource disparities hinder uniform implementation of policies. Plan 2050 addresses this through regional funding mechanisms, shared infrastructure, and capacity-building initiatives. These measures help less affluent municipalities adopt sustainable practices, a model that other metropolitan areas like Metro Vancouver and Greater Toronto could adopt.

6.1.3 Value of tailored community engagement

Localized engagement strategies enhance public trust and acceptance of policies. Winnipeg's participatory methods addressed specific concerns and built community trust, a replicable model for regions grappling with resistance to high-density housing or transit-oriented development.

6.1.4 Flexibility in governance models

Winnipeg Plan 2050 demonstrates how decentralized governance can coexist with cohesive metropolitan planning. This balance is achieved through polycentric and network governance models, ensuring alignment on critical objectives while maintaining municipal independence. Urban planners in regions like Los Angeles or Greater London could adopt similar frameworks, where collaborative councils mediate conflicting priorities while preserving municipal autonomy.

6.1.5 Balancing economic and environmental objectives

Incentive-based approaches like tax breaks for eco-friendly developments allow municipalities to align economic priorities with sustainability goals. This framework provides a blueprint for other regions balancing development and environmental preservation. Policies like density bonuses for green infrastructure development can help align municipal economic priorities with regional environmental objectives.

6.2 Contributions to the discourse on urban governance

Winnipeg's Plan 2050 offers valuable contributions to the study and practice of urban governance. The following themes emerge as significant advancements in the field:

6.2.1 Integration of flexibility and sustainability

Winnipeg Plan 2050's polycentric approach combines local adaptability with sustainable metropolitan objectives, offering a transferable model for curbing sprawl, promoting mixed-use development, and conserving green spaces.

6.2.2 Encouragement of localized environmental initiatives

Winnipeg plan 2050 emphasis on green infrastructure and emissions reduction inspires municipalities to pursue localized projects aligned with regional climate objectives, fostering a culture of environmental responsibility across the region.

6.2.3 Promotion of equitable development

Smaller municipalities often lack the resources to implement sustainability measures independently. *Winnipeg Plan 2050* mitigates these disparities through shared infrastructure, resource coordination, and regional funding pools, promoting equitable development across the WMR.

6.2.4 Scalable community engagement frameworks

Winnipeg's use of public consultations, online feedback mechanisms, and participatory planning provides a scalable framework for community engagement. These strategies can be tailored to other metropolitan regions to enhance public trust and participation in regional initiatives.

6.2.5 Adaptable governance models

The application of Polycentric and Network Governance theories underscores the importance of respecting local autonomy while fostering regional cohesion. This governance model serves as a blueprint for diverse municipalities with conflicting priorities.

6.3 Lessons for future regional planning initiatives

6.3.1 Supporting municipal independence and regional alignment

A multi-tiered approach, like *Winnipeg Plan 2050*, ensures cohesive metropolitan growth by balancing local autonomy with regional objectives. These Governance frameworks must enable municipalities to retain control over local issues while advancing collective goals.

6.3.2 Leveraging community engagement to build trust

Transparent and proactive engagement strategies, such as public consultations and online feedback platforms, are essential for building trust and cooperation among stakeholders which shows the importance of integrating community voices into the planning process.

6.3.3 Aligning economic and environmental objectives

Collaborative planning platforms and incentive-based policies, such as tax benefits for green businesses and development bonuses, help municipalities reconcile economic growth with sustainability goals.

6.4 Recommendations for enhancing local-regional coordination

6.4.1 Institutionalize shared decision-making mechanisms

Establish formal structures, such as advisory councils or cross-municipal committees, to ensure consistent dialog and active participation in regional policymaking. Shared decision-making mechanisms enhance accountability and mutual respect, creating a strong foundation for sustainable and cooperative partnerships. Rotational leadership roles and inclusive representation can further ensure equitable participation.

6.4.2 Develop standardized policy integration tools

Developing standardized tools, such as shared data systems, policy frameworks, and best practice guidelines, can enhance consistency in implementing regional objectives while accommodating local needs. Adopting standardized approaches for green infrastructure projects can enable municipalities to align their environmental actions with overarching regional goals, such as emissions reduction targets.

6.4.3 Enhance community engagement strategies

Tailored engagement methods, such as community workshops, participatory planning processes and interactive feedback platforms, build public trust and ensure localized concerns are addressed. Transparent and inclusive engagement fosters a sense of ownership among residents, improving the likelihood of successful implementation.

6.4.4 Implement pilot programs for policy testing

Pilot programs provide a low-risk method for testing policies before full-scale implementation, allowing municipalities to adapt initiatives based on real-world feedback. These projects increase acceptance and reduce resistance to change.

7. Conclusion

Winnipeg's Plan 2050 serves as a forward-thinking model for metropolitan governance, offering a balanced approach to harmonizing local autonomy with regional objectives. Through its innovative governance structures, equitable resource allocation, and community-centered strategies, the plan effectively addresses critical urban challenges, including housing shortages, environmental sustainability, and resilient infrastructure. The integration of localized priorities with regional cohesion is a cornerstone of the plan's success, showcasing its ability to promote sustainable and inclusive metropolitan growth.

A key insight from *Winnipeg Plan 2050* is the importance of adaptability in governance frameworks. By allowing municipalities to retain autonomy over community-specific issues while aligning with regional objectives, the plan demonstrates how decentralization and cohesion can coexist. This balance is particularly relevant for metropolitan regions grappling with urban sprawl, socio-economic inequalities, and climate adaptation challenges. As noted by [1, 9], flexible yet inclusive governance models are essential for tackling modern urban complexities.

Another critical lesson from *Winnipeg Plan 2050* is the role of community engagement. Mechanisms such as participatory workshops and feedback platforms not only fostered transparency and inclusivity but also enhanced public trust and policy acceptance. These approaches ensured that regional initiatives were relevant, well-supported, and effectively implemented, providing a replicable framework for community-driven urban planning.

Despite its successes, *Winnipeg Plan 2050* reveals several ongoing challenges, including resource disparities among municipalities, regulatory inconsistencies, and tensions between economic development and environmental goals. Addressing these barriers will require innovative approaches such as regional funding mechanisms, standardized policies, and incentive-based strategies to align diverse municipal priorities. The plan underscores the relevance of governance principles like Polycentric Governance, Network Governance, and the Subsidiarity Principle, which can be further refined and applied in other urban contexts to achieve cohesive and sustainable growth.

Winnipeg's Plan 2050 offers valuable lessons for metropolitan regions seeking to reconcile the pressures of urbanization with sustainability goals. Its collaborative governance model serves as an inspiring blueprint for resilient, inclusive, and sustainable urban futures.

7.1 Directions for future research

Winnipeg's Plan 2050 opens new avenues for research and innovation in urban governance. Key areas for future exploration include:

7.1.1 Governance structures and policy integration

Comparative analyses across metropolitan regions could identify best practices for balancing local autonomy with regional cohesion. Research into advanced policy integration tools, such as digital platforms for data sharing and collaborative planning, can provide actionable insights into improving coordination and responsiveness in urban planning.

7.1.2 Long-term impacts of adaptive governance

Investigating the long-term effects of adaptive governance models on metropolitan resilience is important. Approaches such as periodic policy reviews, cross-municipal task forces, and pilot programs should be evaluated for their effectiveness in addressing dynamic urban challenges, including housing affordability, infrastructure demands, and environmental changes.

7.1.3 Multi-level public engagement

As cities grow increasingly interconnected, fostering equitable participation in governance processes is crucial. Future studies could assess the effectiveness of

various engagement methods, from in-person community workshops to digital platforms, to identify strategies that best foster transparency, trust, and active involvement across diverse populations.

Winnipeg's Plan 2050 serves not only as a practical guide but also as a foundation for advancing research in metropolitan governance. By drawing on its successes and addressing its challenges, policymakers and researchers can build on this model to foster more resilient and inclusive urban regions worldwide.

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Sustainable Planning Strategies for a Port City: Rethinking the Izmir's Meles River Basin Development in Turkey

Birge Yildirim Okta

Abstract

River deltas have been ideal locations for thriving port cities; yet, the march of industrialization and urban expansion has brought significant environmental challenges. This chapter focuses on Izmir, a port city in Turkey, formerly known as Smyrna. It explores its transition from a vibrant coastal marsh to a heavily urbanized industrial area facing ecological issues. The Meles River, a key feature of Izmir's development, now experiences major problems, including flooding, pollution, and habitat destruction, exacerbated by poor stormwater management and unchecked urban growth. The chapter proposes strategies for adopting a multifaceted approach. Key strategies include integrating green infrastructure, restoring the river's natural state through rewilding, and updating policies to manage urban and environmental needs. By enhancing community engagement and securing diverse funding sources, Izmir can transform the Meles River into a model of social, ecological, and economic sustainability.

Keywords: landscape urbanism, hydrology, resilient cities, landscape as infrastructure, sustainable planning, port city

1. Introduction

The cosmopolitan character of port cities has moulded how these cities have taken on economic and urban forms, as well as architectural and cultural identities. This is not just due to the new economic paradigms these cities were seeing as crucibles of social change considering capitalism expansion and industry-specific land use where the web of environmental harms established multiple social groups and conflicts that met at an urban site and a port [1]. The objective of this chapter is twofold: (1) to examine the development of Izmir through the lens of the Meles River and (2) to identify the challenges posed by urban growth, with the aim of developing strategies for sustainable development.

When defining sustainable development many publications refer to the Brundtland Report's definition of sustainability as "Development that meets the needs of the present without compromising the ability of future generations to meet their

own needs” [2]. This definition is still valid since it bridges a gap between environmental management, economic development, and the biophysical environment [3]. Urban design intertwines social, environmental, and economic processes and strategies in a multidisciplinary approach from the local to the regional scale. Here, I will try to clarify what this means for sustainable urban design.

The goal of social sustainability in urban planning is to build communities that are inclusive, equitable, and resilient. This included guaranteeing access to basic services, fostering social solidarity, and fostering well-being. Public spaces that are not averse to any type of people, while also promoting interaction and social inclusiveness create better social environments. Also, affordable housing policies and design can help reduce social inequity as well. Developments will be useful if they are well planned for in participation with local communities, and therefore, there will be more ownership and sustainability. Also, the integration of social sustainability in the design of urban sites can enhance quality of life and create more socially equity cities’ overall conditions [4]. Integrating social sustainability into urban design has the potential to greatly improve the overall quality of life and social fairness in cities.

