

Florida International University
Kimberly Green Latin American and Caribbean Center

Public Policy in Disaster Risk Management

White Paper

Juan Pablo Sarmiento, Research Fellow, Kimberly Green Latin American and
Caribbean Center, Florida International University

Gabriela Hoberman, Director of Academic Programs, Kimberly Green Latin
American and Caribbean Center, Florida International University

August 20, 2026

The white paper titled “Public Policies in Disaster Risk Management” is a component of the Disaster Risk, Resilient Infrastructure and Environmental Security (DRIES) research line of the Kimberly Green Latin American and Caribbean Center at Florida International University. (FIU-LACC). This document was prepared by Juan Pablo Sarmiento (ORCID: 0000-0001-8192-902X) and Gabriela Hoberman (ORCID: 0000-0001-8790-4544), professors affiliated with FIU-LACC. The opinions expressed in this publication do not necessarily reflect those of FIU or LACC.

Miami, August 20, 2026.

Sarmiento, J. P., & Hoberman, G. (2026). *Public policy in disaster risk management (White Paper No. 1, p. 76)*. Kimberly Green Latin American and Caribbean Center, Florida International University. <https://doi.org/10.25148/fiuir.32848>

About the Authors

Juan Pablo Sarmiento, M.D., M.P.H.

Research Fellow, Kimberly Green Latin American & Caribbean Center

Steven J. Green School of International & Public Affairs



Dr. Sarmiento has a courtesy appointment as a Research Fellow at the FIU Kimberly Green Latin American and Caribbean Center (LACC). In his role, Dr. Sarmiento assists LACC in developing and advancing a focused line of inquiry on disaster risk reduction, resilient critical infrastructure, and environmental security in the Latin American and Caribbean region. For 16 years, he was Professor and Associate Director of Research at the Extreme Events Institute at Florida International University (FIU-EEI).

Dr. Sarmiento has been a consultant for the World Health Organization (WHO), the United Nations Development Program (UNDP), the Inter-American Development Bank (IDB) and the Pan American Health Organization (PAHO/WHO). He was a member of the Working Group on Social and Economic Research Applications (WG SERA) of the World Meteorological Organization. He served for a decade as Technical Manager of the regional risk management program in Latin America and the Caribbean of the United States Agency for International Development (USAID). Dr. Sarmiento has worked on disaster management and disaster risk reduction of multiple events—including earthquakes, tropical storms, landslides, and droughts—throughout the Latin America and Caribbean region.

Gabriela Hoberman, Ph.D.

Director of Academic Programs, Kimberly Green Latin American & Caribbean Center

Steven J. Green School of International & Public Affairs



Dr. Gabriela Hoberman is the Director of Academic Programs at the Kimberly Green Latin American & Caribbean Center (LACC) and the Faculty Director of LACC's Study Abroad Program on Society, Politics & International Relations in Argentina. She is also the Primary Investigator (PI) of the Tinker Field Research Collaborative Grant at LACC. Dr. Hoberman is a political scientist and researcher in the field of disasters in the Latin American and Caribbean region. Her areas of expertise are comparative politics, disaster risk policy, genocide studies, and Latin American politics.

Dr. Hoberman teaches comparative politics courses in the Department of Politics and International Relations, the Master of Arts in Latin American and Caribbean Studies and is affiliated scholar at the Jack D. Gordon Institute for Public Policy, collaborating in a series of initiatives on public policy and global security. From 2014 to 2022 she was the Assistant Director of FIU's DRRA-Extreme Events Institute, advancing training of faculty and practitioners to help address the driving forces of disaster risk in the LAC region. Her articles have appeared in academic journals such as *Disaster Prevention and Management*, *Natural Hazards Review*, *International Journal of Disaster Risk Reduction*, *Natural Hazards*, *International Studies Perspectives*, and *Environmental Hazards*.

Table of Contents

About the Authors.....	iii
Summary	1
Keywords	1
Introduction	1
Chapter 1: Disaster Risk Management	3
1.1 Essential concepts	3
1.2 Disaster risk management and its scope	4
1.3 Disaster risk management and climate adaptation.....	5
1.4 Systemic risk	6
Conclusion.....	6
Chapter 2: Fundamentals of Public Policy	8
2.1 Definition of public policy	8
2.2 The relationship between public policy and governance	10
2.3 Policy Design: The Essence of Public Policy Design and Processes	11
2.4 Birkland's view of politics as a system	12
2.5 J. Kingdon's model of "policy currents"	13
2.6 The policy cycle as an analytical framework.....	15
Conclusion.....	15
Chapter 3: Phase 1 - Problematizing the topic and	17
its inclusion in the agenda	17
3.1 The three dimensions of problematization	17
3.2 Problematization and transition to the public agenda	18
3.3 The public agenda and the government agenda.....	19
3.4 Stakeholder assessment	21
Conclusion.....	22
Chapter 4: Phase 2 - Policymaking	24
4.1 Defining policymaking.....	24

4.2 Political decision-making models at the formulation stage	25
4.3 Dynamics of Advocacy Actors and Coalitions in Policymaking.....	28
4.4 Instrument selection: the central technical task of formulation	29
4.4 Suggested outline for a DRM policy-making process.....	32
4.5 DRM Policymaking and Governance: The Connection to iGOPP	34
Conclusion	36
Chapter 5: Phase 3 - Policy Implementation	38
5.1 What does implementation consist of?	38
5.2 Berman's Approaches: Scheduled and Adaptive Implementation.....	39
5.3 Lewis and Flynn's implementation model	42
5.4 Ingram's Flexible Framework for Implementation Analysis	44
5.5 Factors of success and failure in implementation	46
5.5 Possible actions to improve implementation: connection to DRM governance	49
Conclusion	52
Chapter 6: Phase 4 - Policy Evaluation.....	54
6.1 What is public policy evaluation?	54
6.2 Types of public policy evaluation.....	55
6.3 Characteristics of rigorous evaluation of public policies	58
6.3 Relationship between evaluation and governance	59
6.4 Main shortcomings of public policy evaluation.....	61
6.5 How to improve the evaluation of public policies.....	63
Conclusion	66
References.....	68

Summary

Governance in disaster risk management (DRM) is a multidimensional process that articulates public, private, multilateral, and civil society actors to identify, mitigate, and manage risks. Its effectiveness hinges on both the existing policy and institutional frameworks, and the quality of the relationships between decision-makers and those responsible for implementation. In this context, the Sendai Framework 2015-2030 serves as the primary international benchmark, emphasizing four key priorities: understanding risk, strengthening its governance, investing in resilience, and improving disaster preparedness.

This paper proposes an exploration of the intersection between public policy theory and contemporary developments in DRM. The study is structured into six chapters, each addressing a distinct phase of the public policy process applied to risk management. Beginning with foundational concepts, the text progresses through the phases of problematization and agenda-setting, formulation and decision-making, and implementation and evaluation. Throughout this process, theoretical frameworks of reference, including those of Birkland, Kingdon, Simon, and Lindblom, are presented to explain how DRM policies are built, adopted, executed and evaluated; to strengthen a more effective, transparent and evidence-based management.

Keywords

Disaster risk management, governance, public policy, resilience, Sendai Framework

Introduction

Public policies and disaster risk management reflect a comprehensive perspective and a bidirectional relationship. Governance in disaster risk management (DRM) is a multidimensional process that involves various actors, including public officials, decision-makers, the private sector, non-governmental organizations (NGOs), multilateral institutions, and civil society. These stakeholders collaborate to establish disaster risk governance processes, by defining and implementing tools and mechanisms, and making decisions in DRM.

It is important to recognize the distinct typologies, mechanisms, and characteristics of risk governance, as well as their relationship with risk management, development planning, and emerging trends in this field. To achieve this, it is convenient to evaluate the existing legislative and regulatory processes in DRM in the region of the Americas, their respective roles and how their potential influence on the anticipated results of risk governance.

Among the international mechanisms available, the Sendai Framework (MoUs) 2015-2030, a 15-year, non-binding global agreement aimed at reducing, preventing and responding to disaster risks worldwide, stands out. It outlines four specific priorities of the MoU for action: 1) understanding disaster risk; 2) strengthening disaster risk governance for better management; 3) investing in DRM to enhance resilience; and (4) increasing disaster preparedness to facilitate effective response and recovery, rehabilitation and reconstruction.

This paper aims to bridge the gap between the theory of public policies applied to risk management and the latest developments in DRM. It is structured into six chapters. Chapter 1 delves into the key concepts, describes the scope of DRM, explores the relationship between DRM and adaptation to climate change, and introduces the concept of systemic risk. Chapter 2 establishes the conceptual association between public policy and governance by examining Thomas Birkland's systems perspective and John Kingdon's Multi-Current Framework. Chapter 3 describes Phase 1 of public policies in risk management, highlighting the problematization of the issue and its inclusion in the government agenda. Chapter 4 discusses Phase 2, which encompasses the formulation, decision-making models ranging from bounded rationality to mixed scanning, defense coalitions, and instrument selection. Chapter 5 examines Phase 3, or implementation, analyzing Berman's programmed and adaptive approaches, Lewis and Flynn's operating model, Ingram's flexible framework, and the structural conditions that contribute to successful or unsuccessful implementation. Finally, Chapter 6 addresses Phase 4, policy evaluation, describing its main ex-ante, concomitant, and ex-post modalities. It also identifies the primary constraints that

impact the quality and effectiveness of evaluation and proposes strategies to strengthen its institutionalization and promote a more effective, transparent, and evidence-based DRM.

Chapter 1: Disaster Risk Management

1.1 Essential concepts

Disaster risk management theory is founded upon the following fundamental concepts: disaster, threat/hazard, vulnerability, exposure, risk, and underlying risk and resilience factors.

Disaster: "Serious disruption of the functioning of a community or society on any scale due to hazardous phenomena that interact with conditions of exposure, vulnerability, and capacity, causing one or more of the following: human, material, economic, and environmental losses and impacts." (United Nations 2016, p.13)

Threat/hazard: "A human process, phenomenon or activity that may cause death, injury or other effects on health, damage to property, social and economic disruption or environmental damage." (United Nations, 2016, p.19)

Vulnerability: "Conditions determined by physical, social, economic, and environmental factors or processes that increase the susceptibility of a person, community, property, or system to the effects of hazards." (United Nations, 2016, p. 25)

Presentation: "The situation of people, infrastructure, housing, production capacities and other tangible human assets located in areas exposed to threats." (United Nations, 2016, p.19)

Disaster risk: "The potential for death, injury, or destruction and damage to property in a system, society, or community in a particular period of time, determined probabilistically as a function of hazard, exposure, vulnerability, and capacity." (United Nations, 2016, p.15)

Acceptable or tolerable risk: refers to the extent to which a disaster risk is considered acceptable or tolerable under social, economic, political, cultural, technical and environmental conditions.

Underlying Disaster Risk Factors: "Processes or conditions, often related to development, that influence the level of disaster risk by increasing levels of exposure and vulnerability or reducing capacity." (United Nations, 2016, p. 25)

Resilience: "The ability of a system, community or society exposed to a threat to resist, absorb, adapt, transform and recover from its effects in a timely and efficient

manner, including through the preservation and restoration of its basic structures and functions through risk management." (United Nations, 2016, p. 23)

1.2 Disaster risk management and its scope

According to the United Nations, disaster risk management is "the implementation of disaster risk reduction policies and strategies to prevent new disaster risks, reduce existing disaster risks and manage residual risk, thereby contributing to the strengthening of resilience and the reduction of disaster losses." (United Nations, 2016, p.16)

Depending on the scope, four types of disaster risk management are identified: reactive, prospective, corrective, and compensatory.

Reactive risk management is the set of actions and measures aimed at dealing with an adverse event, either due to an imminent threat or due to the materialization of the risk. It acts on an existing risk and emphasizes the potential impact and consequences of its materialization.

Prospective risk management is the process by which preventive measures or actions are taken in development planning or in the decision-making process of private actors (from individuals to companies) to avoid or reduce exposure, vulnerability or risk.

Corrective risk management involves taking measures or action to promote the reduction of existing risks and their constituent factors - risks, exposure and vulnerability. This approach should be integrated into both development planning and private sector decision-making processes.

Finally, compensatory risk management is understood as the process by which measures or actions are taken to transfer or share the residual risk that remains after other risk management measures have been implemented.

This document identifies two types of risks that require a tailored approach. Extensive risk encompasses the risk for hazardous events, characterized by low intensity, severity, and impact, as well as high-frequency disasters. This type of risk is prevalent in rural areas and urban peripheries, where low-income communities and households are exposed to storms, floods, fires, or landslides. In general, extensive risk is associated with poverty, inequality, and environmental degradation.

Conversely, intensive risk is characterized by disaster risk of high intensity, severity, and impact and, occurring at medium to low frequency. This type of risk is prevalent in large cities or densely populated areas, exposed to major threats such as earthquakes, tsunamis,

hurricanes, active volcanoes, or major floods. Furthermore, these areas have high levels of vulnerability to these threats.

1.3 Disaster risk management and climate adaptation

As per the IPCC's SREX report (IPCC, 2012), disaster risk is not solely determined by natural events, but primarily by the extent of exposure and vulnerability of individuals, communities, and systems. Consequently, even phenomena that are not necessarily extreme can cause great damage if they impact highly vulnerable populations or if multiple events occur consecutively, leading to cumulative effects.

Climate change alters weather events, affecting their frequency, intensity, duration, and geographic extent. Likewise, these conditions create the potential for unprecedented events. These changes are not always gradual; they can also be rapid and unexpected. In essence, the behavior of the climate becomes more uncertain, not only the changes in averages, but also the variability and distribution of events. Even several moderate events, when combined, can generate severe impacts.

At the same time, many extreme events are part of natural climate variability. This pattern will persist in the future. Extreme events will not only be influenced by human-caused climate change, but also by this natural variability. Both factors will interact, resulting in more frequent and more complex extreme events that require comprehensive solutions.

Faced with this scenario, adaptation to climate change becomes a crucial tool for disaster risk management. Adapting goes beyond merely reacting to emergencies; it involves anticipating more extreme risks in the future, including significant urban planning, infrastructure development, and production systems. However, this preventive and transformative approach is not always fully understood or effectively applied in decision-making processes.

In this context, disaster events should not be solely attributed to natural phenomena or climate change. Instead, they are largely the result of societal organization and decision-making, a concept known as the social construction of risk. Therefore, a more practical and balanced vision is needed that emphasizes reducing exposure and vulnerability, as addressing these factors is key in mitigating the impacts of disasters.

1.4 Systemic risk

The word 'system' is derived from the Latin *systēma*, which is derived from the Greek word *σύστημα* *sýstēma* 'gathering, whole, aggregate'. It describes a set of entities that interact in an orderly and organized manner. The first formulation of system as a theory is attributable to the biologist Ludwig von Bertalanffy (1901-1972), who coined the name "General Systems Theory."

Systemic risk research originally emerged within complexity science in the early 1950s. The concept of systemic risk and its application to "complex problems" (Rittel and Webber, 1973) has gained prominence in the 2000s, coinciding with the 2007/08 financial crisis, the 2011 earthquake and tsunami in the Tōhoku region, Japan, recent climate impacts, and the COVID19 pandemic caused by the SARS-CoV-2 virus. These events heightened awareness of how specific events (such as physical hazards, economic or geopolitical events) have knock-on effects across regions and sectors through interconnected and interdependent systems, resulting in unmodeled losses and the potential for systemic collapse.

In the complex scenario where the construction of risk materializes, a phenomenon known as systemic risk emerges. This risk manifests at the local level within a specific territory. Systemic risk is characterized by high levels of interdependence, where the linearity of events is replaced by discontinuities, feedback loops, and uncertainty. When we discuss systemic risk, we are referring to crises that occur sequentially, synchronously, or simultaneously. Systemic risk is associated with cascading or concatenated events and coincidences, compound, or concomitant events. The former involves a sequence of interconnected incidents or occurrences where each event triggers or influences the next, often leading to a chain reaction or escalation of consequences. The latter refers to the possibility of unrelated events occurring simultaneously. These events may appear or act together without having a causal relationship.

Conclusion

Disaster risk management, a field of increasing complexity, demands a rigorous understanding through the integration of fundamental concepts. Disasters are not inherently a natural phenomenon; they arise from the interaction of hazards with pre-existing conditions of exposure, vulnerability, and capacity in a territory. This distinction holds immense practical importance; it implies that disaster events are largely socially constructed and, consequently, preventable or at least mitigable through public policy, territorial planning and development decisions.

Risk management encompasses four complementary modalities — reactive, prospective, corrective and compensatory. These modalities range from immediate response to disaster, intervention of existing risk, actions aimed at preventing or minimizing the construction of new risks, to the transfer of residual risk. This diversity of approaches reflects a conceptual evolution, it is no longer just a matter of responding to emergencies, it is about intervening in the factors that generate them, particularly vulnerability and exposure.

