



# Resilient institutions for a transformative post-pandemic recovery in Latin America and the Caribbean

Inputs for discussion



UNITED NATIONS

ECLAC



**XVIII**

Meeting of the Regional Council for  
Planning of the Latin American and  
Caribbean Institute for Economic  
and Social Planning (ILPES)

Virtual meeting, 19–21 October 2021

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# Contents

Foreword .....	7
Introduction.....	11
<b>Chapter I</b>	
<b>An institutional structure for a transformative recovery .....</b>	<b>15</b>
Introduction .....	17
A. The importance of comprehending the crisis in all its complexity: Is this a syndemic?.....	17
B. Anticipatory governance and the capacity to construct probable futures.....	20
C. Leadership in a pandemic and leadership for a transformative recovery.....	23
D. Trust in institutions, citizen participation and strengthening democracy.....	25
E. The importance of open government, digital government and data interoperability in forging resilient institutions .....	26
1. Open government and digital government .....	26
2. E-government in Latin America and the Caribbean: the United Nations e-Government Development Index (EGDI).....	29
3. The challenge of data interoperability.....	30
4. Interoperability in Costa Rica .....	31
F. The tools and institutions supporting Dominica’s goal to become the world’s first climate-resilient nation .....	32
1. The National Resilience Development Strategy and the Dominica Climate Resilience and Recovery Plan.....	32
2. Institutional organization for action .....	34
G. Conclusions.....	35
Bibliography.....	36
<b>Chapter II</b>	
<b>The different perspectives on the concepts of resilience and institutional resilience .....</b>	<b>39</b>
Introduction .....	41
A. Complex systems and the “new normal”: uncertainty, incomplete information, recurrent shocks and resilience .....	41
B. The concept of resilience across disciplines, international agendas and some other specific issues.....	43
1. Resilience in the field of disciplines.....	43
2. Resilience in international agendas .....	44
3. Thematic resilience.....	47
C. Institutional and organizational resilience.....	48
1. Concept .....	48
2. Organizational capability-based resilience, according to Ducheck .....	49
3. Building resilient institutions.....	51
4. Capacity development and resilience.....	51
5. Adaptive learning in institutions .....	53

D. Conclusions.....	54
Bibliography.....	54
Annex II.A1 .....	59
<b>Chapter III</b>	
<b>Resilience in territories.....</b>	<b>63</b>
Introduction .....	65
A. Overview of territorial resilience and approaches to the concept.....	65
B. The institutions needed to foster resilience in territories .....	67
1. Institutions to foster resilience mechanisms .....	67
2. Engaging indigenous peoples and local communities in the construction of resilient and more inclusive societies .....	68
3. The opportunities and challenges of building resilience in territories and lessons for institutions.....	69
4. The capabilities needed to construct and enhance territorial resilience.....	70
5. Social capital as a road map to resilience for communities .....	72
C. Differing socio-spatial dynamics: vulnerability and resilience as a continuum .....	73
1. Urban spaces: Medellín, an example of a resilient city.....	73
2. The challenges of multi-scalarity in subnational resilience strategies: the Mexico City Resilience Strategy .....	74
3. Rural spaces: the Parque de la Papa in Peru .....	77
D. Measuring resilience in a territory.....	78
E. Conclusions.....	80
Bibliography.....	81
<b>Chapter IV</b>	
<b>Institutional resilience and the role of foresight .....</b>	<b>83</b>
Introduction .....	85
A. The role of foresight in fulfilling the 2030 Agenda for Sustainable Development.....	85
B. The institutional development of foresight.....	86
C. Foresight for institutional resilience .....	91
D. Foresight, innovation and creative adaptation.....	94
E. How to create visions and construct new responses .....	95
F. The role of foresight and innovation laboratories in creating expeditious and timely public policy responses .....	96
G. The relationship between foresight and State policy.....	101
H. Conclusions.....	104
Bibliography.....	105
<b>Concluding remarks and recommendations .....</b>	<b>109</b>
<b>Tables</b>	
II.1 Conceptual definition of resilience in selected disciplines .....	44
III.1 Indicators of community (territorial) resilience .....	79
IV.1 Latin America and the Caribbean: examples of foresight systems, 2021 .....	89
IV.2 Key foresight and innovation concepts .....	95
IV.3 Latin America: examples of government innovation laboratories .....	99

**Figures**

I.1	Latin America and the Caribbean (33 countries): number of countries assigned each of the ratings of the United Nations e-Government Development Index (EGDI), 2003–2020.....	29
I.2	Latin America and the Caribbean (33 countries): average rating on the e-Government Development Index (EGDI) and its subindices, 2014, 2018 and 2020.....	30
IV.1	Latin America and the Caribbean (20 countries): long-range planning horizons in the region, 2021.....	87

**Boxes**

I.1	Cuba: a systemic approach to risk management.....	19
I.2	Key assumptions, considerations and tenets of the Design and Implementation Framework of Vision 2030 Jamaica.....	21
I.3	The Open Government Partnership.....	27
I.4	The dimensions of interoperability.....	30
II.1	Learning from the response to the COVID-19 crisis: lessons and challenges regarding resilience and planning for development.....	53
III.1	Japan: culture, memory and resilient communities.....	79
IV.1	The example of Finland in the field of foresight.....	92
IV.2	Recommendations for implementing foresight and innovation laboratories.....	98
IV.3	Chile: Peñalab municipal innovation laboratory.....	99
IV.4	State policy and intersectoral coordination: the Digital Transformation Strategy towards the Bicentennial: Costa Rica 4.0.....	103

**Diagrams**

I.1	Conceptual framework for collaboration.....	24
I.2	Costa Rica: proposed model of digital governance.....	31
I.3	Dominica: the integrated thematic framework of the National Resilience Development Strategy-Dominica 2030.....	33
I.4	Dominica: resilience as defined in the Dominica Climate Resilience and Recovery Plan 2020–2030.....	34
II.1	Resilience in the international agendas pursued by the United Nations, 2000–2021.....	45
II.2	A capability-based conceptualization of organizational resilience.....	49
II.A.1	United Nations resolutions and reports highlighting resilience, by purpose, 2010–2021.....	61
III.1	Timeline of the Mexico City Resilience Strategy, 2013–2021.....	75
III.2	Mexico City Resilience Strategy.....	76
IV.1	Characteristics of innovation laboratories.....	97







# Foreword



The coronavirus disease (COVID-19) pandemic has revealed the fragility of our societies and exacerbated the profound inequalities that exist, both within countries and between them. It has also underscored the importance of science and of having robust information systems for decision-making to transform our hitherto unsustainable patterns of production, distribution and consumption, along with their institutional and political underpinnings.

We are living in times of great uncertainty, in which it remains unclear whether the inertial trend will restore a style of development that we had already warned was unsustainable; or whether, instead, we will succeed in making the leap towards a society that recognizes and embraces the links between human well-being and the health of ecosystems.

Throughout human history, we have learned that crises generate learning and can unleash major transformations. The COVID-19 pandemic and the multiple crises it has provoked (health, economic, social and environmental) ought to be a turning point driving change towards a more sustainable style of development.

The Economic Commission for Latin America and the Caribbean (ECLAC) has advocated for the post-pandemic recovery to be viewed as an opportunity to transform the region's development model into one that is sustainable, with equality and human dignity at the centre. It is essential that the forces driving this model be inclusive and innovative; they must generate and use knowledge and non-polluting technologies; and they must provide opportunities for more balanced development in the region's countries.

In this proposed big push for sustainability, the State and politics have a central role to play as representatives of the general interest of current and future generations. This involves a strengthened and renewed welfare state that not only corrects failures, but also creates new ways of doing things and steers the economy towards them; allowing us to be competitive and at the same time more inclusive, while protecting the environment that underpins our lives. Urgent government intervention in response to the COVID-19 crisis expanded the ideas and public policy space for coping with systemic crises, while freeing State intervention from the ideological burden it used to bear.

Transformative recovery must address citizens' distrust of institutions, which has been aggravated by inequality, the culture of privilege and an economic model that generates winners and losers. This means changing not only the pattern of development, but also the way in which we communicate with citizens and how we involve people in the decisions that affect their environment and quality of life.

Constructing this new development pattern, which overcomes the imbalances of its predecessor, requires renewed, collaborative and participatory leaderships, together with anticipatory governance that uses the construction of possible futures as a vehicle for inclusive and participatory reflection, and a territorial approach that harnesses local specifics and capacities to achieve synergetic and virtuous production linkages. It also requires long-term planning to link short- and medium-term measures with a consensus-based vision of the country, and the forging of pacts between the government and all social actors in the locality in question. The aim is to renew the State's capacities to face current and future challenges in a coordinated manner.

As stated in this document, enabling conditions are needed to ensure that the development objectives become State policy. These include a strengthened democracy that is committed to dialogue and builds trust, in which institutions are managed with transparency and accountability. Greater citizen participation in public affairs, the promotion of gender equality and the strengthening of ethics and public integrity are also required.

The document also argues that new institutional capacities and leaderships are needed to drive the changes necessary for a transformative recovery. These include capacities to incorporate a foresight-based approach, to mainstream climate action in public management, to integrate territorial policies in the form of an ecosystem, to generate empathy and build compacts in the territory, to mainstream open government and to provide digital public services.

The effectiveness of public action depends on social compacts that give it the necessary political support, ensure the transparency of the actions in question and strengthen the functioning of democracy. Open government and digital government make it possible to bring public action closer to the citizen and make management more effective. The more complex and ambitious the task, the more important government accountability and transparency become.

Planning and the construction of future scenarios with broad consensus will also make it possible to chart a path with equality and sustainability for the region. To this end, new leaderships must emerge in the institutions called upon to spearhead the changes —leaderships that are at once more inclusive, horizontal, empathetic and collaborative.

That is what this document is about; it aims to contribute to this reflection and advance discussion on the institutional capacities and leaderships that need to be developed to regain citizens' trust and build lasting and sustainable compacts. The aim is to create resilient institutions that can cope with current crises and prepare for future ones, focusing policy and investment on developing fairer and more sustainable societies.

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Executive Secretary  
Economic Commission for  
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# Introduction



With less than ten years to go before the deadline for achieving the Sustainable Development Goals, established with the adoption of the 2030 Agenda for Sustainable Development, the structural challenges for their implementation remain and are increasing, now in a more demanding context of uncertainty and crisis resulting from the coronavirus disease (COVID-19) pandemic.

The emergency caused by the spread of the coronavirus has highlighted the structural problems and pre-existing vulnerabilities in Latin America and the Caribbean, which are manifested in inequalities between and within countries and the unsustainability of the development model. Challenges have also arisen in terms of coordination between sectors, institutions and levels of government, and in relation to the quality of information, resulting in policy inconsistencies and information failures that impede timely decision-making based on conclusive empirical evidence. This document therefore argues that in order to face structural problems and new challenges, there is a need for strengthened institutions with renewed capacities and leadership to design policies and programmes that meet existing requirements with a view to the future in a participatory, collaborative and inclusive manner. Building resilient institutions that can cope with the current crises and prepare for future ones is an imperative, because today's policy and investment decisions will condition our future.

In light of the pressures and inertia that seek to maintain and strengthen an economic model that has failed to meet the basic needs of the population while affecting the ability of future generations to achieve sustainable development, the Economic Commission for Latin America and the Caribbean (ECLAC) has underscored the need to connect the emergency with recovery and the decade of action to address the main challenges facing our societies, already set out in the 2030 Agenda. The aim is to build a world without poverty, with decent work for all; a world where consumption and production patterns, and the use of natural resources, are sustainable; a world in which democracy, good governance and the rule of law are the essential elements of sustainable development.

In *Building a New Future: Transformative Recovery with Equality and Sustainability*,<sup>1</sup> ECLAC proposes aligning short-term policies aimed at overcoming the effects of the pandemic with strategies for structural change based on a big push for economic, social and environmental sustainability in a number of sectors that are destined to drive this new development model. The implementation of this proposal requires a long-term vision to direct national public investment and foreign direct investment towards these sectors. If countries do not have a clear vision for the future (anticipatory governance), it is difficult for them to direct investment towards the growth drivers they have identified as priorities. Along with this long-term vision, there is also need of an institutional framework with the capacity for dialogue, consultation and agreement on these new investments in the territory.

This document builds on that proposal and focuses on an essential element for ensuring transformative recovery: the renewed capacities of the State to build more resilient institutions, understood not only as the ability to anticipate or cope with a crisis, but also to learn, adapt and incorporate new knowledge in order to deal with new adverse events that may arise in the future. The underlying premise of this work is that opening the door to the future with a key to the past is impossible. Building inclusive and resilient societies requires institutions capable of carrying out the changes needed.

The 2030 Agenda already warned that bold, transformative and integrated action was needed to put the world back on the path to sustainability and resilience. These measures are now more urgently needed than ever to ensure that no country or person living in it is left behind.

The challenge is significant, but the good news is that the region is not starting from scratch. This document discusses how open government plans, territorialization of planning, climate crisis responses and disaster risk management provide some lessons on managing uncertainty and shed light on some factors that would enable the building of more resilient institutions.

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<sup>1</sup> Economic Commission for Latin America and the Caribbean (ECLAC), *Building a New Future: Transformative Recovery with Equality and Sustainability* (LC/SES.38/3-P/Rev.1), Santiago, 2020.

Chapter I addresses some of the capacities required by institutions to ensure transformative recovery: anticipatory governance, inclusive leadership and the capacity to build trust to strengthen democracy, among others. As shown in the chapter, the aim is more horizontal public administration which mainstreams the gender perspective, is open to dialogue, is participatory and transparent, builds trust and strengthens democracy, while using new technologies and benefiting from open government and e-government. The chapter presents national planning experiences as examples of this proposed comprehensive, intersectoral, multilevel, multi-stakeholder and long-term approach.

Chapter II examines the different meanings of the concept of resilience from the perspective of different disciplines, international agendas and specific themes, in order to contribute to the discussion on the capacities required to build institutional resilience. As outlined in the chapter, the aim is to develop and continuously strengthen foresight, response and adaptation capacities. In this learning process, fostering creativity, innovation, flexibility and social capital, among other enabling conditions, is imperative.

Chapter III addresses the building of territorial resilience and the institutional framework required to do so. It highlights the planning challenges that the Latin American and Caribbean Institute for Economic and Social Planning (ILPES) has been discussing (intertemporal, intersectoral and multiscale issues, participation of multiple actors and cross-cutting approaches, especially the gender perspective), along with specific challenges relating to building institutional resilience in a territory and the role played by social capital and communities' sense of belonging.

Chapter IV examines the role of foresight in building resilience, focusing on new trends in foresight methods, the current role of foresight in institutions, the importance of innovation, and futures studies and their contribution to shaping more resilient institutions. It also addresses the participation of multiple actors in the construction, discussion and monitoring of future scenarios, outlining a new dynamic between foresight, innovation, adaptation and collective learning.

As stated in the document, the COVID-19 pandemic has highlighted the importance of the State and its irreplaceable public function and representation of the general interest (of present and future generations). Hence, transformative recovery requires a strengthened and renewed welfare state: an open, transparent and participatory State, capable of building scenarios for the future with civil society, academia and the private sector, in order to move towards more inclusive and resilient societies.

The COVID-19 pandemic has tested the response and adaptation capacity of institutions and of public management. However, as is evident throughout the document, it has also created an unprecedented opportunity to identify the capacities needed to build resilient institutions that can lead a response that is equal to the challenges of the present and future.





# An institutional structure for a transformative recovery

## Introduction

- A. The importance of comprehending the crisis in all its complexity: Is this a syndemic?
- B. Anticipatory governance and the capacity to construct probable futures
- C. Leadership in a pandemic and leadership for a transformative recovery
- D. Trust in institutions, citizen participation and strengthening democracy
- E. The importance of open government, digital government and data interoperability in forging resilient institutions
- F. The tools and institutions supporting Dominica's goal to become the world's first climate-resilient nation
- G. Conclusions

## Bibliography



## Introduction

The Economic Commission for Latin America and the Caribbean (ECLAC) has cautioned that we are facing a real change of era, with global challenges such as climate change, inequality, growing asymmetries between developed and developing countries and, now, the coronavirus disease (COVID-19) pandemic. All this calls for a profound transformation that reflects a recognition of the relationship between the economy, society and the environment and for greater multilateral cooperation at the global and regional levels (Bárcena, 2020).

In order to accomplish this profound transformation, stronger institutions will be needed that possess revitalized capacities and leadership and that are capable of engaging in a participatory, dialogue-based, collaborative and inclusive effort to devise new plans, policies, strategies and programmes to meet the needs of today's population while looking to the future. In this chapter, a number of issues that are key to an understanding of this process of change will be discussed.

### A. The importance of comprehending the crisis in all its complexity: Is this a syndemic?

The effects that the COVID19 pandemic has had in Latin America and the Caribbean and in the rest of the world have highlighted not only the weak points of the countries' health systems in terms of their response capacity but the shortcomings of the entire public-sector apparatus in anticipating social needs and fully meeting them and in providing public goods and services with the level of flexibility, immediacy, effectiveness, relevance, openness and transparency that the emergency demands.

Seen in this light, the pandemic has simply deepened the recessionary gaps that have plagued the world economy ever since the economic crisis of 2008–2009. When this economic crisis is viewed against the historical backdrop of the various cyclical crises of capitalism, it becomes apparent that this has been the most serious one since the Great Depression of the 1930s (ECLAC, 2021a).

Of all the world regions, Latin America and the Caribbean has been the hardest-hit. According to the Pan American Health Organization (PAHO), as of May 2021, millions of people had become infected and over one million had died. These figures do not, however, include all the after-effects of the virus which people who have been infected may have to deal with in the future, and those after-effects are still unknown. Nor is it known whether those effects will be temporary or permanent.

The COVID-19 pandemic has laid bare pre-existing structural problems and vulnerabilities in Latin America and the Caribbean. Those flaws are reflected in the fact that, as a result of the pandemic, the region witnessed the steepest drop in its GDP (6.8%) since 1900 and turned in the worst economic performance of all the developing countries. The region's flat growth in the years before the crisis, combined with the contraction seen in 2020 and the weakness of its social protection and health systems, triggered increased unemployment, declines in income and mounting poverty and inequality. Between 2019 and 2020, the number of employed persons fell by over 24.8 million and, in 2020, the extreme poverty rate came to 12.5% while the poverty rate was 33.7%. This means that, by late 2020, there were 209 million poor people in the region, which was 22 million more than the year before. Out of that total, 78 million were living in extreme poverty. The distribution of income has also become more skewed, with the Gini coefficient climbing by 2.9%. Without the social and reactivation policies that the countries have put in place, these figures would be even worse (ECLAC, 2021b). The economic slump of 2020 also forced many micro-, small and medium-sized enterprises to close their doors. These changes had a disproportionately strong impact on women, thereby intensifying the structural gender-based inequality that is characteristic of the region.