Morelli defines environmental sustainability as the capacity to meet the resource and service needs of current and future generations while maintaining the health of the ecosystems that support them [5]. It is a condition of balance, resilience, and interdependence that enables human societies to satisfy their wants without exceeding the carrying capacity of the systems on which they depend. In cities, green infrastructure can be utilized for managing stormwater, reducing urban heat island effects, and increasing biodiversity. Urban voids may be transformed into green infrastructure of the cities which can help decrease the urban heat island effect, manage stormwater, and increase biodiversity. Using renewable energy sources can help to lower carbon footprints. Promoting public transport, cycling, and walking would minimize dependence on fossil fuels and air pollution [6]. These small steps would help to create urban environments that are habitable and environmentally balanced.

Economic sustainability in urban planning entails developing resilient and fair economic opportunities while also maintaining resource efficiency. This involves promoting local economies through mixed-use complexes that include residential, commercial, and recreational spaces, so reducing the need for long commutes, as well as stimulating local enterprises. Investments in green infrastructure, such as energy-efficient buildings and renewable energy infrastructure, reduce operating costs in the long run and create jobs. Economic justice policies aimed at economic inclusion, such as affordable housing, education, training, and the like, ensure that economic benefits are more fairly spread out through the different economic classes [7]. Economic sustainability assures that urban development improves cities’ long-term economic well-being and resilience, helping cities to respond more effectively to economic transitions and challenges.

Integrating sustainable development into urban design necessitates a holistic strategy that considers social, environmental, and economic factors.

In the next chapter, various strategies that strive for the resilience and sustainability of Izmir with main focus on the Meles River as a part of the prerequisites for the key infrastructure are discussed.

2. From rural to urban: The evolution of the Meles River and Delta

The Meles River is of historical and literary importance, most significantly attributed to Homer’s birthplace and writing [8]. The river flows through ancient Smyrna,

now İzmir, which has influenced the city's history and urbanization in multiple ways (**Figure 1**). It has been seen as a boundary and a threshold, a target for improvement and concealment, and a source of health challenges for the city [9].

One of the most formidable physical barriers to connecting Silk Road caravans and other trade routes to the city was the Meles River. The ancient Caravan Bridge, which has been preserved over the centuries, served not only as a critical gateway linking the city to the outside world but also as a remarkable engineering accomplishment designed to overcome the Meles River, often seen as an obstacle [10]. In the latter half of the nineteenth century, further interventions to cross the river were made to facilitate railway connections to the port. An 1860 map illustrating the route of the İzmir-Aydın railway, the first railway line in the Ottoman Empire, shows several points where the railway had to bridge the Meles River (**Figure 2**) [12]. As the city expanded, its infrastructure investments intersected with this approximately 18-kilometre-long waterway, transforming it into a significant record of urban development and memory [13].

The initial settlements in the Gulf of İzmir began in the Neolithic Age, reaching their zenith towards its end, and continuing partially into the Chalcolithic Age around 6000 years ago. After the abandonment of Late Neolithic mounds, settled life resumed in the Early Bronze Age (ca. 3300–3000 BCE) along the Bayraklı coast at the Tepekule Mound, known as “Palaia Smyrna” (Old Smyrna) [14].

By the late fourth century BCE, due to political, military, and environmental disasters, the city was relocated and re-established as “Nea Smyrna” (New Smyrna) on the slopes of Pagos Hill (Kadifekale), incorporating contemporary technological advancements. Nea Smyrna was strategically chosen for its defence capabilities, commercial potential, and infrastructural suitability, and remains inhabited to this day [15].



Figure 1.
Diagrammatic map showing Meles Basin and its location.

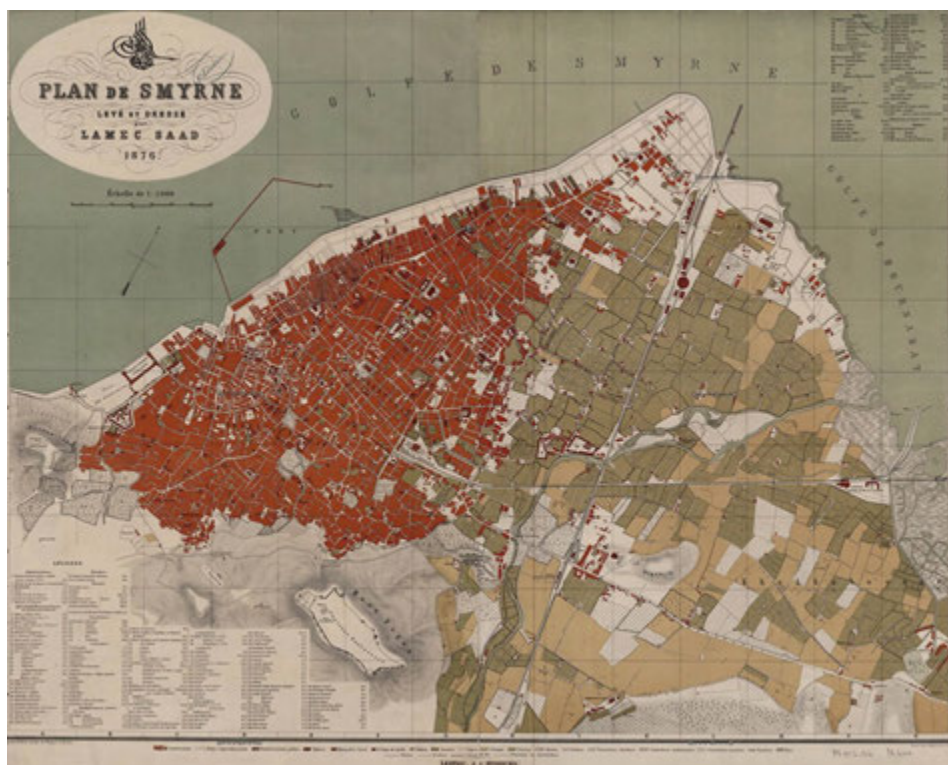


Figure 2. City of Smyrna, 1876 Meles River and sediment islands along the river. The newly constructed railway crossing the Meles River and reaching the port of Smyrna [11].

The Izmir Metropolitan Area Master Plan, prepared in 1965 and adopted in 1973, defined the primary development direction of the city toward a north-south axis. This growth spread mainly in the southward direction through the Karabağlar-Gaziemir-Cumaovası (present-day Menderes) line, parallel to the Meles River, to upgrade infrastructure and support the city's growth. To support this growth, the railway system between Menemen, Gaziemir, and Cumaovası was modernized to double tracks and electrification, boosting the suburban transit speed. To facilitate this development, the railway line between Menemen, Gaziemir, and Cumaovası was upgraded with double tracks and electrification, improving the suburban transit speed [16]. An industrial zone of 220 hectares was established north of Gaziemir, while Karabağlar was designated for small-scale crafts. This strategic development enhanced connectivity to the southern transportation corridor, linking the city centre with Cumaovası Airport (now Izmir Adnan Menderes Airport), which commenced operations in 1987. Over time, extensive modifications have been made to the Meles River, including its coverage, narrowing, and interruption by road infrastructures. Since the mid-nineteenth century, the river's morphology has been significantly altered by railway developments and, from the mid-1980s onwards, by road networks (**Figure 2**).

The coastline has been changed since the 1970s by stream controls, preventing both subsurface and surface water networks from reaching Izmir Bay and generating significant disturbances to the aquatic ecology [17]. For instance, large-scale coastal

fillings undertaken for the organization and construction of Izmir's port in the nineteenth century greatly impacted the form of the Meles River (**Figure 3**) [17].

Since the inception of the Izmir Great Canal Project in the 1970s, riverbeds prone to flooding within the urban landscape have undergone rapid transformation into concrete channels, losing their natural attributes. This significant intervention involved the concreting and rehabilitation of the Meles (Yeşildere) River, known to carry substantial pollution into the bay. Despite relocating pollutant sources, floods persisted as impermeable river- and stream beds hindered groundwater replenishment, disrupting the city's natural water ecosystem. Presently, even purportedly natural areas of the Meles have been altered for pipeline installation, exacerbating flood risks by preventing water retention. Consequently, summer desiccation of the Meles occurs, while inadequate canal cross sections lead to flooding during heavy rainfall.

In the last century, İzmir has experienced significant urban degradation. The rejuvenation of the harbour area has presented a transformative opportunity to redefine the city's urban fabric and architectural character within the İzmir Port District [18]. The establishment of the port sought to enhance the city's contemporary image, creating a new central hub that aligns with its growing international prominence.



Figure 3.
Meles watershed.

The Meles River, historically revered as the “holy river” and associated with Homer, played a crucial role in nineteenth century travel and commerce [19]. However, twentieth century urbanization led to pollution, channelization, and substantial transformation. Despite these changes, İzmir Bay still contains significant deposits of residual alluvial remnants from the Meles River [20].

In the early twentieth century, following the establishment of the Republic, the İzmir Port Operations gained significant importance, leading to the resolution of the longstanding issue of constructing a new port due to the inadequacy of the existing coastal facilities in Pasaport and the distance from the Alsancak railway station [21]. The decision to construct the new İzmir Alsancak Port adjacent to the Meles Delta in its current location was reached in 1944. However, the process was delayed, and it was not until 1954 that the construction of a new port facility in Alsancak began under the Ministry of Public Works, and was finally completed in 1959 [16].

Between 1960 and 2000, İzmir Bay became notorious for its bad odour. With the development of industry and the growth of urbanization, the streams and rivers within the city centre became the focal point of chemical waste. The İzmir Great Channel Project, which began in 1987, despite being planned in 1962, only became operational in 2002. To improve the water quality in İzmir Bay, all rivers, streams, creeks, and water networks that entered the bay were repaired and regulated, and the water regime was controlled. In addition to these treatments, frequent bottom dredging was carried out to eliminate odour-causing silt accumulation, with the intention of recycling it through drying procedures. A membrane was placed over the silt deposit in the Meles Delta to minimize odours and petrol emissions. The delta started to be used as a periodic waste accumulation area where mud extraction was required (Figure 4).

Urbanization and industrialization have doubtlessly imposed severe impacts on the Meles River and its surroundings in İzmir. Projects such as the İzmir Metropolitan Area Master Plan of 1965 brought about extensive alterations on the Meles River, diverting the river from its natural course and morphology. Another river degradation work started in the 1970s and is still going on. This is the İzmir Great Canal Project, which involved the canalization of large portions of the riverbed to concrete, strongly increasing the flood risks of the city, providing a permanent disturbance on the natural water system, and seriously affecting the cultural and natural heritage. On the one hand, improvements have also taken place to address water quality concerns, such as the discharge of chemical wastes from industrial and urban origins. On the other hand, water quality and flooding problems have not yet been solved. Having done an inquiry into the specifics, the following section does a thorough review of integrating principles of sustainable development into urban design practice.