Climate change introduces a new and structural dimension of uncertainty. It alters the frequency, intensity and geographical distribution of extreme events, thereby amplifying existing risks and potentially leading to historically unprecedented scenarios. In light of this, climate adaptation must transcend mere reactive measures. It requires profound transformations in urban planning, infrastructure, and production systems, aimed at reducing exposure and vulnerability before disasters strike.

Finally, the concept of systemic risk presents perhaps the most challenging aspect of contemporary risk management. In an increasingly interconnected world, risks do not operate in a linear or isolated manner; they are interrelated, mutually amplifying and manifesting as cascading crises with far-reaching effects that transcend sectors and territories. The financial events of 2007-2008, the earthquake and tsunami in Japan's Tōhoku region in 2011, recent climate impacts, and the COVID-19 pandemic caused by the SARS-CoV-2 virus (among other major events) have shown that systemic interdependence can transform local or sectoral phenomena into global shocks with unpredictable consequences.

In short, effective disaster risk management requires an integrated vision that articulates the scientific understanding of hazards with the analysis of social vulnerability, climate adaptation, and the governance of systemic risks. Resilience — understood as the ability to resist, adapt, and transform — serves as the normative framework for this collective effort. Achieving it transcends the boundaries of individual sectors or disciplines; it emerges as across-cutting imperative for contemporary societies in the face of an ever-evolving risk environment.

Chapter 2: Fundamentals of Public Policy

The study of decision-making processes and the implementation of public policy hold a central position in political science and public administration. Contrary to being a neutral or purely technical domain, public policy in disaster risk management is the domain in which societies make binding collective decisions regarding their shared values, resource allocation, and risk management strategies. In recent decades, the increasing complexity and unsustainability of governance environments—shaped by globalization, demographic change, climate disruption, and institutional fragmentation—have made the implementation of sustainable public policies more intricate. Concurrently, the quality of public policy systems has emerged as an increasingly critical determinant of social resilience.

This chapter offers a structured introduction to the conceptual underpinnings of public policy, with a particular focus on its connection to governance, its design processes and the initial phase of its development, specifically the inclusion of agendas. The analysis draws upon the Index of Governance and Public Policies in Disaster Risk Management (iGOPP), developed by the Inter-American Development Bank (Lacambra et al., 2015 and Lacambra et al., 2020). This index offers one of the most rigorous operational frameworks for connecting public policy theory with disaster risk governance. The analysis is further enriched by fundamental scholarly references in political science, including the works of Birkland (2020), Kingdon (2003), Howlett, Ramesh, and Perl (2009), Dye (1987), Lasswell (1956), and Mitchell, Agle, and Wood (1997) on stakeholder analysis.

The chapter is structured as follows: Sections 1 and 2 examine the concept of public policy and its interrelation with governance. Section 3 addresses policy design as the pivotal intellectual and technical activity of policymaking. Section 4 presents Birkland's systemic perspective on public policy. Section 5 explores Kingdon's Multiple Streams Model as a fundamental theory for delineating public policy agendas. Section 6 scrutinizes the phases of the policy development process, with a particular emphasis on Phase 1, Agenda Inclusion, which encompasses the formulation of public and governmental agendas, as well as stakeholder assessment.

2.1 Definition of public policy

Public policy, a concept with diverse definitions depending on the field of study, is most commonly defined by Thomas Dye as "what governments decide to do or not do" (Dye, 1987, p.1). The simplicity and elegance of this definition emphasize that inaction is also a form of public policy—with real distributional consequences akin to legislative actions. It is crucial

to note that inaction itself is not the absence of public policy; it has recipients, winners and losers, governed by a logic of power. This raises the question not only of government actions but also of those who choose to remain inactive and the reasons behind it. Furthermore, it highlights the governmental nature of public policy, distinguishing it from private decisions or unauthorized social action. Private decisions are binding only on the decision-maker; while public policy binds all subjects under the authority of the State. Non-compliance with public policy triggers sanction mechanisms that private party lack.

A more sophisticated formulation of public policy is developed by David Easton (1965), who adopts an organic perspective on politics (Hanumanthappa D. G, 2023). Easton defines public policy as the "authoritative allocation of values for the whole of society" which encompasses the production of the political system that facilitates the distribution of goods, rights, and obligations. Easton's systems framework situates public policy at the intersection of inputs (demands and supports from the environment) and outcomes (binding decisions), incorporating feedback processes that modify future inputs. This systemic conception is fundamental to understanding politics as a dynamic and recursive process, rather than a series of isolated actions.

Harold Lasswell (1956), who established political science as a distinct discipline, conceptualized public policy as the systematic application of governmental intelligence to address societal problems. This definition underscores the problem-oriented nature of public policy, its multidisciplinary approach, and its normative commitment to upholding human dignity. Hogwood and Gunn (1984) broadened the definitional landscape by identifying ten different ways in which the term "policy" is employed in practice. These include a clear stated intention, formal authorization, a program, an outcome, and ultimately, a process. This demonstrates that "policy" functions simultaneously as a noun and a verb, as well as a product and a practice.

For this paper, and in line with the iGOPP framework, public policy is defined as the set of legal, institutional, and budgetary frameworks that enable governments to establish objectives, assign responsibilities, mobilize resources, and create transparency and accountability mechanisms in the governance of specific areas of collective interest. As stated by the iGOPP, the Index assesses the "formal, and therefore demonstrable, existence of a series of legal, institutional and budgetary conditions that are fundamental for Disaster Risk Management processes to be implemented in a specific country" (Lacambra et al., 2015, p.i). This definition is significant because it emphasizes the need for formal, verifiable evidence, distinguishing between political intention and political reality. It demands that the conditions of governance be demonstrably established, not merely declared.

2.2 The relationship between public policy and governance

Governance and public policy are interrelated concepts, yet analytically distinct. Governance encompasses the overarching framework of rules, norms, institutions, and relationships that facilitate the collective decision-making and implementation processes. Public policy, in turn, emerges as a significant outcome of governance, serving as the tangible product through which governance exerts its authority over specific social problems.

The World Bank defines governance as the way in which power is exercised in the management of a country's economic and social resources for development. It identifies accountability, transparency, the rule of law, and participation as its essential characteristics (World Bank, 2005). The United Nations Development Programme expanded this concept to encompass the system of values, policies and institutions through which society manages its affairs through interactions between the state, civil society and the private sector (UNDP, 1997). More recently, the World Bank's *2017 World Development Report* described governance as the process through which state and non-state actors interact to design and implement policies within a given set of formal and informal rules that shape and are shaped by power (World Bank, 2017).

The iGOPP operationalizes this relationship within the context of disaster risk management. It conceptualizes DRM as a dimension of development policy that can only advance through the collaborative functioning of governance conditions and public policy instruments. The Index identifies governance as the enabling environment in which policies can be designed, financed, and implemented. Furthermore, it defines emerging governance conditions as a structural impediment to effective public policy, irrespective of the quality of individual policy instruments. In this framework, governance is not merely the backdrop on which politics operates; it is the prerequisite for the effectiveness of the policy (Lacambra et al., 2015).

This relationship has significant practical implications. A government can enact comprehensive and sophisticated disaster risk management legislation while simultaneously lacking the institutional capacity, fiscal and human resources, or rule of law conditions to implement it. Howlett, Ramesh, and Perl (2009) contend that the selection of policy objectives and instruments is always conditioned by the institutional context—actors, ideas, and institutions—in which policymakers operate. In this sense, the quality of governance determines the variety of feasible policies and the conditions under which they can be expected to achieve the intended results.

2.3 Policy Design: The Essence of Public Policy Design and Processes

Public policy design is the deliberate process by which policymakers identify objectives, select instruments, and construct frameworks to address public problems on the government's agenda. It is the intellectual core of policy-making — where abstract governance intentions are translated into concrete legal, institutional, and programmatic forms.

Howlett (2011; 2019) defines policy design as "the process of consciously choosing a set of policy means or instruments with specific objectives and goals in mind." This definition encompasses several essential dimensions; the intentionality of the design (as opposed to incremental or accidental changes), the selection of instruments (rather than just objectives), and the orientation towards specific populations and problems. Howlett distinguishes between substantive policy instruments—which directly influence the behavior of target populations through regulation, economic incentives, or information—and procedural instruments, which shape the processes through which policies are formulated and implemented.

The iGOPP represents a distinct model of policy design tailored to the conditions of governance for disaster risk reduction. Its architecture aligns with the nested model of policy design described by Howlett et al. (2009). At the broader level, governance conditions (legal frameworks, institutional mandates, inter-institutional coordination mechanisms) delineate the scope of viability within which operational policy decisions are made. Within this scope, specific DRM instruments — such as risk identification systems, early warning protocols, and financial backstop mechanisms — are designed to address specific risk management objectives. Coherence between these levels — as Howlett (2019) refers to as "calibration," emerges as a pivotal determinant of the effectiveness of public policies.

Hogwood and Gunn (1984) characterize policymaking as inherently political as well as technical. Even the most technically sophisticated policymaking must navigate the challenges of political feasibility, disputes between actors, and institutional resistance. This perspective is crucial to understanding why the iGOPP's finding of "emerging progress" in DRM governance in Latin America and the Caribbean is not primarily a technical deficit but rather a reflection of the political conditions that shape public policy design and the institutional limitations within which disaster risk governance operates.

A critical distinction in policy design lies between policy as written and policy as implemented. The gap between the formal content of public policy and operational reality—as identified by Pressman and Wildavsky (1973) as the implementation gap, is influenced by the quality of the design itself. This includes the clarity of objectives, the alignment of instruments with capacities, and the provision of genuine incentives for compliance through

accountability mechanisms. The iGOPP's emphasis on "formal and therefore demonstrable" governance conditions serves as a direct methodological response to this gap, asserting that design verification is a prerequisite for assessing governance quality.

2.4 Birkland's view of politics as a system

Birkland's book, "An Introduction to the Political Process" (Birkland, 2020) presents one of the most widely used and analytically sound frameworks for understanding public policy as a system. Drawing on Easton's systems theory, Birkland conceptualizes the political process as an open system where inputs from the social, economic, and political environment are transformed, through institutional processes, into political outcomes. These outcomes, in turn, trigger feedback processes that shape future inputs.

At the core of Birkland's systemic model lies the recognition that policymaking is not a linear sequence of rational decisions, but a dynamic, and iterative process shaped by multiple actors, competing interests, institutional constraints, and the inherent uncertainty associated with public problems. The "policy-making system" encompasses not only government institutions, but also unofficial actors, including interest groups, the media, think tanks, the private sector, epistemic communities, and civil society. These interactions shape the selection of issues for government agenda consideration, the evaluation and rejection of potential solutions, and the adoption and implementation of policies on the decision-making agenda.

Birkland identifies several distinctive properties of the public policy-making system that have direct implications for understanding DRM governance. Firstly, the system is characterized by bounded rationality; decision-makers operate with incomplete information, limited cognitive capacity, and frequent turnover among government officials, which prevents the design of fully rational public policies from being ideal rather than reality. Secondly, the system is shaped by process dependency; existing policies, institutions, and stakeholder configurations create inertia that hinders radical policy change even when demonstrably necessary. Thirdly, the system responds to focal events — dramatic incidents, disasters, or crises that focus political attention on previously neglected and ignored issues on the agenda and create temporary windows of opportunity for changes in public policy.

This third property holds particular significance in the realm of disaster risk management. Birkland's comprehensive research on focal events (2006) elucidates that major disasters, such as earthquakes, floods, hurricanes, and pandemics, serve as catalysts for policy transformation. They accomplish this by transforming diffuse public concern into focused policy demand. While they may not always generate new political ideas, they elevate the existing proposals of specific communities that have developed them to the visible and feasible agenda of decision-makers in high-level government positions. The documentation

provided by iGOPP's on legislative and institutional reforms in the aftermath of major disasters in Latin America and the Caribbean exemplifies this dynamic.

Birkland's systems perspective emphasizes the significance of the institutional context, encompassing the "structural" and "social" dimensions of public policymaking, in determining policy outcomes. Constitutional arrangements, federal structures, the separation of powers, and electoral systems influence the pathways through which political challenges transition from recognition to response. Consequently, the iGOPP indicator structure differentiates between national, sectoral, and territorial governance conditions. The same political objective may require distinct instruments and accountability mechanisms based on the distribution of authority within a specific constitutional framework (Lacambra et al., 2015, p.9).

2.5 J. Kingdon's model of "policy currents"

John Kingdon's *Agendas, Alternatives and Public Policies* (1984; revised 2003) introduced the Multi-Stream Framework (MSF), a framework that has become one of the most influential in the study of public policy. Initially developed to explain the emergence and implementation of issues within the U.S. federal agenda, the MSF has been extensively applied and adapted to comparative and international policy research (Howlett, 2019; Cairney & Jones, 2015).

Kingdon's central theoretical contribution was to challenge the rational-integral model of public policymaking. This model posits that governments identify problems, generate and evaluate solutions in a systematic way, and select the most effective option to address the identified needs. In contrast, Kingdon argued that the political process is characterized by three largely independent currents that simultaneously flow through the political system. These currents converge at a specific moment, a short-term window of opportunity where the identified problem aligns with the necessary incentives and conditions to advance the decision-making agenda.

The problem stream encompasses the processes through which conditions are defined as public problems deserving of government attention. Not every condition becomes a problem; they should be perceived as something that the government can and should address. Problems are elevated to the forefront of the agenda through systematic indicators (statistical data, trend lines, comparative references), focus events (disasters, crises, dramatic incidents), and feedback from existing programs that reveal gaps or failures. As Kingdon (2003, p. 198) observed, "people may generally agree that something should be done and still disagree about the nature of the problem."

The policy stream is the domain of specialists, including policy communities, academic researchers, think-tanks, and bureaucratic experts. These specialists generate, refine, and

advocate for specific solutions. This stream operates largely independently of the problematic stream. Ideas develop and recombine over time, with many proposals circulating in what Kingdon called the "soup of primitive politics" awaiting their moment of political relevance. Solutions gain traction in the policy stream through criteria of technical feasibility, value acceptability, and anticipation of future constraints, particularly budget limitations. In this stream, policy entrepreneurs—individuals willing to invest their resources in promoting concrete solutions—play a crucial role in packaging proposals and maintaining their visibility across multiple policy windows (Kingdon, 2003).

The political current encompasses the dynamics of electoral politics; the organized interests present and the national mood. At a given moment, the context, the opportunity, and the political commitment to act coincide with a problem previously identified with a policy that can be supported by a majority. Political receptivity to specific problems and solutions is influenced by various factors, including changes in government, public opinion, electoral cycles, and advocacy coalition activities. Unlike problematic and political currents, the political current is often driven by factors independent of the substantive merits of specific proposals.

In Kingdon's framework, the pivotal moment lies in the opening of a window of opportunity for policy. This is a transient period during which the three streams converge, creating conditions for policy change. Policy windows are established by focusing events on the problematic current, through shifts in the political current, or, occasionally, by the emergence of a compelling solution within the political current. When a skilled policy entrepreneur combines a well-crafted solution to a politically pertinent issue at a time of political receptivity, the conditions for agenda-setting—and, ultimately, policy change—are maximized. (Kingdon, 2003, p.195).

The Multi-stream Framework has been widely applied in the realm of disaster risk and emergency management. Birkland's (2006) research on focal events demonstrates how major disasters create opportunities for DRM policy reform, elevating pre-existing proposals developed by policy communities from the government's agenda. The iGOPP implicitly reflects this dynamic; their national assessments indicate that the most significant advances in the formal governance conditions of DRM – encompassing comprehensive legislation, dedicated institutional mandates, and explicit budget allocations – frequently occur after major disasters that opened political avenues for reform (Lacambra et al., 2015).

A frequently cited limitation of Kingdon's approach is that his emphasis on contingency and solution advocates overlooks the role of structural determinants that, albeit more subtly and equally decisively, filter and prioritize the problems that gain prominence on the agenda. Howlett (2019) point out that the comparative application of MSF has underscore the

significance of institutional contexts – such as constitutional frameworks, state capacity, and veto actors – in determining which windows open, their openness and who possesses the access and resources to exploit them. In the context of Latin America and the Caribbean, high institutional fragility, bureaucratic process, and fiscal constraints can effectively close policy windows even when the three streams would otherwise converge, resulting in what the iGOPP refers to as "nascent governance conditions" despite formal policy momentum.

2.6 The policy cycle as an analytical framework

The policy cycle or stage heuristics is one of the most enduring and extensively utilized frameworks for analyzing the political process. Originating in Lasswell's (1956) functional analysis of the decision process, and subsequently elaborated by Anderson (1975), Hogwood, and Gunn (1984), the framework disaggregates the political process into a sequence of analytically distinct stages: problem identification and agenda-setting, policy formulation, decision-making, implementation, evaluation, and — in some iterations — termination or revision.

As Birkland (2020) emphasizes, the stage framework serves as a heuristic rather than a descriptive theory. It does not assert that policy development unfolds linearly and sequentially from agenda formulation to evaluation. In contrast, actual political processes exhibit non-linearity, iteration, and are characterized by feedback mechanisms, inversion, and concurrent activity across multiple stages. The framework's value lies in providing analytical entry points to comprehend each phase of the process and the factors that influence transitions between phases.