The pandemic has also hit the region at a politically fraught time when the populace is questioning the democratic institutions of all branches of government—the executive, the legislature and the judiciary—and is demanding greater equity and social justice and increased effectiveness, transparency and accountability in the management and use of public resources.

In some countries of the region, the public's growing discontent even before the pandemic, in conjunction with their governments' limited capacity for anticipating and addressing it appropriately, gave rise to mass demonstrations in which the protesters' demands ranged from better treatment to concrete measures for tackling the region's deep-seated poverty, inequality, exclusion and culture of privilege.

The pandemic has focused attention on the State's essential role in supplying public goods and services and has led to the resurgence of the public sector as the rightful domain for mounting a response to the emergency and leading the post-pandemic recovery. Public perception that there is a lack of political leadership capable of instilling trust in State institutions and their actions has limited the effectiveness of the State.

This will require an effort to shape new types of power relations among all the agents of the State and to find a new way of managing public-sector activities from a systemic perspective that makes it possible to pinpoint which areas need to be strengthened to improve the entire public management cycle. More cooperative relationships also need to be formed among the various institutions and between them and the population at large to build greater resilience to critical internal and external events. This is why it is just as important to strengthen the institutional structure as it is to strengthen coordination practices and processes and linkages between the different sectors (intersectorality) and levels of government (multilevel management) in the design and implementation of public policies.

In dealing with this complex situation, understanding the actual nature of a given crisis and characterizing it properly are a necessary condition for good decision-making. At the outset, the pandemic was viewed as being similar to a war; the virus was seen as an "outsider," and the experts' role was unclear. All of this resulted in significant delays when it came time to take decisions about how to manage the pandemic.

According to Hoton (2020), the complexity of the COVID19 pandemic has to do with the fact that there are two types of diseases that are interacting in specific population groups: infections of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) and a series of noncommunicable diseases. These diseases converge in social groups in line with deeply rooted patterns of inequality in the region's societies. The aggregation of these diseases in a context marked by social and economic disparity exacerbates the adverse effects that each of these diseases has separately. Hoton therefore maintains that COVID-19 is not a pandemic but rather a syndemic. Because of the syndemic nature of the present threat, we will need to adopt a more broad-ranging and integrated approach if we want to protect the health of our communities (Hoton, 2020).

The concept of a syndemic encompasses biological and social interactions, and an approach to the pandemic from this standpoint entails devoting more attention to noncommunicable diseases and socioeconomic inequalities rather than looking solely at the damage or harm caused by the virus itself. In this sense, coping with COVID-19 involves addressing such health issues as hypertension, obesity, diabetes and cardiovascular and chronic respiratory diseases, among others, and the deep inequalities in terms of income, employment, gender, education, health, housing and access to environmental, digital and public services that exists within and between the countries of the region. It is a call for sweeping structural change as part of an integrated process based on policies that speak to the economic, social and environmental facets of all these issues.

In this sense, the 2030 Agenda for Sustainable Development, which the States members of the United Nations adopted in 2015, lays the groundwork for this type of systemic approach and the application of integrated policies for taking up the many development challenges that need to be met on the basis of the principles of the Agenda and the dimensions of sustainable development that it addresses. One of the underlying principles of the 2030 Agenda is the interconnected and indivisible nature of the 17 Sustainable Development Goals and the balance that they strike among the economic, social and environmental pillars of development. The five dimensions of the 2030 Agenda—people, prosperity, planet, partnership and peace—attest to the importance of good governance and governability in creating an enabling environment for any sustainable development process.

In order to deal with highly complex crisis situations, the State must mount a system-wide response and, in order for it to do so, its institutions must be revamped so that they are capable of governing complex systems and complex dynamics, especially when a wide range of risk factors are all converging at the same time. Action has to be focused on causes rather than on managing the effects of the situation, and an effort has to be made to build capacity for acting strategically in a radically changing world.

In the past few decades, new and different paradigms –ones in which the emphasis is on change, reform, modernization and, more recently, innovation– have been taking on a more important role. States and their institutions are being called upon to innovate on an ongoing basis, but not to innovate solely for the sake of innovation. Experimentation has proven to be a good thing because it opens the way for improvements and provides a means of avoiding becoming trapped in a rigid framework or path and because the uncertainty that typifies this era of change makes it impossible to set out straightforward, reliable courses of action beforehand. Nevertheless, experimentation needs to be directed along the correct path, one that will lead to institutions that can cope with change and that are capable of directing that change with deliberation and without losing sight of the objectives being pursued.

As governments have taken action to contend with the COVID19 pandemic, they have worked to apply strategies for flattening the curve of infections. This is an example of systemic thinking, as they have combined measures for restricting individual and collective freedom of movement with health-related, employment (teleworking), educational (remote learning) and social (resource transfers) measures. The lockdowns and social distancing measures ordered by the authorities are designed not only to reduce each individual's risk of contagion, but also to prevent mass infections that would overwhelm the country's medical services. To devise these kinds of measures and understand them, it is necessary to think systemically, but the initial delays revealed that public administration and government action are rife with linear thinking (warning systems, administrative systems, health and sanitation, logistics and communications, among others), meaning they still fall short when the time comes to deal with complex phenomena such as the climate crisis or instability in a financialized economy. These kinds of phenomena are already happening and having an impact on the world's countries but there has not yet been a concerted global or regional response exhibiting the sense of urgency and the swiftness that has marked the response to the pandemic.

Other examples of systemic responses on the part of the State include disaster risk management in Cuba (see box I.1), the implementation of the Vision 2030 Jamaica National Development Plan, which is presented in section B, and Dominica's National Resilience Development Strategy–Dominica 2030, which is discussed in section F.

**Box I.1****Cuba: a systemic approach to risk management**

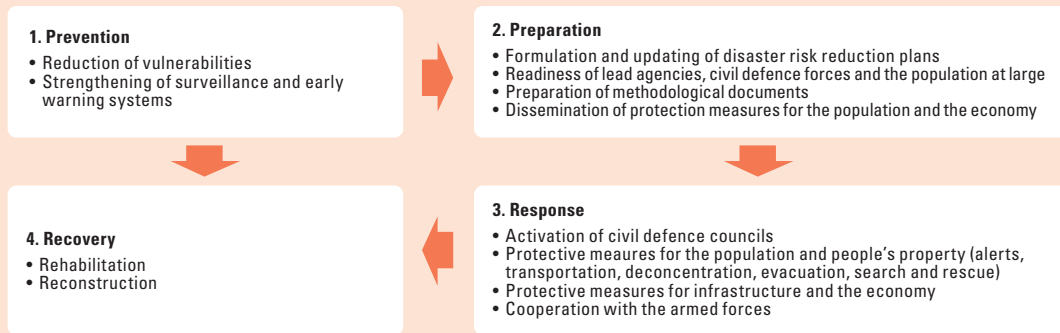
Because of its geographic location, Cuba is exposed to a range of natural, technological and health hazards. Reducing disaster risk is therefore a government priority, and the steps taken to deal with that risk have yielded a vast body of laws and regulations along with structural measures that have provided social, economic and security safeguards to help shield the island's population from the impacts of natural disasters.

The Cuban Civil Defence System is the cornerstone of Cuba's disaster risk reduction capabilities and operates throughout the country. To do its work, it draws on the human and material resources of government bodies and agencies, social institutions and businesses. These entities work together within the framework of the High Command for National Civil Defence to enforce civil defence measures, regulations and international agreements and to coordinate international aid and cooperation programmes when disasters hit.

As shown in the following diagram, Cuba's disaster risk reduction cycle is composed of four different stages.

## Box I.1 (concluded)

## The disaster risk reduction cycle in Cuba



**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of E. Rivera, "Innovaciones en sistemas de alerta temprana y planes de enfrentamiento a desastres en relación con fenómenos meteorológicos extremos", Ministry of Agriculture/Ministry of Science and Technology of Cuba [online] [https://www.cepal.org/sites/default/files/events/files/ernesto\\_rivera.pdf](https://www.cepal.org/sites/default/files/events/files/ernesto_rivera.pdf).

This cycle can be characterized as an integrative approach to risk reduction for the following three reasons:

- The risk management system addresses all the different types of hazards that can pose a threat to the island;
- All competent territorial bodies provide information relating to their field of activity (multidisciplinary effort);
- The records that they compile provide a valuable pool of information.

The Cuban Civil Defence System now has over 60 years of experience, and its efficiency and effectiveness have been amply demonstrated in the course of its response to the many disaster risks that have arisen over the years. Thanks to the outstanding efficiency of the country's early warning system and the inroads that it has made, Cuba served as the advisory country for the regional project entitled Strengthening the Integration of Early Warning Systems for More Effective Disaster Risk Reduction through Knowledge and Tools Transfer in the Caribbean. This project was implemented by the United Nations Development Programme (UNDP), the International Federation of Red Cross and Red Crescent Societies (IFRC) and the Caribbean Disaster Emergency Management Agency (CDEMA) and was sponsored by the Directorate-General for European Civil Protection and Humanitarian Aid Operations (DG-ECHO).

Within this framework, Cuba is transferring its expertise and tools to four Caribbean nations: Saint Vincent and the Grenadines, Saint Lucia, Dominica and the Dominican Republic. It has also put together a toolkit composed of instructional and methodological materials, case studies and other items concerning the efficiency and results achieved by each of the components of Cuba's early warning system. This toolkit is being made available to all the members of the Caribbean Community (CARICOM) and the countries of Latin America.

**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of J. Llanes Guerra, *Cuba: Los centros de gestión para la reducción de riesgo: mejores prácticas en reducción del riesgo*, United Nations Development Programme (UNDP), 2010; Latin American and Caribbean Economic System (SELA), "Eficacia y eficiencia muestra modelo cubano para reducir riesgos de desastres", 2020 [online] <http://www.sela.org/es/prensa/servicio-informativo/20200609/si/64531/cuba> and PreventionWeb, "Caja de herramientas: sistemas de alerta temprana en Cuba" [online] <https://www.preventionweb.net/educational/view/59362>.

## B. Anticipatory governance and the capacity to construct probable futures

In times of uncertainty and continual, pervasive change, if political authorities are to prepare for future crises, identify those probabilities and manage them appropriately, they must scan the horizon and be open to recognizing and addressing latent or incipient problems. Glaring shortcomings in this respect include short-sightedness on the part of policymakers when designing programmes, a tendency to treat symptoms rather than root causes and a focus on measures for application in the short run at the cost of future generations. Today's societies are neither prepared nor equipped to engage in anticipatory forms of governance because the constant press of day-to-day urgencies leaves no time for them to address long-term challenges. It is rare for crises to be prepared for ahead of time and, once they have passed, organizations seldom take the time to interpret what has happened or to see what can be learned from them.

According to Bárcena and Iglesias (2011), the value of a consensus-based vision lies in the fact that it requires the State to take a long-term strategic approach, to play an anticipatory role and to design strategies for guiding the national development process.

Inerarity (2020) states that reintegrating the future back into political activity can be a transformative and innovative force in democratic affairs that can provide a way of learning from past events and avoiding mistakes when crises become the “new normal”. It is therefore important to hone institutions’ strategic capacity and, above all, their ability to learn and apply those lessons in decision-making.

Anticipatory governance, which can also be defined as the political system’s capacity for looking to the future, imagining, thinking strategically and changing (The Millennium Project, 2021, and Inerarity, 2020), was initially thought of as entailing the early application of flexible, collaborative strategies in order to arrive at suitable decisions. The objective of this type of governance is to correctly address and anticipate social paradigms and possible changes in the environment. It also involves systematically incorporating and addressing strategic foresight throughout the government structure, including policy analysis, commitments and decision-making (Strategic-Foresight, 2020). This will equip governments with the capacity to explore the future on an ongoing basis so that they can adapt to it and shape it with the help of better, more sophisticated measures, as has been done in Singapore, Canada, the United Kingdom, France, Finland and, more recently, the United States and Spain.

Anticipatory governance is a complicated undertaking because of the way today’s institutions are structured and because the current system creates incentives for fast solutions for immediate problems. The concept of anticipatory governance was developed some 40 years ago, but the crisis caused by the COVID19 pandemic has resulted in a renewed appreciation of its importance in the light of the lack of foresight associated with multilevel governance and the absence of more decentralized methodologies and one-size-fits-all solutions.

In order to usher in an anticipatory form of governance, a narrative has to be developed around its importance, a value proposition has to be constructed, institutional capacity has to be built up and a culture of the future has to be nurtured (The Millennium Project, 2021, and Inerarity, 2020).

The Vision 2030 Jamaica National Development Plan is an example of anticipatory governance that uses intermediate monitoring tools and results-based management to adapt to short-term contingencies without losing sight of the long-term vision (see box I.2).

### Box I.2

Key assumptions, considerations and tenets of the Design and Implementation Framework of Vision 2030 Jamaica Planning is a development process in and of itself. The realization of social transformation through the achievement of the long-term goals and outcomes of Vision 2030 Jamaica and the SDGs requires the institutionalization of strategic planning built on the results-based management and performance-based management principles that guide implementation.

Strategic planning must first culminate in a design or blueprint for development and then be periodically updated as necessary and revised to respond to “new” knowledge and changing or emerging realities.

The Medium-Term Socio-Economic Policy Framework (MTF), covering successive three-year periods, presents medium-term strategies and policy-based programming and is the centrepiece of the implementation framework of Vision 2030 Jamaica and, by extension, the SDGs. It ensures coherence between long-term planning and the medium-term policy priorities of government and provides for the continuous implementation of Vision 2030 Jamaica across governing administrations. This framework also allows for shifts in policy priorities and resource reallocations in response to emergencies, such as the COVID-19 pandemic, while maintaining the long-term national development strategic focus.

A long-term national development plan geared towards social transformation is a prerequisite for the operationalization and institutionalization of transformational leadership principles and practices. Transformational leadership is more than a principle, it is a framework for action. Its prioritization requires evidence- and results- based planning and implementation for systemic and structural social transformation. This type of leadership is also in line with good governance. Coordination, institution-building and institutionalization, accountability and transparency are critical to building trust and partnerships in effecting transformational action in and across multiple sectors, and at national and local levels.

**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of information from the Government of Jamaica.

In some countries, anticipatory governance is used as a means of avoiding the errors of the past or of getting ahead of possible social changes and future challenges. In others, the emphasis is on democratization and transparency in addressing the issues on the government's agenda. In still others, a bolder step has been taken into the area of new technologies. Accordingly, in the view of García Fronti and Herrera (2020), anticipatory governance also affords the ability to govern emerging technologies in the early stages of their development. These authors contend that, by fostering the development of capacities associated with foresight, commitment and integration, anticipatory governance encourages all social actors to think more deeply about their roles in relation to emerging technologies and to become cognizant of their own position and own responsibilities as a participant in the process involved in developing a new technology. They go on to assert that, with this type of governance, it is assumed that issues should be brought up for public debate on a substantive basis and that the government's stance with respect to future events is established on the basis of the legitimacy of government leaders.

Within this conceptual framework, governments that seek to play an excessively central role come in for harsh criticism when they sideline other social actors that are championing proactive proposals and other possibly complementary points of view that could engender cooperative efforts on the part of the citizenry.

A proactive government administration capable of engaging in a successful form of anticipatory governance makes use of hard data, prioritizes, promotes and develops partnerships and networks to obtain societal data that it then converts into valuable information that will facilitate and ensure sound decision-making. This is of pivotal importance because it so often happens that decision makers are not familiar with the environments in which those decisions will ultimately have an impact; they do not understand the context or the relevant social needs well enough or do not envision how their decisions will influence those environments. This is why one of the technologies used in anticipatory governance is that of "big data" or, in other words, the use of algorithms to process large amounts of differing types of data.

Vision 2030 Jamaica was designed for resilience and adaptation to foreseen challenges in the development space as well as agility in responding to unforeseen shocks and crises. Its seven guiding principles represent a development framework that is people-centred and underpinned by commitments to sustainability (economic, social, environmental); social cohesion; partnership; transparency and accountability; equity; sustainable urban and rural development; and transformational leadership.

The institutionalization of the guiding principles as tenets of the national development planning framework is interconnected with the transition to a paradigm that advances the development and application of the higher forms of capital: human, knowledge, cultural and institutional. A key assumption in the Vision 2030 Jamaica Theory of Change (ToC) is strategic long-term planning geared towards institutional building and institutionalization as prerequisites for transformational leadership and achieving systemic and structural transformations.

This approach is an alternative to tenuous short- to medium-term "fixes" to the symptoms of development challenges rather than root causes.

As mentioned earlier, there are many different explanations for the tendency to focus entirely on solving problems in the short term, to the detriment of efforts to bring about more profound changes whose effects will play out over the long term. Those reasons include the temporal mismatch between decisions whose effects will be seen only in the long run and the length of elected officials' terms in office, the existence of strong social and political pressure to resolve current problems and an insufficient understanding of the effects of short-termism.

In its *COVID-19 Special Report*, No. 11, ECLAC underscores the importance of forging links between these two time frames: "A transformative recovery [from the pandemic] requires short-term policies that have a long-term vision and are mutually consistent. The construction of a new style of development must begin now starting from policy design" (ECLAC, 2021b).



Prospective planning is one of the core functions of a planning system. Its purpose is to chart the medium- and long-term outlook for society as a whole, clearly set out the options available to the authorities when the time comes for them to make a decision and explore new economic and social strategies. Although the countries of the region are displaying a renewed interest in policies of State (see chapter IV), this is a practice that has not yet permeated public administration in the region. Foresight remains the domain of a handful of government offices, elite research groups and some sectoral (e.g. demographic and energy) policy bodies, but it has not been internalized in day-to-day institutional practice. The issue of foresight in the region is discussed in depth in chapter IV. This is partly why, for example, even though developed countries had scientific information in their possession regarding the possibility of a pandemic, they were unable to anticipate it, prepare for it or respond to the emergency effectively.

Thus, anticipatory governance should provide a bridge between the present and the future which, however uncertain, nonetheless helps to provide knowledge about alternative scenarios in probable future situations.

## C. Leadership in a pandemic and leadership for a transformative recovery

An analysis of the results of efforts to manage the health crisis shows that the type of political leadership exercised in each country has been of decisive importance. As observed by the Organization for Economic Cooperation and Development (OECD, 2020a), the public's trust in the authorities and expert advisory services have proved to be valuable assets in dealing with the pandemic.

The pandemic has underscored the importance of science and scientific knowledge as a basis for sound decision-making. If the experts who have the relevant information, knowledge and data are to advise leaders effectively, those leaders need to be open-minded, and the style of government has to transition towards a more thoughtful and less ideological stance.