Figure 4.
Evolution of the port of İzmir from 1945 to 2024.

3. Methodology

This chapter aims to develop strategies for fostering a sustainable urban design around the Meles River and Delta to enhance Izmir's resilience. The methodology involves a thorough examination of urban development in the Meles River Basin, particularly addressing the challenges posed by urban growth since the establishment of the industrial port in 1945. The study utilizes GIS data to design green infrastructure along the Meles River and proposes micro-interventions along the concrete canal through various river sections. It incorporates TUIK population statistics and Milli Eğitim Bakanlığı preschool data to apply a feminist perspective to socio-economic development and urban sustainability. Historical documents, maps, and literature reviews are employed to gather comprehensive information and formulate strategies for the Meles River.

A sustainability diagram, integrating social, economic, and environmental factors, is adapted to the Meles River context to create a framework for sustainable development. The strategies focus on promoting socio-economic development, implementing principles of environmental socialism, and integrating environmental economy dynamics. The methodology emphasizes small-scale interventions aimed at transforming the Meles River and Delta into a more sustainable and resilient urban environment. This includes rethinking ecology as a key driver for the urban economy, supporting socio-economic growth from local to regional levels, and enhancing placemaking through compelling urban narratives.

4. Resilient urban ecologies: Adaptive strategies for the Meles River and Delta

Beginning with the recognition of the sustainability diagram as a foundational tool, which incorporates social, economic, and environmental factors and is widely utilized in sustainability studies and urban planning, this chapter will seek for small-scale interventions for a more sustainable Izmir. The adaptation of this diagram to the context of the Meles River and its surroundings will serve as a framework for developing strategies. These strategies encompass socio-economic development, the adaptation of environmental socialism principles, and the integration of environmental economy into the region's dynamics. The goal is to address the specific challenges and opportunities presented by the Meles River and Delta to achieve a more sustainable urban environment. In terms of the Meles context, we can redefine these strategies as rethinking ecology as an agent for the urban economy, socio-economic development from local to regional scale, and placemaking through urban narratives (**Figure 5**).

The sustainability diagram's framework offers a structured method to transform its principles into actionable strategies for the Meles River Delta. Viability within this framework aligns closely with environmental sustainability, focusing on the long-term health and resilience of ecosystems. In the Meles River Delta, this is achieved through approaches like the sponge city concept, river rewilding, and the construction of wetlands, which restore natural processes, boost biodiversity, and sustainably manage water resources. These efforts ensure the environment remains strong, supporting both human and natural systems over time.

Bearability, another key concept from the sustainability diagram, translates into effective placemaking within the Meles River Delta. Placemaking here involves

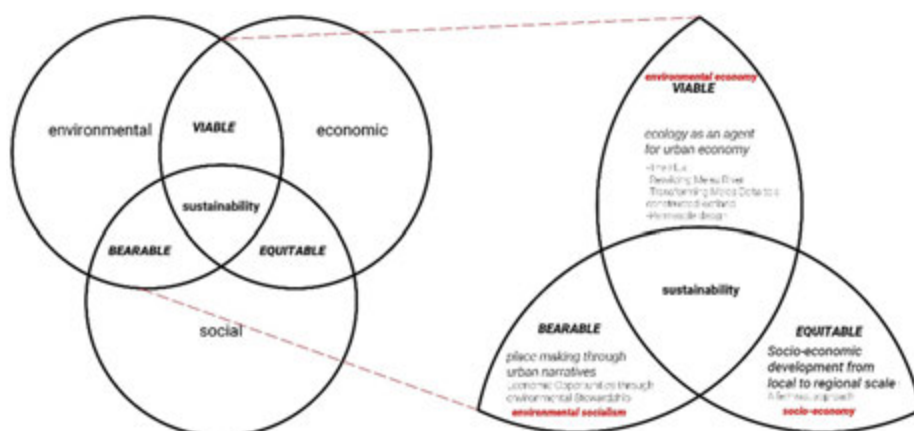


Figure 5.
Adapting the sustainability diagram to the Meles River and its surroundings.

creating spaces that are culturally and socially significant. This is accomplished by refunctioning and restoring historical sites, sustaining urban memory, and creating public spaces that encourage community interaction. These strategies help transform the Meles River into a lively, inclusive space that enhances the local community’s quality of life and strengthens social connections.

Finally, equity in the sustainability framework ties directly to socio-economic development on both local and regional levels. Inclusive local development strategies, such as those with a feminist approach, aim to empower marginalized groups and ensure that economic growth is beneficial to the entire community. This helps build socio-economic resilience, reduce inequalities, and create opportunities for everyone. These strategies also support regional development, ensuring that economic benefits are widely distributed across the area.

In conclusion, this comprehensive approach has the potential to safeguard and revitalize the Meles River Delta by promoting a sustainable, inclusive, and thriving future on a regional scale. However, the strategy does come with its challenges. Putting sustainability principles into practice can be intricate, especially in areas where there are various stakeholders with different priorities. Reaching the desired goals, especially in terms of environmental and socio-economic progress, typically demands ongoing dedication over time.

4.1 Rethinking ecology as an agent for urban economy: The sponge city approach

Izmir exemplifies the extensive urbanization process witnessed in many cities. During the early twentieth century, the construction of densely populated urban cores on the city’s slopes led to increased and more frequent flooding of the city centre on the plains below during rainstorms.

The beginning of the transformation lies in perceiving the Meles River and its surroundings not merely as a problem but as a landscape infrastructure. The goal of the proposed strategies is to enhance urban resilience by leveraging the landscape as infrastructure and applying principles of landscape urbanism.

Adopting the sponge city approach for the Meles Basin and incorporating strategies such as the creation of detention ponds, green corridors, floodable parks,

bioswales, rain gardens, water capture, and soil improvement would help to improve resiliency [22, 23]. The sponge city concept offers cost-effective and environmentally friendly alternatives to traditional “grey engineering” stormwater management solutions. Additionally, it has the potential to create social and recreational spaces, enhance biodiversity in urban areas, and mitigate the urban heat island effect. There are two main interventions, establishing a continuous green belt along the river, and which I define as the flux and rewilding of the Meles River.

4.1.1 The flux

Using landscape as infrastructure and employing landscape urbanism ideas provide a realistic strategy for stormwater control in Izmir [24]. However, the city lacks an appropriate supply of permeable open space. To address this issue, therefore, it is critical to protect and improve existing natural open areas to increase their porosity. Upstream flood mitigation measures such as runoff detention, water harvesting in cisterns, and encouragement of permanent vegetation cover can be implemented in the plains to alleviate flooding impacts [25].

The proposed green corridor along the Meles River will address the potential for rehabilitation of the Meles River. The approach builds upon the idea of riparian corridors that are among the most important and practical measures for conserving biodiversity and maintaining ecosystem resilience (**Figure 6**). Through sustainability-focused

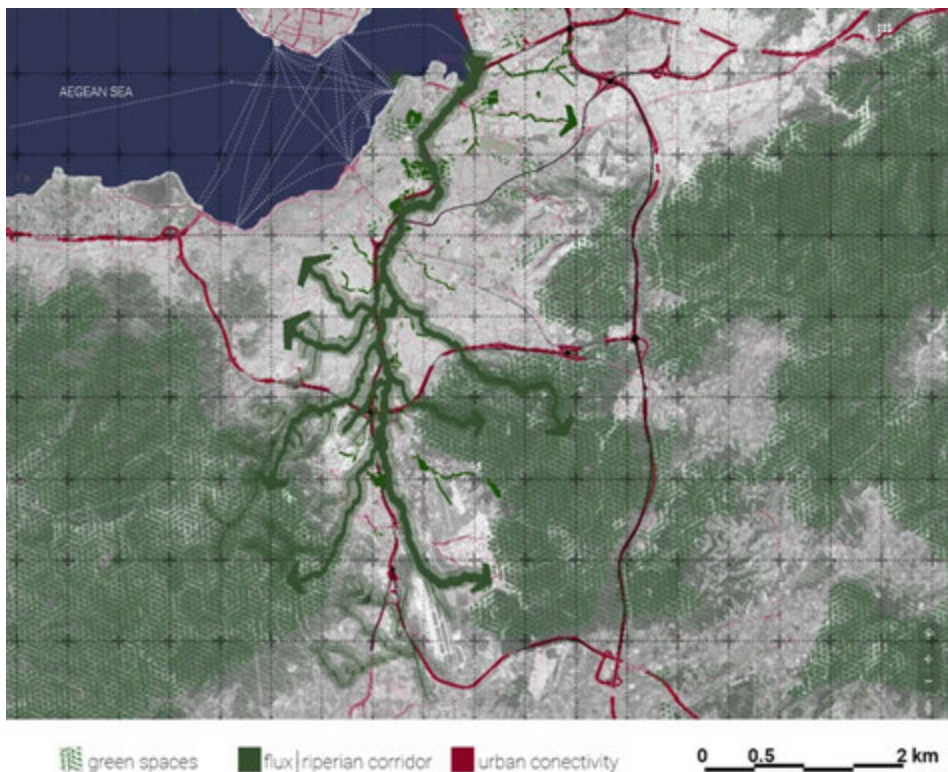


Figure 6.
The concept of flux: Establishing the riparian corridor along the Meles River.

strategic planning the Meles riparian corridor enhances the ecological quality and connectivity and contributes to resilience of the urban landscape along the Meles River.

4.1.2 Rewilding the Meles River

During the twentieth century, pollution problems occurred in the Gulf of Izmir with migrations due to industrialization and urbanization. Odour and foam problems occurred because of industrial waste disposal in the Gulf. After 2002, Meles River was located in a concrete channel, and its capacity was artificially increased. The surface of the river basin was impenetrable with concrete preventing precipitation infiltration to the underground and increasing surface flows. Short-term and intense rains caused serious floods in the river basin. Today, floodings are the most important natural hazards threatening the residential areas built in the flood plain.