The iGOPP exemplifies a comparable understanding in various phases of DRM policy development, categorizing its indicators based on the governance conditions required at different stages of policy development. This encompasses the legal frameworks that set the mandate for risk identification, the budgetary conditions that facilitate investment in risk reduction, and the institutional mechanisms that support disaster recovery.

Conclusion

Public policy is the authoritative articulation of collective choices regarding the management of shared societal challenges and the governance of common affairs. Its relationship with governance is inherently constitutive; the quality of governance—the encompassing the institutional, legal, and fiscal frameworks within which policy is conceived, implemented, and assessed—determines the scope of policy options available and the conditions under which any policy is anticipated to achieve the intended results. The iGOPP operationalizes this relationship within the field of disaster risk management, thereby

highlighting the disparity between formal political aspirations and substantive governance capacity that often characterizes numerous developing country contexts.

Policy design is the deliberate process of selecting objectives, instruments, and accountability mechanisms. This process is simultaneously technical and political, characterized by institutional history, and shaped by the exercise of power. Birkland's systemic view of policy situates this design process within a broader environment of competing actors, institutional incentives, and feedback dynamics that make rational-integral design an aspiration rather than a description. Kingdon's Multi-Current Framework explains why public policy change is episodic rather than continuous, depending on the convergence of problem recognition, available solutions, and political responsiveness. This convergence occurs in a short-term window of opportunity that political entrepreneurs can cultivate, but they can rarely fully control.

Chapter 3: Phase 1 - Problematizing the topic and its inclusion in the agenda

Before a public policy can be formulated, implemented or evaluated, a fundamental shift is necessary. A societal issue must be acknowledged, named, and defined as a problem that requires collective action. In this course, other potential problems are excluded from the government's agenda due to factors such as lack of consensus, insufficient incentives, or lack of prominence in public discourse. This process, known as problematization, is the intellectual and political act that initiates the entire public policy cycle.

Problematization is not simply the observation that something is going in the wrong direction. Many situations that cause harm exist for long periods without becoming public problems in the realm of governance. Poverty, environmental degradation and disaster risk have always been present in human societies; they only become policy problems when they are *presented* as socially unacceptable situations, causally attributable to identifiable factors and susceptible to collective action. As Birkland (2020) emphasizes, a condition becomes a problem when people begin to think that a decision should be made about it — and, most importantly, that the government is among those who should act.

3.1 The three dimensions of problematization

Problematization operates simultaneously along three distinct yet deeply interconnected analytical dimensions.

The first is perception. A significant number of social actors must recognize that a situation is causing harm and that this harm is not natural, inevitable, or acceptable. This shift in perception does not happen automatically. It requires affected communities, researchers, civil society, or media actors to make the harm visible. They do this by presenting evidence, testimonies, images, and narratives in a way that moves it from the private sphere of individual suffering to the public sphere of collective concern. For instance, in the context of disaster risk, the publication of loss databases such as DesInventar, or the systematic application of tools like iGOPP, fulfils this crucial function. It makes visible damage that was previously diffuse, localized, and politically invisible.

The second dimension of problematization is its definition, involving the delineation, the true nature of the issue, encompassing its causes, boundaries, affected populations, and scope. This is where problematization assumes a political dimension. The same objective situation can be characterized in radically different ways, each carrying different implications for

accountability and appropriate responses. For instance, a flood that devastates an informal settlement can be categorized as a natural disaster (warranting humanitarian intervention), a planning failure (necessitating regulatory measures), a poverty-related issue (requiring social investment), or a governance deficiency (requiring institutional reform). As Torres-Melo and Santander (2013) point out, the way in which a problem is defined largely determines the legitimacy and acceptability of potential solutions. Consequently, the definition of the problem is never neutral, serving as a battleground for actors with diverse interests, values and explanatory frameworks.

The third dimension of analysis is attribution, which involves identifying the causes and, by extension, the responsibilities associated with a problem. A problem whose causes are attributed to individual behavior elicits significantly different political responses compared to one whose causes are attributed to structural conditions, institutional failures, or market dynamics. In the context of disaster risk management, the Sendai Framework's assertion that disasters are not natural events but the manifestation of accumulated risk—constructed through human decisions about land use, infrastructure investment, social protection, and governance—serves as a potent act of problematization. It attributes disaster losses to identifiable and rectifiable governance failures rather than attributing them to forces beyond human control.

3.2 Problematization and transition to the public agenda

Not all issues that are identified as problems make it onto the public agenda. The transition from a recognized social problem to an issue of active government attention—what Cobb and Elder (1983) called the movement from the systemic agenda to the government agenda—requires certain additional conditions. Kingdon's (2003) Multi-Current Framework provides insights into the factors that facilitate this transition. Problems gain public attention when credible indicators demonstrate their undeniable magnitude. Additionally, focal events such as major disasters, crises, dramatic incidents, and pandemics can generate political attention from various sectors, creating windows of opportunity for action. Furthermore, feedback from existing policies reveals their inadequacy in ways that can no longer be ignored.

Problematization, in this context, serves as the crucial initial step. It establishes the criteria for a public problem before any window of opportunity arises. Without a coherent, evidence-based, and politically comprehensible definition of the problem, its impact, and the state's role in addressing it, even the most dramatic event will fail to generate sustained political action. Countries that have achieved the most remarkable progress in disaster risk governance have done so because they had already engaged in sustained problematization efforts – led by scientific communities, civil society, affected populations and government

officials – to lay the conceptual and political groundwork before the window of opportunity for action opened.

3.3 The public agenda and the government agenda

A critical analytical distinction in the study of agenda definition lies between the public agenda (or systemic agenda) and the governmental agenda (or institutional agenda). This distinction, fundamental to the work of Cobb and Elder (1983) and elaborated by Birkland (2020), traces the trajectory that a problem must undergo from a broad social concern to active consideration by the government.

The public agenda comprises all issues that resonate with a substantial segment of the population — concerns that are widely acknowledged as problems and widely accepted as legitimate subjects of collective attention. A condition transitions from a private problem to a public one when it is perceived to have a broad impact on social welfare, when it is presented as amenable to government action, and when it garners sufficient public support to sustain political pressure. Sjöblom (cited in Birkland, 2020) identifies two processes in this transition: the *perception* of the problem (a situation becomes publicly unsatisfactory when it affects the perceptions of numerous social actors) and the *definition* of the problem (the delineation of its causes, boundaries and political implications).

The government's agenda is narrower and more selective. It comprises the subset of public agenda items that government officials and institutions actively pay attention to for a specific period — problems for which government actors are considering solutions. Kingdon (2003, p.3) defines the government agenda as "the list of issues or problems to which government officials, and those closely associated with them, pay serious attention at any given time." The shift from the government agenda to the decision-making agenda—the additional subset of items for which real options are actively considered—represents an additional threshold that most policy issues never clarify. Being on the government agenda means that a problem has been recognized by the authorities as worthy of attention. This is a significant achievement, considering that most social problems never even reach that stage. The decision agenda is that more demanding and selective space in which the relevant actors not only acknowledge the existence of the problem but also evaluate specific alternatives, allocate resources to analyze them, and move towards an election.

In the realm of disaster risk management, this distinction holds significant operational implications. The iGOPP's assertion that most LAC countries exhibit incipient rather than consolidated DRM governance conditions underscores, in part, the persistent challenge of transitioning DRM from the public agenda—where the repercussions of inadequate risk governance manifest in disaster mortality and economic loss—to the government agenda, where political, legislative, institutional and budgetary commitments are assumed. This

transition typically requires sustained advocacy efforts by political communities or the catalytic effect of a major event (Lacambra et al., 2015; Birkland, 2006).

Factors influencing agenda inclusion

Several factors determine whether and how a problem transitions from the public agenda to the government agenda. Birkland (2020) outlines four primary mechanisms through which issues gain prominence on the agenda.

Indicators, data, and evidence are crucial in problem definition. Statistical evidence of mortality from disasters, economic losses or vulnerability in infrastructure provides the empirical basis for problem recognition. The iGOPP itself functions partially as a system of indicators by quantifying governance gaps in DRM, creating the evidentiary basis for policy advocacy and the need for government attention. However, indicators alone rarely drive agenda changes; their interpretation can be questioned, and their political relevance depends on the decisions and consensus reached by the policy advocates.

Focal events — defined by Birkland (2006) as "sudden and relatively rare events that reveal the failures of existing policies," are perhaps the most potent catalysts for inclusion in the DRM agenda. Major disasters create the political conditions for reform by generating concentrated public demand that surpasses the capacity of existing institutions. This demand makes the costs of inadequate governance undeniable. However, as Birkland points out, the window of opportunity that a focal event presents is short-lived. Political attention and commitment wane, competing priorities resurface, and momentum for reform diminishes if political actors fail to swiftly match available solutions to the politically relevant problem.

Feedback from existing programs serves as a third avenue for agenda inclusion. When existing policies fail to achieve their stated objectives—such as DRM laws exist but lack implementing regulations or disaster funds unable to be disbursed during declared emergencies—program failure generates demands for policy revision that can elevate the agenda's priority. iGOPP's measurement of the disparity between formal policy existence and operational implementation capacity is specifically designed to illustrate this type of feedback signal.

The fourth mechanism involves government and lobbying activities. Policy makers within government, such as ministers, legislators, and senior officials, may attempt to include DRM in the government agenda for various reasons, including electoral pressures, institutional mandates, and international commitments like the Sendai Framework for Disaster Risk Reduction 2015–2030. Organized civil society, scientific communities, and international

organizations also play a role in exerting pressure on government actors to maintain DRM's active presence on the public agenda (Lacambra et al., 2015).

3.4 Stakeholder assessment

Stakeholder assessment is an essential component of the initial phase of the public policy development process. The identification, characterization, and strategic commitment of stakeholders significantly influence both the content of emerging policy proposals and the political viability for inclusion in the agenda. Without a comprehensive understanding of the relevant actors, their interests, and their potential influence, policy advocates risk formulating proposals that lack political support or provoke active opposition from actors capable of obstructing the agenda's progress.

The fundamental framework for stakeholder analysis in political science is Freeman's (1984) concept of a stakeholder as "any group or individual that can influence or is affected by the achievement of an organization's goals." In the context of public policy, this definition encompasses a diverse range of actors, including multi-level state institutions, political parties, organized interest groups, technical and scientific communities, civil society organizations, private sector actors, the media, and, critically for DRM, the affected communities themselves.

Mitchell, Agle and Wood (1997) refined this framework by proposing a typology of stakeholder relevance based on three dimensions: power (the capacity to influence government action), legitimacy (the social acceptance of a stakeholder's claims as appropriate and valid), and urgency (the extent to which stakeholder grievances require immediate attention based on temporal sensitivity or criticality of interest). Actors who possess all three attributes—what Mitchell and collaborators refer to as ultimate actors—are given the highest priority in policy development processes and receive the most consistent government attention.

The Mitchell-Agle-Wood framework holds substantial implications for the inclusion of individuals in the DRM agenda. It posits that populations most exposed to disaster risk, such as older adults, individuals with disabilities, and informal land occupants residing in high-risk areas, may receive minimal government attention not due to the irrelevance of their interests, but rather because they often lack power and, in contexts of political marginalization, may even lack the formal legitimacy necessary to render their claims relevant to decision-makers. Conversely, actors possessing significant power and legitimacy, whose claims lack urgency – large landowners in low-risk areas, well-organized business associations – may receive disproportionate political attention in relation to their exposure to disaster risk.

In the iGOPP operational framework, stakeholder assessment is seamlessly integrated into the design and implementation of the index. The index's indicators evaluate whether governance frameworks explicitly incorporate mechanisms for the participation of relevant actors, including subnational governments, sectoral ministries, civil society organizations, and technical communities, in DRM planning and decision-making. The absence of such mechanisms in a substantial portion of the countries assessed underscores, in part, the failure of initial policy-making processes to conduct and act upon comprehensive stakeholder assessments (Lacambra et al., 2015).

Freeman's stakeholder mapping matrix, a practical tool for stakeholder assessment in Phase 1, positions relevant actors based on two axes: their interest in the issue at hand and their influence on its outcome. Actors with significant power and interest, such as government institutions, large business associations, and national media demand intensive engagement and early mainstreaming in the problem statement. On the other hand, actors with high interest but low power, including affected communities and marginalized groups, require structural mechanisms of inclusion to compensate for their political disadvantage. Actors with high power but low interest need information and advocacy strategies that encourage their involvement. Lastly, actors with low power and low interest require oversight to anticipate potential changes in their relevance as agenda conditions evolve.

Conclusion

Phase 1 of the political process, encompassing the problematization of the issue and its inclusion in the agenda, serves as the fundamental threshold that every public policy must overcome before progressing towards its formulation, adoption, and implementation. In this context, problematization emerges as the most fundamental act within the cycle of public policy. It represents the intersection of knowledge and politics, where evidence converges with narrative, and where the intangible becomes tangible. Consequently, investing in rigorous, participatory, and equity-sensitive problematization—ensuring that the definition of a problem accurately reflects the reality of those most affected, rather than just the preferences of those with the most political influence—transcends the realm of academic pursuits. It constitutes a prerequisite for the development of public policies that effectively serve the intended beneficiaries.

The transition from the public agenda to the government agenda is influenced by the availability of credible evidence, the occurrence of focal events, feedback on existing policy shortcomings, and the organized advocacy of actors capable of exerting political pressure. At this stage, stakeholder assessment is not merely a supplementary activity but a fundamental analytical requirement. Identifying the pertinent stakeholders, their interests,

and their capacity to exert influence is crucial in formulating agenda-inclusion strategies that are both technically sound and politically viable.

These conceptual tools collectively form the intellectual foundation to understand why DRM policies either progress or remain stagnant within specific national and territorial contexts. Furthermore, they enable the identification of the necessary governance investments and policy strategies to transition from initial conditions to well-established and effective policy systems capable of safeguarding the most vulnerable populations from foreseeable and preventable harm.

Chapter 4: Phase 2 - Policymaking

This chapter examines the stage at which government attention translates into concrete policy content. It involves specifying objectives, generating and evaluating alternatives, selecting instruments and proposing institutional and financial arrangements. As described by Howlett, Ramesh, and Perl (2009), this process transforms the problem that has gained public attention into an authoritative proposal for collective action. It is also the stage where commitments confront political and institutional constraints of viability, leading to a widening of the gap between political aspiration and political reality.

4.1 Defining policymaking

Policymaking is the stage of the policy cycle where the content of a potential policy is developed, specified, and evaluated before a formal decision is made. Hogwood and Gunn (1984, p.5) define it as the process where "a decision is made about what to do (or not to do) regarding a problem that has been put on the public agenda." Birkland (2020, p.234) describes it as the phase in which governments define and refine the alternatives they will seriously consider for adoption. This is the moment when Kingdon's (2003) "soup of problems" crystallizes into analyzable policy options with specific content, costs, and consequences.

It is essential to differentiate the formulation and the stages that precede and follow it. The third chapter focuses on defining the agenda, which involves identifying the problems that should be addressed by the government. The formulation, on the other hand, deals with the actions that should be taken to address these problems. Decision-making, which follows formulation, is the formal process of making authoritative choices among the alternatives that have been generated. Implementation, which involves executing the chosen policy, depends on the quality of the formulation. A poorly formulated, yet politically supported, policy can lead to implementation problems that no administrative effort can fully resolve (Pressman and Wildavsky, 1973).

Policy formulation is distinct from policy design, despite the frequent confusion between the two terms. As per Howlett (2019), while design serves as the normative framework, encompassing principles, criteria and objectives, it should guide the formulation process. Formulation, on the other hand, represents the actual process, often characterized by controversy, iteration, and political constraints, through which design criteria are translated into political content. In practice, formulation processes seldom achieve the coherent and calibrated designs advocated by regulatory frameworks. Instead, they yield outcomes

influenced by the political resources of competing actors, the cognitive limitations of decision-makers, and the institutional constraints of existing governance arrangements.

The iGOPP conceptualizes formulation as the phase where the legal, institutional, and budgetary frameworks that support DRM are established. Its practical application lies in identifying gaps in the legal, institutional, and budgetary framework that may exist in a particular country. This helps focus a country's efforts on relevant aspects of governance aimed at strengthening DRM public policy options. The formulation phase is not merely analytical but also constitutively political. The specific content of legal frameworks, mandates assigned to institutions, and budget lines allocated to DRM functions are the results of formulation processes where power, interests, and evidence interact.

4.2 Political decision-making models at the formulation stage

This section delves into the primary models of policy decision-making during the formulation phase, including the rational-integral, incrementalist, mixed-scan, and bounded rationality models. It critically examines their respective contributions and limitations.