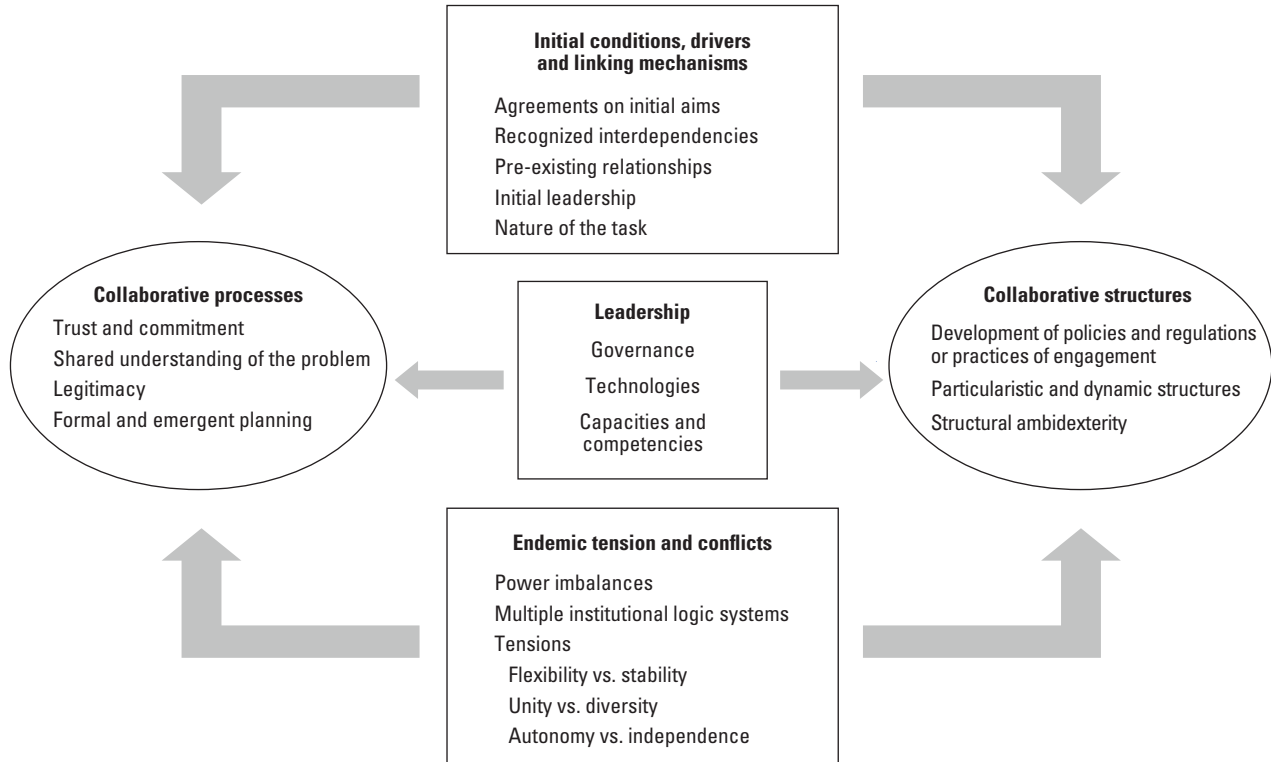
Another very important development has been the renewed appreciation of more horizontal styles of leadership that make use of organization, protocols and strategies and in which social services and a well-run, less vertical and less hierarchical public system play a central and crucial role. Managing a highly complex crisis entails, above all, managing collective intelligence and channelling it into the medical, organizational and political responses to that crisis. The lack of a solid institutional framework has therefore hindered the efforts of many countries' governments to respond in an effective way to the urgent needs that have arisen as a result of the crisis (Martí i Puig and Alcántara, 2020). Diagram I.1 depicts a conceptual framework for collaboration and the associated initial conditions and leadership skills.

For over five years now, the Latin American and Caribbean Institute for Economic and Social Planning (ILPES) has been studying leadership, particularly public leadership, as a social phenomenon originating out of a view of the world as a power-sharing space in which human beings are the only ones who can choose their own destiny, although they are of course influenced by their socio-historical context. Working on leadership in the region therefore entails building the capacity of both governmental and non-governmental actors by upgrading their practices, deepening democracy and helping them to learn how to lead institutions while breaking down outdated paradigms and inculcating the idea that society can only be constructed through co-creation, co-management and co-evaluation.

However, collaboration does not arise spontaneously, nor can it be imposed. For it to become a reality, trust among individuals and individuals' trust in democratic institutions must be rebuilt, and deliberate steps need to be taken to promote policies, standards and practices that can drive the transition from a culture of competition to a culture of collaboration.

**Diagram I.1**

Conceptual framework for collaboration



**Source:** J. Bryson, B. Crosby and M. Stone, "Designing and implementing cross-sector collaborations: needed and challenging", *Public Administration Review*, vol. 75, No. 5, 2015.

Crosby and Bryson (2005) identify eight important leadership competencies:

- (i) **Leadership in context:** The capability of understanding social, political, economic and other contexts and their potentialities for change. It is important to address problems that affect the population as a whole, not just elite groups, poor persons or the middle class;
- (ii) **Personal leadership:** A capability for personal exploration with a view to identifying assets, strengths and weaknesses relevant to the goal of beneficial change;
- (iii) **(Visionary leadership):** The capability to interpret reality and shape shared visions of the future. This entails the capability to create and communicate shared meanings around a problem or a stage in history;
- (iv) **Team leadership:** The capability to build effective work groups. Three particularly important aspects of this capability are recruitment, communication and the empowerment and development of leadership capabilities among members of the team.
- (v) **Organizational leadership:** The capability to create effective organizations and to nurture them, with the focus being on the organization's purpose and design, internal and external changes, and the construction of inclusive communities;
- (vi) **Political leadership:** The capability to take decisions in different fields, forums or arenas, such as the legislative, executive and administrative arenas. This entails an ability to form coalitions that will support the changes that are being sought.
- (vii) **Ethical leadership:** The capability to sanction conduct and adjudicate disputes in different arenas and to discern what is ethical and what is legitimate.
- (viii) **Policy entrepreneurship:** The capability to coordinate leadership objectives over the course of a policy change cycle.

In an unequal, uncertain and complex world, public leadership styles will play a significant role in determining what the post-COVID-19 recovery looks like. These forms of leadership should help to forge new linkages between the State and society (linkages that have now been severely weakened) in order to confront complex future scenarios. Thus, to bring about an inclusive, sustainable recovery, public leaders will be needed that have a renewed capability to arrive at agreements and work horizontally. They will need to be resilient, transformative, collaborative, innovative, ethical and transparent. To this end, democracy must be strengthened, trust in institutions must be nurtured and public participation in decision-making must be promoted.

## D. Trust in institutions, citizen participation and strengthening democracy

Trust is of key importance for institutions, but in many countries of the region, there has been a crisis in trust in institutions, and that crisis is not yet over. According to Latinobarómetro data, trust in public institutions has been steadily waning in the region since 2010 (Corporación Latinobarómetro, 2018). The percentages of the respondents in the countries that were surveyed by Latinobarómetro in 2018 who said that they trusted the various public institutions were as follows: electoral institutions: 28%; the judiciary: 24%; the government: 22%; the legislature: 21%; and political parties: 13%. At 14%, levels of interpersonal trust were also at a low that year. According to these results, the level of trust in Latin America and the Caribbean is the lowest of any world region. There are three dimensions to this lack of trust: among members of the population, between them and their representatives, and among the representatives of public institutions themselves.

The importance of rebuilding trust in order to strengthen democratic governance in the region is underscored by recent studies that show that societies where people cooperate with one another in the pursuit of shared objectives and where compliance with social norms is strong are in a better position to neutralize health emergencies such as the COVID19 pandemic (Min J. 2020 in ECLAC, 2021c).

Social trust also paves the way for government programmes focusing on structural reform, and investing in building social trust is therefore an essential step in creating more inclusive, resilient societies and in strengthening democracy and public participation. The changes that are needed to tackle the crises being faced today (the COVID-19 pandemic, inequality and the destruction of the environment) necessarily entail expanding opportunities for public participation and increased transparency and accountability in decision-making at all levels.

The 2030 Agenda for Sustainable Development and other international instruments signed by the countries of the region, such as the Paris Agreement, underscore the importance of building partnerships among governments, the private sector, civil society, the United Nations system and other organizations. These instruments also provide for participatory and transparent oversight and review mechanisms.

On the domestic front, the population is calling ever more loudly for a sustainable form of growth that will induce a more equitable distribution of economic benefits and environmental impacts and that will safeguard the fundamental rights of all persons, of vulnerable groups and of future generations. A persistent culture of privilege in the Latin American and Caribbean region in which elite groups are far removed from the realities faced by the rest of the population, in combination with an increasing number of cases of institutional corruption, has triggered growing distrust among the population of political and other institutions of democratic systems of government. This distrust undermines those institutions' legitimacy as drivers of the difficult types of changes that will be needed to transition towards more inclusive and resilient societies in such uncertain times.

Data compiled by the Centre for the Future of Democracy of the University of Cambridge (Foa and others, 2020a) indicate that the level of satisfaction with the workings of democracy has been steadily declining throughout the world since the 1990s. A study by the Centre that focuses specifically on the views of different age groups found that younger generations' dissatisfaction with democracy has risen in both absolute and relative terms (Foa and others, 2020b). Both of these studies find that Latin America is one of the regions

in which this dissatisfaction has increased the most. The research indicates that the lack of social policies to mitigate economic crises and the perception that corruption goes unpunished are two of the main reasons for this discontent with the workings of democracy.

This increasingly negative assessment of democracy needs to be turned around by strengthening the democratic system and winning over members of society once again so that policies in line with the objectives agreed to at the international level can be implemented and so that the system can meet the needs of those who have been hurt the most by the current climate and health emergencies and those who may bear the brunt of the measures needed to deal with those emergencies.

It has therefore become necessary to leave behind the present system of representative democracy –which is based on representation and the delegation of authority to leaders, with the sovereignty of the people being expressed only in elections held once every four or six years– and to move on to a more participatory form of democracy in which citizens have access to a range of direct and semi-direct democratic mechanisms that will strengthen and expand their right to actively participate on an informed, transparent basis in decision-making that affects their surroundings and their quality of life.

The democratization processes that marked the last two decades of the twentieth century opened the way for new mechanisms for the exercise of direct and semi-direct democracy in the region, such as citizens' initiatives, the right to have issues put up for referendum, open lobbying, assemblies and impeachment proceedings, although they are as yet used fairly infrequently and do have their detractors.<sup>1</sup>

At the international level, the entry into force of the Regional Agreement on Access to Information, Public Participation and Justice in Environmental Matters in Latin America and the Caribbean (known as the Escazú Agreement) is a step forward in the effort to reinforce environmental democracy. This agreement is the first regional environmental treaty to be ratified by the countries of Latin America and the Caribbean and the first one in the world to refer explicitly to environmental human rights defenders and to guarantee their protection. The innovative nature of this agreement extends to the way in which it was negotiated and approved, as its negotiation was based on active public participation and was an open and transparent process. The adoption of the Escazú Agreement stands as an example of what can be accomplished when government and society work together and demonstrates that ambitious pacts can be formed that transcend political cycles and allow the citizenry to actively participate in the construction of more just, inclusive, peaceful and sustainable societies.

## **E. The importance of open government, digital government and data interoperability in forging resilient institutions**

### **1. Open government and digital government**

To build trust between citizens and public institutions, information must be shared, channels for participation have to be opened up and there has to be accountability and transparency in government action.

This represents a new paradigm: open government. An open government is marked by power sharing and collaboration, and for this to be possible, there must be political will and an institutional structure that is open to collaboration and to the joint creation of solutions for public problems.

The Open Government Partnership (OPG) was formed in 2011 and has supported the creation of national plans for open government involving the participation of many different stakeholders in its member countries (see box I.3). The latest generation of open government plans in the countries of the region have broadened the scope of participation to include all branches of government, as the legislative and judicial branches have

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<sup>1</sup> For a detailed analysis of a range of different positions on direct democracy, see Altman (2005 and 2018).

now joined the executive in embracing the commitments made in those plans. In Costa Rica, for example, work has begun on open justice as a new paradigm for the administration of justice based on the principles of open government: transparency, participation and collaboration.

### Box I.3

#### The Open Government Partnership

The emerging open government paradigm provides a fresh approach to the reform of the State and the modernization of public administration which is centred around citizens' right to informed participation in public affairs. The starting point for this paradigm is a new way of pooling initiatives for promoting transparency, accountability, citizen participation and collaboration on the part of a range of stakeholders as a vehicle for the joint production of public value.

Open government policies are thus the foundation for interwoven practices, values and cultural aspects that can come together to configure a platform for the construction of an open and collaborative model of governance. The realization of that model will enable a newly empowered citizenry that demands transparency and wishes to play a part in public policy to regain its trust in public institutions.

Open government thus has to do with trust in institutions, in the citizenry and among its members. It involves collaborating and sharing, changing the workplace culture and, ultimately, altering the part played by a country's citizens from one that is confined to voting and sporadic participation to a role of active engagement in community affairs.

Since the founding of the Open Government Partnership, 57 national action plans have been co-developed in Latin America and the Caribbean and 1,156 commitments relating to the principles of open government have been fulfilled.

Latin America and the Caribbean: member countries of the Open Government Partnership that are implementing a national action plan

Country	Year joined	National action plan under implementation
Argentina	2012	Fourth plan
Brazil	2011	Fourth plan
Chile	2011	Fifth plan
Colombia	2011	Fourth plan
Costa Rica	2012	Fourth plan
Dominican Republic	2011	Fourth plan
Ecuador	2018	First plan
El Salvador	2011	Fifth plan
Guatemala	2011	Fourth plan
Honduras	2011	Fourth plan
Jamaica	2016	First plan (in co-development)
Mexico	2011	Fourth plan
Panama	2012	Third plan
Paraguay	2011	Fourth plan
Peru	2011	Fourth plan
Uruguay	2011	Fourth plan

**Source:** Prepared by the authors.

In addition, the number of local open government initiatives is growing. The Open Government Partnership, the Economic Commission for Latin America and the Caribbean (ECLAC) and other organizations are promoting a programme for local governments at this critical juncture, when provinces, cities and local communities are at the forefront of the effort to combat COVID-19 but are grappling with budget constraints and challenges in addressing other emergencies at the same time, such as the climate crisis. To date, 56 new local members (16 of which are in Latin America and the Caribbean) have joined the Open Government Partnership.

**Source:** Economic Commission for Latin America and the Caribbean (ECLAC).

OPG was founded before the adoption of the 2030 Agenda for Sustainable Development, but the two initiatives complement each other so well and create such a powerful synergy that the OPG principles of transparency, citizen participation and civil society collaboration cut across all 17 of the Sustainable Development Goals and their targets. In fulfilling the commitments made in their national open government plans, the countries have passed new laws, founded institutions and developed more robust regulations and procedures for public information access. They have also set up open data portals and collaborative shared work spaces for making use of public-sector information and providing new types of health, education, environmental, safety and security, transport and other public services.

For example, as part of the response to the pandemic, portals that allow the reuse of information have played a key role in supporting the diagnosis of COVID-19, the monitoring of cases and the tracing of infection sources with the help of applications developed through the cooperative efforts of various stakeholders. Examples include Colombia's CoronApp, which enables people to report their symptoms, provides a classification of risk categories and offers other functionalities such as "COVID passports" and telemedicine appointments. Another is Argentina's CUIDAR software, which allows people to self-test for COVID-19 and serves as a gateway for information on developments in the pandemic and on measures adopted by the Argentine authorities to curb the spread of the virus. Mention should also be made of Uruguay's mobile Coronavirus UY application, which provides information and an epidemiological questionnaire to help people report their symptoms accurately and offers tracking and telemedicine functions that also enable users to contact their own physicians through the application. These kinds of open data initiatives, many of which have been launched within the framework of national open government policies, are landmark events in the effort to demonstrate that information access is not only a right but is also the most constructive and collaborative way to add public value to government databases.

Digital government has also performed a vital function in allowing public institutions to remain "open" and to continue operating so that they can meet citizens' needs during times when social distancing has been recommended to slow the spread of the virus.

The delivery of such services as resource transfers to vulnerable persons, distance education for primary, secondary and university students, telemedicine and the distribution of basic information on plans, strategies and policies during the pandemic has only been possible in countries and territories of the region that have suitable digital infrastructure. Clearly, digital divides have been a factor, and population groups in vulnerable situations owing to a lack of income, distance education and infrastructure have been left behind.

Making progress towards the digital transformation of government functions will require a radical change in the culture of the public sector with regard to participation, policymaking, public service delivery and collaboration. The OECD Digital Government Policy Framework delineates six dimensions of a digital government: digital by design, data-driven public sector, government as a platform, open by default, user-driven and proactiveness (OECD, 2020b). Whereas e-government puts the emphasis on technology, digital government involves integrating that culture into all government processes focused on meeting user needs by reengineering and redesigning services and procedures. It is very important to underline the fact, however, that technology is a cross-cutting means of facilitating improvements in government, but it is not the driver of change.

Digital government is widespread in the region, with 16 countries having already designed national digitalization strategies. However, these strategies are more focused on digital infrastructure and production than on structural economic, social and environmental aspects or on disaster-response capabilities. Nor is there a clear-cut connection between national development strategies or plans and digital agendas, which is a wasted opportunity for addressing the two objectives in an integrated manner and for mainstreaming digital strategies into medium- and long-term sustainable development policies (OECD, 2020b).