Water quality analysis reports by the Environmental Protection and Control Department of Izmir Province showed that the microbiological parameters and some of the chemical parameters (pH, nitrate, heavy metals, etc.) of Meles River water were within the limits of good water quality in 2015. However, the dissolved oxygen (DO) value, COD, BOD₅, ammonium nitrogen, nitrite nitrogen, total nitrogen, and total phosphorus were very high according to the same report [24]. Therefore, the overall water quality of the stream was determined as bad due to the low dissolved oxygen levels and high nutrient levels and organic matter. The Meles River, after it was enclosed in a concrete channel, tried to re-adjust to its former riverbed during the following years, forming islands of sediments or accumulation zones. The naturalization interventions at branch river points aim to restore the hydrosystem's function, making the Meles a living river through rewilding methods. This means that restoration actions are carried out to re-create natural conditions, improving the water quality and generating spaces for recreational uses. The enhancement of water quality can contribute to the development of freshwater vegetation, reviving the wildlife and increasing local biodiversity [26]. Small-scale restoration works on rivers whose beds have been changed in areas where urbanization is intense play a very important role. It is imperative that site-specific local interventions, especially where stream power is limited and naturalize modified channel profiles, such as Meles, should not be ignored [26–29]. Partial replacement of the concrete canal with a natural channel and the creation of a new meandering channel to replace concrete weirs are among the small-scale strategies proposed for adapting the Meles River (**Figure 7**) [28].

This naturalization of a concrete canal river section to a natural channel will increase groundwater-surface water interaction and habitat restoration, which can improve water quality and ecosystem quality of the river. Restoration of riparian zones can include concrete removal and restoration of natural vegetation on small-scale projects along the riverbanks, lifting posted riparian habitat (due to the river moving), or restoration of the hydrology in the rivers. The channel shift from a concrete channel to a more naturalized river bed would help to mitigate the impacts of urbanization, reduce flooding, and boost biodiversity and ecological health throughout the city landscape [29].

Combining engineering and ecological restoration has the potential to improve aquatic habitat and biodiversity along the urban river path [30]. Overall, the revitalization and rewilding of the River Meles require a process-based, multi-pronged solution to deal with legacy pollution, aid in naturalization, and deliver site-specific small-scale interventions in the urban setting. Utilizing evidence-based interventions and learning from similar restoration efforts, the Meles River Basin can become an

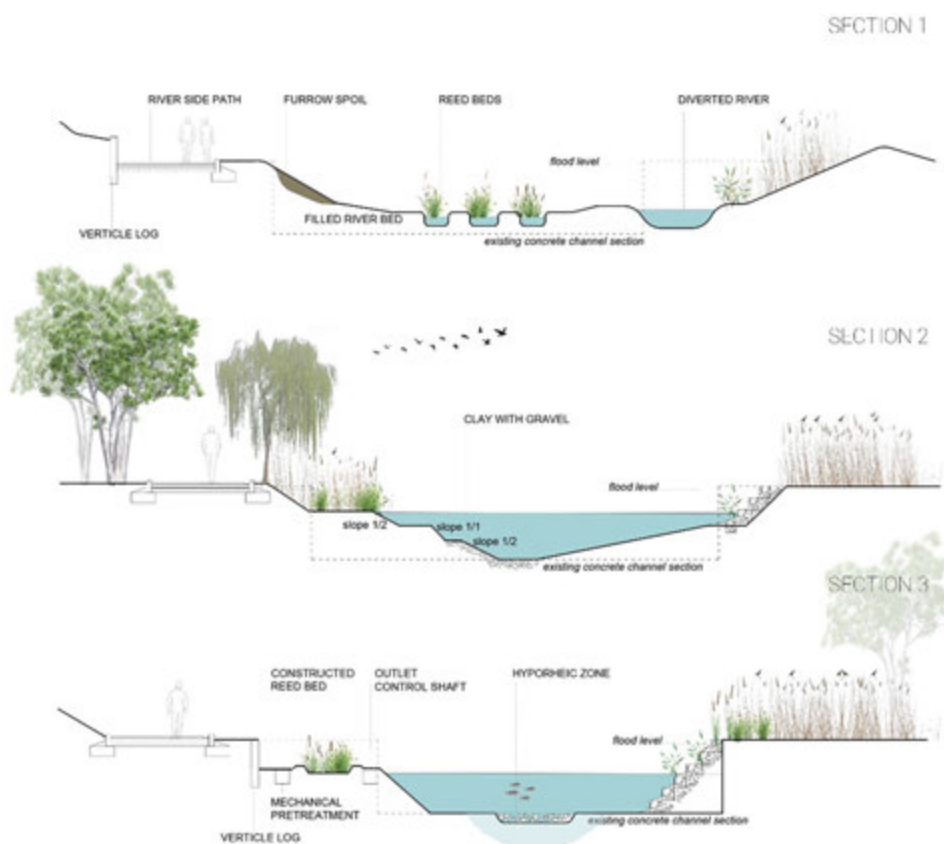


Figure 7. Section 1: The creation of a new meandering channel to replace concrete weirs, Section 2: Full replacement of the concrete canal along river sections with a natural channel. Section 3: Partial replacement of the concrete canal with a hyperpoic zone

example of how conservation and restoration initiatives can work together, helping both ecosystems and local communities [28–30]. Community engagement and educational programmes help involve local communities even more in the restoration to secure a long-term conservation impact—a conservation legacy—where the land is included and actively part of the management plan. Together these interventions, along with more macro-scale efforts, contribute to the improved overall environmental health and adaptive capacity of the Meles River.

4.1.3 Transforming the Meles Delta to a constructed wetland

Damming the river would reduce the frequency and severity of inundations in and around the city, partially creating a flood plain for the Meles River Delta. There are several important options for rehabilitating and improving habitat. These measures include the construction of a primary pond, filtration pools, and areas of shallow water, to provide a range of aquatic habitats capable of supporting different species [31].

Meles Delta river systems, especially those with natural geomorphic processes and minor physical degradation, have the capacity to regenerate if allowed to go unmanaged. Still, active rehabilitation designs, such as those put in place over the

last 30 years, might be necessary for metropolitan areas or rivers that have been significantly affected by hydropower, like Meles. In these situations, soft engineering techniques—such as riparian vegetation, big woody debris, and in-stream macrophytes—can help restore a more natural river ecosystem, particularly in streams with moderate levels of impact and geomorphic stress [32].

4.1.4 Permeable design

The principal strategy to be adapted for the Meles River Delta is transforming this artificial mud accumulation pool into an ecologically constructed wetland through the implementation of regulated artificial channels and artificial topography. This comprehensive solution will help develop the delta as recreational ground to celebrate the urban memory and create a resilient infrastructure to combat urban floods and mitigate sediment movement. Integrating the Meles River into the delta through side weirs will allow the establishment of a wetland ecosystem, which can effectively regulate floodwaters during major rainfall events and ensure the city's resilience (Figure 8).

In its current state, the Meles Delta lies adjacent to Izmir Port and represents a remnant of halophytic vegetation. It has largely lost its value in terms of the river ecosystem, but it still provides habitat for water birds such as cormorants, kingfishers, herons, gulls, and terns, including the little bittern, white-headed duck, and common pochard. To further boost biodiversity and restore ecological conditions, allocating space for wetland development will boost biodiversity. This biodiversity augmentation method may potentially lead to the return of biota to the region, representing the ecological rejuvenation of the wetland area.

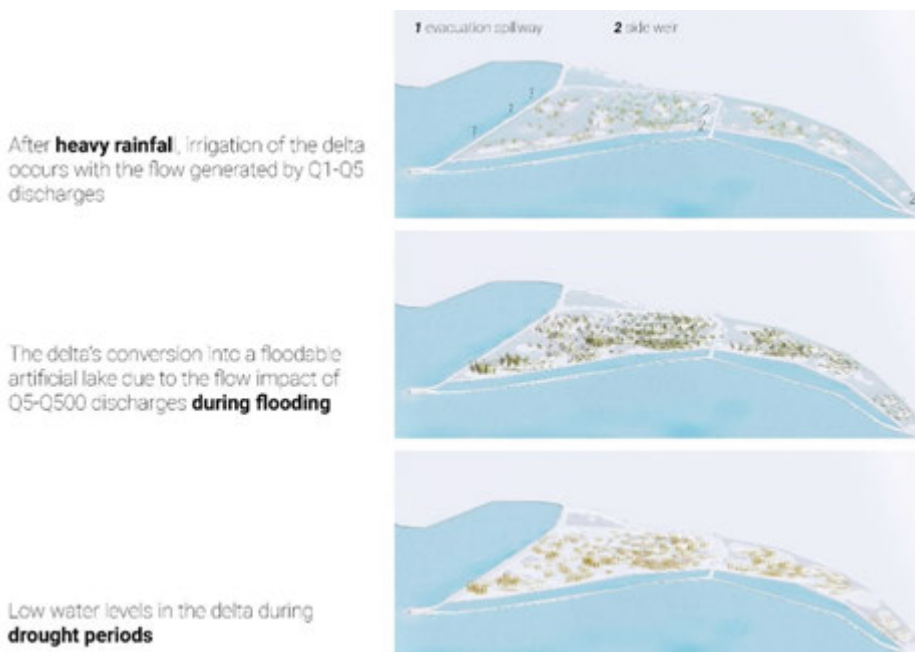


Figure 8. Left: Strategy for transforming the Meles Delta into a constructed wetland. Annual changes in water levels.

The term permeability is used in planning, architecture, landscape architecture, and urban design. It refers to different meanings in different scales having the same concept referring to a flow. For instance, urban planning refers to the degree to which urban spaces allow the movement of people, vehicles, air, and water. In landscape and urban design, the permeability of the structural landscapes being built allows water to flow, thereby eliminating the risk of them becoming an ecological barrier [33]. The adoption of permeability as a strategy to create recyclable, low-carbon, and energy-efficient infrastructure for urban furniture and landscape structures around the Meles River will support the sustainability criteria. Specifically, the permeability of artificial landscapes within the River Meles riparian corridor will facilitate ecological connectivity, easing the flow of energy, water, sediment, nutrients, and organic matter, while reducing the urban heat island effect and enhancing climatic comfort. It will also contribute to reducing flood risk by increasing the soil absorption capacity. The durability of selected materials will reduce the need for frequent reproductions and repairs, thereby reducing the carbon footprint. Recyclable materials such as plastic, wood, metal alloys, and steel.

without the need for remanufacturing can be processed and used. Material selection is an important choice to reduce structural waste. It will also ensure that the structure can be recycled at the end of its life.

4.2 Socio-economic development from local to regional scale: A feminist approach

It may be possible for the Meles Basin to achieve local to regional development that will create socio-economic transformation. Urban and regional socio-economic development at the village scale can be achieved with the participation and support of local government organizations and NGOs. The strategy stresses the conservation and wise use of natural resources combining this with mobilization of local communities to promote sustainable agriculture and industrial procedures. And in paying for education, eco-tourism, and recreation, we enrich the economic landscape of the region while also protecting its significant historical and cultural legacy. Meles Basin can be part of a comprehensive development process that fosters ecological harmony as well as economic prosperity.