The rational-integral model

The rational-integral model, also known as the synoptic model, embodies the normative paradigm of policymaking. Grounded in neoclassical economics and formal decision theory, it prescribes that policymakers should: (1) exhaustively identify all possible alternatives to address a delineated problem; (2) assess each alternative against a standardized cost-benefit metric; and (3) select the alternative that maximizes net social welfare. This model was formalized articulated in the realm of public policy by Lasswell (1956) and operationalized through the cost-benefit analysis tool and systematic frameworks of programmatic planning, such as the Planning, Programming, and Budgeting System (PPBS) introduced in the United States federal government in the 1960s.

The analytical merits of the rational model are evident: it provides a structured, transparent, and defensible foundation for policy choice, treating formulation as an intellectual problem amenable to systematic resolution. In the context of DRM, it supports the type of systematic risk assessment, multi-criteria analysis of risk reduction options, and cost-benefit evaluations of investments in early warning and preparedness, which presuppose the risk identification and reduction components of the iGOPP. The Index addresses the inclusion of DRM in the government's agenda by verifying the existence of adequate legal frameworks for DRM, with the design of the iGOPP grounded on the understanding that disaster risk is essentially a development-related issue.

Despite its widespread acceptance, the rational model has been subjected to sustained and largely persuasive criticism. Its primary limitation, as identified by Herbert Simon (1957), lies

in the assumption of integral rationality — the capacity of decision-makers to identify all alternatives, obtain complete information, and calculate optimal outcomes. Managerial behavior places decision-making at the core of analysis and investigates the decision-making processes of individuals within specific organizational frameworks or contexts. While standard economic theory posited that individuals are perfectly rational decision-makers, Simon highlighted the limitations of rationality that managers encounter in real-world scenarios, particularly in terms of their memory, attention, and capacity.

Bounded rationality and satisfaction

Simon's response to the limitations of integral rationality was the theory of bounded rationality. This theory acknowledges that decision-makers operate under cognitive constraints, incomplete information, and time pressure, rendering the rational-integral ideal virtually unattainable. Instead of optimizing, Simon (1957) proposed that managers should seek alternatives until they find one that meets an acceptable threshold and then cease their search. Simon aimed to establish the distinction between theoretical behavior and actual behavior, thereby verifying the direct inapplicability of neoclassical theory in practice. In the 1950s, Simon developed a more positive and formal characterization of the mechanisms of choice under conditions of bounded rationality, considering not only the economic behavior of the individual, but also their environment.

Bounded rationality has significant implications for DRM policymaking. In situations where risk data are incomplete, institutional capacity is limited, and political pressure for immediate action is high—conditions prevalent in many disaster-prone countries in Latin America and the Caribbean—satisfying behavior is not a departure from good practice, but an institutional reality that policymaking must acknowledge and accommodate. Improved governance of disaster risk management leads to a substantial reduction in the likelihood of human casualties caused by disasters. Specifically, an additional point in the iGOPP is associated with a 3% reduction in deaths caused by disasters caused by natural hazards. Nevertheless, the formulation of improvements in governance must proceed under conditions of limited rationality.

Incrementalism: getting ahead

Charles Lindblom's (1959) critique of the rational model stands as the most enduring and influential in political science literature. Lindblom argued that the rational model described an unattainable ideal, and that actual policymaking unfolds through what he called "muddling through." This process involves incremental and fragmented comparisons, wherein policymakers evaluate only a limited number of alternatives that exhibit marginal differences from existing policies. In situations characterized by high uncertainty and incomplete information, small, reversible adjustments are preferable to radical reforms.

These adjustments distribute the costs of change more predictably and engender less political resistance. In practice, policymakers fail to identify targets and subsequently examine alternative means, deviating from the rational ideal demands. Means and ends are often considered concurrently, as different policy alternatives represent varying compromises between conflicting values. Consequently, incremental outcomes are virtually inevitable, given the necessity of negotiating a limited number of alternatives that differ only marginally from previous policies.

Lindblom's incrementalism has both descriptive power and normative scope. It effectively captures the political realities of contested, fragmented, and trajectory-dependent political environments, while also acknowledging the value of reversibility. Small changes can be corrected more easily than deep reforms. However, it has also faced criticism for its inherently conservative bias. Critics, including Etzioni (1967), were concerned about the apparent endorsement of a conservative and fragmented political process that perpetuates existing agreements and harms those who lack power in incremental negotiation. This criticism is particularly pertinent for DRM. The compound and long-term risks posed by climate change and population aging cannot be adequately managed through mere marginal adjustments to existing emergency response arrangements. Instead, they require coherent and anticipatory policy frameworks that incremental formulation is structurally ill-equipped to produce.

Mixed scanning and the normative-optimal model

Etzioni's (1967) mixed-sweep model proposed a synthesis of rational and incremental approaches. Instead of rejecting incrementalism entirely, Etzioni suggested a synthesis. His idea was that policymakers should operate simultaneously on two levels; a broad scan to establish fundamental directions and a detailed and incremental approach to handle specific decisions. In mixed scanning, each element complements the other, reducing its shortcomings. Incrementalism limits the unrealistic aspects of rationalism, while rationalism helps overcome the conservative inclination of incrementalism by exploring long-term alternatives.

As an alternative response to the limitations of both rationalism and incrementalism, the normative-optimal model advocates for a more systematic yet realistic approach to policymaking, that integrates both quantitative and qualitative analysis and explicitly considers the influence of values and political dynamics in policy decision-making. In DRM contexts, the inclusion of extra-rational components, such as political will, institutional values, and cultural assumptions regarding risk, is maintained. This is particularly pertinent as the formulation of comprehensive DRM legislation requires not only technical analysis but also political commitment and clarification of values.

In practical terms, mixed scanning offers the most operationally advantageous framework for DRM policymaking. The six-component architecture of the iGOPP — General Framework for Governance, Risk Identification, Risk Reduction, Disaster Preparedness, Financial Protection, and Recovery — precisely embodies this two-tier structure. It serves as a broad directional framework (fundamental governance conditions for DRM as a whole) within which more detailed and incremental decisions are made on specific instruments and existing institutional arrangements.

4.3 Dynamics of Advocacy Actors and Coalitions in Policymaking

Policymaking is never purely technical; it's a political process where actors with different interests, beliefs, and resources compete to shape emerging policies. Understanding the stakeholder landscape—who participates, their positions, and influence mechanisms—is crucial for predicting outcomes, even more so than technical analyses.

Sabatier and Jenkins-Smith's (1993) Advocacy Coalition Framework (ACF) provides the most comprehensive theoretical explanation of how stakeholder dynamics influence policymaking over time. The ACF conceptualizes the political process as occurring within policy subsystems—relatively stable configurations of actors who share an interest in a specific political domain—in which actors form coalitions based on shared belief systems. The ACF describes the political process as an adversarial competition in which actors form and maintain coalitions, engage in analytical debates with learning potential, and defend their preferred problems and policy alternatives. The appropriate scale to analyze political processes over time is a subsystem of policies composed of actors who actively seek to influence policy decisions related to a particular issue and within a defined geographical area.

Within each advocacy coalition, actors share profound *core beliefs* (fundamental normative commitments regarding the appropriate role of the state and the market), *core policy beliefs* (positions on the specific political issue, its causes, and suitable responses), and *secondary beliefs* (instrumental positions on preferred policy instruments). The stability of the coalition is sustained through shared core beliefs. Change within coalitions often occurs at the level of secondary beliefs, while major policy shift—shifts in core beliefs between coalitions—requires external shocks or policy-oriented learning.

For DRM policymaking, the ACF unveils several distinct dynamics. First, DRM subsystems generally comprise at least two competing coalitions: a *forward-looking management-oriented coalition* (comprising scientists, civil society organizations, international development agencies, and risk-informed government officials advocating for anticipatory, long-term investments aimed at preventing risk construction or reduction) and a *reactive, response-oriented coalition* (comprising emergency management agencies, civil protection

services and political actors whose primary framework is reactive disaster management). These coalitions engage in competition not only for resources but also for the fundamental definition of DRM is and the appropriate policy instrument it requires.

Second, Haas's (1992) concept of epistemic communities—networks of knowledge-based experts who share normative and causal beliefs and actively seek to influence policy—plays a crucial role in DRM formulation. Risk scientists, climate modelers, epidemiologists, and urban planners constitute a distinctive epistemic community whose technical authority grants them access to formulation processes that purely interest-based actors lack. The iGOPP indicators include measures of whether national risk information systems—the institutional expression of the work of this epistemic community—are formally integrated into DRM formulation processes. Several institutional arrangements influence decision-making in disaster risk management. These include incentive structures, information gaps, and intra-governmental relationships. Both formal and informal institutions contribute to shaping the exposure, sensitivity, and capacities of individuals, social groups, and socio-ecological systems to respond to disaster risk.

Third, the concept of *policy brokers* – actors whose primary role is to mediate between competing coalitions and produce viable compromises – is essential to understanding how DRM formulation processes advance in politically contested environments. International organizations like the IDB, UNDP, UNDRR, and the World Bank often assume intermediary roles in LAC countries, offering both technical legitimacy and political facilitation for DRM governance reforms that national coalitions alone cannot sustain.

4.4 Instrument selection: the central technical task of formulation

The selection of policy instruments, the specific tools employed by government seeks to modify the behavior of target populations and achieve policy goals—is the defining intellectual task of policymaking. Howlett (2011; 2019) organizes extensive literature on policy instruments around two fundamental axes: the distinction between substantive and procedural instruments, and the distinction between policy *objectives* (citizens, organizations, markets) and the *resources* that governments deploy to influence them (authority, money, information, organization).

Substantive instruments

Substantive instruments are tools that directly influence the behavior of target populations toward achieving policy objectives. Howlett (2019) categorizes them into four families based on the primary resource they utilize. Authoritative-based instruments — such as laws, regulations, prohibitions, rules, and licenses — rely on the legal power of the state to compel or prohibit specific behaviors. In the context of DRM, these instruments encompass building codes, land use regulations in risk-prone areas, mandatory risk assessment requirements

for infrastructure development, and civil protection laws. Policies incorporate a substantive element that includes the technical arrangements of potential solutions to the political problem at hand, as well as a procedural component that involves all the processes and activities necessary to coordinate the actions of the political actors responsible for formulating, making decisions and implementing these alternatives.

Treasury-based instruments allocate financial resources to establish incentives (grants, tax breaks, loans) or disincentives (levies, fines, premium pricing) that alter the cost-benefit analyses of target entities. In DRM, these instruments encompass disaster risk insurance schemes, catastrophe bonds, pre-approved contingency funds, and investment incentives for resilient infrastructure. The Financial Protection component of the iGOPP accurately evaluates the legal and institutional conditions for the operational functionality of these instruments — including the existence of legislation permitting parametric insurance, the establishment of dedicated budgetary allocations for DRM, and the development of sovereign risk financing mechanisms.

Nodality-based tools leverage the government's central node in information networks to influence behavior through information provision, awareness-raising campaigns, labeling and vocational training. In DRM, these tools include public early warning systems, community-based risk education programs, hazard mapping and disclosure requirements, as well as professional certification standards for emergency managers. Organization-based tools, on the other hand, directly utilize government organizational capacity — including public companies, regulatory agencies, and emergency response units, to deliver DRM services.

Procedural instruments

Procedural tools are instruments that modify the policy process rather than directly impacting target populations. They influence who participates in the formulation, what information is considered, and how inter-institutional coordination is managed. Howlett (2011) categorizes these tools into four families: those that create new actors (advisory committees, scientific panels, multi-stakeholder platforms); those that modify actors' resources (training programs, capacity building grants, technical assistance); those that alter the rules of the game (consultation requirements, impact assessments, transparency obligations); and those that affect the network of political actors (coalition facilitation, support to interest groups, partnership frameworks).

In the initial stages of public policy development, procedural instruments often held greater significance than substantive ones in the formulation of DRM policies. When DRM governance conditions are still developing — as evidenced by the iGOPP assessment of most LAC countries — the primary challenge is not selecting advanced substantive tools but

establishing the institutional framework and engagement mechanisms that make substantive tool selection meaningful. Procedural instruments such as a national risk committee, a multisectoral coordination mechanism, or a systematic stakeholder consultation process are instrumental in creating the conditions necessary to the informed and legitimate decision-making of substantive DRM policy.

Guiding principles

Four fundamental principles are documented that serve as the guiding principles for DRM policies.

- Decentralization

Territorial entities must exercise their functions autonomously in the area of risk management, strictly subject to the powers that each of them has been specifically assigned in the constitution and the law.

The "national system" must contribute to strengthening the decentralization process through which the territorial entities can assume their responsibilities, reserving to the national level the tasks of defining the policy framework, coordinating actions, and implementing support and subsidy activities.

- Scope of competence

In risk management activities, for the purpose of exercising their respective powers, observance of the following criteria is essential:

- **concurrence**, harmonization of planning, management, and execution of national, municipal and district interests, promoting the joint structuring and collaboration of territorial entities to enhance the quality of life of their constituents
- **complementarity**, each actor should concentrate on its intervention in the areas where it can provide the most significant value, in relation to the contributions of others
- **and subsidiarity**, a matter must be resolved by the authority, whether regulatory, political or economic, that is closest to the issue at hand

- Coordination

National, subnational and local entities must ensure that there are due harmony, articulation, consistency, coherence, and continuity in their activities in relation to other sectoral and territorial bodies, for risk management.

- Participation

During risk management activities, the competent entities shall ensure that the citizen participation procedures are effective.

Criteria for the selection of instruments

Howlett (2011) outlines four criteria for evaluating instrument selection: **effectiveness** (will the instrument achieve its intended objective?); **efficiency** (at what cost relative to available alternatives?); **equity** (how are the costs and benefits of the instrument distributed among social groups and territories?); and **legitimacy** (Is the instrument consistent with the rule of law, democratic accountability and social values?). In DRM contexts, a fifth criterion, **resilience**; becomes particularly relevant. Resilience refers to the instrument effectiveness under the stress conditions (disasters, fiscal crises, political transitions) that are precisely the conditions in which DRM governance is most needed.

4.4 Suggested outline for a DRM policy-making process

Based on the theoretical frameworks reviewed above and the operational architecture of the iGOPP, the following suggested outline presents a structured approach to the formulation of a DRM policy framework. The framework is designed for application at the national level but can be adapted to subnational contexts. It progresses in five phases, each with defined inputs, processes, and outputs.

Phase A: Problem Specification and Evidence Base

Objective: To translate the agenda item — DRM as a governance priority — into a precisely defined policy problem with measurable dimensions.

Key activities: systematic risk assessment and exposure mapping; review of existing legal and institutional frameworks (using iGOPP indicators as an analytical template); analysis of past disaster data on mortality, economic losses and institutional response failures; identification of population groups and territories at higher risk.

Key actors: national meteorological and geological services; civil protection institutions; academic and research communities; international technical organizations (UNDRR, IDB).

Results: A national DRM risk profile and governance gap analysis, which constitute the evidentiary basis for the selection of instruments.

Phase B: Stakeholder mapping and participatory consultation

Objective: To identify all relevant actors, assess their positions and resources, and design inclusive formulation processes that enhance the legitimacy of emerging policy options.

Key activities: Stakeholder mapping using the Mitchell-Agle-Wood salience framework; structured consultations with reference ministries, subnational governments, civil society, private sector entities, and affected communities; inter-agency technical working groups for each DRM component.

Key actors: Office of the Presidency or Cabinet (coordination); Ministry of Finance; line ministries (health, housing, infrastructure, environment); subnational governments; civil society coalitions.

Results: A stakeholder register, consultation registers and a documented account of positions and concerns informing instrument selection.

Phase C: Generation and evaluation of policy alternatives

Objective: To generate a comprehensive set of policy alternatives for each DRM governance gap identified in Phase A, and to evaluate their effectiveness, efficiency, equity, legitimacy and resilience.

Key activities: comparative policy analysis (review of portfolios of DRM instruments in comparable countries); cost-benefit analysis for priority instruments; legal feasibility assessment; assessment of institutional capacity for each proposed instrument; scenario analysis under climate and demographic change projections.

Key actors: technical formulation teams (economists, lawyers, risk engineers, social scientists); international comparators; representatives of the epistemic community.

Results: A structured alternative analysis document that presents options, evaluations, and recommendations for each component of DRM.

Phase D: Instrument Selection and Package Design

Objective: To select a coherent package of substantive and procedural instruments that addresses the identified governance gaps, while ensuring institutional and fiscal viability.

Key activities: Application of Howlett's instrument selection criteria (effectiveness, efficiency, equity, legitimacy, resilience); comprehensive assessment of fundamental governance directions and specific instrument choices; design of implementation regulations and inter-

institutional coordination arrangements; design of financial protection instruments (contingency funds, sovereign risk transfer mechanisms).

Key actors: High-level inter-ministerial committee; legal drafting team; Ministry of Finance (on tax); DRM Technical Secretariat.

Outputs: A draft DRM policy framework document, including the associated draft legislation, institutional arrangements, budget proposals and implementation roadmap.

Phase E: Validation, Review and Formal Proposal

Objective: To submit the draft policy framework to public consultation, expert review and political validation prior to its submission for formal decision-making.