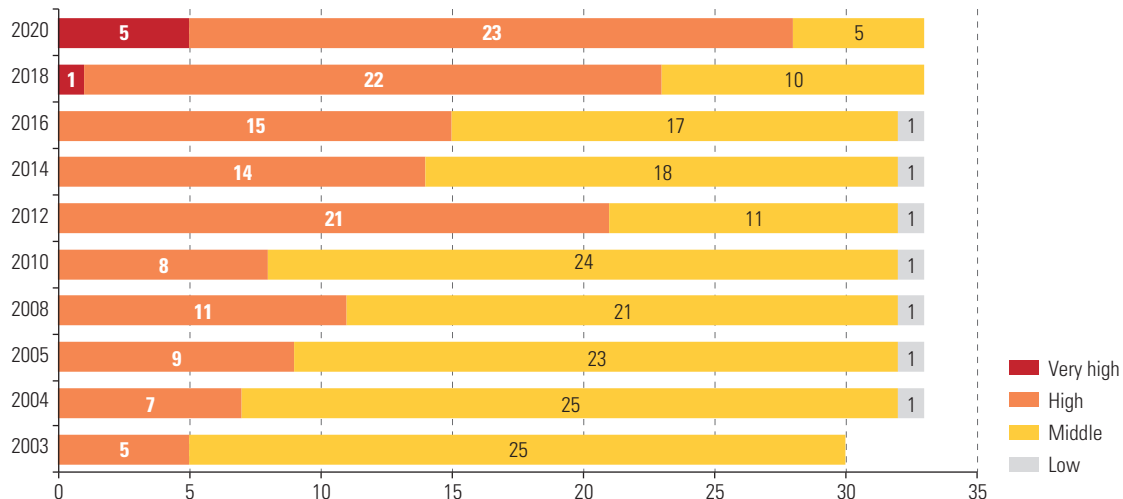
## 2. E-government in Latin America and the Caribbean: the United Nations e-Government Development Index (EGDI)

Since the early 2000s, the United Nations Department of Economic and Social Affairs has been working through the United Nations Public Administration Network to conduct a survey once every two years on the development of e-government in Member States. The data gathered in the survey are then used to construct the e-Government Development Index (EGDI), which quantifies the stage reached in the implementation of e-government systems in each of the 193 States Members of the United Nations. This index is based on a holistic view of e-government that incorporates three important dimensions involved in ensuring that people can benefit from online services and information: the availability of online services, telecommunications connectivity and human resource capacity for promoting and using information and communications technologies (ICTs).<sup>2</sup>

As shown in figure I.1, the number of countries of the region with high or very high ratings on this index has been rising steadily: in 2003, only 5 countries ranked that high on the index, but that number had climbed to 14 by 2014 and to 28 by 2020. In the last two years, further progress has been made in the delivery of online services, connectivity, digital literacy and the promotion of access to ITCs. The top-rated countries in terms of the implementation of comprehensive national e-government strategies are Uruguay, Argentina, Chile, Brazil and Costa Rica. Uruguay had already been ranked as “very highly developed” in 2018, while the other countries listed here obtained that ranking in 2020 when their supporting legislation had been developed further and they were cooperating closely with regional and international partners in the sphere of digital government.

**Figure I.1**

Latin America and the Caribbean (33 countries): number of countries assigned each of the ratings of the United Nations e-Government Development Index (EGDI), 2003–2020



**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of United Nations, E-Government Survey, 2003-2020.

As can be concluded from the data shown in figure I.2, the region’s average rating is slightly above the world average (0.62 versus 0.60). The regional average for two of the subindices that make up the e-Government Development Index –the Local Online Service Index and the Telecommunications Infrastructure Index– has improved quite significantly.

<sup>2</sup> The e-Government Development Index is a composite index based on the weighted averages of three normalized subindices: the Telecommunications Infrastructure Index, which is derived from data furnished by the International Telecommunication Union (ITU); the Human Capital Index, which is primarily based on data provided by the United Nations Educational, Scientific and Cultural Organization (UNESCO), and the Local Online Service Index, which is based on data collected from an independent online service questionnaire drawn up by the Department of Economic and Social Affairs of the United Nations, which is used to assess the online presence of the governments of each of the 193 States Members, supplemented by a questionnaire designed by the Member States themselves.

**Figure I.2**

Latin America and the Caribbean (33 countries): average rating on the e-Government Development Index (EGDI) and its subindices, 2014, 2018 and 2020



**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of United Nations, E-Government Survey, 2003-2020.

### 3. The challenge of data interoperability

In addition to service design, streamlining and automation, it is important to set up interoperable systems in the different sectors of a government's administrative apparatus to promote government efficiency. And to integrate different public agencies' data systems, their databases will need to be digitized, for the most part, and they will need to use the same standards and identifiers (OECD, 2020b).

Interoperability can be defined as "the ability of ... organisations to interact towards mutually beneficial and agreed common goals, involving the sharing of information and knowledge between the organisations, through the business processes they support, by means of the exchange of data between their respective ICT systems" (European Commission, 2010). In order to have an effective level of interoperability, the countries will need to work on all four of its dimensions (see box I.4) so that they can step up inter-agency cooperation and guarantee quality services for the population.

In order to implement interoperability initiatives, the public service paradigm will need to be changed, a value proposition will need to be formulated that includes cultural changes that will place citizens at the centre of public administration, and the relevant processes, institutions and relationships with the public will need to be modified.

#### Box I.4

##### The dimensions of interoperability

Institutions that want to have interoperable data systems will need to work at all four of the levels of interoperability:

- (i) **Legal interoperability:** This dimension involves ensuring that organizations that operate within different legal, political and strategic frameworks can work together. Clear-cut agreements on how legislative differences are to be dealt with will be needed, and consideration may have to be given to the application of new legislative measures.
- (ii) **Organizational interoperability:** This kind of interoperability is needed to ensure that services will be available and that they can be easily identified, are readily accessible and are user-focused. Two components of this aspect of interoperability need to be recognized: business process alignment and organizational relationships. With respect to the first of these components, all public institutions involved in public service delivery need to have a grasp of the overall institutional process, as well as the function that they perform within that process. In regard to the



**Box I 1 (concluded)**

second component, the relationship between service providers and service consumers must be clearly structured. The participating public administrations must find instruments, such as memorandums of understanding and service level agreements, for formalizing mutual assistance, joint action and interconnected business processes.

- (iii) (Semantic interoperability: This aspect of interoperability concerns ensuring that the format and the precise meaning of the information that is being exchanged is understood and preserved throughout all inter-party exchanges, i.e. the message that is transmitted is understood.
- (iv) Technical interoperability: This dimension encompasses the applications and infrastructure that connect up systems and services and includes such elements as interface specifications, interconnection services, data integration services, data presentation and exchange, and communication security protocols.

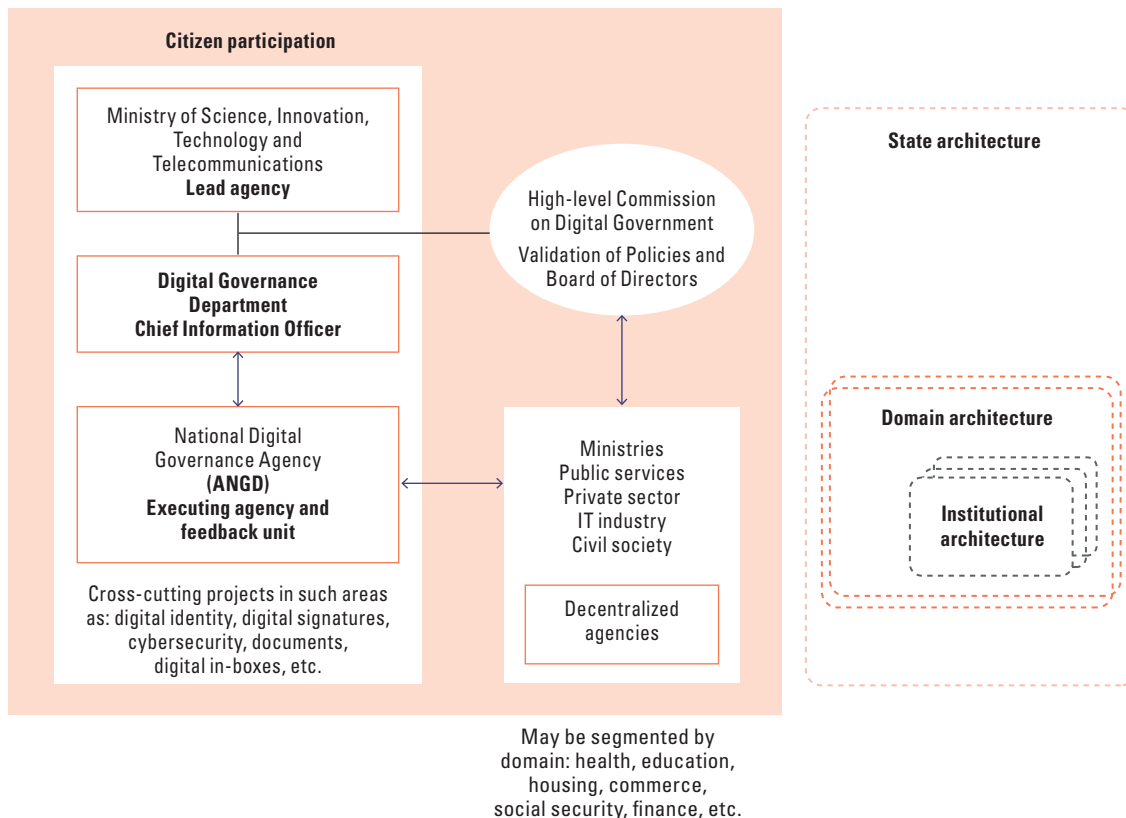
**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of A. Naser (coord.), "Gobernanza digital e interoperabilidad gubernamental: una guía para su implementación", *Project Documents* (LC/TS.2020/80), Santiago, Economic Commission for Latin America and the Caribbean (ECLAC), 2021.

## 4. Interoperability in Costa Rica

As part of the technical assistance on government interoperability provided by ILPES to the Ministry of Science, Innovation, Technology and Telecommunications of Costa Rica, the Institute proposed a governance and interoperability model in which the structural components of the interoperability exercise conducted in that country were compiled and converted into a manual on the implementation of the necessary institutional structure to underpin digital governance (Naser, 2021) (see diagram I.2).

### Diagram I.2

Costa Rica: proposed model of digital governance



**Source:** A. Naser (coord.), "Gobernanza digital e interoperabilidad gubernamental: una guía para su implementación", *Documentos de Proyectos* (LC/TS.2021/80), Santiago, Economic Commission for Latin America and the Caribbean (ECLAC), 2021.

Digital governance entails viewing the State and its capacity to create public value as a whole. This requires adopting an approach in which the first step is to define and agree on what public value actually is at the level of the State and how that value is represented in each State institution.

There are a variety of digital governance models in the world, but, given the cultural traits, resource endowments, capacities, gaps in maturity and existence of decentralized institutions in the countries of the region, the model that is the best fit in terms of the needs of countries in Latin America and the Caribbean is a mixed model that combines elements of the centrally coordinated model with elements of the decentralized coordination model proposed by OECD. In the centrally coordinated model, there is a coordination unit with a clear mission, which establishes precise roles for information systems managers. The decentralized coordination model, in contrast, offers greater flexibility to individual ministries to carry out projects and explore different approaches using ICTs for their modernization. While there may be a central coordinating body and a national strategy to guide e-government activities, these bodies have increasingly fewer binding requirements and do not have a designated central official who assumes responsibility for the final digital agenda. In a governance model such as the one depicted in diagram I.2, the combination of efforts to promote inter-ministerial coordination and collaboration, set priorities and facilitate the participation and coordination of relevant agencies at all levels of government ensures political leadership and commitment to the national strategy. This model strengthens the management of links between the various stakeholders involved in decision-making, implementation and evaluation of matters of public interest (illustrated in the citizen participation component of the diagram), and enables monitoring of how the various stakeholders interact to ensure quality and effectiveness, both in the system as a whole and in each of its individual components. This is a prerequisite for the design of the cross-cutting projects that will serve as the pillars of digital government, such as projects concerning interoperability, digital identity, digital signatures, cybersecurity, digital in-boxes and citizens' folders. These projects provide a vehicle for initiatives aimed at implementing user-focused solutions (digital applications, procedures and other formalities) within a single organizational, regulatory and semantic framework on a single, standardized, interoperable platform.

As mentioned earlier, the complexity of this process is such that it necessarily entails a capacity-building effort. This is because it is not an innovation in an exclusively technological sense but rather also involves a change in the technical and political culture of the participating institutions, a substantial measure of political will and, above all, a reinvigorated user-focused system for assisting the public that is based on collaboration with the members of the public that it is intended to serve.

## **F. The tools and institutions supporting Dominica's goal to become the world's first climate-resilient nation**

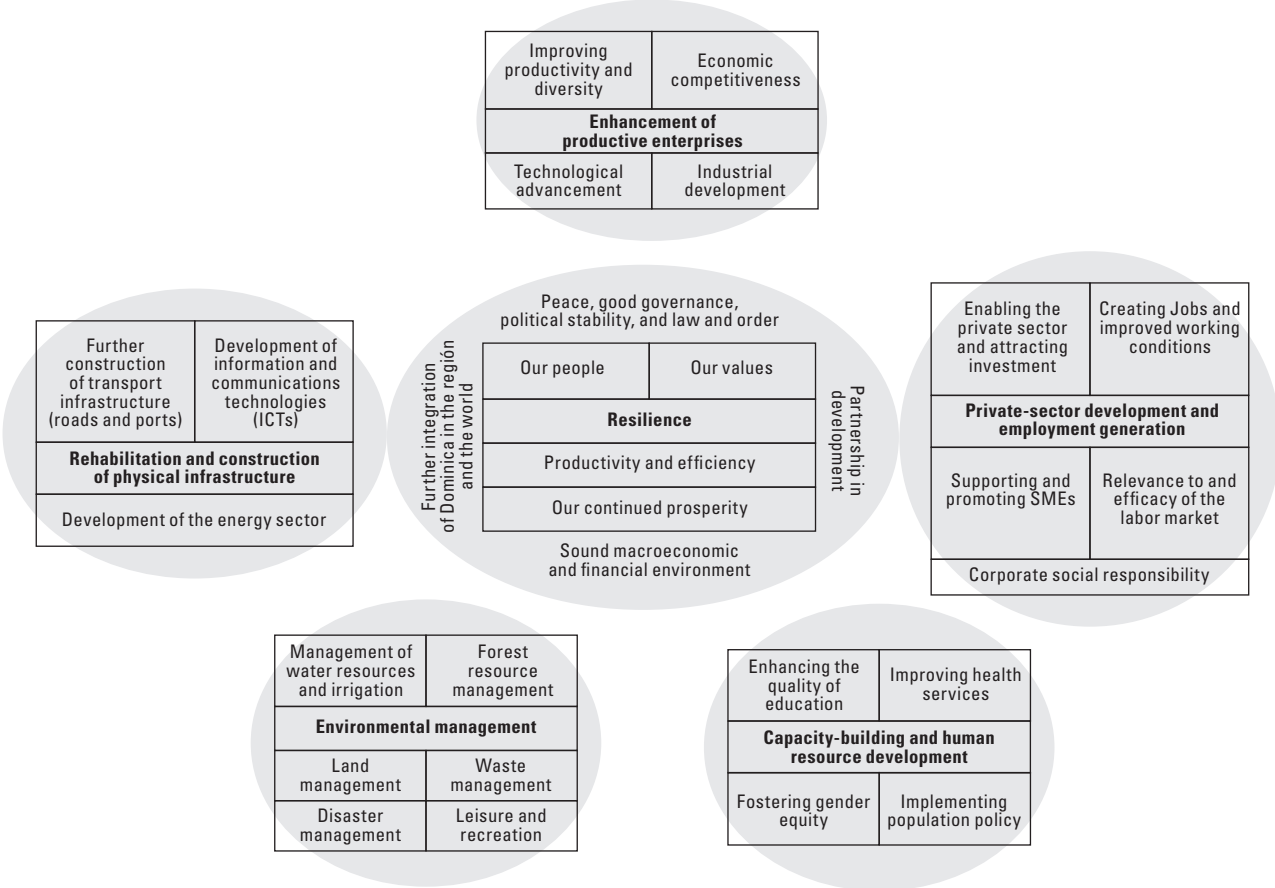
### **1. The National Resilience Development Strategy and the Dominica Climate Resilience and Recovery Plan**

In the aftermath of the devastation caused by Hurricane María in Dominica in 2017, its government made a commitment to rebuild the country and to turn it into the world's first climate-resilient country.

To that end, it drew up the National Resilience Development Strategy–Dominica 2030 (Government of Dominica, 2018), which plots out a road map for the achievement of resilience by 2030 (see diagram I.3). It also developed the Dominica Climate Resilience and Recovery Plan 2020–2030 (Government of Dominica, 2020) as a companion document. This plan will also serve as a guide for the formulation of sectoral strategic plans.

Diagram I.3

Dominica: the integrated thematic framework of the National Resilience Development Strategy-Dominica 2030



Source: Government of Dominica, *National Resilience Development Strategy-Dominica 2030*, 2018 [online] <https://dominica.gov.dm/government-publications/national-development-strategies/the-national-resilience-development-strategy-dominica-2030>.

This planning effort is aimed at accomplishing a full recovery, building climate-resilient systems and prudent disaster risk management systems and establishing an effective disaster response and recovery mechanism in order to reduce the negative impacts of future disasters and bring about a swift recovery.

The Resilience Strategy focuses on seven development objectives:

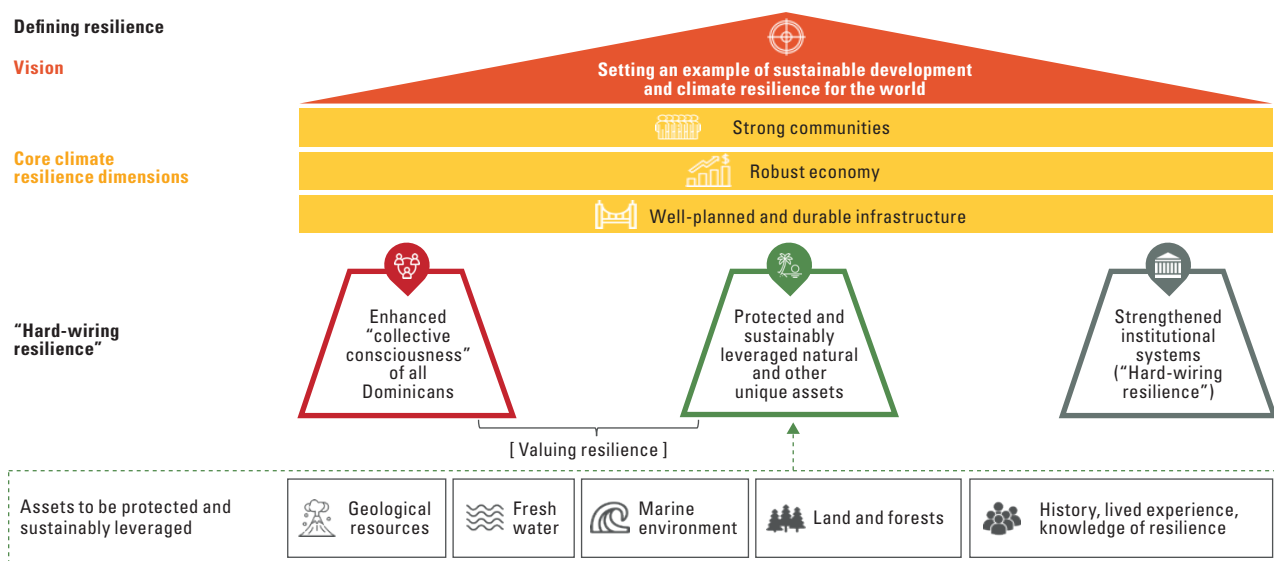
- (i) Promoting food security and self-sufficiency through climate resilience, agriculture and fisheries development;
- (ii) Enhancing the resilience of ecosystems and sustainable use of natural resources (forestry, marine and water resources);
- (iii) Enhancing infrastructure resilience;
- (iv) Promoting sustainable human settlements/communities;
- (v) Providing adequate and sustainable social protection systems with the ability to respond rapidly to the impact of shocks at the individual and household levels;
- (vi) Implementing a comprehensive risk management framework (including a national vulnerability risk resilience fund) and pursuing the low-carbon development pathway (the greening of the economy);
- (vii) Promoting economic empowerment and innovations through sustainable climate financing.