The widespread failure of top-down development policies and the dependence of regional economies on global trends have led to the search for alternative policy approaches. Today, neo-liberal policies shape port cities like many metropolises, and development processes from local to regional are not prioritized by governments [34]. These strategies aim to leverage local competitive strengths to unlock economic potential. Most importantly, these approaches include local stakeholders in all stages of development planning and implementation. Adaptation of this participative strategy for Meles would ensure that economic operations are strongly linked to the local environment by relying on a thorough awareness of the socio-institutional and economic milieu of the region [35].

In İzmir, there are currently 123 preschools, which is insufficient given the population of 270,374 children aged 0–5 (**Figure 9**) [36]. The lack of adequate preschool facilities highlights a significant gap. Increasing the number of preschools is crucial not only for enhancing child education but also for supporting female employment and ensuring socio-economic sustainability in the region. Such improvements could enable families to participate more actively in the workforce while contributing to

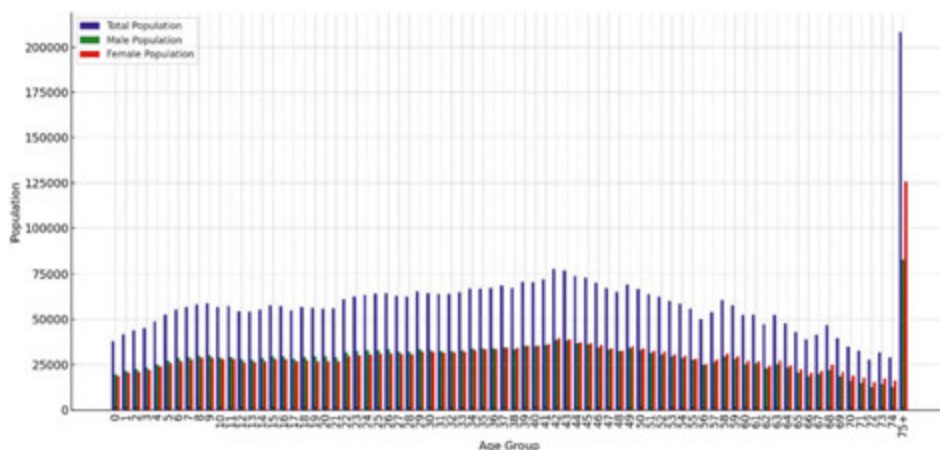


Figure 9.
Population distribution by age group in Izmir [36].

broader economic stability. Data on preschool availability and workforce dynamics provide a valuable foundation for policy development and resource planning [37].

It is possible to move local development initiatives forward by ensuring women's active participation in the local economy and establishing childcare centres [35]. Establishing neighbourhood centres will strengthen women's access to sustainable business models and related business support services, thereby enabling the community to develop successful and pioneering economic efforts [35]. Through deliberate integration of women into supply chains, particularly within eco-tourism, education, and agriculture sectors at the grassroots level, a more inclusive and sustainable socio-economic paradigm can take root.

The strategy for socio-economic development also involves the development of green public transportation strategies and enhancing accessibility. Connecting neighbourhoods with proposed bicycle lanes will increase accessibility, as will the merging of the existing EuroVELO bicycle route with the Meles Delta riparian corridor.

4.3 Promoting social environmentalism: Placemaking through urban narratives

Port cities on the periphery, like Izmir, serve as key points of contact with the global capitalist economy, regardless of the theoretical perspective. The colonial dynamics of port cities shaped their physical appearance, spatial layout, economic mechanisms, population dynamics, class structure, political aspirations, and cultural life. The cities functioned as human laboratories in which the social changes wrought by rampant capitalism could be seen in miniature form, the new economic operations generating new social classes and conflict, all compressed within the confines of the port city [1]. Port cities like Izmir were key commercial nodes that connected the agrarian periphery and industrial core, and a diverse assemblage of foreigners, colonials, merchants, intermediaries, and servants contributed to their commercial networks and transformation [1]. Today, to revive this memory in Izmir, urban narratives can be revitalized by integrating memory spaces such as educational routes, memory parks, ecology parks, agricultural and industrial parks, and open-air museums into the river corridor of Meles. Additionally, the adaptive reuse of derelict factories and industrial infrastructure can serve as memory spaces to reinvigorate

Izmir's cosmopolitan urban memory. These include the historical textile heritage of Izmir dating back 8000 years (including the nineteenth-century Basmahane Gari and the early twentieth-century Sumerbank factory), Ottoman-era hydraulic infrastructure, and ancient Roman aqueducts like the Kizilcullu and Vezir Suyu aqueducts in the Paradiso region, along with St. Vukolos Church and Profiti Elia Church in Yeşildere, Kadifekale, and the historical Caravan Bridge. These are the landmarks that could collectively allow Izmir to share and therefore accessorize its true identity. Together, these sites reflect the rich urban tapestry of Izmir's heritage, including its significance as a hub and trade for commerce.

5. Discussion

The Meles River in Izmir faces significant challenges due to urban growth and its historical transformation. Key issues include increased flooding in the city centre due to inadequate stormwater management, pollution from past industrial activities, and the loss of natural habitats caused by urban expansion. The river's transformation into a concrete channel has further deteriorated its ecological function, exacerbating water quality problems and reducing biodiversity. Addressing these challenges requires navigating social and economic factors. The current regulations often do not fully incorporate urban planning aspects underscoring the necessity, for updated policies and improved coordination among authorities, environmental agencies, and community groups. Socially, it is crucial to enhance community engagement and integrate heritage into planning to garner support and foster a strong connection to the river. From a perspective securing funding for both large-scale infrastructure projects and small-scale ecological interventions is vital while striking a balance between development and environmental conservation for long-term sustainability.

To address these issues effectively a comprehensive strategy is essential. Adopting the sponge city approach by implementing detention ponds, green corridors, floodable parks, and rain gardens can improve management and ecological resilience. Initiatives like rewilding efforts. Such as removing channels and enhancing water quality will help restore the river to its state and promote biodiversity. Institutional reforms along with policy updates are necessary to modernize regulations and encourage cooperation among stakeholders. Involving communities in the planning process and promoting education will ensure that social values and needs are considered. Moreover, exploring funding sources while aligning development strategies, with environmental objectives will bolster sustainable development efforts and stimulate local economies.

By implementing these tactics, the Meles River has the potential to evolve into a sustainable corridor and an eco-friendly resource playing a role, in enhancing sustainability, biodiversity, and the socio-economic progress of the area.

6. Conclusion

Port cities have been undergoing significant urban transformation since the early twentieth century. With the intensification and acceleration of commercial networks driven by neo-liberal policies, this transformation has been further enhanced. Particularly since the 1980s, policies promoting deindustrialization, coupled with natural and anthropogenic disasters, have contributed to the proliferation of

substandard buildings and large-scale urban transformation projects. These changes have led to the erasure of local identities and urban elements in many areas, while also exacerbating global warming and increasing the frequency of urban disasters.

These cities are currently experiencing rapid transformation. They struggle to preserve and transmit their urban memory and heritage to future generations, rendering them vulnerable to catastrophes and subject to profit-driven coastal transformation projects. This chapter develops strategies for the port city of Izmir, leveraging socio-economic, socio-environmental, and environmental-economic principles to promote more sustainable urban development.

Fundamentally, it adapts the basic principles of sustainability to specific sites through narratives such as “Rethinking Ecology as an Agent for Urban Economy,” “Socio-economic Development from Local to Regional Scale,” and “Placemaking through Urban Narratives.” By implementing micro-interventions that yield macro impacts, the Meles River is transformed into a landscape infrastructure. Additionally, the strategy aims to promote development from the neighbourhood scale to the basin scale through the employment of women.

Focusing on the unique context of Izmir as a cosmopolitan port city, the approach emphasizes preserving urban memories through the creation of memory parks and architectures by the adaptive reuse of historical factories.

These strategies, while tailored for Izmir, are also adaptable to other port cities. By reinterpreting and utilizing the cultural and historical superstructures, hydrological infrastructures, and inherent characteristics of port cities, we can strive to achieve more sustainable urban environments. Through proactive planning, community engagement, and visionary leadership, port cities and river deltas can evolve into models of sustainability, resilience, and prosperity in the face of ongoing global challenges.

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Section 3

Regional Planning and Arctic
Landscapes

Chapter 6

Lessons from Contemporary Regional Institutions in Arctic Landscapes

Sveinung Eikeland

Abstract

The chapter addresses regional institutions in an Arctic institutional landscape after the 1990s. It analyzes the conditions for the upcoming and the implementation of regional institutions as an element of state institutions' withdrawal from Arctic regions from the 1990s; how these institutions have developed in the meeting with changes in global economies and laws subsequently affecting the Arctic afterwards; and how the successes and failures of the regional institutions have impacted the Arctic regions' position in upcoming multilevel governance. The chapter considers the development of three regional institution cases: The Norwegian-Russian Barents Region in fisheries management and "people to people" interaction from the 1990s; the creation of a northern regional supplier organization in the global oil and gas industry from the 2000s; and the establishment of the Finnmark estate in 2006, whereby the new Norwegian regional landowner institution aimed to integrate international Indigenous people's rights and policies into a regional institution. The chapter demonstrates regional agents' capacity for creating and developing regional institutions in the Arctic in the period addressed, but also that the viability of the institutions was threatened by the existence of global conflicts and impacts of wars, and by international legalization of policy processes addressing important issues in the Arctic, such as the rights of Indigenous people. Policy implications are found in addressing conditions impacting regional level roles in meeting international law and global economies.

Keywords: regional institutions, Arctic regions, state institution positions, multilevel governance, indigenous agency

1. Introduction

The 1990s introduced broad and periodically dramatic changes in the institutional landscapes in Arctic regions, characterized by a withdrawal of dominant state institutions from economic life, the entering of global markets, and the creation of Indigenous people policy movements. As part of the changes, radical reforms to regulations and acts that were inspired by neoliberal politics replaced by direct state-managed business activities, and by the entering of policies securing indigenous

people's individual legal rights to learn and use their language, culture, and livelihood. These changes strengthened the inclusion of Arctic regions and communities in global economy and international politics and law. The chapter aims to analyze the conditions for the upcoming and implementation of regional institutions in this landscape; how these institutions have developed in the meeting with changes in the Arctic from the 1990s until today; and how the processes have impacted on the Arctic regions' position in actual multilevel governance (MLG) on a global level.