Key activities: public consultation on the draft framework; independent technical review; political negotiation within the executive and between branches of government; formal inter-ministerial authorization; referral to the legislative or decision-making authority.

Key actors: All previously involved actors; legislative committees; executive officers.

Results: A finalized and formally endorsed DRM policymaking document, ready for decision and adoption.

4.5 DRM Policymaking and Governance: The Connection to iGOPP

The iGOPP as a formulation evaluation framework

The iGOPP describes the general methodology employed in the Governance and Public Policy Index in DRM, presenting the core concepts that underpin both disaster risk management and governance, thereby defining its fundamental characteristics. The iGOPP evaluates the formal existence of the legal, institutional, and budgetary prerequisites essential for DRM governance. Its 241 indicators, meticulously organized into six components, serve as an implicit model for DRM policymaking.

Each of the six components of the iGOPP corresponds to a formulation domain. First, the General Governance Framework component evaluates whether the fundamental legal mandate and institutional architecture for DRM have been established. Second, the Risk Identification component assesses whether the evidentiary infrastructure for risk-informed policy choice has been legally and institutionally implemented. Third, the Risk Reduction component assesses whether the instruments for prospective risk management, such as land use regulations, building codes, and critical infrastructure standards, have been formulated and legally substantiated. Fourth, the Preparedness component assesses

whether operational response frameworks with appropriate inter-agency coordination mechanisms have been developed. Fifth, the Financial Protection component assesses whether risk financing instruments have been legislatively authorized and appropriately institutionalized. Finally, the sixth Recovery component assesses whether mandated post-disaster reconstruction frameworks have been formulated, and clear resources have been established.

The gap between formulation and implementation

One of the most significant empirical findings of the iGOPP is that most LAC countries exhibit incipient rather than consolidated governance conditions. This finding largely stems from a systematic failure in the formulation phase. The iGOPP evaluates 241 indicators to assess governance conditions in disaster risk management. Effective disaster risk management relies on legal, institutional, and budgetary frameworks. Countries like Peru and Panama have tested the iGOPP, leading to improvements in governance indicators in 13 countries. However, it is crucial to note that even in countries with clear legal frameworks, the iGOPP consistently identifies the absence of implementing regulations, dedicated budget allocations, and inter-institutional coordination mechanisms. These procedural instruments are essential for translating substantive legislative commitments into operational governance capacity.

This gap arises from a formulation gap rather than a mere implementation failure. It reflects the inclination, consistent with Lindblom's diagnosis of incrementalism, for policymaking processes to produce framework legislation that earns political credit at the agenda stage without generating the detailed and operationally instrument-specific decisions necessary for implementation. Birkland (2020) points out that the visibility and drama of major disaster events incentivize broad legislative responses that demonstrate political commitment, while the intricate regulatory and budgeting work of formulation—less visible, more technically demanding, and more politically contentious—receives scant attention within the policymaking process. Consequently, the result is what Pressman and Wildavsky (1973) identified as the structural cause of failure in implementation; the disparity between enactment and the operational conditions of effective action.

Towards a formulation-centred approach to DRM governance

The theoretical frameworks reviewed in this chapter suggest a focused understanding of how to improve DRM governance, emphasizing the quality of formulation processes rather than solely the content of the policies adopted. This analysis reveals several implications. First, DRM policymaking in high-risk, low-capacity contexts requires *mixed-scan approaches* that integrate a clear strategic framework (defining the governance conditions the policy aims to establish) with realistic and sequenced options of instruments tailored to institutional and

fiscal capacity. Attempting to formulate comprehensive DRM legislation without the regulatory, institutional, and budgetary infrastructure essential for its implementation creates the governance gaps documented by the iGOPP.

Second, the dynamics of actors in the formulation of DRM – particularly the competition between prevention and response-oriented coalitions – requires explicit management through procedural instruments that establish authoritative spaces for technical knowledge and affected communities. The technical nature and external position of these actors facilitate the interaction between DRM knowledge, institutions, the political world, and society. In this context, policy intermediaries (international organizations, independent commissions) play facilitating roles, making it more likely for formulation processes to produce coherent instrument packages that reflect both technical evidence and political feasibility.

Third, the selection of instruments for DRM should be guided by the criteria of resilience, effectiveness, efficiency, equity and legitimacy. Instruments that depend on sustained political will, complex inter-institutional coordination, or unreliable budget allocations will fail precisely in the context where DRM governance is most needed. Formulation should prioritize instruments with self-reinforcing characteristics — legal mandates with stringent implementation obligations, dedicated financial mechanisms that withstand budget crises, and institutional arrangements with sufficient legal independence to maintain their functions during political transitions.

Fourth, the iGOPP's conclusion that an additional point in the index is associated with a 3% reduction in disaster-related fatalities provides direct empirical support for the formulation-centric perspective. The tangible and demonstrable existence of governance conditions, a consequence of rigorous formulation processes, has measurable implications for disaster outcomes. This finding transforms DRM policymaking from an abstract governance concern into a life-saving imperative.

Conclusion

Policymaking is the stage at which governance intentions transform into political content. At this juncture, issues that have gained traction within the government's agenda are elevated to the decision-making agenda and translated into tangible legal frameworks, institutional mandates, financial instruments, and operational procedures. As this chapter has elucidated, the models that describe the actual process of formulation—bounded rationality, incrementalism, and mixed scanning—are not merely descriptive; they also serve as normative guides. They identify structural trends that contribute to formulation failures and propose the conditions under which more coherent, anticipatory, and equitable policy packages can be generated.

In the context of DRM governance in Latin America and the Caribbean, the implications are both diagnostic and prescriptive. The systematic documentation of governance gaps by the iGOPP highlights structural flaws in the formulation phase. On the one hand, there is a tendency to create broad legislative frameworks that lack the necessary regulatory, institutional, and financial details to effectively implement and dominate coalitions focused on responding to potential risks in political systems that prioritize visible emergency spending over invisible investments in risk reduction. On the other hand, it is worth noting the absence of the necessary procedural instruments, such as consultation mechanisms, integration of the epistemic community, and inter-institutional coordination platforms, that are essential for the quality formulation processes.

The five-phase formulation scheme proposed in this chapter provides a structured response to addressing these failures. It begins with a rigorous, evidence-based specification of the problem, followed by inclusive stakeholder consultation. Then, generates and evaluates alternatives under various criteria, including resilience. Next, it selects coherent instrument packages that are calibrated according to institutional capacity. Finally, it validates the emerging framework through democratic processes before formal adoption. It is not an idealized model of integral rationality; It is a mixed-scan approach that integrates strategic direction with practical feasibility, technical rigor with political legitimacy.

The relationship between transparent policymaking and disaster outcomes has transcended theoretical discourse. Empirical data from the longitudinal analysis of 26 nations within the iGOPP framework unequivocally demonstrates that enhancements in governance processes, specifically during the formulation phase—the tangible and verifiable presence of legal, institutional, and budgetary conditions—directly result in a decrease in fatalities from disaster events. Hence, investing in the quality of DRM policymaking is not merely an administrative refinement. It stands as one of the most cost-effective interventions for disaster risk reduction.

Chapter 5: Phase 3 - Policy Implementation

This chapter examines the policy implementation stage, the phase where authoritative decisions, such as statutes, executive orders, plans, and budget allocations, become operational reality through the efforts of public bureaucracies, executing agencies, and the communities they serve. As Torres-Melo and Santander (2013) note, a persistent complaint in the Colombian context—and by extension in Latin America—is not the absence of policies, but their ineffectiveness. Governments enact laws, issue decrees and formulate administrative acts, yet the problems they intend to address persist or intensify. Consequently, understanding the disparity political intention and political reality, and devising strategies to bridge this gap, constitutes the central objective of research within the implementation phase of a public policy.

5.1 What does implementation consist of?

The implementation of public policies entails the transition from authorized public decisions, articulated through statutes, plans and administrative orders, to the tangible actions, services, regulations and social outcomes that the policy aims to achieve. It serves as the operational cornerstone of governance, where institutional intentions converge with administrative realities, political commitments align with resource limitations, and legal mandates navigate the diverse social contexts in which they must be effectively implemented.

The landmark study by Pressman and Wildavsky (1973), titled “*How Great Expectations in Washington are dashed in Oakland*”—captures the essence of the implementation problem, laying the foundation of implementation research for five decades. It established that the gap between political decision-making and actual political outcomes is not merely coincidental, but rather a structural issue. The increasing complexity of joint action requires the coordination of multiple actors, organizations, and levels of government over time to achieve a common goal. However, as the number of decision points, the actors requiring consent or compliance, and the institutional layers involved increase, the likelihood of partial implementation, distortion, or failure becomes higher.

Torres-Melo and Santander (2013, p.85) define implementation as the process of translating policy decisions into concrete actions. This phase encompasses a series of activities, such as allocating financial, human, and organizational resources, assigning responsibilities to executing agencies; designing operating procedures; establishing monitoring and accountability mechanisms; and managing relationships between various actors, including

state and non-state entities, whose coordinated behavior is essential for achieving policy objectives.

Implementation simultaneously encompasses administrative and political dimensions. Administratively, it requires organizational capacity, including agencies, budgets, personnel, and procedures to execute prescribed functions. Politically, it involves the exercise of discretion, resource allocation between competing policies, and ongoing negotiation between various levels of government, public and private actors, and central mandates and local conditions. Recognizing this dual character, as Birkland (2020) refers to it as the “administrative policy” of implementation, serves as the foundation for comprehending the reasons behind implementation failures and the potential for improvement.

5.2 Berman's Approaches: Scheduled and Adaptive Implementation

Paul Berman's (1978; 1980) contribution to implementation theory lies in his proposal of a contingency framework—a systematic explanation of the appropriateness of various implementation strategies—, based on the premise that no single approach to implementation is universally suitable for all policy situations. Berman’s empirical study of federal education programs in the United States enabled him to distinguish between planned implementation and adaptive implementation, which correspond respectively to the top-down and bottom-up paradigms that have shaped the debate on implementation research for four decades.

Scheduled deployment and top-down approach

Scheduled implementation, a top-down approach, relies on the hierarchical authority of central decision-makers within the decision-making process. It assumes that implementation is primarily an administrative matter. If the policy is well-specified, resources are sufficient, and the implementing agencies are competent, the policy should be implemented as intended. The top-down approach reflects an underlying paradigm that views decision-making and implementation as two distinct stages completed by different stakeholders. A central level is responsible for the formulation stage, while executing agencies at a subnational level are responsible for the implementation stage. Sabatier and Mazmanian (1979) produced the most systematic formulation of this approach, identifying six conditions for a top-down correct implementation: clear and coherent policy objectives, solid causal theory, adequate resources and authority, officials committed to execution, compliance by target groups, and stable socioeconomic conditions.

Berman (1980) delineated the conditions under which programmed implementation emerges as the optimal strategy. These conditions include the need for incremental modifications to existing behaviors, a well-established and stable technological infrastructure capable of achieving policy objectives, a predictable environment, minimal

discord among implementing actors regarding policy objectives, and a closely interconnected institutional environment with distinct lines of authority and accountability. In such environment, systematic pre-programming and monitoring of implementation activities by central authorities prove both feasible and effective.

For DRM governance, scheduled implementation is most appropriate for routine administrative functions. These include the systematic maintenance of risk databases, the application of established building code standards, the distribution of pre-approved contingency funds and the periodic testing of emergency communication systems. These functions have well-defined technical requirements, stable institutional arrangements, and implementation that can be monitored through quantitative indicators of compliance. The iGOPP's formal verification of legal, institutional, and budgetary conditions — a hallmark of a top-down governance assessment — is based on the capacity for the programmed implementation of the governance conditions it identifies.

The primary criticism of the top-down approach lies in its systematic underestimation of the discretion exercised by implementing actors at lower levels and the ability of local conditions to challenge core mandates. Berman acknowledged that for many policy problems, particularly those involving uncertain technology, disputed goals, or diverse local contexts, scheduled implementation is not only impractical but also counterproductive. This is because it imposes uniform procedures in heterogeneous situations that require differentiated responses.

Adaptive Deployment and Bottom-Up Approach

Adaptive implementation, a bottom-up approach, is grounded in fundamentally distinct assumptions. Rather than viewing implementation as the execution of centrally defined plans, it conceptualizes it as an iterative process of adjustment. This process involves continuously adapting the policy to the institutional environment, the capacities of implementing actors, and the evolving preferences of target populations. The bottom-up or adaptive competitive approach posits that effective implementation requires a process that enables the policy to be adapted in response to the interactions that develop with its institutional environment.

Berman (1980) identified adaptive implementation as an appropriate when the technology is uncertain—when there is no well-established and proven method for achieving policy objectives. Additionally, adaptive implementation is suitable when there is a conflict of objectives between implementing actors, requiring negotiation rather than compliance. Furthermore, it is appropriate in unstable or loosely coupled environments with multiple actors having independent authority over relevant resources. Lastly, adaptive implementation is necessary when a significant change in existing behaviors or systems is

required. Bottom-up approaches view implementation as the result of negotiation rather than the explicit control of central policymakers. Research in this tradition focused on discretion exercised during the implementation process and the decisions made by bureaucrats.

Lipsky's (1980) concept of street-level bureaucracy serves as the empirical foundation for the bottom-up approach. These public employees, including teachers, police officers, social workers, emergency managers, community health workers, directly interact directly with citizens and possess significant discretion in applying policy to individual cases. Lipsky contends that these relatively low-level employees operate under heavy workloads, ambiguous agency goals, and inadequate resources. When combined with substantial discretionary authority and the obligation to interpret policy on a case-by-case basis, the disparity between government policy in theory and policy in practice can be substantial and concerning.

For DRM governance, the adaptive approach emerges as an indispensable strategy when the implementation conditions are characterized by uncertainty and heterogeneity. This description accurately reflects most of DRM challenges in LAC. Community-based disaster risk reduction, the incorporation of indigenous knowledge into local early warning systems, the management of informal settlement upgrading in high-risk areas, and the provision of post-disaster psychosocial support, all entail policy objectives whose realization hinges on the adaptation of central frameworks to the local social, cultural and geographical contexts. Torres-Melo and Santander (2013) underscore that in the Colombian context, characterized by substantial territorial diversity, institutional fragmentation, and capacity disparities, adaptive approaches are not merely a methodological preference, but an operational imperative.

Berman's Contingency Matrix: Choosing the Right Approach

Berman's (1980) most important contribution was to challenge the normative prescriptions of both sides and propose a contingency framework. In this case, the appropriate implementation strategy should be determined based on the specific characteristics of the political situation. When the policy objective aims for incremental change, a stable technology and environment, low conflict, and a tightly coupled institutional environment are present. In such cases, bottom-up scheduled implementation is the most suitable strategy. Conversely, uncertain technology, target conflicts, and an unstable or loosely coupled environment need the adoption of the bottom-up adaptive approach.

This contingency logic has direct implications for the diagnostic framework of the iGOPP. The Index's conclusion that most LAC countries exhibit incipient DRM governance conditions is, in part, a finding regarding the lack of coordination between the implementation strategy and

the implementation context. Comprehensive DRM legislation (designed for scheduled implementation) is being applied in institutional environments characterized by uncertain technology, conflicting objectives, and loose institutional coupling—conditions that require adaptive implementation but are inadequately addressed by the logical compliance often invoked by formal legal frameworks. Mitigating this mismatch is one of the primary challenges of governance in disaster risk management.

5.3 Lewis and Flynn's implementation model

Drawing upon Berman's typology and empirical research on implementation, Lewis and Flynn (1978) developed an operational model of implementation that aimed to establish a connection between normative prescriptions for implementation and empirical explanations for its execution. Their model stands out by emphasizing the activities, resources, and inter-relationships among actors that constitute the daily operations of implementing policy — elements that more abstract theoretical frameworks tend to overlook.

Drawing upon Berman's typology and empirical research on implementation, Lewis and Flynn (1978) developed an operational model of implementation that aimed to establish a connection between normative prescriptions for implementation and empirical explanations for its execution. Their model distinguishes itself by emphasizing the activities, resources, and interrelationships among actors that constitute the daily operations of implementing policy—elements that more abstract theoretical frameworks tend to overlook.

Lewis and Flynn (1978) conceptualized implementation as a constant of three interdependent operational components. Each component must have adequate resources and organizational structure to facilitate the effective execution of policy.

The Three Operating Components of the Lewis and Flynn Model

1. Organizational capacity and mandate: For a policy to be effectively implemented, there must be a designated agency or set of agencies with a clear mandate to act. This mandate should be supported by sufficient organizational capacity (personnel, experience, and internal procedures). Additionally, the agency must possess the authority to deploy the resources required for its implementation. Without an unambiguous institutional framework for policy, responsibility becomes diffuse and accountability diminishes. In the context of DRM, this aligns directly to the component of the General Governance Framework of the iGOPP, which emphasizes the formal and verifiable existence of a designated institution with a legally established mandate.