The Strategy also provides for a revamped configuration of recovery efforts in which the corresponding responsibilities are distributed among four levels: the household, community, district and national levels. This effort will therefore entail not only multilevel governance but also a multi-stakeholder approach.

The Dominica Climate Resilience and Recovery Plan 2020–2030 asserts that, in order to achieve genuine resilience, the focus has to be on building strong communities, a sustainable economy and durable, well-planned infrastructure underpinned by the critical preconditions of valuing, financing and mainstreaming resilience. All these elements are of fundamental importance for long-term success (Government of Dominica, 2020). Diagram I.4 charts the conceptualization, dimensions and foundations for resilience as outlined in the plan.

#### Diagram I.4

Dominica: resilience as defined in the Dominica Climate Resilience and Recovery Plan 2020–2030



**Source:** Climate Resilience Execution Agency for Dominica (CREAD), *End of Year Report*, December 2019 [online] [www.creadominica.org](http://www.creadominica.org).

## 2. Institutional organization for action

The National Development Management Framework sets the context and parameters that guide the Dominica's development process. The National Resilience Development Strategy–Dominica 2030 stands at the pivot of that framework and provides direction and content to guide sectoral strategies and action plans.

In its strategy document, the Government of Dominica states that: "Building resilience into the national development planning and management process requires better and more careful preparation of project proposals, closer monitoring of key indicators, systemic reporting and frequent evaluation of programmes and projects. Tasked with a collective responsibility for the fulfilment of this resiliency-building vision, governmental ministries and agencies are expected to follow through" (Government of Dominica, 2018, p. 24).

At the time that the Strategy was approved, the institutional arrangements for its implementation included 16 ministries, whose efforts were to be guided by the Office of the Prime Minister and the Office of the Secretary to the Cabinet. Later, however, the Ministry of Economic Affairs, Planning, Resilience and Sustainable Development, Telecommunications and Broadcasting was created. The Ministry's work is organized into eight core areas: (i) economic growth, resilience and sustainable development; (ii) development and social protection; (iii) economic and social research; (iv) capital investment; (v) land use and physical planning; (vi) telecommunications regulation; (vii) public relations; and (viii) policymaking and policy management (Government of Dominica, 2018).

From the very start, the National Resilience Development Strategy–Dominica 2030 established that this process would demand the concerted efforts of the State as a whole and of all the agents of development present on the island. Because of the various legal and other instruments to be used for this purpose, however, a special-purpose institutional framework was needed in order, in particular, to maintain the transparency and accountability required when making use of resources from donor agencies and the private sector. The government therefore decided to create the Climate Resilience Execution Agency of Dominica (CREAD).

CREAD is a statutory government agency tasked with leading and coordinating strategic initiatives across all sectors in Dominica with the goal of making the country the world's first climate-resilient nation. It works to bolster the ability of the business community, public services and social-sector partners to build strong and resilient communities, develop adaptive infrastructure, accelerate economic growth, strengthen institutional systems, enhance Dominicans' ability to respond to the local impacts of global climate change and set an example for the rest of the world as to how to respond to the challenges of a changing climate.

The innovative aspect of this institutional arrangement is that it facilitates the mainstreaming and institutionalization of resilience, proposes revamping the entire State apparatus through the introduction of integrated policies, recognizes and promotes the participation of all agents of development, distributes responsibilities across the various levels of government and assigns institutional learning and innovation a vital role in forging resilience.

## G. Conclusions

Given the complexity of the pandemic and of future crises, whether they take the form of health emergencies or are caused by climate change, a thorough-going change must be made in the way that State institutions function at the national, subnational and local levels and how the institutions at those levels interact. The sectoral focus and silo mentality that is so prevalent in the current institutional framework renders those institutions incapable of grappling with complex situations that call for integrated, long-term policies while at the same time coming up with immediate responses to the citizenry's needs in relation to a basic income, employment and access to health services, education, ICTs and connectivity.

The need to strengthen the State's role as a guarantor of the common good has been established, but the State must also develop a greater capacity to anticipate crises, prepare for them and cope with them when they occur and to learn from past successes and failures and apply those lessons in its decision-making. In a power-sharing society, public leadership needs to function along more horizontal lines, to promote collaborative dynamics among different institutions and to foster more participatory and transparent interactions between them and other agents of development.

Citizens' trust in democratic institutions must be restored so that the population will participate and collaborate more fully in finding solutions for shared problems. A renewal of trust is also essential in order to encourage dialogue and the formation of the social compacts that will serve as the cornerstone for agreements around the structural changes needed to bring about a transformative recovery. Policies of State and open government policies will be the mainstays for impending changes in the way the State operates, but what will be even more important is the change of culture that these policies will engender. This change of culture will involve placing the citizenry at the centre of a new approach to public service, providing access to information, encouraging public participation and promoting transparency and accountability. All of these capacities will play a pivotal role in the creation of more resilient institutions that will be capable of surmounting the challenges involved in bringing about a transformative recovery in the post-COVID19 world.

There have been cases in the region, as in Costa Rica, Cuba, Dominica and Jamaica, in which planning and policy instruments and institutions have been developed that can be used to take an integrated, intersectoral, multilevel, multi-stakeholder, long-term approach to dealing with the complexity of future crises and prompting changes in public administration that will enable the countries of the region to be prepared for the challenges of the twenty-first century.

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# The different perspectives on the concepts of resilience and institutional resilience

## Introduction

- A. Complex systems and the "new normal": uncertainty, incomplete information, recurrent shocks and resilience
- B. The concept of resilience across disciplines, international agendas and some other specific issues
- C. Institutional and organizational resilience
- D. Conclusions

## Bibliography

## Annex II.A1



## Introduction

As mentioned in chapter I, the coronavirus disease (COVID-19) pandemic has highlighted the systemic nature of the risk posed by disasters and the severe cascading impact they have on society as a whole. What began as a health crisis has had serious impacts on food security and on economic and social systems, hindering achievement of multiple Sustainable Development Goals (SDGs) and highlighting the need to identify and prevent potential risks and reduce existing ones. The increasing public importance of issues related to economic, political and environmental crises and their multidimensional impacts has shaped contemporary public debate and focused attention on the question of how societies cope with the challenges posed by natural disasters, social and political upheavals and economic crises. The resilience of our societies, which is to say, the capacity of social systems to withstand upheavals, survive shocks and ensure the continuity of their most basic functions, has been shown once again to be fundamental. This resilience is understood to be the capacity of our communities, institutions and economic, social and environmental systems to resist and absorb shocks and positively transform in response to them.

The development challenges exposed by COVID-19 in Latin America and the Caribbean require resilient institutions and comprehensive, innovative responses capable of adjusting and transmuting, with in response to the pace of change in the environment, the magnitude of the challenges and the wider availability of increasingly sophisticated information, based on new information technologies. This chapter examines how the conceptualization of resilience can contribute to strengthening States' capacity to anticipate, prepare for and respond to crises, and subsequently adapt and transform institutions. It also identifies the capacities and processes of public institutions that ought to be strengthened in view of the uncertainty and volatility of the environment, and the complexity and multidimensional nature of development problems.

This chapter focuses on a pragmatic approach, analysing experiences related to planning processes and instruments, the changes that are required to build resilience in institutions and the barriers to resilience. In addition to the theoretical conceptual review herein, regional and extraregional practices are also examined. Lastly, it looks at how institutional memory is maintained and communicated across fragmented organizational boundaries, especially at a time of public sector cuts, to determine which elements drive a return to the pre-crisis status quo.

### A. Complex systems and the “new normal”: uncertainty, incomplete information, recurrent shocks and resilience

The observations of Leach, Stirling and Scoones (2010) on the contradiction in “contemporary responses to environment and development challenges” and the “recognition of growing complexity and dynamism” are even more relevant today amid the global and regional crisis posed by the COVID-19 pandemic and the interaction between natural and social systems it has brought to the fore. They note that today's world is highly complex and dynamic, and the interaction between water, land and other ecological systems interact and climate change and new patterns of disease incidence leading to rapid changes in environmental conditions. Developments in science and technology are proceeding faster than ever, with the spread of technologies shaped by new and often highly globalized patterns of investment and information. Social systems are also undergoing rapid changes linked to population growth, urbanization, the difficulty of meeting social demands through political-democratic processes and market relationships.

The policies and institutions that have to deal with this new dynamic context are often premised on static views of the world that seem to follow relatively clearly determined, single linear trajectories. The authors note that “assumptions of stability (*ceteris paribus*), equilibrium and predictable, controllable risks dominate” and the failures of the approaches to intervention and policy resulting from this static view are evident even though “governments and institutions are ... increasingly preoccupied with risk and the insecurities that real and perceived threats seem to pose”. The authors argue that “dominant approaches involve a narrow focus

on a particular (highly incomplete) notion of risk. This (wrongly) assumes that complex challenges can be calculated, controlled and managed —excluding other situations where understandings of potential future outcomes are more intractable. Some of these involve uncertainty, where the possible outcomes are known but there is no basis for assigning probabilities, and judgement [or common sense] must prevail. Other situations involve ambiguity, where there is disagreement over the nature of the outcomes, or different groups prioritize concerns that are incommensurable”

The authors also speak of cognitive blindness (not knowing what one does not know) and its implications for public policy analysis. While conventional approaches to policy analysis are well-attuned to handling risk, they become inadequate in the situations in which incomplete knowledge can be recognized to prevail, such as some social, technological and ecological dynamics where the possibility of surprise is ever-present. This is why “a wider appreciation of the dimensions of incomplete knowledge ... is essential if we are to avoid the dangers of creating illusory, control-based approaches to complex and dynamic realities”

Organizations must use their awareness of the volatility and uncertainty of the times to develop a resilience capacity which enables them to cope effectively with unexpected events, bounce back from crises, and even foster future success (Duchek 2020).

In complex systems, tensions exist between efficiency and resilience (OECD, 2020a, p.2). These tensions refer to the space that must exist for systems to learn and adapt, which contrasts with an approach that prioritizes efficiency, focused on minimizing costs and resource use: fostering resilience requires some degree of redundancy of resources and space for trial and error. System resilience is built on the acceptance of the uncertain, unpredictable and random nature of systemic threats. This mind-set “acknowledges that the infinite variety of future threats cannot be adequately predicted and measured, nor can their effects be fully understood” (OECD, 2020a). It is accepted that “massive disruptions can and will happen ... and it is essential that core systems have the capacity for recovery and adaptation to ensure their survival”, and even grow stronger following the crises to improve the system through broader systemic changes (ibid., p. 11).

A recent OECD (2020a) article on systemic resilience as a strategy for tackling COVID-19 and future shocks concludes that resilience, understood as the capacity for recovery and adaptation in the aftermath of a disruption, “is a requirement for interconnected twenty-first century economic, industrial, social, and health-based systems, and ... is a ... crucial part of [national and subnational] strategies to avoid systemic collapse” (p. 16). As such, policymakers must be given support to “build safeguards, buffers and ultimately resilience to physical, economic, social and environmental shocks” (OECD 202a, p. 12). The following are some specific recommendations for building resilience to contain epidemics and other systemic threats (OECD, 2020a, p. 18):

- Design systems, including infrastructure, supply chains, and economic, financial and public health systems, to be resilient, which is to say recoverable and adaptable.
- Develop methods for quantifying resilience so that trade-offs between a system’s efficiency and resilience can be made explicit and guide investments.
- Control system complexity to minimize cascading failures resulting from unexpected disruption by decoupling unnecessary connections across infrastructure and make necessary connections controllable and visible.
- Manage system topology by designing appropriate connection and communications across interconnected infrastructure.
- Add resources and redundancies in system-crucial components to ensure functionality.
- Develop real-time decision support tools integrating data and automating selection of management alternatives based on explicit policy trade-offs in real time.

Additionally, enhancing the exercise of the rights of access to information, participation and justice are essential for building resilience strategies and moving towards more inclusive societies, ensuring that the issues that affect disadvantaged groups and vulnerable communities the most are addressed while also guaranteeing that the needs of these groups are met.

Viewed through this lens, “Ultimately, resilience-building aims to ensure systems are better prepared and equipped for rapid change, high uncertainty and plausible future shocks” (OECD 2020c p. 169). Achieving that goal will require deep understanding of system components and their interactions, which would be used to design evidence-based methods to anticipate plausible shocks and the ability to stimulate effective action. Thus, “resilience-building should incorporate complex systems thinking, foresight analysis and behavioural science which could be used to stress test existing systems based on informed scenarios” (OECD 2020c p. 169).

## B. The concept of resilience across disciplines, international agendas and some other specific issues

### 1. Resilience in the field of disciplines

The Spanish Royal Academy officially included the Spanish word “resiliencia” in its dictionary as recently as 2014, defining it as the capacity of a living being to adapt to a disturbing agent or an adverse state or situation or as the capacity of a material, mechanism or system to recover its initial state when the disturbance to which it had been subjected has ceased. The term “resiliencia” was adapted into Spanish from the English word “resilience” which in turn has its etymological origin in the Latin “resiliens”, present participle of “resilire” which means to rebound or recoil (RAE, 2021).

As shown, the concept of resilience is used in a multitude of disciplines, and in many of them the constructs that have been developed are very complex. Table II.1 shows some of the most representative definitions of the disciplines in which resilience has been conceptualized, such as psychology, ecology and natural disaster prevention.

One of the first contemporary uses of resilience is given by C.S. Holling (1973), who approaches the concept from the environmental or ecological point of view, defining resilience as a measure of the ability of ecosystems to absorb changes of state variables, driving variables, and parameters, and still persist.<sup>1</sup> In the 1980s, resilience was defined by some authors as the capacity of a system to return to pre-disturbance conditions (Fox and Fox, 1986; Pimm, 1984; Keeley, 1986).

In psychology, ecology, organizational studies and disaster management, resilience is understood as a process, a capability or an outcome, and capability is considered a key element in understanding resilience in difficult or threatening circumstances (psychology), shocks (ecology), internal or external adversity (organizational resilience) or crises (disaster and threat management). Regarding types of capabilities, in psychology it refers to the ability to absorb disturbances and reorganize while maintaining the same function and structure, in the organizational field it refers to the ability to adapt positively, achieve positive results, absorb stresses, preserve or improve functioning and recover, and in disaster and threat management it refers to the ability to adapt, be creative and flexible, self-regulate and have routines to cope with complexity.

Thus, resilience refers to a systemic concept, with integrated units that are interdependent through complex relationships. It is an outcome whereby a system has capabilities that are expressed in processes, such as absorption, adaptation, recovery and self-regulation, through which it is able to maintain the same functions and structure, or effect enhanced positive outcomes.

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<sup>1</sup> According to McAslan (2010, p. 2) the first “modern” use of resilience was by Robert Mallet. Mallet used the concept of resilience to measure and compare the strength of materials used in the construction of metal warships in England in the mid-nineteenth century. Mallet developed a measure called the “modulus of resilience” as a means of assessing the ability of materials to withstand severe conditions, and defined it as the energy required to rupture a material as a result of a force being applied.

**Table II.1**  
Conceptual definition of resilience in selected disciplines

Discipline	Definition
Psychology	<p>“Process of, capacity for, or outcome of successful adaptation despite challenging or threatening circumstances” (Masten, Best and Garmezy, 1990).</p> <p>“Buffering capacity” to resist shocks. Theory on loss, trauma, and forms of acute adversity for adults (Bonanno, 2004).</p> <p>“Stable trajectory of healthy functioning in response to a clearly defined event” (Bonanno, 2012, p. 753).</p>
Ecology	<p>Equilibrium and stability of systems (Holling, 1973).</p> <p>“The persistence of systems and of their ability to absorb change and disturbance and still maintain the same relationships between populations or state variables” (Holling, 1973, p. 7).</p> <p>The “capacity of a system to absorb disturbance and reorganize while undergoing change so as to still retain essentially the same function, structure, identity, and feedbacks” (Walker and others, 2004).</p>
Organizational studies	<p>Explains how organizations continually achieve positive outcomes despite strain and barriers to adaptation (Lengnick-Hall and Beck, 2005; Sutcliffe and Vogus, 2003; Weick and Sutcliffe, 2007).</p> <p>“Positive adjustment under challenging conditions. This involves: (1) the ability to absorb strain and preserve (or improve) functioning despite the presence of adversity ... or (2) an ability to recover or bounce back from untoward events” (Sutcliffe and Vogus, 2003).</p>
Disaster and threat management	<p>Refers to both the maintenance of the status quo and adaptation (Hollnagel, Woods and Leveson, 2006; Zolli and Healy, 2013).</p> <p>Ability of a system to adapt, be creative and flexible, but also to “self-regulate and have processes and routines capable of handling complexity without oversimplifying” (Normandin and Therrien, 2016).</p>
Multilevel management	<p>Quality that “arises from interaction across multiple levels of functioning” (Boon and others, 2012; Bronfenbrenner, 2004; Drabek, 1986; Sutcliffe and Vogus, 2003).</p> <p>“Resilience is a systems concept, and the social-ecological system, as an integrated and interdependent unit, may itself be considered a complex adaptive system” (Berkas and Ross, 2013, p. 14).</p>

**Source:** Prepared by the authors, on the basis of T. Williams and others, “Organizational response to adversity: fusing crisis management and resilience research streams”, *Academy of Management Annals*, vol. 11, No. 2, table 2, New York, Academy of Management, 2017; A. Masten, K. Best and N. Garmezy, “Resilience and development: contributions from the study of children who overcome adversity”, *Development and Psychopathology*, vol. 2, No. 4, Cambridge, Cambridge University Press, 1990; G. Bonanno, “Uses and abuses of the resilience construct: loss, trauma, and health-related adversities”, *Social Science & Medicine*, vol. 74, No. 5, Amsterdam, Elsevier, 2012; “Loss, trauma, and human resilience: have we underestimated the human capacity to thrive after extremely aversive events?”, *American Psychologist*, vol. 59, No. 1, Washington, D.C., American Psychological Association (APA), 2004; C. Holling, “Resilience and stability of ecological systems”, *Annual Review of Ecology and Systematics*, vol. 4, No. 1, Palo Alto, Annual Reviews, 1973; B. Walker and others, “Resilience, adaptability and transformability in social-ecological systems”, *Ecology and Society*, vol. 9, No. 2, Wolfville, Acadia University, 2004; C. Lengnick-Hall and T. Beck, “Adaptive fit versus robust transformation: how organizations respond to environmental change”, *Journal of Management*, vol. 31, No. 5, Thousand Oaks, Sage Publications, 2005; K. Sutcliffe and T. Vogus, “Organizing for resilience”, *Positive Organizational Scholarship: Foundations of a New Discipline*, K. Cameron, J. Dutton and R. Quinn (eds.), San Francisco, Berrett-Koehler, 2003; K. Weick and K. Sutcliffe, *Managing the Unexpected: Resilient Performance in an Age of Uncertainty*, San Francisco, Jossey-Bass, 2007; E. Hollnagel, D. Woods and N. Leveson (eds.), *Resilience Engineering: Concepts and Precepts*, Burlington, Ashgate Publishing, 2006; A. Zolli and A. Healy, *Resilience: Why Things Bounce Back*, London, Headline, 2013; J. Normandin and M. C. Therrien, “Resilience factors reconciled with complexity: the dynamics of order and disorder”, *Journal of Contingencies and Crisis Management*, vol. 24, No. 2, Hoboken, Wiley, 2016; H. Boon and others, “Bronfenbrenner’s bioecological theory for modelling community resilience to natural disasters”, *Natural Hazards*, vol. 60, No. 2, Berlin, Springer, 2012; U. Bronfenbrenner, *Making Human Beings Human: Bioecological Perspectives on Human Development*, Thousand Oaks, Sage Publications, 2004; T. Drabek, *Human System Responses to Disaster: An Inventory of Sociological Findings*, New York, Springer, 1986; F. Berkas and H. Ross, “Community resilience: toward an integrated approach”, *Society & Natural Resources*, vol. 26, No. 1, Milton Park, Taylor & Francis, 2013.