The general purpose of the chapter is to address regional institutions' established and developed in Arctic regions from 1990s ability to be inclusive institutions. The approach that scholars such as Acemoglu and Robinson [1] believed to be crucial for developing trust-based societies lies in theoretical considerations back to regional institutions as core driving forces in developing modern societies, and their definitions and exploration by Giddens [2] and Paasi [3]. The regional institutions that emerged were part of adapting processes to interaction and activities moving out of the local and also out of the state structures. From sociological structuration theory [2] regional institutions answered an increasing resolution of local institutions, where institutions at the regional level prevent alienation in modern centralization, due to the disembedding of local interaction. In these theories, regional agencies' roles in developing institutions and their exploiting of upcoming strategic opportunity spaces at the regional level are crucial [4–7] to achieve changes in institutional landscapes at the regional level. The chapter thereby looks for driving forces in new regional institutions emerging in the Arctic from the 1990s in regional reflexive agencies identifying opportunity spaces based on historical experiences of agencies at the intermediate level [2, 4, 8], first and foremost in the historical state structural landscapes that had operated and governed the Arctic regions. From a structuration theory viewpoint, regional agencies were challenging and attacking established structures and institutions. Furthermore, institutional geography [3] extended the content of the functions of regional institutions highlighted by structuration theories, by addressing their impacts on the development of sociocultural characteristics as regional identities. Where identity encourages regional institutionalization by boundary settings addressing “the others” as state and municipal institutions and symbols [9]. Regional institutions in the actual period are thereby political constructions not only receiving new tasks and functions from socioeconomic and political development processes but are also able to build regions themselves by strengthening collaboration in the regions and building trust and social capital across internal politicized and ethnical borderlines [10, 11]. This is partly demonstrated in analyses of regional institutions addressing regional policies—and innovation arguing that regional disparities in growth cannot be fully explained by external incentives or by endogenous, knowledge-based approaches [12]. There are important examples of upcoming regional institutions with functions in regionally driven transnational relations and in regional innovation policies addressed in economic geography from the 2000s [12, 13]. An actual perspective is to address the development of regional institutions as part of encouraging regional “partnerships for regional innovation” in a place-based or regional territorial perspective [14, 15].

Empirically, the chapter addresses three cases built around regional institutions, see the maps below, elaborated by data following the institutions from their start-up of substituting former state structures in the regions in the 1990s up to the characteristics of the Arctic landscape today. It thus also addresses opportunities and challenges in elaborating and comparing case studies of how the institutions address change and develop through time. The data stems mainly from the northernmost region of

Norway, but the cases also include data from agents involved in transnational collaboration at the regional level between regions in Northern Norway and Northwest Russia. Russian and Norwegian Arctic territories together constitute more than 50% of the Arctic region. The cases are elaborated on by data based on collecting and highlighting reasonings selected from reviews of analyses of Arctic regions conducted in the previous two to three decades, mainly by the author. The cases are developed based on characteristics of the period in which they are implemented, which are almost similar for the cases, while the cases are differentiated by the regional agencies involved, their functions, and the vulnerabilities in the development of institutions up to today. One of the cases addresses the regional integration of Barents Sea fisheries and the subsequent emergence of institutions within the framework of a Norwegian-Russian Barents Region. A second case concerns how regional institutions push northern regions into global production and governance systems in the oil and gas industries. The third case addresses a regional landowner institution emerging for co-ownership of land in Finmark (the “Finmark Estate” or “FeFo”), where the inclusion of Indigenous agency embedded in institutions at a global level more and more became a central framework for implementation and operation.

The chapter is structured as follows: the first part provides a conceptual and methodological basis for analyzing institutional processes at the regional level. It then elaborates on the development of the three Arctic regional institutional cases, and in the final part, the results are summarized and debated from a position where the Arctic regional level is changing its entering and situating in MLG.

2. Regional institutions: Conceptual and methodological approaches

The chapter considers the implementation and viability of emerging regional institutions in Northern Norway and Northwest Russia as from the 1990s. The institutions studied were created, developed, and implemented in a period when economic liberalization, Indigenous policies and rights, and attempts at regionalization of governance entered Arctic regions and substituted strong, or, it can be argued, very compact historical state structures. The chapter argues that the withdrawal of the state structure and the development and operation of the regional institutions in the Arctic in the space that was left are part of rapid and complex changes, like Schumpeter’s “creative destructions” [16], where the regional institutions must be evaluated and understood in relation to whether they are able to include a manifold of socioeconomic classes, ethnic groups, and international relations [1]. Furthermore, the chapter addresses the role of regional agencies in these types of inclusion processes at the regional level [10, 11] under these frameworks, as well as regional institutions in the huge, broad new, and actual governance processes taking place at a global level governance. The institutions that emerge thereby explain the development of subnational units or regions in subsidiarity processes in an Arctic landscape of local, regional, national, and supranational institutions [17–19]. One issue emphasized in the MLG literature is that institutions at the regional level have major functions in multilevel structures, although more and more through the emergence of a politicization of regional positions and identities [19, 20], rather than in regional administration. In the Arctic, this particularly concerns policies highlighting the entry of Indigenous agencies and attracting global market interest in the natural resources that are found. To sum up, the approach for analyzing the regional institution cases lies in theories of including institutions high lightening [1]; regional

institutions as core agents in handling disembedding and centralization issues [2]; regional agents' capacity for exploiting opportunity spaces as crucial for developing regional institutions [5–7]; and regional institutions in transforming sociocultural characteristics of regions [3, 9–11, 21].

Despite these manifold arguments for the importance of analyzing regional-level institutions, an overall picture is the lack of empirical analysis of institutions at the regional level [22]. Empirical analyses of institutions have addressed global, national, or local levels, rather than regional levels. Even in structuration theory, of which regionalization was a fundamental element, agencies between global level (“world empires”) and individual human level (“micro situations”) have not been included in empirical analyses [23] from the 1990s and ahead. Moreover, since most of the research based on theories of institutions has been conducted outside the geography discipline, the territorial dimension of institutionalization has neglected to include the analysis of institutions as part of territorial processes, and thereby the mechanisms that lead to territorial-specific institutions [24]. The elaboration of the cases therefore also considers this missing perspective by addressing institutions emerging from, operating, and governing at Arctic regional levels of which the characteristics of space and scale are changing over time and where changes uncover opportunity spaces for agency at regional level.

There are probably many reasons for the mode position of region level institutions in empirical analyses. Agencies in “creative destruction” processes are often active for a short period of time. Regional institutions in governance are different from governing stable local and state hierarchies. These differences also cause the formation of institutions at the region level to be more open than at the state and municipal levels concerning who participates in development processes and the topics addressed in those processes. Examples of assessing regional institutions are found in their addressing of developing social capital, trust, innovation, and integration among groups at regional levels. Institutions at regional levels can thereby also be characterized as more porous in their meetings with societal changes than those at state and municipal levels, and thereby demanding other types of methods and data. Regional institutions have nevertheless, or due to these characteristics, crucial functions in the constitutions of modern societies by addressing the quality of new governance in the form of decentralization and subsidiarity [24], while at the same time, regionalization studies have more often addressed lapses of and changes in state positions. The cases address regional agencies shaping spaces, basing strategies on historical experience from state institutions with crucial functions in Arctic regions, and on capacities at the regional level for the identification of opportunity spaces in the new institutional landscapes in the 1990s and thereafter.

The chapter approaches the methodological challenges from a diachronic perspective [2, 4] where cases are gradually put together by agencies during the period and thereby final and definitive concepts of regional institutions do not stand at the beginning of the investigation but come at the end where also the fate of the regional institutions of the cases can be concluded, as argued by Weber [25]. From this viewpoint, the regional agencies interviewed and analyzed are reflexive concerning, for example, institutional building at the regional level in the development of transnational relations, regional agencies' negotiations with multinational companies, and attempts to include international law in regionalization processes in the Arctic. The most dramatic institutional changes in the period were in the former USSR, where the Russian state removed Soviet institutions in the belief that markets would create

new institutions [26]. But also, the exposure of global markets in the Arctic and the development of international law constituted major changes in Arctic regions.

Based on searching information from qualitative interviews with regional agents finding opportunities after the state withdrawal, the elaboration of the cases is based on qualitative personal interviews in Norway and Russia with fisheries companies and public fisheries management organizations, as well as on studies of legal documents in fisheries [27–30]. It is also based on qualitative interviews with regional enterprises, a northern regional supplier organization (“Petro Arctic”), and two MNCs (Statoil/Equinor and Eni Norwegian/Vår Energi (“Our Energy”)) concerning the allocation of supplier contracts for the “Snøhvit” gas field and the “Goliath” oil field in the Barents Sea [31]; and furthermore on qualitative interviews with staff and members of the Norwegian Sámi Parliament, and the Finnmark County Council; and on studies of public documents prepared for the decisions of these political bodies concerning the Finnmark Act in 2005 [32–36].

3. The starting point of the cases: Transition from state to regional institutions

The 1990s lifted key functions out of state-driven hierarchies. Regional agencies identifying opportunity spaces resulting from these changes constituted much of the background to the emergence of the institutions addressed by the chapter. A common feature of the 1990s, and of the cases elaborated, is regional agents reacting to state institutions withdrawing from direct governance of northern communities after a historical period in which Arctic states such as Norway and Russia had formed structures to secure control of remote regions by initiating and implementing what can be characterized as state satellite institutions. The positions of the states in the Arctic were based on government exploitation of natural resources owned and managed by the states, state ownership of industries, running of businesses, control of exports, and control of the allocation of supplier contracts in huge global industries operating in Norway and Russia. However, due to or despite the state governance, the cases are situated in a context where both the Norwegian and Russian states for many years since the 1990s have shared common “periphery problems” in northern areas characterized by economic vulnerability in terms of exploitation and production of raw materials and outward migration of young people, and thereby marginalizing the communities.

One sign of cracks established in the state structures was in the late 1980s when the Soviet Union allowed their regions (oblasts) to have their own contacts with foreign countries. This opportunity resulted in frequent networking with Norwegian Arctic regions. At the same time, as part of a regionalization of the northern and regional policies conducted by the state [37], Norway strengthened the strategic role of the regional councils in the governance of the regions [38, 39]. For example, during the period the northernmost regional council in Norway changed its strategy from requiring the Norwegian state (from the capital of Oslo) to solve regional development problems, to proclaiming that from now on it was up to regional institutions to make changes [40]. One important condition, seen from the region’s viewpoint, was to include regions in neighboring countries in their agencies, inspired by the regionalization in, for example, the Øresund region that connects Copenhagen in Denmark with the southern part of Sweden (Skåne).

The cases addressed in the chapter include institutions covering different territories of Northern Norway. Northwest Russian territories are part of one of the cases (no. 1) (**Figure 1**).