2. Resource mobilization and allocation: Implementation requires continuous mobilization and targeted allocation of financial, human, informational, and technical resources. Lewis and Flynn's model underscores that resource adequacy transcends the mere total budget; it hinges on the quality of resource allocation processes. Specifically, it examines whether resources are effectively delivered to the operational level when and in the required manner, whether they are allocated according to the policy's operational priorities, and whether accountability mechanisms ensure their utilization for their designated purposes. In DRM, this aligns with the Financial Protection component of the iGOPP and the budgetary conditions it evaluates.

3. Interorganizational coordination and stakeholder engagement: Effective policy implementation requires the collaborative efforts of numerous agencies. Lewis and Flynn (1978) emphasize the significance of inter-organizational coordination in achieving this goal. This coordination requires the alignment of activities among these entities around shared objectives. Furthermore, meaningful stakeholder participation is crucial throughout the implementation processes, not merely in its formulation. Communities, civil society organizations, and private sector actors are not only beneficiaries of implementation, but also essential partners. Their knowledge, networks, and legitimacy are indispensable for effective public policy.

Lewis and Flynn's model is integrated with Torres-Melo and Santander's (2013) explanation of implementation as a relational process, rather than just an administrative one. Their analysis of the Colombian context reveals that the failure of many public policies is not primarily due to resource constraints or legal gaps, but rather relational gaps; the inability to establish and sustain inter-organizational relationships, networks of trust, and incentive alignments that sustainable implementation requires. This is particularly pronounced in DRM contexts, where implementation inherently involves multiple sectors (health, housing, education, civil protection, environment), varying levels of government (national, regional, municipal) and a diverse array of non-state actors (NGOs, private sector, community-based organizations) whose interests, capacities and incentives must be continuously aligned.

The model also highlights the concept of the implementation chain — which refers to the sequential sequence of actions and decisions that must transpire between policy adoption and the attainment of desired outcomes. Each link in this chain represents a decision point at which distortion, delay, or failure can potentially occur. Pressman and Wildavsky (1973) mathematically demonstrated that, even if each step in a lengthy implementation chain possesses a high probability of successful completion, the cumulative probability of the entire chain being successfully executed can be significantly low. A policy that requires 30

sequential authorizations, each with a 90% probability of completion, has less than a 5% probability of being fully implemented by design. Lewis and Flynn's model addresses this concept by emphasizing the significance of simplifying deployment chains. This involves reducing the number of authorizations required, consolidating decision points, and incorporating redundancy into critical path elements.

5.4 Ingram's Flexible Framework for Implementation Analysis

Helen Ingram's (1990) contribution to implementation theory was to propose a flexible, non-prescriptive framework that could accommodate the diverse policy contexts, implementation strategies, and outcome variables that the first two generations of implementation research had revealed. Ingram's framework synthesized the ideas of top-down and bottom-up debates, avoiding the normative rigidity of both approaches.

The fundamental principle of Ingram's (1990) framework lies in the recognition that implementation analysis should commence with a contextual assessment rather than a theoretical assumption. Prior to selecting an implementation strategy or evaluating implementation performance, analysts and policymakers must address four pivotal questions:

Analytical question	Contextual dimensions
What is the policy problem?	Is it technical or social in nature? Does it involve established routines or novel behaviors? Is the causal theory linking political actions to outcomes well-validated or speculative? The nature of the problem determines the appropriate level of programmatic specificity.
Who are the relevant actors?	Which actors should engage, cooperate or refrain from acting to achieve political objectives? What are their interests, values, abilities, and relationships? Ingram stresses that implementation analysis should provide a comprehensive understanding of actors—encompassing both formal implementing agencies and non-governmental actors as well as target populations.
What is the institutional context?	What are the formal and informal rules, norms, and relationships that govern the behavior of the actors who implement it? What incentives and restrictions do these standards create? How do federal or intergovernmental agreements distribute authority?

What does success mean in this context?	Ingram (1990) asserts that successful implementation cannot be solely defined by compliance with core mandates. Instead, it should encompass the quality-of-service delivery from the perspective of the target populations, the adaptability of the implementation system to evolving conditions, and the sustainability of long-term outcomes.
---	---

The Ingram framework is *flexible* in its approach by refraining from prescribing a singular implementation model or a universal set of success criteria. Instead, it offers an analytical framework that enables the identification and justification of contextually appropriate implementation strategies. This flexibility proves particularly advantageous in the context of DRM, where the diverse risk types, governance capacities, demographic profiles, and institutional arrangements prevalent within LAC countries render any single implementation model insufficient.

Ingram (1990) also introduces a crucial distinction between implementation as a result and implementation as governance. The former pertains to whether services, regulations, or benefits reach their intended recipients as intended. The latter, on the other hand, focuses on whether the implementation process itself fosters the institutional capacity, relationships of trust, and political legitimacy that are essential for the sustained effectiveness of public policies. This distinction directly aligns with the iGOPP's measurement approach; the Index evaluates not only the existence of DRM activities, but also whether the governance conditions – the institutional, legal and financial frameworks – that facilitate the sustained implementation of DRM are formally and verifiably in place.

Ingram's (1990) framework has been expanded and updated by Schneider and Ingram (1997). They developed a theory of policy design for democracy that explicitly incorporates issues of equity and citizenship into implementation analysis. They argue that the social construction of target populations—how implementing actors and political systems perceive the identity and value of the groups targeted by a policy—has significant effects on implementation behavior. Populations socially constructed as deserving (such as the elderly, children, veterans) receive a more generous and attentive implementation than those considered to be lesser/unworthy, or ignored (such as the poor, the marginalized, informal settlers). This analysis is directly applicable to DRM implementation. The systematic under-protection of older people, people with disabilities, and marginalized communities in disaster risk management not only reflects resource scarcity but also the social construction of these groups as peripheral priorities for implementation.

5.5 Factors of success and failure in implementation

Matland's ambiguity-conflict model

Richard Matland's (1995) ambiguity-conflict model stands as the most influential synthesis of top-down and bottom-up perspectives. It presents a four-cell matrix that predicts implementation outcomes based on the degree of political ambiguity and the degree of political conflict surrounding a policy. These factors are best conceptualized as interrelated axes, with the internal context of each country determining the location of specific policies within an implementation matrix. Public policy implementation occurs at two levels: the macro-implementation level, where centrally located actors design government programs, and the micro-implementation level, where local organizations react to plans at the macro level, develop their own programs, and implement them.

Matland's Four Implementation Contexts

Administrative implementation (low ambiguity, low conflict): Outcomes are contingent upon the availability of resources. Technical policies that are well-designed and have broad consensus can be implemented through established administrative procedures. Example of DRM: maintenance of national risk databases with stable funding.

Political implementation (low ambiguity, high conflict): Outcomes are determined by power. When the political objectives are clearly defined, but there is no consensus among stakeholders, the implementation hinges on the political strength of the coalition that supports it. Example of DRM: application of land use regulations in risk areas where owners resist enforcement.

Experimental implementation (high ambiguity, low conflict): Outcomes of interventions are contingent upon the prevailing contextual conditions. When objectives are unclear, but conflict is low, local actors have substantial autonomy in interpreting and adapting policy frameworks. Results vary widely across different deployment centers. Example of DRM: community-based disaster risk reduction programs in environments characterized by widespread support yet lacking a consensus on methodologies.

Symbolic implementation (high ambiguity, high conflict): Outcomes are determined by the strength of local coalitions. When both ambiguity and conflict are high, symbolic policies are adopted at the national level, yet they yield highly variable or minimal results at the operational

level. Example of DRM: broad framework laws that establish DRM as a national priority without specifying mandates, resources or accountability — precisely the scenario documented by the iGOPP for many LAC countries.

Systematic Failure Factors in Implementation

Based on the research of Pressman and Wildavsky (1973), Matland (1995), Birkland (2020), Torres-Melo and Santander (2013), and the empirical data compiled by the iGOPP, the following primary factors account for the failure to implement policies across various domains and contexts:

Failure Factor	DRM mechanism and relevance
Political ambiguity	Policies with unclear objectives, undefined target populations, or unspecified causal mechanisms provide implementing actors with insufficient guidance, resulting in inconsistent behaviors, and enabling symbolic compliance. The iGOPP identifies this as a generalized failure mode, specifically DRM framework legislation that lacks implementing regulations.
Insufficient resources	Policies that mandate results without allocating sufficient financial, human and technical resources are inherently susceptible to failure. In DRM, dedicated budget lines, pre-established emergency funds, and implementation-trained staff are not optional components of governance; rather, they are essential prerequisites for operational efficacy.
Inter-organizational fragmentation	When implementation requires coordination among multiple agencies with distinct mandates, cultures, and incentives, coordination costs accumulate at each decision point. The issue of 'joint action' as identified by Pressman and Wildavsky (1973) is particularly pronounced in DRM, where structurally intersectoral coordination is imperative.
Capacity shortfalls at the local level	The disparity between centralized policy directives and decentralized deployment capacity is a primary source contributing to the gap identified by the iGOPP. Peripheral municipalities, which are exposed to compounded risks and demographic aging, typically possess the most constrained institutional capacity.

Lack of political support over time	Over time, the windows of policy opportunity narrow, and political attention is subject to fluctuations. Without sustained political commitment and institutional support, implementation processes lose momentum as other priorities emerge.
Exclusion of the target population	Where populations in need of political protection lack political representation, social legitimacy, or access to implementation mechanisms, they consistently experience lower implementation outcomes. The social construction analysis of Schneider and Ingram (1997) provides a predictive framework for this phenomenon within marginalized groups.
Complexity of the deployment chain	The more decision points, authorizations, and inter-institutional handovers a policy requires, the higher the likelihood of delays, distortion, or failures. Policy design should prioritize minimizing unnecessary chain complexity.

Conditions for successful implementation

By reversing the failure analysis and considering the top-down conditions of Sabatier and Mazmanian (1979), Berman's (1978; 1980) contingency framework, and Ingram's (1990) flexible analysis, the following conditions are identified as structural prerequisites for successful implementation:

- **Clear and coherent policy objectives** that specify the behaviors required by target actors and populations, with explicit mechanisms of transparency and accountability that generate significant incentives for compliance.
- **Adequate resources**, encompassing financial, human, technical and informational aspects, must be allocated through reliable mechanisms that ensure timely delivery to the operational units responsible for implementation.
- **A sound causal theory that links** policy instruments to their intended outcomes, evidence-based, and tailored to the specific institutional and social context of implementation.
- **Engaged with implementation officials** at all levels of the implementation chain, with sufficient autonomy to adapt operational procedures to local conditions within the bounds of the stated objectives.
- **Sustained policy support** through feedback mechanisms, monitoring systems, and accountability structures that ensure implementation performance is transparent to decision-makers.

- **Meaningful participation** of target communities—not as passive recipients, but as active co-producers of implementation—that improves both the quality-of-service delivery and the social legitimacy of the public policy implementation process.

5.5 Possible actions to improve implementation: connection to DRM governance

The theoretical and empirical analysis presented in this chapter identifies a set of concrete actions that can enhance the quality of implementation in various policy areas, with a specific focus on DRM governance in Latin America and the Caribbean. These actions are categorized into six groups, each corresponding to a primary failure factor previously identified.

Action Cluster 1: Clarification of Policy Objectives and Causal Theory

Problem addressed: Policy ambiguity stands as the most systemic mode of implementation failure in LAC DRM governance. Framework legislation that establishes DRM as a national priority without delineating responsibilities, target populations, measurable indicators, or accountability mechanisms fails to provide adequate guidance for administrative implementation.

Actions: Require the development of implementation regulations within specified deadlines following the enactment of DRM framework legislation. Mandate that all DRM policies incorporate an explicit theory of change — a documented explanation of the causal pathway from the instrument to the outcome. Adopt iGOPP indicators as a standardized template to assess the integrity of DRM governance frameworks, ensuring that legal mandates are accompanied by institutional and budget allocations.

Action Cluster 2: Adapting the implementation strategy to the policy context

Problem addressed: Applying top-down scheduled deployment to policy contexts that require adaptive approaches—and vice versa—is a design flaw that leads to systematic implementation deficiencies.

Actions: Prior to implementing DRM policies, conduct contextual evaluations to determine the most suitable strategy. Berman's (1980) contingency can be applied to this process. For DRM policies involving uncertain technology or diverse local conditions, adaptive implementation protocols should be incorporated into the policy design from the outset. These protocols should include community monitoring, iterative review cycles, and explicit provisions for operational adaptation. Reserve scheduled deployment for DRM functions with well-established

technology and where there is no conflict of objectives. Regular risk monitoring, adherence to the building code, and pre-positioned resource management should be implemented.

Action cluster 3: Strengthening institutional capacity at the local level

Issue addressed: The iGOPP documents a persistent capacity gap between national DRM frameworks and subnational implementation capacity. Peripheral municipalities that face the greatest compound vulnerability tend to have the least institutional capacity to act in accordance with the frameworks established by national policy.

Actions: Establish dedicated national technical assistance programs for the implementation of a municipal DRM, providing training, methodological guidance and shared analytical tools. Reform fiscal transfer formulas to reflect institutional capacity deficits along with risk exposure, ensuring that municipalities with the greatest implementation challenges receive proportionately larger resources. Develop regional implementation networks that enable municipalities to share capacities and coordinate in contexts of shared risk. Apply the iGOPP indicator framework at subnational scales to make local governance gaps visible and actionable.

Action Cluster 4: Reducing the costs of inter-organizational coordination

Problem addressed: The implementation of DRM is inherently cross-sectoral; and coordination failures between ministries of health, housing, civil protection, environment, and social services are among the most documented sources of DRM implementation failures in Latin America and the Caribbean.

Actions: Establish legally binding inter-ministerial DRM coordination platforms with defined decision-making rules, participation requirements, and accountability for performance. Clarify institutional mandates through a comprehensive legislative allocation of DRM responsibilities, eliminating overlaps and gaps that generate diffuse accountability. Invest in shared information systems — risk registers, community vulnerability databases, early warning networks — that reduce information asymmetries between agencies and incentivize coordination.

Action Cluster 5: Building monitoring, evaluation and learning systems

Problem addressed: Implementation failures persist when they are invisible — as there are no feedback mechanisms in place to make performance deficits apparent to decision-makers or affected communities.

Actions: Integrate monitoring and evaluation frameworks into DRM implementation plans from the outset, ensuring that indicators are aligned with operational performance (not merely legal existence). Institutionalize independent evaluation cycles, as Torres-Melo and Santander (2013) emphasize that evaluation is not a terminal phase of the policy cycle but an ongoing source of learning in implementation. Regularly apply iGOPP assessments to track governance improvements and identify persistent gaps. Establish feedback mechanisms at the community level, such as participatory monitoring, community guides, and complaint channels, to make the experience of target populations visible to implementing agencies.

Action Cluster 6: Inclusive Implementation and Community Co-Production

Problem addressed: The systematic exclusion of marginalized populations, including older adults, individuals with disabilities, indigenous communities, and informal settlers, from implementation processes yields sub-optimal outcomes and perpetuates the inequalities that DRM policies intend to mitigate.

Actions: Establish co-production mechanisms at the community level, transitioning from symbolic consultation to genuine participation in the planning, monitoring, and adaptation of implementation. Apply Ingram's (1990) social construction analysis to discern how existing implementation systems construct target populations and adjust resource allocation and scope accordingly. Need to provide training for implementers, particularly public administration officials, on inclusive practices that acknowledge and address the distinct needs of vulnerable groups. Integrate DRM implementation at the community level with social protection systems, recognizing that the determinants of vulnerability to disasters and the determinants of social exclusion are structurally analogous.

The connection between these actions and the iGOPP framework is direct and empirical. The 241 indicators of the iGOPP are precisely organized around the governance conditions – legal, institutional and budgetary – that facilitate the implementation actions outlined above. Each indicator documents a condition whose absence represents an implementation risk, while each improvement in the iGOPP score signifies a reduction in the likelihood of implementation failures. The iGOPP's empirical finding that an additional point

on the governance index is associated with a 3% reduction in disaster fatalities underscores the critical importance of addressing implementation gaps.

Torres-Melo and Santander (2013) conclude their analysis of implementation by emphasizing that the efficacy of public policy ultimately hinges not on the intricacy of its design, but rather on the quality of the relationships—between institutions, between government levels, and between the State and its citizens—through which implementation take place. This perspective that prioritizes the quality of relationships in implementation serves as a counterpoint to the governance frameworks of the United Nations, the World Bank and the IDB. Governance transcends by being merely a set of formal conditions to be measured, it is a dynamic set of relationships that needs cultivation, maintenance, and accountability. In the field of disaster risk management, where the lives of the most vulnerable are at risk, this accountability manifests most profoundly in an implementation that genuinely reaches those who require it most.

Conclusion

Implementation is the stage in which the entire public policy architecture—governance frameworks, formulated objectives, selected instruments—is tested against operational reality. As this chapter has demonstrated, the gap between political intention and political outcome is not an accidental failure but a structural aspect of the political process. This gap arises from the cumulative complexity of joint action, the exercise of discretion, the lack of coordination between centralized mandates and decentralized capacities, and the differential power of actors to influence the implementation process in their favor.