## 2. Resilience in international agendas

Diagram II.1 shows how expression of the concept of resilience has evolved in the international agendas of the United Nations from 2000 to the present, and how rather than concepts defined by disciplines or fields of knowledge, issue-based meanings are used in the agendas. The sole exception is the field of disaster and threat management, as resilience to environmental threats, climate change and disaster risk is generally included. The declaration on financing for sustainable development issued in 2021 (United Nations, 2021a) refers to future pandemics and a resilient recovery from the crisis caused by COVID-19. The meanings used in each agenda are described below.

In 2000, at the fifty-fifth session of the General Assembly of the United Nations, the Millennium Declaration was adopted by Heads of State, and from it the eight Millennium Development Goals (MDGs) emerged. Although resilience is not explicitly mentioned in the declaration, it calls for action to promote sustainable development, addressing the special needs of small island and landlocked developing States, strengthening of capacities, and preventing and reducing the effects of natural and man-made disasters (United Nations, 2000). The inclusion of these issues marked the beginning of the inclusion of the different meanings of resilience in the international agendas of the United Nations over the following two decades.

**Diagram II.1**

Resilience in the international agendas pursued by the United Nations, 2000–2021



**Source:** Prepared by the authors, on the basis of United Nations, *United Nations Millennium Declaration* (A/RES/55/2), New York, 2000; “Hyogo Framework for Action 2005–2015: building the resilience of nations and communities to disasters”, *Report of the World Conference on Disaster Reduction* (A/CONF.206/6), New York, 2005; “Draft report” (A/CONF.207/L.3/Add.2), New York, 2005; *The future we want* (A/RES/66/288), New York, 2012; *SIDS Accelerated Modalities of Action (SAMOA) Pathway* (A/RES/69/15), New York, 2014; *Sendai Framework for Disaster Risk Reduction 2015–2030* (A/RES/69/283), New York, 2015; *Paris Agreement*, New York, 2015; *Transforming our world: the 2030 Agenda for Sustainable Development* (A/RES/70/1), New York, 2015; *Addis Ababa Action Agenda of the Third International Conference on Financing for Development (Addis Ababa Action Agenda)* (A/RES/69/313), New York, 2015; “Draft resolution submitted by the President of the General Assembly. Our ocean, our future: call for action” (A/71/L.74), New York, 2017; *Follow-up and review of the financing for development outcomes and the means of implementation of the 2030 Agenda for Sustainable Development* (E/FFDF/2021/L.1), New York, 2021; United Nations Environment Programme (UNEP), “Convention on Biological Diversity”, *Strategic Plan for Biodiversity 2011–2020, Including Aichi Biodiversity Targets*, Nairobi, 2010.

Five years after the Millennium Declaration was adopted, the central theme of the Hyogo Framework for Action was building the resilience of nations and communities to disasters (United Nations, 2005a). The document addresses the importance of community resilience to natural disasters with an emphasis on food security and hospital infrastructure, and proposes strengthening of resilience through the dissemination of knowledge and learning on disaster prevention issues. Also in 2005, the Mauritius Strategy was adopted, calling for action to strengthen the economic, social and environmental resilience of small island developing States through investment in science and technology. The Strategy addresses the importance of developing national sustainable development strategies that include strengthening of resilience to natural disasters (United Nations, 2005b).

The Strategic Plan for Biodiversity 2011–2020 and the Aichi Biodiversity Targets were presented at the tenth meeting of the Conference of the Parties to the Convention on Biological Diversity in Nagoya, Japan in October 2010. The Targets propose enhancing the resilience of ecosystems to the effects of climate change through restoration and conservation actions (UNEP, 2010). In June 2012, the United Nations Conference

on Sustainable Development, held in Rio de Janeiro, adopted the document *The future we want*, in which a commitment was made to sustainable development and to promotion of an economically, socially and environmentally sustainable future. The document highlights the importance of strengthening the resilience of ecosystems to the effects of climate change, urban planning and resilient cities, social resilience, resilience of oceans and marine ecosystems to acidification and the effects of climate change; it also stresses the importance of including resilience in development plans (United Nations, 2012b).

Following on from the Mauritius Strategy, the SIDS Accelerated Modalities of Action (SAMOA) Pathway was adopted in September 2014, and is also known as the Samoa Pathway. The Pathway calls for action to address the vulnerabilities of small island developing States and strengthen their economic, social and ecosystem resilience to the effects of climate change, ocean and marine acidification and invasive alien species. It also highlights the importance of resilience in economic activities such as tourism, agriculture and fisheries. To achieve its objectives, this call for action proposes mobilization of resources and building of the capacities of society and of the public and private sectors (United Nations, 2014).

In 2015, Heads of State and high authorities adopted a number of agreements and agendas that remain in force today, such as the 2030 Agenda for Sustainable Development and the Sustainable Development Goals (SDGs), the Addis Ababa Action Agenda, the Paris Agreement and the Sendai Framework. The Sendai Framework continues the work of the Hyogo Framework for Action by seeking the adoption and implementation of disaster mitigation plans and the strengthening of the economic, social, health, cultural and educational resilience of individuals, communities and countries to disasters. The Sendai Framework emphasizes the resilience of critical infrastructure, businesses, workplaces and supply chains, and the resilience of health systems to shocks, and calls for special action to address the needs of small island developing States that are disproportionately affected by their high vulnerability to the effects of climate change (United Nations, 2015a).<sup>2</sup>

The Paris Agreement adopted by the Conference of the Parties to the United Nations Framework Convention on Climate Change] was also a milestone in actions to address the threat of climate change, in the context of sustainable development and efforts to eradicate poverty. The Agreement addresses climate resilience, financing for resilient development, resilience of socioeconomic and ecological systems, and resilience of communities (United Nations, 2015b). Resilience-building is also one of the central actions of the 2030 Agenda and the SDGs. They call for resilience-building for cities and communities, with attention for vulnerable groups, building resilient and sustainable infrastructure, and fostering the resilience of agriculture to natural disasters (United Nations, 2015c). The Addis Ababa Action Agenda seeks to address the challenges of financing for sustainable development. Resilience to environmental degradation, climate change and other environmental risks is one of its priorities. The agenda also aims to strengthen social and infrastructural resilience, resilience of marine and terrestrial ecosystems, resilience of cities to disasters and the financial resilience of States (United Nations, 2015d).

In 2017, “Our ocean, our future: call for action” was launched, which called for conservation and sustainable use of the oceans, seas and marine resources to promote sustainable development. The call to action prioritizes resilience to ocean and coastal acidification, sea level rise and rising ocean temperatures, and the capability to respond to the other harmful impacts of climate change on the ocean (United Nations, 2017). In 2021, even as the COVID-19 pandemic was damaging different areas and threatening to erase much of the progress achieved by the above-mentioned agendas, the document “Follow-up and review of the financing for development outcomes and the means of implementation of the 2030 Agenda for Sustainable Development” was adopted in line with the Addis Ababa Action Agenda, to mobilize resources to finance recovery from the repercussions of COVID-19 and achieve the SDGs. The document highlights investments in resilient infrastructure—with an emphasis on health infrastructure— climate resilient economic recovery, resilient supply chains, financial resilience to climate and environmental risks, and resilience to future pandemics [Author: this list of themes does not appear to tally with 2021a, please confirm] (United Nations, 2021a).

<sup>2</sup> Resilience is also included in the five pillars of action proposed by the Global Facility for Disaster Reduction and Recovery (GFDRR), and especially pillar 5 “Resilient Recovery”, which aims for a faster and more resilient recovery through support for the planning of reconstruction processes



An analysis of the resolutions from the General Assembly of the United Nations relating to resilience from 2010 to 2021 (see annex II.1), and their content, reveals that almost all of them have ambitious aspirations concerning resilience. In fact, the resolutions contain calls to action and adopt international agendas in which the use of the umbrella concept of resilience has expanded into new fields.

### 3. Thematic resilience

The concept of thematic resilience has only recently begun to gain ground. This conception of the term emerged in the mid-2000s and mainly relates to defining and understanding the resilience of a given subsystem to natural disasters, catastrophes or crises, and how it recovers and provides the critical services society needs.

According to *Terminology on Disaster Risk Reduction* resilience is “the ability of a system, community or society exposed to hazards to exist, absorb, accommodate to and recover from the effects of a hazard in a timely and efficient manner, including through the preservation and restoration of its essential basic structures and functions” (UNISDR, 2009, p. 24). Lu (2019, p. 2) in an Asian Development Bank publication defines resilience as “the capacity to resist, respond to, or recover from natural hazards and maintain essential infrastructure function, both now and over the medium and long term”.

Economic resilience is one of the most meanings that has gained more importance in recent years. Briguglio and others (2006, p. 6) developed a conceptual and methodological framework for analysing and measuring economic resilience. As part of this framework, they define economic resilience as “the ‘nurtured’ ability of an economy to recover from or adjust to the effects of adverse shocks to which it may be inherently exposed”. Another definition of economic resilience is proposed by Hallegatte (2014, p. 14) as “the ability of the economy to cope, recover, and reconstruct and therefore to minimize aggregate consumption losses”.

OECD/World Bank (2019) mention that fiscal resilience is determined by “the capacity of governments to assess and quantify expected expenditure, creating conditions that support resilience, sound fiscal planning, and pre-arranging financial mechanisms to cost-efficiently meet losses that cannot be reduced”.

The resilience of cities to natural disasters is another term that has been developed recently. Jha, Miner and Stanton-Geddes (2013, p. 10) divides this concept into four components: infrastructural resilience, institutional resilience, economic resilience, and social resilience. Infrastructural resilience refers to a reduction in the vulnerability of built structures, such as buildings and transportation systems. It also refers to sheltering capacity, health-care facilities, critical infrastructure, and the availability of roads for evacuations and post-disaster supply lines. Infrastructural resilience also refers to a community’s capacity for response and recovery. Institutional resilience refers to the systems, governmental and non-governmental, that administer a community. Economic resilience refers to a community’s economic diversity in such areas as employment, number of businesses, and their ability to function after a disaster. Social resilience refers to the demographic profile of a community by sex, age, ethnicity, disability, socioeconomic status, and other groupings, and the profile of its social capital. Although difficult to quantify, social capital refers to a sense of community, the ability of groups of citizens to adapt, and a sense of attachment to a place.

Kruk and others (2015, p. 1910) define health system resilience as “the capacity of health actors, institutions, and populations to prepare for and effectively respond to crises; maintain core functions when a crisis hits; and, informed by lessons learned during the crisis, reorganise if conditions require it”.

Weikert (2020) defines resilient infrastructure from two perspectives, the first as “the capacity of infrastructure systems to withstand disruption while maintaining their critical functions, and how this provides wider benefits to the users of the infrastructure services in question”. The second perspective he gives is “how the infrastructure—and its attributes, such as quality, design and operation— affects the resilience of other systems (infrastructure or otherwise) and the livelihood alternatives of individuals, households and communities”. Gay (2016, p. 81) states that resilient infrastructure is not one that never fails; but rather, after suffering a natural or anthropogenic failure, one that is capable of sustaining a minimum level of service and regaining its original operating performance within a reasonable time and at a reasonable cost.

## C. Institutional and organizational resilience

### 1. Concept

Institutional resilience includes the capacity to deliver and improve results over time in a credible, legitimate and adaptive manner; as well as the capacity to manage shocks and changes affecting institutions, whether they are of external or internal origin.

Anderson and De Tollernaere (2020) underscore that resilience “is not an isolated characteristic or feature of institutions, but rather is the product or function of a virtuous cycle of institutional performance” and that it “derives from institutional efficacy (or the ability to deliver and enhance results over time)”.<sup>3</sup> This, in turn, builds trust, legitimacy and credibility, which are sources of resilience that further strengthen an institution’s capacities (Barma, Huybens and Viñuela, 2014). Institutional resilience “is more than mere ‘absorptive capacity’ or ‘speed of recovery’” (Aligicia and Tarko, 2014, p. 52), institutional resilience is thus the product of how an institution has evolved over time, its inclusiveness or exclusivity, and its norms and networks of trust (Adger, 2006)” (OECD 2020c, p. 191). State-society relations and expectations underpin and build institutional resilience, which also depends on innovation and creative socio-cultural adaptations made possible by flexible and polycentric institutional processes (Aligicia and Tarko, 2014) and it is intertwined with local history, cultural norms, performance, legitimacy and adaptability.

As the current crisis has highlighted, institutions that function well in times of stability can become weak or collapse in times of crisis or have difficulty recovering from a shock. This demonstrates that promoting institutional resilience goes beyond institutional effectiveness, accountability and inclusiveness.

Witmer (2019), citing Collinson and Hearn (2005) and Lorber (2000), adopts a gender approach to explore organizational resilience, arguing that organizations are “dynamic, socially constructed collectives embodied in a social context and mirror society’s gendered constructs which are continually reinforced through an on-going loop-back effect”. Organizational resilience therefore explores power structures, processes and collective social interactions within the organizational context during high stress conditions. Organizational resilience refers to the organization’s ability to respond productively to significant disruptive changes especially unexpected emergent events (Witmer and Mellinger, 2016; cited in Witmer, 2019, p. 514).

Witmer (2019), citing Weick and Sutcliffe (2007), Branicki, Steyer and Sullivan-Taylor (2016) and Lengnick-Hall, Beck and Lengnick-Hall (2011), also posits that “through the concept of high reliability organizations, create a link between individual responsiveness, and the organization’s ability to be resilient in a volatile and competitive environment. This perspective positions the relationship between the organization and individuals in a shared collaboration in which a person uses personal agency and chooses to connect their individual value system with the organization’s purpose and mission”.

Franken and Plimmer (2017, pp. 2–7) offer a definition of employee resilience, based on the conceptualization of Näswall and others (2013), which focuses on the two key behaviours of collaboration and problem-solving. They argue that collaboration helps to develop social capita because it facilitates information sharing and cross-functional cooperation (p.4). Such behaviour reflects resilience by facilitating access to and exchange of resources that may bolster problem-solving and seeking feedback (Mitchell, O’Leary and Gerard, 2015, cited in Franken and Plimmer, 2017, p.4). Collaboration also allows for the adaptive utilisation of collective competencies in responses to shared issues and challenges (Hardy, Lawrence and Grant, 2005, cited in Franken and Plimmer, 2017, p. 4). Such responses are particularly relevant in the public sector, as “collective responses are required to aid responsiveness to diverse demands from a variety of stakeholders” (O’Leary and Bingham, 2009, cited in Franken and Plimmer 2017, p.4).

<sup>3</sup> The term “institutions” refers to a set of structured norms, protocols and rules that govern the behaviour and operations of actors and entities in society. Institutions can be both formal and informal. When these norms, protocols and rules are codified (such as in a charter, constitution, legislation or statute), they become formal institutions. Almost all public sector entities and regulatory bodies are formal institutions. However, societies are also governed by informal institutions, which are primarily a set of uncoded, community-accepted norms that are enforced with a threat of social sanction (Alexander and others, 2019, p. 1).

In her examination of the multidimensional aspect of resilience, Witmer (2019, p. 515) describes the concept of “bricolage”, the central role of reflection and learning for resilience, as well as the attributes of flexibility and agility as central features in cycles of learning, innovation, and transformation. The concept of “bricolage”, which is key to organizational resilience, is about using available resources for creative problem-solving. She cites Crevani (2018), Vogus and Sutcliffe (2012) and Välikangas (2007) to argue that in some contexts, organizational resilience “points to the value of space for exploration and reflection”, and that space “aids in both the learning aspect of resilience and the reflection needed to reveal embedded norms and values that could hinder resilient responses to change” (Witmer 2019).