Case 1 analyses the increasing scope of the Norwegian-Russian relations from the late 1980s and the upcoming regional institutions addressing Barents Sea fisheries, their solving of problems and crises in these fisheries in the 1990s, and the continuation of the changes in fisheries institutions through the development of a broader manifold of institutions under a Barents Region umbrella. The Barents fisheries in the 1980s were characterized by overfishing, resulting in the closure of fisheries processing plants in Northern Norway, due to a lack of raw fish. The case concerns regional fisheries companies and regional politicians' agents in Norway and Russia entering new opportunity spaces in the wake of changes in political conditions for Western cooperation with Russia after the collapse of the Soviet Union in the early 1990s. Companies and politicians in northern regional councils initiated, grounded, and demonstrated opportunities that could be pursued by new regional institutions, encouraging a Barents Region wider than fisheries and the territories of Murmansk and Finnmark in Russia and Norway, respectively. The case demonstrates new regional institutions built by personnel and companies developing contacts and networks across the Norwegian-Russian border, regional councils' policies addressing a need for change at state levels, and changes in the state's laws and politics, reflecting upscaling processes concretized by Norwegian fisheries processing plants getting their raw fish from Russian fisheries companies located mainly in the Russian city of Murmansk (a population of approx. 300,000), and broad people-to-people collaboration, including universities and healthcare institutions in the wider Barents Region constituting 25% of Arctic territories.

Case 2 analyses the inclusion of northern industries in global production networks after the entry of multinational companies (MNCs) to the oil and gas industry in Barents Sea offshore fields from the 1990s. Despite the public interest in the regional impacts of the oil and gas industry, the regional position of this industry in Europe had mainly been analyzed and assessed as impacts of the state governance of global markets and industries [41], rather than regional agencies and institutions. The case considers the regional level and concerns the inclusion of a new Arctic region as part of the global production network and governance organizing the oil and gas industry, by developing an institution at the regional level to organize the MNCs' purchasing, aiming to increase the inclusion of regional industries in supplying Barents Sea fields. An important aspect of the case is how a new institution at the regional level was a



Figure 1.
The three regional institutional cases in part of the Arctic territory.

result of the new organization of northern supplier enterprises' negotiation with the entering MNCs, whereby regional industries required MNCs' operations to adapt to these industries' capacities and opportunities. The case explains regional industries' entry into global industries by succeeding in extending the agenda of MNCs' purchasing strategies concerning the development and operation of fields in the Barents Sea. It addresses the expansion of Norwegian oil and gas operations in the early 2000s, from operating in the North Sea fields in the southwest of Norway to fields in the Barents Sea, and how the geographical diffusion of a global industry to the remote areas of the north resulted in the emergence of supplier-contracting institutions at regional level.

Case 3 explores the establishment of a regional landowner institution, including Indigenous people agencies, by the Norwegian state's transfer of huge land ownership from the state to the Finnmark estate on the adoption of the Finnmark Act in 2005 relating to legal ownership and management of land and natural resources in the northernmost Norwegian county of Finnmark [42]. The new owner of a large outlying area had more than 40 employees and constituted a co-managing institution governing the natural resources in Finnmark. FeFo is owned by the Regional Council of Finnmark and the Norwegian Sámi Parliament at 50% ownership each. The principal aspect of the chapter concerning case 3 is how the Regional Council of Finnmark sought to develop FeFo into a regional landowner institution, particularly by meeting global Indigenous policies developed and decided by global institutions such as the United Nations [43–45].

4. Diachronic characteristics of the cases

Case 1 demonstrates complex and long-term, structuration processes [23] whereby agencies in Norwegian and Russian Arctic regions saw opportunities for solving problems through an infinite series of agencies, including networking on a transnational stage and exerting pressure on the Norwegian and Russian states for the development and changing of institutions at the state level. The initiating driving force of the “Barents” regionalization in the 1990s was the aim of including the huge Russian fisheries in the economics of the western Barents Sea fisheries by bringing Russian fisheries into Northern Norwegian fisheries industries, and by establishing a common fisheries management for the Barents Sea, while important frameworks and driving forces, see above, were the disregarding of the dissolution of the Soviet Union from the late 1980s and the liberalization of the management of Norwegian fisheries. The most important aspect of the Norwegian liberalization was to allow all enterprises in Northern Norway to export fish by repealing the order requiring export through state export organizations [46]. Moreover, there was a mirror imaging of the Norwegian Fisheries Landing Act [43], from only exceptionally allowing Russian landings of raw fish in Norwegian fisheries harbors to only exceptionally prohibiting such landings. A further step in the formal institution building was the Norwegian and Russian agreement in 2010 on a treaty concerning maritime delimitation and cooperation in the Barents Sea [47]. The treaty changed the framework for fisheries, as well as for the operations of the oil and gas industry in the Barents Sea, see case 2.

The regional re-institutionalizing followed the liberalization at state levels in Norway and Russia pushed by private and privately owned companies in Barents Sea fisheries, in close collaboration with northern regional county councils building networks with Russian politicians on the regional level in the Arctic. [48]. Fisheries companies and management organizations in northern areas of Norway and Russia had collaborated through informal “channels” from the final phase of the Cold War

and were thereby prepared for the exploitation of the new conditions in the 1990s. However, neither many of the private companies involved nor the Regional Councils had important positions in the former state governance of fisheries. The new institutions were thereby pushed by regional agents outside the state fisheries industries and policies in Norway. Soviet regional fisheries institutions had stronger positions, but not in the governance of international relations before the 1990s.

The regionalization of Barents Sea fisheries was also rooted in common Norwegian-Russian regulation of Barents Sea fisheries from the 1970s and encouraged a multiplication of fish harvested in the Barents Sea in the late 1990s. Moreover, the regionalization was strengthened by developing informal institutions built between Russian and Norwegian fishing companies and processing plants, such as “bare boats,” whereby Norwegian plants gave vessels to private Russian shipping companies in exchange for guarantees of future deliveries of fish. The “bare boats” also gave opportunities for Norwegian shipping companies to build new vessels to substitute used vessels given by them to Russian shipping companies.

The development of Barents Sea fisheries, and in Russian and Norwegian politics outside fisheries, enforced a regionalization based on an increasing territorial space of interaction, where the new scope was formally strengthened by the Barents Region (from 1993) that included the new political regional institutions comprising the International Barents Secretariat (2008) and the Norwegian Barents Secretariat (1993). The latter is owned by the Northern Norwegian regional councils and can be characterized as a formal region-based institution managing important Norwegian borderline interaction with Russia. The slogan of the new collaboration was building “people to people” relations like Paasi’s “place” and similar region building.

The fisheries crisis in the Barents Sea affected communities in Northern Norway and was resolved by a regional agency that encouraged the development of an international region, including agents in northern places and cities of Russia, as well as in Norway. New formal political institutions such as the Barents Region strengthened the integration processes by including a manifold of regional border-crossing actions. The regionalization of the Barents Region was so strong that for a period a common perception argued that the Norwegian state transferred responsibility for developing Norwegian-Russian relations in Arctic regions from the state to the Arctic regions and the Barents Region institutions. In the northernmost counties in Russia and Norway, the political relations at the regional level were facilitated through the Norwegian-Russian “Murmansk corridor” [49, 50].

The regionalization processes in both Russia and Norway turned after 2000 by, once again, a strengthening of the positions of the states. But the regional position was still present in Norway until Russia annexed the Crimean Peninsula in 2014, and it collapsed when Russia invaded Ukraine in 2022. However, even today three Arctic fisheries harbors in Norway (Kirkenes, Båtsfjord, and Tromsø) are exempt from the Norwegian and EU sanctions addressing Russian fisheries, as Russian vessels still deliver raw fish to the Norwegian enterprises in the cities. The case thereby demonstrates the creation of a renewed stable situation in the Barents Sea for at least 30 years, emerging from the rapid institutional changes in the early 1990s. The new institutions also could benefit from agencies in northern fisheries developed before the state regimes after 1945, although without dominating the industry during the state period [27]. The case demonstrates the importance of including agents and places not close to the former state structures in regionalization processes when developing new regional institutions and coping with embeddings and scaling caused by the influences of global economics and politics.

Case 2 addresses the withdrawal of a Norwegian state-driven model from the 1970s aiming to develop the regional impacts of the Norwegian offshore oil and gas industry, and the emergence of new conditions for encouraging regional impacts through agreements between MNCs and regional industries. The changes elucidated by the case include the diffusion of global industries from Northern Sea fields to the fields in the Barents Sea after the 2000s. Here, the global industries were challenged by the regional industry arguing that the MNCs' contracting forms and their selection of subcontractors favored industries in regions close to the MNCs' original operation fields in the south, thereby discriminating against enterprises close to the fields in the Barents Sea. A northern supplier industry organization ("Petro Arctic") demanded negotiations concerning the development of a specific Arctic institutional allocation of contracts. The negotiations between MNCs and the regional supplier organization resulted in a regional contracting institution differing from those characterized by the global production system in the southwest of Norway. The new institution at the regional level changed the perception that when oil and gas activities entered the Barents Sea area after 2000, the moving northward was planned to be a continuous extension of the original region. However, this ended up operating in a new Arctic region, and with a negotiated Arctic model concerning a decrease in the size and scale of the costs of every contract used in the Barents fields; a requirement for short distances between contractors and the operational fields to give local enterprises a beneficial proximity advantage; and removal of the frequently used huge framework arrangements favoring major suppliers, by opening the tender processes. The new regional institution thereby concretized a specific local content in Arctic regions in the oil and gas industry and also resolved a critical issue for global industries operating far from their headquarters in other areas. The case also confirmed the importance of addressing places and agents outside global industrial systems when entering regional industries into the dynamics and institutions of global production networks. The newcomer institution resulted in huge deliveries from northern industries to MNCs operating in the Barents Sea.

The background to the Norwegian state's transfer of its land ownership to the Finnmark estate in *case 3* included many factors, one of which was a state's wish to attract economic activities based on exploiting the outfield Arctic nature resources by global industry entering the areas. The state hoped that a regional deliberative landowner institution such as FeFo could make "better" decisions concerning the allocation of use of the outfields than a remote state. It was important that the "Finnmark estate" owned property that was populated by huge numbers of Indigenous people. The case concerned the transfer in 2006 of the ownership of the land in the northernmost province of Norway (Finnmark) from the state to co-management governance organized by the Norwegian Sámi Parliament and the Regional County Council, both located in Finnmark. The "Finnmark estate," see above, received its mandate under a state "Finnmark Act" [31] and FeFo became the second largest landowner in Norway. The state ownership of land in other Norwegian regions is organized as common state properties governed by "mountain boards" operating at the municipal level in 90 Norwegian municipalities. In Finnmark, however, the state aimed to develop a regional agency or to make FeFo a regional landowner institution, including Sámi positions.