Berman's (1978; 1980) distinction between programmed and adaptive implementation provides the fundamental strategic framework. Implementation must be designed to adjust to the characteristics of the political situation, not imposed based on a single normative model. The model of Lewis and Flynn (1978) bases this framework on the operational realities of institutional mandate, resource mobilization, and inter-organizational coordination. Ingram's (1990) flexible framework broadens the analysis to inquire not only whether implementation is occurring, but also whether it is building the governance capacity and social legitimacy that sustained policy effectiveness requires.

For DRM governance in Latin America and the Caribbean, the translation of these frameworks into practical action is of utmost urgency. The iGOPP's comprehensive documentation of governance gaps—such as nascent legal frameworks lacking implementing regulations, institutional mandates without budget allocations, national plans without operational protocols—accurately identifies the implementation deficits that

the theoretical frameworks in this chapter elucidate. Addressing these deficits requires not only the enactment of more robust laws or increased budgetary allocation, but also the development of better-designed implementation strategies. These strategies must be contextually tailored, build rather than assume institutional capacity, involve rather than exclude marginalized communities, and be accountable through monitoring and evaluation systems capable of revealing the costs of implementation failure before adverse events become catastrophic.

Chapter 6: Phase 4 - Policy Evaluation

This final chapter delves into Phase 4, the evaluation of policies. Evaluation marks the culmination of the cycle, or more precisely, the stage where it feeds back on itself. As Torres-Melo and Santander (2013) note, the evaluation of public policy serves not only to assess outcomes and validate the phases of the process but also to gain insight into key aspects of policies as intermediaries between the State and its citizens. Therefore, evaluation transcends to be a mere administrative concept; it stands as the epistemological foundation of evidence-based governance. This systematic process enables governments to determine whether their policies have achieved their intended objectives, assess the associated costs, evaluate equity implications, and identify the underlying causal mechanisms. Ultimately, it provides valuable guidance on areas where policy adjustments are necessary.

6.1 What is public policy evaluation?

Policy evaluation is the systematic application of social science methods to evaluate the design, implementation, and outcomes of public policies with the objective of enhancing governance decisions. The most widely accepted definition in the field of evaluation is that of theorist Michael Scriven (1991), who highlighted the significance of values. Evaluation is the systematic process of determining merits, values, and significance. Unlike research, evaluation questions originate from users of the evaluation or key stakeholders in the evaluation. As Daniel Stufflebeam (1985) succinctly stated, drawing attention to the difference between research and evaluation: "The purpose of evaluation is to improve, not to demonstrate."

Torres-Melo and Santander (2013) and Roth (2009) posit that the evaluation of public policies not only serves to ascertain the outcomes and validate the phases of the process but also enables us to comprehend key aspects of policies as intermediaries between the State and citizens. This relational framework—evaluation as a mediating instrument between state action and citizen experience—reflects the governance dimension that distinguishes policy evaluation from purely technical program evaluation. A government that evaluates is, in principle, a responsible government; that subjects its choices to public scrutiny, learns from systematic evidence, and adjusts its actions in response to what that evidence reveals.

Birkland (2020, p. 278) defines policy evaluation as the "stage of the policy process in which we assess the extent to which a policy has achieved its intended objectives and whether the chosen policy has been worth, as a whole, worth its costs." This definition encompasses two analytically distinct issues that evaluation must address: a question of efficiency (did the

policy achieve its intended outcomes?) and a question of value (was the policy worthwhile?). The first is empirical; the second is normative. Both are essential to completing the assessment, and their confusion is a common source of the assessment stage.

Weiss (1998) further refines the concept by distinguishing between evaluability evaluation, process evaluation, outcome evaluation, and impact evaluation. Evaluability evaluation determines if a program is well-defined and implemented to be meaningfully evaluated. Process evaluation assesses how a program was implemented. Outcome evaluation assesses changes in the target population. Impact evaluation attributes observed changes specifically to the program, controlling for other possible causes. These distinctions align with the different questions public policy evaluations must answer and the methodological requirements they impose.

By examining methods such as formative, summative, outcome-based, impact, ex-ante, and ex-post evaluations, it is possible to understand the distinct roles that each play in shaping public policy outcomes across various domains. From a comprehensive perspective, evaluation draws upon multiple disciplines, including economics, political science, and public health, to offer a broader perspective of how evaluation frameworks are applied in diverse contexts. This multidisciplinary nature is particularly significant for DRM assessment, where the causal chains linking governance interventions to disaster outcomes simultaneously encompass physical, social, institutional, and political systems.

6.2 Types of public policy evaluation

Torres-Melo and Santander (2013) categorize the main types of evaluation based on their temporal placement within the policy cycle: ex-ante evaluation, concomitant evaluation, and ex-post evaluation. This tripartite structure, commonly used in Latin American policy analysis, is based on the premise that different evaluative questions become pertinent at various stages of policy development. The following table organizes each type within the cycle and outlines its primary purpose and methods.

Type	Synchronization in the cycle	Purpose and methods
Ex-ante evaluation	Before deployment	Prior to policy adoption, this assessment evaluates the potential consequences of policy alternatives. It uses cost-benefit analysis, social impact assessment, regulatory impact analysis, risk modelling and feasibility studies to inform instrument selection and forecast outcomes. It mitigates the risk of designing policies with flawed causal theories.

Concomitant evaluation	During implementation	It assesses implementation progress, identifies bottlenecks, and enables real-time adjustments. It encompasses process evaluation, monitoring and follow-up of performance against defined indicators. It facilitates adaptive management by generating feedback that allows for corrections before irreversible results are achieved.
Ex-post evaluation	After implementation	It assesses the outcomes, impacts and cost-effectiveness of the project after a sufficient period has elapsed for the intended effects to manifest. It includes summative evaluation, impact evaluation, and efficiency analysis. It serves as a basis for accountability and informs future cycles.
Formative assessment	Throughout the process	Evaluation oriented to continuous improvement, not limited to a single stage of cycle. It emphasizes learning and quality enhancement rather than accountability. Particularly relevant for adaptive implementation contexts.
Summative assessment	End of the cycle	It provides a conclusive evaluation of the merit and value of public policy, guiding decisions regarding accountability, continuation, or termination. It differs from formative assessment because it is oriented toward judgement rather than improvement.

Ex-ante evaluation: anticipating consequences

Ex-ante evaluation involves the application of analytical methods prior to the implementation of policies to assess the probable outcomes of proposed alternatives. Its normative foundation lies in the rational model of policy design. If governments possessed the ability to accurately predict the results of their elections, they could select instruments that optimize desired effects while minimizing unintended costs. In practice, ex-ante evaluation does not guarantee certainty; rather, it reduces uncertainty by making the assumptions inherent in policy proposals explicit and subjecting them to systematic scrutiny.

In the context of DRM, ex-ante assessment is operationalized through risk and vulnerability assessments, economic analysis of disaster loss scenarios, and regulatory impact analysis of proposed land use, building code, and emergency planning requirements. The Risk Identification component of the iGOPP — which assesses whether national risk assessment systems exist, are legally obligatory and integrated into policy planning — serves as a measure of institutional capacity for ex-ante assessment of DRM policy choices. A country lacking a formal national risk assessment system is unable to conduct an ex-ante assessment of DRM investments; its policy decisions are made in the absence of the evidence that rational policy design requires.

Concomitant evaluation: real-time monitoring and learning

Concomitant or continuous evaluation, also known as monitoring and evaluation (M&E), involves the systematic collection and analysis of performance data during the implementation phase. Its theoretical foundation is rooted in the feedback systems model. Implementation is not a mechanical process of plan execution but a dynamic interaction between policy design and operational reality. Systematic feedback enables adaptive management. As Berman (1980) demonstrated in his analysis of adaptive implementation, policies operating in uncertain or loosely coupled environments cannot be adequately governed by central command. They require continuous information flows that allow implementing actors to identify when adaptation is necessary.

Monitoring and evaluation are frequently conflated, a misconception that diminishes the value of both activities. Monitoring is the systematic and ongoing monitoring of inputs, activities, and implementation results against a predetermined performance benchmark. Primarily a management tool, monitoring provides essential data for decision-making. In contrast, evaluation is periodic and conducted systematically on the results and their causal relationships. It serves as a tool for learning and accountability. While both activities are complementary, they are distinct. Without monitoring, assessments lack the necessary data. Without evaluation, monitoring generates information that is tracked but not utilized to generate further information or establish accountability (Torres-Melo and Santander, 2013).

Ex-post evaluation: responsibility and learning

The ex-post evaluation assesses the outcomes and impacts of a public policy after sufficient time has elapsed for its intended effects to manifest and for the counterfactual analysis to be valid. It stands as the most rigorous form of methodological evaluation, particularly impact evaluation, which must demonstrate not only a change in results but also the causal link between public policy and the change, excluding other concurrent factors. Rossi, Lipsey, and Freeman (2004) delineate three fundamental questions that ex-post evaluation must address: Was the policy essential? (requires evaluation) Was it implemented as intended?

(process evaluation) Did it produce the desired outcomes? (evaluation of results and impact).

Each type of evaluation serves a distinct purpose by ensuring accountability, identifying unintended consequences, and measuring both the successes and shortcomings of public policies. This provides essential feedback to policymakers, enabling continuous refinement and improvement of their strategies. Rigorous protocols and objective assessments are necessary to ensure credible and actionable results. For DRM assessment specifically, the ex-post assessment must address the counterfactual problem in its most acute form. Catastrophic events are probabilistic; their absence does not prove prevention, and their occurrence does not prove the failure of policy. Impact assessment in DRM requires quasi-experimental methods, historical comparative analysis, and the systematic use of disaster loss databases to construct plausible counterfactual scenarios.

6.3 Characteristics of rigorous evaluation of public policies

The literature on assessment theory, spanning from Scriven (1991) to Stufflebeam and Zhang (2017) and Patton (2008), identifies a set of characteristics that distinguish rigorous and effective assessment from superficial compliance exercises. These characteristics transcend merely methodological preferences; they represent the conditions under which evaluation can fulfill its governance function of informing decisions, holding institutions accountable, and generating the institutional learning required for evidence-based policymaking.

Feature	Definition and relevance of governance
Systematics	The evaluation must be conducted in accordance with explicit and replicable procedures. The selection of methods, data sources, indicators, and analytical approaches should be documented and defensible, enabling independent verification of findings.
Based on theoretical frameworks	Rigorous evaluation is grounded in an explicit theory of change; which provides a documented explanation of the causal pathways through which the policy is anticipated to yield its intended outcomes. Without this theoretical framework, evaluation lacks the necessary tools to discern whether the observed failure reflects a policy design problem, an implementation challenge, or an evidence deficiency.
Credible and independent	The results of the evaluation hinge on their acceptance by decision-makers and citizens. Credibility is contingent upon the evaluator's independence from the executing agency, and the transparency of the quality assurance methods and processes employed in the findings. Torres-Melo and Santander (2013)

	emphasize that in contexts where evaluation is exclusively conducted by implementing agencies, the conflict of interest systematically biases the results towards favorable outcomes.
Participatory	Assessment that excludes the perspectives of target populations results in an inherently biased explanation of policy effects. Participatory evaluation, which involves communities, civil society, and implementing actors in the design and validation of evaluation frameworks, enhances both the quality of the evidence and the legitimacy of the findings (Patton, 2008; Schneider & Ingram, 1997).
Timely and usable	Evaluation that yields results after decisions have already been made, or in ways that policymakers cannot utilize, fails in its governance function regardless of their technical quality. Evaluations should be designed to produce relevant and actionable findings at the point in the policy cycle when those findings may influence decisions.
Action-sensitive	The evaluation should disaggregate the results by population group, including gender, age, income, territory, ethnicity, and disability status, to identify differential effects. A policy that improves average outcomes while worsening outcomes for the most marginalized groups is not successful; aggregate evaluation conceals this flaw.
Focus on utilization	Patton's (2008) use-focused evaluation emphasizes that evaluation should be designed from the beginning with its intended use in mind. This involves identifying the users, the decisions they will make, and the timeframe for the evaluation. Assessments designed without an explicit usage plan are often produced and ignored.

6.3 Relationship between evaluation and governance

The evaluation of public policies is a fundamental element of effective governance, as it promotes public accountability and contributes to citizens' trust in government. Evaluation ensures that decisions are grounded in reliable evidence and yield desired results. Building upon the first nationally significant survey of policy evaluation practices covering 42 countries, the OECD analysis (2020) offers a comprehensive examination of the institutionalization, quality, and utilization of evaluation across countries, demonstrating the interdependence of these three dimensions.

The governance-evaluation relationship operates in three directions. First, evaluation is an outcome of governance. For systematic evaluation to be conducted, governance conditions

must be in place, including legal mandates that establish evaluation requirements, institutional units with authority and capacity to conduct evaluations, budgetary allocations for evaluation activities, and accountability mechanisms that ensure that evaluation findings are taken into account in policy decisions. When governance conditions are incipient, as evidenced by the iGOPP documents for most LAC countries, assessment is often ad hoc, donor-driven, and disconnected from the policy decisions it is nominally intended to inform.

Second, evaluation serves as a crucial contribution to governance. Rigorous evaluation provides the evidence base that governance needs to enhance its policies, optimize resources allocation, and hold its institutions accountable. Particularly during crisis, maintaining citizen trust requires decision-makers' accountability for the effectiveness of policies and their equitable impact on all citizens. Falling to meet the challenge of policy evaluation can have severe consequences for economies and societies, as governments must make substantial progress in evidence-based policymaking. The iGOPP's empirical finding that an additional point on the governance index is associated with a 3% reduction in disaster fatalities exemplifies the significance of evaluation research. This evidence is only attainable when systematic data on governance conditions and long-term disaster outcomes are collected, maintained, and analyzed.

Thirdly, evaluation is an instrument of democratic accountability; facilitating the relationship between the State and citizens by making government performance transparent, subject to debate, and amenable to improvement. Evaluation transcends its role as a technical tool for public management, emerging as a political practice that empowers citizens to hold their governments accountable for the commitments they have undertaken (Torres-Melo and Santander, 2013). In the context of DRM, this entails that assessments should not only ascertain the existence of governance frameworks but also evaluate their effectiveness in safeguarding the most vulnerable populations from the most foreseeable risks. Furthermore, these findings should be disseminated in accessible formats to enable affected communities to engage with and utilize the information effectively.

The monitoring and evaluation component of the iGOPP deserves explicit attention in this context. While the Index primarily measures the formal existence of governance conditions—not their operational effectiveness—its consistent application across multiple countries and time periods establishes the comparative evidence base necessary for evaluation. Countries that have implemented the iGOPP regularly can monitor improvements in governance, identify persistent gaps, and establish a causal relationship between changes in governance conditions and changes in disaster outcomes. This constitutes the governance-evaluation feedback loop in its most direct operational form; measurement that

facilitates learning, learning that promotes improvement, and improvement that can be validated through subsequent measurement cycles.

6.4 Main shortcomings of public policy evaluation

Despite its pivotal role in evidence-based governance, policy evaluation in Latin America and the Caribbean—and many other developing regions—is marked by enduring structural deficiencies (Torres-Melo and Santander, 2013; OECD, 2020). The subsequent analysis synthesizes the salient findings of the reviewed literature.

Gap 1: Institutional fragility and capacity deficits

The capacity to conduct and use evaluations within the public sector remains limited. Numerous ministries and local governments lack dedicated assessment units or trained personnel. Limited training and high staff turnover hinder the development of evaluation expertise within government institutions. In most LAC countries, evaluation is conducted sporadically by implementing agencies rather than independent bodies. This practice creates structural conflicts of interest that compromise the quality of results. The iGOPP's documentation of the evolving governance conditions in most of the countries assessed implies, by extension, an incipient capacity for evaluation. Without the institutional mandates, budgets, and human resources necessary to conduct evaluations, the formal requirement to evaluate is a governance aspiration rather than a concrete reality.

Gap 2: Weak evaluation culture and political incentives

A fundamental cultural obstacle is the widespread perception among implementing actors that an evaluation is a threat — a mechanism for exposing failure and attributing blame — rather than a tool for learning and improvement (Torres-Melo and Santander, 2013). This perception generates systematic resistance; agencies avoid commissioning evaluations of their own programs, conceal data from external evaluators, and present evaluations as compliance exercises rather than genuine consultations. The structure of political incentives reinforces this dynamic; politicians and senior officials benefit from announcing new policies rather than evaluating existing ones; success stories are rewarded, while honest evaluations of mixed results are not. Birkland (2020) points out that focused events—disasters—briefly outgrow this incentive structure, making policy failure undeniable, but the resulting evaluative attention is often short-lived.