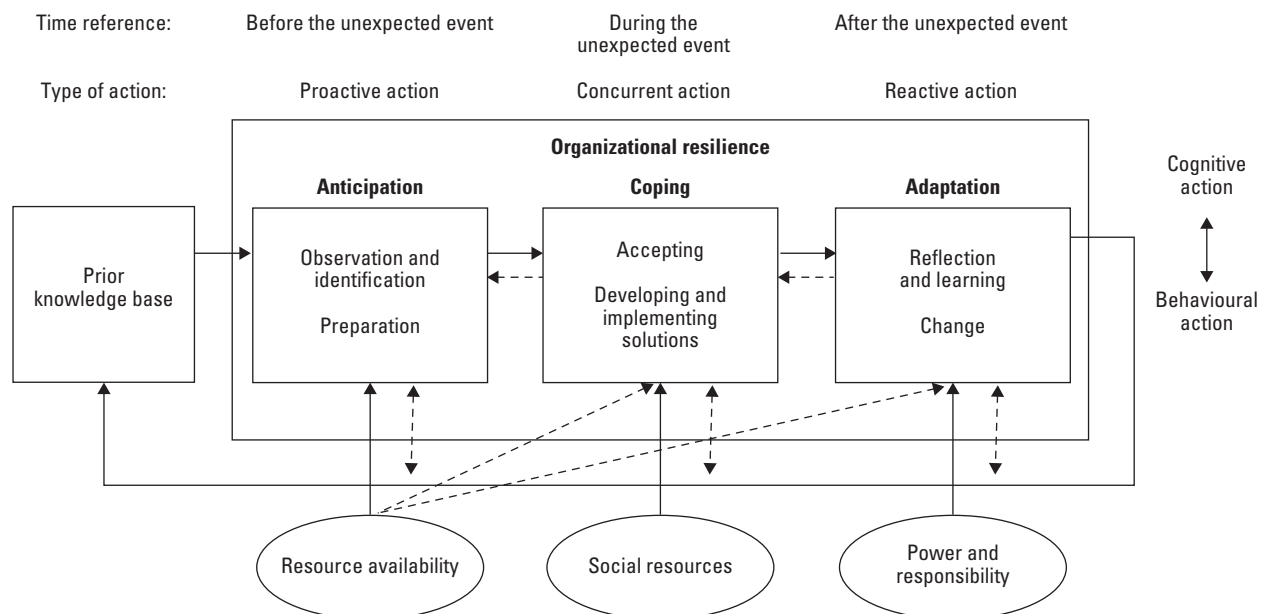
## 2. Organizational capability-based resilience, according to Ducheck

Duchek (2014) defines organizational resilience as the “ability to anticipate potential threats, to cope effectively with unexpected events and to learn from these events to produce a dynamic capability that is directed toward facilitating organizational change”. From this process perspective, she notes that “resilience means to effectively respond to adverse events, not only after adverse events, but before, during, and after as well” (Duchek, 2020).

Duchek (2020) formulates a conceptual framework that breaks down organizational resilience into three stages, looking at the capacities that make an organization resilient in each of these stages. The framework thus provides a means of determining how in practice some organizations are more resilient than others. Diagram II.2 shows each of these stages: anticipation, coping and adaptation. The author underscores the importance of understanding development of resilience from a process perspective, in three successive but overlapping stages.

### Diagram II.2

A capability-based conceptualization of organizational resilience



Source: S. Duchek, “Organizational resilience: a capability-based conceptualization”, *Business Research*, vol. 13, No. 1, Berlin, Springer, 2020.

As the diagram shows, cognitive and conceptual actions are required at each stage to foster institutional resilience. At the anticipation stage, which is essential to prepare for and cope with unexpected events, three essential capacities are needed: observation, identification and preparation. The availability of resources is a key factor in this stage.

The second stage (coping) occurs during the unexpected event, meaning that it is concurrent with it. During this stage, the event and its effects are accepted (cognitive action) and, above all, strategies (solutions) are formulated and implemented to resolve or address those effects (behavioural action) (Weick, Sutcliffe and Obstfeld, 2005, cited in Duchek, 2020). The general ability to cope with the unexpected is defined as an effective handling of unexpected events so as to resist destruction (Wildavsky, 1991; Horne and Orr, 1997; Mallak, 1998, cited in Duchek, 2020). This stage is highly dependent on the organization's social capital (both internal and external) and to a lesser degree on availability of resources and its degree of authority, relative power and accountability within the public sphere.

The last stage (adaptation) is post-event and is reactive in nature: it entails organizational change (positive change), which must occur based on reflection and learning (cognitive capability). At this stage, the ability of the organization to leverage its relative authority and role is vital, which is to say its responsibility and mandate, both in government and in relation to citizens and stakeholders, to change and strengthen itself to appropriately discriminate and respond effectively to external demand.

According to Duchek's (2020) framework, the three stages of resilience and the elements surrounding them are interrelated. Based on this interrelationship and dependence, the author develops four propositions about organizational resilience:

- (i) An organization's knowledge base is an important antecedent of organizational resilience. It builds the foundation for the anticipation of critical developments (as well as coping and adaptation). In turn, an organization's knowledge base may be enhanced through the accomplishment of the three resilience stages.
- (ii) Resource availability positively influences the resilience of organizations. Specifically, it fosters the development of anticipation capabilities (as well as coping and adaptation capabilities).
- (iii) Social resources positively influence the resilience of organizations. Specifically, those resources foster the development of coping capabilities.
- (iv) Power based on expertise and shared responsibilities positively influence the resilience of organizations. Specifically, they foster the development of adaptation capabilities.

Resilience, as a fundamental organizational ability that is directed toward organizational advancement, enables organizations to withstand stresses, continuously innovate, and quickly adapt to changes (Duchek, 2020). To achieve organizational resilience, organizations must allocate sufficient resources (financial, material and human) to developing resilience capabilities, such as financial reserves, and positive relationships (Kendra and Wachtendorf, 2003; Gittell and others, 2006; Valikangas and Romme, 2013, cited in Duchek, 2020). In addition to these capabilities, Duchek, Raetze and Scheuch (2020) suggest that there is empirical evidence that diversity also plays an important role in organizational resilience. In this regard, diversity is understood as "the distribution of personal attributes among interdependent members of a work unit" (Jackson, Joshi and Erhardt, 2003, p. 802).

Duchek, Raetze and Scheuch (2020) discuss how diversity strengthens the three key capabilities of organizational resilience, namely anticipation, coping and adaptation. Diversity can influence the development of anticipation capabilities by improving the observation and identification of critical changes and preparation for future developments. By improving sensemaking and problem-solving capabilities, diversity can foster coping capabilities. Lastly, diversity can improve organizational capabilities for reflection and learning from critical situations, and thus foster adaptation capabilities.

### 3. Building resilient institutions

Anderson and De Tollernaere (2020, pp. 193–194) identify four methods of institutional development that build institutional resilience (Ostrom, 2005; Barma, Huybens and Viñuela, 2014; Andrews, Pritchett and Woolcock, 2017; OECD, 2020a):

- (i) Identify and leverage domestic sources of resilience. Repeated exposure to crises can generate endogenous resilience.
- (ii) Build on what already exists, replicating and scaling-up what works. It is also useful to scan the local context to identify so-called pockets of effectiveness, or cases of positive deviance, and then replicate and scale-up what is working for use in new situations.
- (iii) Adopt local social norms and values where feasible, as such cultural norms are enduring and typically designed to solve collective problems.
- (iv) Take advantage of institution's social capital. Institutions that build relations with citizens and gain citizen's trust are ultimately more resilient. This suggests that in addition to looking at the functioning of an institution in and of itself, development actors need to consider its role in mediating State-society relations, and the legitimacy or credibility it has gained as a result.

### 4. Capacity development and resilience

De Weijer and McCandless (2015) provide an analysis of how the relationship between capacity development and resilience has evolved, and summarize this in four evolutionary shifts.

In the first shift, it was thought that more skilled individuals would improve organizations' performance and, as a result, capacity development initially focused on building individual skills and competencies. It was subsequently understood that organizational capacity "was a function of organisational vision, structures, processes and incentives", or a "more systemic notion of capacity across different interconnected levels".

In the second shift, the focus on performance overshadowed the focus on building skills. According to this approach, "individuals or organisations would achieve better results once they have developed capacities". The authors state that research suggests that the capacity to deliver results is but one dimension of capacity and that these dimensions "also extend to the broader abilities that are needed to make an organisation or system endure and perform over time ..." such as the capability to act and commit, to deliver on development objectives, to adapt and self-renew, to relate to external stakeholders, and the capability to achieve coherence.

The third shift concerns the value-neutral nature of capacity in supporting positive or negative forces in development. The authors argue that "the process by which capacity is developed is not value-neutral, it is inherently value-laden and political. Capacity development generates winners and losers, and is deeply related to power". They note that those building capacity "do so on the basis of inherent beliefs about the direction policies and strategies should take, which may not match with the perspective of those whose capacity is being 'built'" and therefore, "capacity development is deeply connected to the goals and aspirations of the actors involved, their ... motivations, and should not be seen as a technical exercise".

In the fourth and final shift, with the growing awareness of the need to develop capacities rather than build them from scratch, the term capacity-building was replaced with capacity development. From this shift, it was understood that capacity "needed to be viewed as something inherently linked to actors' own motivations, drive and sense of purpose. Further, existing capacities [...] were increasingly seen as a property of a social system that emerged from a complex interplay of attitudes, assets, resources, strategies and skills, both tangible and intangible. As such, they are much less amenable to external influence". The authors illustrate

this by drawing on the definition of the Organisation for Economic Co-operation and Development (OECD): “the process whereby people, organisations and society as a whole unlock, strengthen, create, adapt and maintain capacity over time”. Capacity development was thus seen as primarily endogenous” (OECD, 2006, cited in De Weijer and McCandless, 2015).

The authors state that the “concept of resilience is rooted in systems thinking, and for social systems in particular in the theory of complex adaptive systems”. This requires a new and broader vision in which a social system is understood by looking at all its elements and the interactions between them; focusing on the dynamics and feedback loops existing in these interconnections; and transforming reductionist thinking to understand change as less linear and predictable, “viewing the properties of a system as essentially self-organising and emergent”. The tendency to promote the status quo in policy and practice has led to criticism that the concept of resilience “focuses on absorptive or adaptive rather than transformative capacity, and pays insufficient attention to issues of power. Historically, resilience was used to describe the ability of a system (or a material) to return to its original state after having been disturbed... over time the term has moved from referring to a simple return to the original state to the ability of a system to adapt and transform itself in the face of shocks”. It is vital to focus on the power relations in deep structures as they are at the root of conflict and crises. These deep structures can either “maintain the status quo of the social system (through negative feedback loops) or catalyse adaptive or transformative change (through positive feedback loops)”.

The authors also explain that “capacity development thinking recognises that capacity... emerges through complex interactions between resources, capabilities, assets, incentives and governance arrangements”. Since capacity does not need to be created from scratch, those who develop capacity have begun to “focus more on finding ways to create conditions for existing capacity to expand, rather than merely focusing on building new capacities”.

A World Bank study (Barma, Huybens and Viñuela, 2014) on building State capacity in challenging contexts concluded that successful organizations develop internal efficiency and create external political and social groups support by focusing on delivering results and generating legitimacy at the same time. “They cumulatively build resilience and the ability to sustain gains in what can be rapidly shifting political-economic environments” (Barma, Huybens and Viñuela, 2014, p.2).

O’Brien and others (2012) highlight the importance of learning processes in “shaping capacities and outcomes of resilience in disaster risk management, climate change adaptation, and sustainable development”. They posit that an “iterative process of monitoring, research, evaluation, learning, and innovation can reduce disaster risks and promote adaptive management in the context of extremes” and “technological innovation and access may help achieve resilience, especially when combined with capacity development anchored in local contexts”.

The integration of different types of knowledge, an emphasis on inclusive governance and the principles of adaptive management are some of the tools resilience thinking offers for reconciling short- and long-term responses (O’Brien and others, 2012). They identify eight factors for adaptive management in organizations. The first three involve a capacity to reconcile short- and long-term goals; a willingness to reconcile diverse expressions of risk in multi-hazard and multi-stressor contexts; and the integration of disaster risk reduction and climate change adaptation into other social and economic policy processes. Next are innovative, reflexive, and transformative leadership (at all levels); and adaptive, responsive, and accountable governance; and support for flexibility, innovation, and learning, locally and across sectors. The last two are the ability to identify and address the root causes of vulnerability; and a long-term commitment to managing risk and uncertainty and promoting risk-based thinking.

The authors conclude that “lessons learned in climate change adaptation and disaster risk management illustrate that managing uncertainty through adaptive management, anticipatory learning, and innovation can lead to more flexible, dynamic, and efficient information flows and adaptation plans, while creating openings for transformational action” (see box II.1).

**Box II.1**

Learning from the response to the COVID-19 crisis: lessons and challenges regarding resilience and planning for development

The Organisation for Economic Co-operation and Development (OECD) *Development Co-operation Report 2020* (2020c) analyses the drivers of resilience based on pandemic response processes in different settings and countries. The report says that learning from previous epidemics has underpinned the most effective government responses. In addition, reflections from previous crises in several countries "have repeatedly highlighted that the most relevant and sustainable programmes come from local responders and support for local solutions" (OECD, 2020c, p. 117). Innovative partnerships also led to new initiatives in many countries. The creation of information- and evidence-based compacts and strategic action and investment have been key to fostering partnerships between governments and development actors.

The report highlights the challenges of developing digital solutions, with special emphasis on people living in vulnerable conditions, and the need to strengthen innovation in this area. The pandemic raised awareness on the importance of creating new links among databases and State agencies, with a view to providing State assistance to the most vulnerable when they need it. In both developing and the most developed countries, the pandemic has given rise to successful innovations in digital solutions. The report presents cases such as in Costa Rica, where the government deposited subsidies in bank accounts and made it possible for those who did not have an account to make an online request to open one.<sup>a</sup>

**Source:** Organisation for Economic Co-operation and Development (OECD), *Development Co-operation Report 2020: Learning from Crises, Building Resilience*, Paris, 2020; F. Fukuyama, "The thing that determines a country's resistance to the coronavirus", *The Atlantic*, Washington, D.C., 30 March 2020 [online] <https://www.theatlantic.com/ideas/archive/2020/03/thing-determines-how-well-countries-respond-coronavirus/609025/>.

<sup>a</sup> See the responses of the Governments of Latin America and the Caribbean to COVID-19 and its effects in COVID-19 Observatory in Latin America and the Caribbean [online] <https://www.cepal.org/en/topics/covid-19>, and in the series of ECLAC thematic bulletins on the subject.

## 5. Adaptive learning in institutions

The ability to learn adaptively is fundamental to coexist in conditions of adversity, whether at the level of individuals, programmes or organizations. Gupta and others (2010, p. 461) define adaptive capacity as the inherent characteristics of institutions that empower social actors to respond to short and long-term impacts either through planned measures or through allowing and encouraging creative responses from society both *ex ante* and *ex post*. This also encompasses the characteristics of institutions (formal and informal) that enable societies to cope with adverse situations, for example, the effects of climate change. For this to happen, institutions must allow actors to learn from new ideas and experiences to flexibly and creatively manage the expected and the unexpected, while maintaining a degree of identity (Gupta and others, 2010).

As stated in Laws and others (2021), complex problems such as the COVID-19 pandemic "require flexible systems to support testing, learning and adaptation. Tackling complex challenges means interacting with unpredictable systems of political, organisational and individual behaviours and incentives". Given the importance of the capacity for adaptive learning, there is a need to develop knowledge around the capacity of organizations and programmes to deliver change in these complex contexts (Valters, Cummings and Nixon, 2016). With this in mind, Gupta and others (2010) designed an analytical tool termed the "adaptive capacity wheel", which can be used to identify and assess the characteristics of institutions to determine their adaptive capacity.

According to the analytical framework of Gupta and others (2010), the characteristics of institutions that promote adaptive capacity include: broadly participatory structures that enable learning among social actors and even promote change; the mobilization of horizontal and collaborative leadership; flexible structures that combine formal and informal positions to foster efficiency and effectiveness; and the principles of fair governance (open information, participation and accountability).

Institutions that learn are those that re-envision themselves as dynamic social bodies, where ideas flow through conversations that, in turn, foster meaningful relationships that are based on trust and anchored in strong ties and proximity. These relationships are not only internal, but also external (Cortés, 2020).

Valters, Cummings and Nixon (2016) argue that adaptive organizational learning is a “process that involves sharing of knowledge, beliefs or assumptions among individuals” and “fundamental changes in the theories in use or frames of reference within which decision-making proceeds”. They uphold that this type of learning is “institutionalized in the form of learning systems that include informal and formal mechanisms of management information-sharing, planning and control”.

## D. Conclusions

The increased frequency of environmental, social and economic crises, most notably the COVID-19 pandemic, has tested the capacity of social systems to cope with, absorb and improve in the face of severe shocks, which means that the resilience of institutions must be strengthened to meet the challenges of the future.

As discussed in this chapter, the lessons learned from approaches to resilience in a variety of disciplines, international agendas and specific thematic issues—in particular climate change and disaster risk management—show that managing uncertainty through adaptive management, anticipatory learning and innovation are key elements for building resilient institutions that are able to function with flexibility, agility and efficiency in times of crisis, while creating opportunities for transformative action.

To build institutional resilience, the framework proposed by Duchek calls for a focus on strengthening anticipation, coping and adaptation capacities. The capacity for anticipation emerges from observing and identifying possible hazards and preparing for them; the capacity for coping starts with accepting the crisis in order to develop and implement solutions; and lastly, the capacity for adaptation comes through a process of reflection and learning and culminates in change, allowing the institution to emerge stronger and better prepared to face future crises.

In conclusion, resilience is not only about institutions being able to foresee or cope with a crisis, but also to learn from shocks and incorporate this new knowledge to grow stronger ahead of any future adverse events. The COVID-19 pandemic has challenged the response and adaptive capacity of institutions and public policies. But it has also opened up an unprecedented opportunity to learn about the enabling conditions for building resilient institutions.

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## Annex II.A1

### Resilience in United Nations resolutions and documents, 2010–2021

In 2010, the concept of resilience was included in the resolutions on the annual reports on: strengthening of the coordination of emergency humanitarian assistance of the United Nations; international cooperation on humanitarian assistance in the field of natural disasters, from relief to development; and the International Strategy for Disaster Reduction. The meanings of the term “resilience” initially used in these annual reports related to the resilience of infrastructure, communities and people to natural disasters. Recent publications have included resilience of health systems, resilience in the delivery of humanitarian assistance, the resilience of cities and communities, resilience of the population to disasters, resilience of displaced people and their host communities, ecosystem resilience, and the resilience of women and girls to climate change.

In 2011, during the Fourth United Nations Conference on the Least Developed Countries, the Programme of Action for the Least Developed Countries for the Decade 2011–2020 (Istanbul Programme of Action) was launched, one of the goals of which is to strengthen the resilience of the least developed countries to economic, natural and environmental crises and disasters, as well as to climate change. The Programme proposes improving social protection systems to build resilience for the most vulnerable, and establishing national facilities for crisis mitigation and resilience, to reduce vulnerability to the repercussions of economic shocks.

The following year in Rio de Janeiro, Brazil, the call to action entitled *The future we want* was adopted, calling for strengthening of the resilience of ecosystems to new and emerging challenges and of agriculture to climate change and natural disasters. It also addresses sustainable transport as a catalyst for the resilience of cities, urban-rural linkages and the productivity of rural areas, underlining the importance of considering disaster risk reduction, resilience and climate risks in urban planning. The declaration also highlights how the resilience of society can be improved by strengthening social programmes and a commitment is made to restore marine ecosystems’ health and resilience—and those of the communities that depend on them—in view of ocean acidification. It calls for “more coordinated and comprehensive strategies that integrate disaster risk reduction and climate change adaptation considerations into public and private investment, decision-making and the planning of humanitarian and development actions, in order to reduce risk, increase resilience and provide a smoother transition between relief, recovery and development” (United Nations, 2012b).