The regional owner, the regional county council, and agencies were soon challenged by the strengthened position of international law addressing Indigenous people's need for protection of traditional forms of living based on their use of attractive land for example, MNCs. The case thereby also demonstrates how the implementation of international law and Indigenous people rights policies impacted opportunities for the building and development of a regional institution. It furthermore demonstrates

that in meeting the global legalization processes, FeFo lifted interactions and processes out of the local level communities to a regional landowner institution, becoming more and more a party in global law-based disputes with and within local communities concerning the real ownership of land. Local practices and debates were thereby disembedded from the local area, but also de facto bypassed the regional level to end up in national and international courts. Local and regional, spotlights were therefore set on the establishment of another institution constituting part of the Finnmark Act, the Finnmark Commission, to review historical use and property conditions in the county, in order to achieve legal rights to demand the takeover of formerly state-owned land. A separate regional court, the *Utmarksdomstolen* (“Outland Court”) for Finnmark, was appointed to rule on disputes. The key conclusion from the Commission and the Outland Court so far has been to reject the regional ownership by FeFo of the land territories in a large Sámi-populated municipality (Karasjok). The Norwegian Supreme Court rejected in 2024 communal ownership but admitted families and minor communities to apply for ownership. The regional ownership will thereby always be temporary, and the case can also be understood to demonstrate a failure to develop an institution at the regional level, due to new frameworks at the national and global levels.

FeFo became a regional institution testing the borderlines of international law in local and regional disputes, rather than an institution addressing territorial identity, entrepreneurship, and innovation among local users and industries. The case explains an institutional failure to develop regional subsidiarity processes when local disputes are interpreted via legal processes that bypass the regional level and move out of the region for a final decision. FeFo was also perceived by local users and stakeholders as the withdrawal of informal local rules of allocation of land resources in local communities in favor of a formal regional institution.

The **Table 1** highlights findings demonstrated by the three cases concerning the implementation and development of the regional institutions created in the 1990s. It addresses central approaches in studies of creating regional institutions in Arctic regions and distinguishing diachronic factors as the role of regional agencies in periods, and the impacts of global processes for the positioning of Arctic regions in MLG.

A major finding is that the regional institutions analyzed in case numbers 1 and 2 succeeded in strengthening Arctic regions’ positioning in global governance as in MLG, while the regional institutions addressed in case 3 failed. The reasons to be found are in the most important differences between cases 1 and 2, and case 3, respectively, were that processes at the regional level in cases 1 and 2 can be characterized by the inclusion of agents and places in the formation of regional institutions, of which the most important was that Murmansk fisheries de facto became part of local Norwegian fisheries industries and the Northern Norwegian industries included in global industrial networks. Cases 1 and 2 also demonstrate strong relations between developing global market relations, social networking, and informal institutions at regional level, as well as in developing institutions, encouraging Norwegian-Russian “people to people” and “bare-boat” interactions. The cases demonstrated situating Arctic regions in MLG by including and negotiation of agents outside established state-governed structures and systems as part of the enlarging scope. Cases 1 and 2 also demonstrate new regional institutions with their origins in problems and opportunities that were experienced at local and regional levels, and where regional agents saw opportunities to resolve them by forming new institutions at regional level, including by demanding that new state institutions facilitate and support these

Regional institutions' withdrawal of state institutions from Arctic regions in Norway and Russia after the 1990s.	Case 1	Case 2	Case 3
Agencies at the regional level involved in forming the new institutions.	Norwegian and Russian private regional fisheries companies, regional councils, and oblasts aiming to solve crises in Barents Sea fisheries and in international governance.	Regional industrial supplier organization, aiming to include regional industries in global economies.	Finnmark Regional Council, aiming to include Indigenous people policies in regional institutions.
Regional institutions created.	A manifold of Norwegian-Russian formal and informal institutions.	MNCs' supplier contracting to allocate institution addressing northern industry.	A regional-Sámi co-management landowner.
Functions of the regional institutions.	Global integration of Norwegian and Russian fisheries in the Barents Sea fisheries and broader "people to people" collaboration between Norway and Russia.	Prevention of discrimination by including regional industries in global oil and gas production systems and governance.	Moving state ownership and traditional land use regulations to a regional institution governed by international law.
Regional level positioning in actual Arctic governance.	Part of Norwegian and Russian foreign policies until 2022, and regional fisheries institutions are still a part of Barents Sea fisheries management.	Gaining a central position in Norwegian oil and gas policies.	Marginal, due to the regional landowner institution's lack of opportunities to include developing international law.
The institutions' actual success and failings.	Success until 2014, then failed to meet the new states' strategies, operations, and war caused by global conflicts.	Success, as it attracts the entry of MNCs to the Arctic by making economic impacts at the regional level visible to locals.	Failing in integration of policies building processes at the regional level with the legalization of policies at the global level.

Table 1.
Distinguishing similarities and differences in the diachronic of the three Arctic cases from the 1990s.

economic and political renewal processes. The two cases demonstrated the significant role of regional processes, which were also comprehensive, as they included a manifold of agents and places, but also that the processes were developed in a historically short period of state-enforced regionalization policies in Russia and Norway. The cases moreover demonstrate regional institutions being more and more concerned with agents outside traditional local spaces [51].

In case 3, the driving force of establishing and developing FeFo can be characterized by top-down-like governance embedded in the development of international law, rather than by mobilization of regional agencies. The impacts of the Finnmark estate on regional-level institutions in MLG are thereby uncertain. Today, it is more likely that FeFo as a regional institution is at the point of failing, as land ownership becomes more and more embedded in global law and policies, rather than in regional governance and local communities. The case also demonstrates a lack of strengthening of the regional level institutions in the wake of the international development

of Indigenous policies and law, where the regional institutions' position in these processes is not clear and is rather weak. The emerging international law thus had an impact at the local and regional levels, but without strengthening these levels as part of MLG, and did not generate similar interaction in region-building processes to the networking in cases 1 and 2, for example, and as those processes were considered by Giddens and Paasi [2, 3, 9–11, 21].

5. Conclusions: Future disembedding of Arctic regions?

The chapter specifies several characteristics of regional institutions created in the Arctic from the 1990s which have been of crucial importance to the emergence of modern societies in these areas. These include the following: 1. Institutions on the regional level exploited opportunity spaces at the regional Arctic level when the state hierarchies withdrew. Although the chapter questions regional institutions' abilities to adapt to the disembedding of functions out of Arctic local communities argued by Giddens [2], it demonstrates that addressing institutions at the regional level, as Giddens' structuration theory did, is important for analyzing the structure of the modern Arctic. 2. One part of the replacing of the state was the process where regional institutions invited and mobilized new groups of regional agents into institution building at the regional level based on developing transnational relations, public negotiations including private regional agencies and multinational companies, and attempts to include global legislation addressing Indigenous people in regionalization processes. 3. Regional institutions matter if they create new patterns of interaction at the regional level, as they did in the development of the Barents Region and in regional industries benefiting from the entry of global oil and gas production. Processes in Arctic regions in the 1990s included creative regional agents solving dramatic destruction processes, as those argued by Schumpeter [16] and Acemoglu & Robinson [1]. Local problems for example, fisheries and a lack of ability to supply entering global industries were resolved by regional institutions encouraging and framing the upscaling of interaction, for example, by including agents outside the historical local scale, and by the agents' ability and competence to negotiate novel economic issues in new geographical areas. 4. Overall changes in the Arctic institutional landscape impact the viability of regional institutions. Important changes in the period concern states' foreign policy governance being more and more aimed at attracting multinational companies and global agencies to the regions, the Arctic's importance for power and war relations at a global level, exemplified by the impacts of the Russian war against Ukraine, and the entrance of international law into regional governance. 5. There are differences on regional level in opportunities and strategies for adaptation to these development processes and thereby the processes impact the future position of regional institutions in MLG. At least one of the cases demonstrates how regional institutions can fail if disembedding processes out of the "local" do not move to regional levels, but rather bypass formal legislation issues to higher levels passed by the UN [42–44].

In the modern Arctic global law and policies become more important for the states, as well as for the national Sámi Parliament in Norway, than a regional institution concerning ownership and use of land. Moreover, the Barents Region institutions have almost collapsed as the Russian state has once again entered the northern area, based on the aim of strengthening its global position. Implementation of regional institutions in an Arctic landscape has thereby been influenced more and more by


conditions set by global economics, international law, and supranational multilevel governance. Public policies at both the state and regional levels have addressed multinational acquisitions to Arctic regions, rather than limiting their access and operations. Therefore, Arctic regions comply with international law by addressing Indigenous people's rights decided by international organizations such as the UN after 2000, which also changed the rules of interaction and governance in Arctic communities. One important question raised against this background is whether states that execute power ambitions at a global level, but also concrete policies protecting Indigenous people, increasingly exclude rather than include regional agencies, and therefore also cause a weakening or disembedding of regional levels in MLG in the Arctic, as well as in other regions. It is not thereby obvious that the institutions developed at a regional level as part of the state withdrawal from the Arctic in the 1990s are strengthening these regions' position in new governance today and in the future. Also, due to that. The withdrawal of regional institutions opens for local agencies and thereby no common regional voices in meetings, for example, multinational companies. The locals asking for local protection caused by the implementation of international law, or local economic benefit, rather than arguing, for example, common regional rules as in the 1990s on access to and use of land. Regional institutions are thereby in very challenging intermediate positions and in danger of having their fate decided by disembedding regions trapped in new global governance.

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Regional planning aims to envision a better future for a region and proposes policies to achieve a desired vision of regional development. It encompasses various aspects of the human and biophysical environments, covering extensive geographical areas or jurisdictions with identifiable common characteristics. In this regard, this book offers a state-of-the-art examination of how contemporary regional planning challenges are addressed globally. It includes contributions from leading researchers and scholars in the field of regional planning from Canada, the USA, Israel, Indonesia, Turkey, and Norway. Based on empirical research, the book discusses a variety of topics, including how the relocation of Indonesia's capital city could potentially resolve the country's longstanding regional inequities and multidimensional conflicts; the intricacies of planning in contested cities and the dual role of urban planning in conflict resolution; how regional planning balances local autonomy and regional objectives; river basin development as a sustainable planning strategy for a port city; and positioning the Arctic landscape regions in the global system of growth and development. The book is insightful, thought-provoking, and easy to understand. It could serve as an essential reference material on contemporary regional planning for students, planners, NGOs, government officials and international institutions interested in regional development planning.

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