Limitations 3: Disconnection between assessment and decision-making

Even when evaluations are conducted, their findings often fail to influence policy decisions. Weiss (1998) identifies the "utilization gap" as the central problem of applied social research; the inability of well-conducted evaluations to overcome the political and organizational barriers that separate knowledge from action. Evaluation reports are usually produced at the end of policy cycles, after implementation decisions have already been made, in technical language that is inaccessible to non-specialist decision-makers, and without institutionalized mechanisms to translate findings into policy reviews. Evaluation is institutionalized in form but not in practice (Torres-Melo & Santander, 2013; OECD, 2020).

Methodological limitations 4: Methodological limitations and data deficits

Rigorous evaluation, particularly impact evaluation, requires high-quality baseline data, longitudinal monitoring systems, and the methodological capacity to discern the effects of policies from other concurrent changes. In most LAC countries, these requirements are only partially fulfilled. Administrative data systems are fragmented, georeferenced household surveys are infrequent, and disaster loss databases are incomplete or inconsistent. The absence of pre-implementation baseline data — a consequence of not conducting an ex-ante evaluation — is one of the most pervasive obstacles to a credible ex-post evaluation. Without a documented baseline, post-implementation changes cannot be reliably attributed to the policy (Torres-Melo and Santander, 2013).

Drawbacks 5: Equity blindness

Most policy evaluations in LAC assess average outcomes, utilizing indicators at the national level, aggregate program coverage, and average levels of benefits. However, these evaluations rarely disaggregate findings by gender, age, income quintile, ethnicity, territorial location, or disability status. This blindness to equity makes evaluation systematically silent about the distributional failures that are most crucial for democratic accountability. Specifically, it fails to address whether politics is effectively reaching the most vulnerable, whether produces differential effects between population groups, and whether it is either narrowing or widening existing inequalities. For DRM assessment, where the most vulnerable populations are also the least politically influential, equity-sensitive assessment is not mere a methodological preference but a democratic imperative.

Constraints 6: The Short Term and the Counterfactual Problem of Disasters

DRM assessment encounters a unique methodological challenge that exacerbates the overall deficiencies of assessment practice. This challenge is the counterfactual problem of disasters. The primary objective of DRM governance is to prevent disasters or mitigate their consequences when they occur. However, the absence of disasters does not necessarily indicate effective prevention; it could be attributed to an effective DRM or the absence of a triggering event. Conversely, the occurrence of a disaster does not imply a failure in policy; it could be compatible with an inappropriate DRM or an exceptionally severe hazard event. Assessment frameworks that evaluate DRM policy solely after disaster events – the most common approach in LAC, driven by focus event dynamics – systematically overlook the preventive function of DRM governance and create perverse incentives for short-term reactive investment versus long-term structural resilience.

6.5 How to improve the evaluation of public policies

The shortcomings identified above are not predetermined; rather, they reflect specific institutional, political, and methodological conditions that can be mitigated by deliberate investment in governance. Drawing upon the OECD (2020; 2025), Torres-Melo and Santander (2013), Patton (2008), Weiss (1998), Rossi, Lipsey, and Freeman (2004), and the iGOPP framework, the following six improvement pathways address the main deficiencies identified in section 6.4.

Pathway 1: Institutionalization of evaluation through legal and organizational architecture

A robust institutional framework can facilitate the alignment of isolated and unforeseen evaluation initiatives with more formal and systematic approaches. By promoting both enhanced quality and effective utilization, evaluation can achieve a greater impact in ensuring its full realization of its intended purpose. Specifically, this requires the implementation of evaluation through organic budget and planning legislation that mandates ex-ante and ex-post evaluation of major policies and programs, rather than leaving them discretionary. Additionally, the establishment of independent central assessment units with safeguard budgets and access to government data is crucial. Furthermore, the development of national assessment standards and quality assurance protocols is imperative. Lastly, the creation of transparent publication requirements that make assessment findings accessible to civil society, the media, and

affected communities is essential. Defining and assigning institutional responsibilities for conducting and utilizing policy evaluations is paramount to ensuring the integration of evaluation into the policy process and the allocation of sufficient time and resources to its execution.

Track 2: Develop assessment capacity at all levels

Institutional architecture without human capacity equates to formal governance without operational reality. Evaluation capacity should be concurrently developed at the central government level (specialized evaluation units and methodological expertise), at the sectoral level (ministerial M&E departments with sufficient independence from program managers) and at the subnational level (municipal and regional capacity for participatory evaluation and community monitoring). Training programs for public officials in evaluation methods, results-based management, and the utilization of evidence in decision-making are critical investments. Evaluation capacity cannot be entirely outsourced to external consultants; internal government capacity is required to commission, monitor, use, and respond to evaluations (Torres-Melo and Santander, 2013). In the context of DRM, this includes training emergency managers, civil protection officers, and municipal risk officers in the data collection and analysis skills required for systematic assessment.

Track 3: Incorporating reference data and theory of change from the start

The most common cause of programs that cannot be evaluated is the failure to establish baseline conditions before implementation begins. This failure of formulation has evaluation consequences; policies designed without a documented theory of change, baseline data collection, and pre-specified outcome indicators cannot be rigorously evaluated ex post. The solution lies in integrating evaluation planning into the policy-making phase — not as a bureaucratic add-on, but as a substantive requirement of policymaking. Each DRM policy framework should specify: the problematic conditions it is designed to address (baseline), the causal theory that links the instruments to the results (theory of change), the indicators that will measure progress (results framework), and the evaluation approach that will be applied (evaluation plan). The iGOPP indicators themselves provide a partial model; by defining specific and measurable governance conditions, they create the baseline and results framework required for the assessment of DRM governance progress.

Track 4: Designing for Use from the Start

In Patton's (2008) utilization-based evaluation framework, evaluation is not considered an end in itself, but rather a means to enhance decision-making. Evaluation design should begin with the question: who will utilize these findings, for what purpose, and when? This question should serve as a guiding principle for every subsequent methodological decision; encompassing the selection of evaluation criteria, the scheduling of data collection, the format of reporting, and the dissemination strategy. In practical terms, this entails involving the intended users, such as ministers, senior officials, parliamentary committees, and civil society organizations, in the design of assessment frameworks, not just as recipients of final reports. The legitimacy of the evaluation findings is intrinsically linked to the legitimacy of the evaluation process; evaluations that are designed and conducted without the meaningful participation of those who are responsible for informing decisions will not be utilized, irrespective of their technical quality (Torres-Melo and Santander, 2013).

Track 5: Developing equity-sensitive and disaggregated assessment frameworks

To address the fairness blindness documented in *inconvenience 5* of section 6.4, requires a deliberate methodological investment. This investment should include routine collection of disaggregated data on the effects of policies across various demographic factors such as gender, age, income, territory, ethnicity, and disability status. Additionally, equity should be explicitly considered as a criterion for evaluation alongside effectiveness and efficiency. Furthermore, the development of community-based and participatory evaluation methods is crucial to ensure that the voices of populations whose experiences are often overlooked in administrative data are heard. When assessing DRM, equity-sensitive frameworks should not only evaluate whether the DRM system functions as a mediator, but also whether it effectively reaches the most at-risk populations — including older adults, people with disabilities, informal settlers, and remote communities — with the specific protections they require. The theoretical basis for this approach is provided by the analysis of the social construction of target populations conducted by Schneider and Ingram (1997). Evaluations should actively investigate how the social construction of beneficiary groups influences the distribution of benefits and the extent of policy protection.

Track 6: Development of DRM-specific assessment frameworks that address the counterfactual problem

The counterfactual problem of disasters requires methodological innovation tailored to the DRM domain. Several approaches have demonstrated their validity in literature. Comparative risk assessments—comparing disaster losses in jurisdictions with varying DRM governance conditions over extended periods—can generate quasi-experimental evidence on the effects of governance investments. Probabilistic risk modelling – which estimates anticipated losses under different governance scenarios – can be used to assess the preventive value of DRM investments even in the absence of disaster events. Community-level participatory assessments of vulnerability change—which track whether conditions that create disaster risk are improving or deteriorating—complement macro-level outcome indicators with concrete evidence. The regular application of the iGOPP in several countries provides the comparative data that these approaches require. Investing in systematic, longitudinal databases of disaster losses – aligned with international standards such as DesInventar – is the fundamental data infrastructure without which DRM assessment of any kind remains methodologically compromised.

Conclusion

The evaluation stands as the pivotal phase in the public policy cycle, determining its success or failure. Rigorous, independent, equity-sensitive, and connected to decision-making, the evaluation facilitates feedback processes that enhances public policy design, ensures accountability in implementation, and fosters governance learning. Conversely, the absence of evaluation, characterized by superficiality or disconnection from practical use, disrupts the cycle. This results in policies based on insufficient evidence, implementation without oversight, and decisions without learning. The structural consequences of broken evaluation cycles are evident throughout the public policy landscape of Latin America and the Caribbean. These consequences manifest in the persistence of governance gaps documented by the iGOPP, the recurrence of avoidable losses due to disasters, and the continued lack of protection for the most vulnerable populations.

The four phases examined in this paper are not sequential stages that a policy completes once and then advances. Rather, they are dimensions of continuous governance practice. The definition of agendas that continuously reformulate the problem in the light of new evidence; the formulation that reviews instrument choices in response to implementation and evaluation findings; implementation that is adapted to local conditions through systematic feedback; and the evaluation that generates the evidence base for the reformulation of the agenda. The evaluation not only serves to validate the phases of the process, but also to understand politics as an intermediary between the state and its citizens

— a relationship that is never definitively resolved but is continuously renegotiated through the institutions of democratic governance (Torres-Melo and Santander, 2013).

In the context of DRM governance in Latin America and the Caribbean, this recursive logic has a critical urgency. The empirical finding of the iGOPP – that every point of improvement in governance conditions is associated with a reduction in disaster fatalities – transcends the realm of governance analysis. It constitutes an evaluation finding; product of a systematic, comparative, and longitudinal measurement of governance conditions and disaster outcomes. This finding underscores the fact that investment in evaluation is not merely a bureaucratic expense but a humanitarian return. The knowledge generated by the assessment itself serves as a form of disaster risk reduction, as it illuminates the governance gaps that, if addressed, could potentially save lives.

References

- Anderson, J. E. (1975). "Public policy-making". Praeger.
- Berman, P. (1978). The study of macro- and micro-implementation. *Public Policy*, 26(2), 157–184.
- Berman, P. (1980). Thinking about programmed and adaptive implementation: Matching strategies to situations. In H. Ingram & D. R. Mann (Eds.), "Why policies succeed or fail" (pp. 205–227). Sage.
- Birkland, T. A. (2006). "Lessons of disaster: Policy change after catastrophic events". Georgetown University Press.
- Birkland, T. A. (2020). "An introduction to the policy process: Theories, concepts, and models of public policy making" (5th ed.). Routledge.
- Cairney, P., & Jones, M. D. (2015). Kingdon's multiple streams approach: What is the empirical impact of this universal theory? *Policy Studies Journal*, 44(1), 37–58. <https://doi.org/10.1111/psj.12111>
- Cobb, R. W., & Elder, C. D. (1983). "Participation in American politics: The dynamics of agenda-building" (2nd ed.). Johns Hopkins University Press.
- Dye, T. R. (1987). "Understanding public policy" (6th ed.). Prentice-Hall.
- Easton, D. (1965). "A systems analysis of political life". Wiley.
- Etzioni, A. (1967). Mixed-scanning: A "third" approach to decision-making. *Public Administration Review*, 27(5), 385–392.
- Freeman, R.E. (1984) Strategic management: A stakeholder approach. Boston, MA: Pitman.
- Haas, P. M. (1992). Introduction: Epistemic communities and international policy coordination. *International Organization*, 46(1), 1–35.
- Hogwood, B. W., & Gunn, L. A. (1984). "Policy analysis for the real world". Oxford University Press.
- Howlett, M. (2011). "Designing public policies: Principles and instruments". Routledge.
- Howlett, M. (2019). "Designing public policies: Principles and instruments" (3rd ed.). Routledge.
- Howlett, M., Ramesh, M., & Perl, A. (2009). "Studying public policy: Policy cycles and policy subsystems" (3rd ed.). Oxford University Press.
- Ingram, H. (1990). Implementation: A review and suggested framework. In N. B. Lynn & A. Wildavsky (Eds.), "Public administration: The state of the discipline" (pp. 462–480). Chatham House.
- IPCC (2012) *Special Report on Managing the Risks of Extreme Weather Events and Disasters to Enhance Adaptation to Climate Change SREX*. Intergovernmental Panel on Climate Change. Available at: https://archive.ipcc.ch/pdf/special-reports/srex/IPCC_SREX_ES_web.pdf (Accessed: April 15, 2026).
- Kingdon, J. W. (1984/2003). "Agendas, alternatives and public policies" (2nd ed.). Longman.
- Lacambra, S., Rogers, C., Suarez, G., Hori, T., Salazar, L., Esquivel, M., Narváez, L., Cardona, O. D., Durán, R., Torres, A. M., & Visconti, E. (2015). "Index of Governance and Public Policy in Disaster Risk Management (iGOPP): Main technical document". Inter-American Development Bank. <https://doi.org/10.18235/0010599>

- Lacambra, S., Suarez, G., Hori, T., Chakalall, Y., Guerrero, R., Esquivel, M., Jaimes, I., Osorio, C., Torres, A.M., Visconti, E., (2020) "Index of Governance and Public Policy in Disaster Risk Management (iGOPP): Application Protocol: 2020 Update". Inter-American Development Bank. Available at: <https://doi.org/10.18235/0002808>.
- Lasswell, H. D. (1956). "The decision process: Seven categories of functional analysis". University of Maryland Press.
- Lewis, D., & Flynn, R. (1978). "The implementation of urban and regional planning policies". Social Science Research Council.
- Lindblom, C. E. (1959). The science of muddling through. *Public Administration Review*, 19(2), 79–88.
- Matland, R. E. (1995). Synthesizing the implementation literature: The ambiguity-conflict model of policy implementation. *Journal of Public Administration Research and Theory*, 5(2), 145–174.
- Mitchell, R. K., Agle, B. R., & Wood, D. J. (1997). Toward a theory of stakeholder identification and salience. *Academy of Management Review*, 22(4), 853–886.
- United Nations, A.G. (2016) *Sustainable Development: Disaster Risk Reduction*. Available at: http://www.preventionweb.net/files/50683_oiewgreportsanish.pdf (Accessed: April 14, 2026).
- OECD. (2020). "Improving governance with policy evaluation: Lessons from country experiences". OECD Publishing. <https://doi.org/10.1787/89b1577d-en>
- OECD. (2025). "Implementation toolkit for the OECD recommendation on public policy evaluation". OECD Publishing.
- Patton, M. Q. (2008). "Utilization-focused evaluation" (4th ed.). Sage.
- Pressman, J. L., & Wildavsky, A. (1973). "Implementation: How great expectations in Washington are dashed in Oakland". University of California Press.
- Rittel, H.W.J. and Webber, M.M. (1973) "Dilemmas in a general theory of planning," *Policy Sciences*, 4(2), pp. 155–169. Available at: <https://doi.org/10.1007/BF01405730>.
- Rossi, P. H., Lipsey, M. W., & Freeman, H. E. (2004). "Evaluation: A systematic approach" (7th ed.). Sage.
- Roth, A. N. (2009). "Public Policies: Formulation, Implementation and Evaluation" (7th ed.). Aurora Editions.
- Sabatier, P. A., & Jenkins-Smith, H. C. (1993). "Policy change and learning: An advocacy coalition approach". Westview Press.
- Sabatier, P. A., & Mazmanian, D. (1979). The conditions of effective implementation: A guide to accomplishing policy objectives. *Policy Analysis*, 5(4), 481–504.
- Schneider, A. L., & Ingram, H. (1997). "Policy design for democracy". University of Kansas Press.
- Scriven, M. (1991). "Evaluation thesaurus" (4th ed.). Sage.
- Simon, H. A. (1957). "Administrative behavior" (2nd ed.). Free Press.
- Stufflebeam, D. L. (1985). "Systematic evaluation: A self-instructional guide to theory and practice". Kluwer-Nijhoff.
- Stufflebeam, D. L., & Zhang, G. (2017). "The CIPP evaluation model: How to evaluate for improvement and accountability". Guilford Press.

- Torres-Melo, J., & Santander, J. (2013). "Introducción a las políticas públicas: Conceptos y herramientas desde la relación entre Estado y ciudadanía". Instituto de Estudios del Ministerio Público. ISBN: 978-958-734-137-9
- UNDP (1997) "Governance for Sustainable Human Development." United Nations Development Program. Available at: https://digitallibrary.un.org/record/492551/files/DP%2809%29_H9181.pdf.
- Weiss, C. H. (1998). "Evaluation: Methods for studying programs and policies" (2nd ed.). Prentice Hall.
- World Bank (2005) *Economic Growth in the 1990s: Learning from a Decade of Reform*. The World Bank. Available at: <https://doi.org/10.1596/0-8213-6043-4>.
- World Bank. (2017). "World development report 2017: Governance and the law". World Bank. <https://doi.org/10.1596/978-1-4648-0950-7>