Since 2012, the resolutions on “Agriculture development, food security and nutrition” adopted by the General Assembly have gradually included meanings of resilience. Firstly, it recognized the need to increase the resilience to the effects of climate change of vulnerable groups, food systems, agriculture and food production. The latest report, published in 2020, reiterates the need for greater efforts to increase the resilience of the most vulnerable to the effects of climate change and natural disasters, and the importance of improving the resilience and adaptive capacity of food systems, as well as acknowledging the need to build the resilience and sustainability of agricultural and food production in relation to climate change.

In 2014, the SIDS Accelerated Modalities of Action (SAMOA) Pathway was adopted. The Pathway seeks to strengthen the resilience of countries and their sustainable development, recognizes the importance of building resilient societies and economies and urges countries to develop and implement policies that promote responsive, responsible, resilient and sustainable tourism that is inclusive of all peoples. It also calls for support for work to “raise awareness and communicate climate change risks, including through public dialogue with local communities, to increase human and environmental resilience to the longer-term impacts of climate change”. It recognizes that there is a “critical need to build resilience, strengthen monitoring and prevention, reduce vulnerability, raise awareness and increase preparedness to respond to and recover from disasters”. It

highlights the importance of focusing policies and strategies on disaster risk management and resilience-building. The Pathway also expresses support for measures to “enhance the resilience of agriculture and fisheries to the adverse impacts of climate change, ocean acidification and natural disasters” It reiterates support for the efforts of small island developing States to design and implement preparedness and resilience policies related to desertification, land degradation and drought. It recognizes the potential of sustainable transport as a means to improve social equity, health, the resilience of cities, urban-rural linkages and productivity.

In 2014, the Vienna Programme of Action for Landlocked Developing Countries for the Decade 2014–2024 was also adopted, which includes the specific objective to collaborate to promote sustainable and resilient transit systems. One of the adopted measures is “to support landlocked developing countries in building resilience, developing capacity to respond effectively to external shocks and addressing their specific supply-side constraints”. Also since 2014 the World Food Programme (WFP) *Global Report on Food Crises* has been published, which underscores the crucial importance of the resilience of food systems to the effects of climate change.

A milestone was reached in 2015 with the adoption of major international agendas that set ambitious targets for sustainable development and disaster risk reduction: the Paris Agreement was adopted at the Conference of the Parties to the United Nations Framework Convention on Climate Change, and the General Assembly of the United Nations adopted the 2030 Agenda for Sustainable Development (as a follow-up to the Millennium Development Goals (MDGs)), the Sendai Framework for Disaster Risk Reduction 2015–2030 (as a follow-up to the Hyogo Framework for Action) and the Addis Ababa Action Agenda. The same year, the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP), adopted resolution 71/11 establishing the Asian and Pacific Centre for the development of disaster information management as a regional institution of the Commission. These agendas emphasize the importance of strengthening the resilience of human settlements, of infrastructure (to the effects of climate change and natural disasters), and of marine and terrestrial ecosystems.

Although specific resilience-related mandates have been established in very few cases over the past decade, resilience has become more important and evolved from being one of many aspirations to being one of the central themes of several resolutions, for example from the General Assembly and the Conference of the Parties.<sup>4</sup>

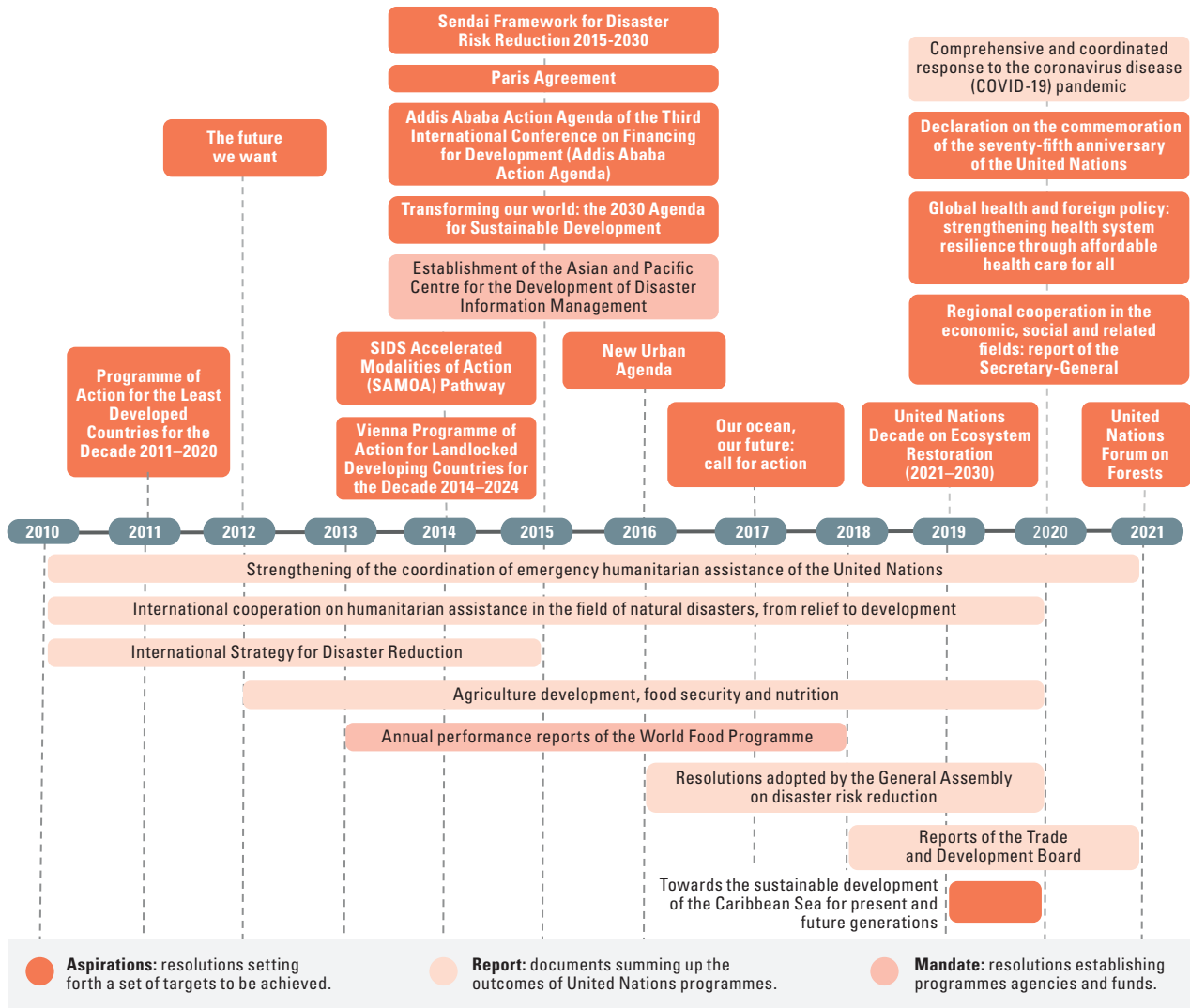
Despite the growing importance attached to resilience in the international arena as a means of facing the challenges of the future, an understanding of how to strengthen resilience has not yet been consolidated, either in terms of themes and fields of action or in terms of the institutions that should ensure that policies and programmes are designed and implemented to promote resilience.

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<sup>4</sup> Cases of resilience-related mandates include: the International Strategy for Disaster Reduction (2010–2015) and the resulting United Nations Plan of Action on Disaster Risk Reduction for Resilience, and the Annual reports of the World Food Programme (2013–2018) on mainstreaming of food resilience and climate change resilience

Diagram II.A.1

United Nations resolutions and reports highlighting resilience, by purpose, 2010–2021



**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of United Nations, *Strengthening of the coordination of emergency humanitarian assistance of the United Nations*, New York, various editions; *International cooperation on humanitarian assistance in the field of natural disasters, from relief to development*, New York, various editions; *International Strategy for Disaster Reduction*, New York, various editions; *Agriculture Development, Food Security and Nutrition*, New York, various editions; *The future we want* (A/RES/66/288), New York, 2012; World Food Programme (WFP), *Global Report on Food Crises*, Rome, various editions; United Nations, *SIDS Accelerated Modalities of Action (SAMOA) Pathway* (A/RES/69/15), New York, 2014; *Programme of Action for Landlocked Developing Countries for the Decade 2014–2024* (A/RES/69/137), New York, 2014; *Regional cooperation in the economic, social and related fields: report of the Secretary-General Addendum: matters calling for action by the Economic and Social Council or brought to its attention: Economic and Social Commission for Asia and the Pacific and Economic and Social Commission for Western Asia* (E/2015/15/Add.2), New York, 2015; *Addis Ababa Action Agenda of the Third International Conference on Financing for Development (Addis Ababa Action Agenda)* (A/RES/69/313), New York, 2015; *Political Declaration of the Comprehensive High-level Midterm Review of the Implementation of the Istanbul Programme of Action for the Least Developed Countries for the Decade 2011–2020* (A/RES/70/294), New York, 2015; *Paris Agreement*, New York, 2015; United Nations Office for Disaster Risk Reduction (UNDRR), *Global Assessment Report on Disaster Risk Reduction*, Geneva, various editions; United Nations, *Input from the Economic Commission for Latin America and the Caribbean to the high-level political forum on sustainable development: note by the Secretariat* (E/HLPF/2016/3/Add.4), New York, 2016; “Draft resolution submitted by the President of the General Assembly. Our ocean, our future: call for action” (A/71/L.74), New York, 2017; United Nations Conference on Trade and Development (UNCTAD), *Report of the Trade and Development Board*, New York, various editions; United Nations, *UN Decade on Ecosystem Restoration 2021–2030* [online] <https://www.decadeonrestoration.org>; *Towards the sustainable development of the Caribbean Sea for present and future generations*, New York, various editions; *Regional cooperation in the economic, social and related fields: report of the Secretary-General* (E/2019/15/Add.2), New York, 2019; *Global health and foreign policy: strengthening health system resilience through affordable health care for all* (A/RES/75/130), New York, 2020; *Declaration on the commemoration of the seventy-fifth anniversary of the United Nations* (A/RES/75/1), New York, 2020; *United response against global health threats: combating COVID-19* (A/RES/74/307), New York, 2020; *Draft resolution: programme of work of the United Nations Forum on Forests for the period 2022–2024* (E/CN.18/2021/L.3), New York, 2021.

**Note:** The resolutions have been selected only if the concept of resilience appears more than three times and is prominent in the resolution.







# Resilience in territories

## Introduction

- A. Overview of territorial resilience and approaches to the concept
- B. The institutions needed to foster resilience in territories
- C. Differing socio-spatial dynamics: vulnerability and resilience as a continuum
- D. Measuring resilience in a territory
- E. Conclusions

## Bibliography



## Introduction

This chapter addresses the institutions-territory-resilience triad with the aim of highlighting the importance of resilience in solving the problems that arise in the territories of Latin America and the Caribbean when disasters occur, be these of natural or human origin. It first takes a conceptual look at institutions, resilience, territory and disasters. It then analyses why it is necessary to have resilient processes in territorial spaces. After this, it asks what capacities a territory's institutions must have if they are to be resilient and discusses the challenges that these institutions must cope with. Lastly, it presents an analysis of urban and rural spaces and multi-scalarity and reflects briefly on how resilience can be measured in a territory.

### A. Overview of territorial resilience and approaches to the concept

In the first half of the twentieth century, planning processes became important in Latin America and the Caribbean to carry out actions in pursuit of development. The paths taken from that time until this have been very varied: there have been State-dominated and centralized approaches to planning and public policies, but also others that have sought to reduce State participation and progressively deconcentrate functions to the different territories of the region. These latter approaches have precipitated greater inequality between territories, as the endogenous resources and ability to attract foreign investment possessed by some have left them better positioned than others that lacked such resources.

Today, the multiple crises faced by the countries of the region and the region's status as the world's most unequal mean that the focus on territories is not only an important academic exercise but a moral imperative for public bodies involved in national development processes.

The Latin American and Caribbean Institute for Economic and Social Planning (ILPES) states that territory is "a human community with a sense of ownership and belonging to a specific natural and social space. Accordingly, 'making territory' means building that sense of ownership and belonging, and implies harmonizing the expectations and needs of the individual with those of the human collective and the natural and social space" (ECLAC, 2019a, p. 21). These territories, as geographical and human spaces, are potential scenes of disasters.

A disaster is defined as an unforeseen and often sudden event that causes great damage, destruction and human suffering. Though often caused by nature, disasters can have human origins, usually linked to technology (CRED, 2020). The COVID-19 pandemic, for example, can be understood as a phenomenon of natural origin in the biological subgroup.

Two factors come together to make a disaster: exposure to natural phenomena capable of triggering processes that cause physical damage and loss of life and capital, and the vulnerability of people and human settlements. Vulnerability includes not only the quality and location of infrastructure, but also social factors such as income inequality and poverty. Hence, policies that reduce the vulnerability of territories are the most important public contribution to disaster risk reduction. Meanwhile, phenomena with the potential to cause destruction in a territory, whether they are of natural or human origin, are identified as hazards. In this context, a hazard is understood as a dangerous event capable of causing damage in a given time period and area (CRED, 2020; ECLAC, 2014; Bello, Bustamante and Pizarro, 2020).

Risk, meanwhile, is associated with the possibility of loss of life, injury to persons or damage to or destruction of assets in a system, society or community in a specific period of time, probabilistically determined according to the hazard, exposure to it, vulnerability and response capacity. Thus, disaster risk management is a comprehensive strategy whose ultimate goal is to minimize the impact and the economic and social effects of disasters by reducing the vulnerability of communities and territories, at the same time as response capacities are developed (ECLAC, 2014; Bello, Bustamante and Pizarro, 2020).

Government institutions are organized to address disaster risk management and are strengthened as new hazards emerge. Their role is to identify problems, provide guiding narratives that lead to a solution, improve practices and work with the community to solve those problems.

The creation of government institutions is a political act that governments carry out in response to certain problems they have an interest in solving. When institutions create narratives about a given problem, that problem becomes part of the collective consciousness. This can lead to public analysis of the problem, i.e., visibility, to increasing national and international interest in it, to funding and probably to the passing of laws to support the institutional architecture for solving the problem.

Although a dense institutional architecture does not in itself guarantee the resolution of public problems, its presence signals to citizens that there is a body within the governmental structure responsible for addressing and resolving the problems that are identified, and thus an interlocutor who can be asked to promote dialogue so that citizens are able to participate in solving the problem in question.

Approximately 15 years ago in the English-speaking world, and a little more recently in Latin America and the Caribbean, a narrative began to take hold in national and international governmental institutions that treats the concept of resilience as a process whereby territories are strengthened against the problems they have to confront. As pointed out in chapter II, the concept of resilience is polysemic. In the social sciences, there are three schools of thought that present resilience as a way of coping with contexts of disaster in territories:

- i) The engineering resilience school of thought, in which the concept is defined by considering how quickly a variable that has been displaced from equilibrium returns to its initial state. This perspective assumes that a system survives if it returns to the equilibrium it was in before the event.
- ii) The ecological resilience school of thought, whose main proponent is C. S. Holling, the ecologist who was the first to criticize the engineering tendency and the idea of system permanence. According to this school of thought, systems are always unstable, and therefore what matters is to return not to the exact equilibrium line, but to an area of stability in which the system can re-establish itself. Holling states that what is important is for the functions of the system to remain, even if the system is disrupted and does not return to its starting point.
- iii) The social-ecological resilience school of thought, whose main proponent is Carl Folke. This tendency argues that systems are subject to constant shocks and that what is important to consider is the degree of shock that the system can absorb while remaining in the same state or domain of attraction, the degree to which the system is able to reorganize itself (when confronted with disorganization) and the degree to which it is able to construct and increase its capacity to learn and adapt (Folke and others, 2005).

Méndez (2016) proposes an approach to the concept of resilience that refers specifically to the territorial dimension, stating that “territorial resilience can be understood as the capacity for positive adaptation evinced by some places as they confront adverse situations resulting from crises caused by external processes but reinforced by certain endogenous weaknesses that have made them especially vulnerable, so that they emerge strengthened by a domestic transformation strategy”.

Although the concept of resilience is polysemic and shifts depending on the discipline it is approached from, for the purposes of territorial analysis the following definition is adopted: resilience is the measure of the capacity of a system or part of a system to absorb or recover from a damaging or hazardous event (Timmerman, 1981). If this definition is linked to the concept of territorial resilience referred to above, the system that confronts damaging or hazardous events is the territory.

This definition highlights how urgent it is for the concept to be treated not just as a theoretical construct for academic use, but as one that the designers and implementers of public policies need to be aware of and engage with. There are currently three lines of research that the academic sector has identified and that the State can follow up on in order to promote resilience as a way of strengthening territories and their communities.

- i) The first line is called “bounce back” and is the hegemonic line followed in the formulation of public policies that treat resilience as a challenge. This line is concerned with warning capabilities and with the rapid response that is necessary and possible in the event of a disaster.

- ii) The second line is called “bounce forward” and promotes a concept of resilience that takes account of the need for the world to become more sustainable in an increasingly complex environment. The position taken in this case, therefore, is that linear analyses are not useful. Instead, it must be assumed that the world is not predictable and that planning is needed to anticipate events. Events will happen, but the effects will be much worse if there is no planning and no forethought and preparation to draw on. This is an approach that includes forecasting as a core component of reflection about the future, combining this with the planning and public policies of the region’s countries.
- iii) The third line focuses on the importance of local capacities and communities. This is a recent approach and one that has been heavily criticized by authors who consider that it fails to take account of the main actor, the State, as the coordinator of actions and guardian of the common good. Critics argue that shifting responsibility for solving the problems caused by disasters on to the community is to deny the importance and responsibility of the State in these situations.

All three lines are being vigorously pursued by both governments and academia in the countries.

Territorial development policies in the region have addressed the issue of resilience along the three lines described. In an analysis of 153 territorial development instruments in Latin American and Caribbean countries, ECLAC (2019a) identified a strong concentration on three themes: land-use planning (59), environmental management (40) and disaster risk management and resilience (32). Other issues addressed centre on urban development, decentralization, infrastructure and cultural diversity, and on the operation of policies, some of which deal with multilevel coordination, local capacity-building, the incorporation of technology and the development of territorial information. The importance of these issues and the emphasis placed on them are found to vary, however, when they are analysed by subregion, with the issue of disaster risk management and resilience having the greatest thematic concentration in the territorial development policies of Central America (ECLAC, 2019a).

## B. The institutions needed to foster resilience in territories

### 1. Institutions to foster resilience mechanisms

In the late twentieth century and in the twenty-first century so far, there have been major changes in the approach of the institutions responsible for fostering resilience in communities.

Between the late 1980s and early 1990s, a multitude of programmes, standards and guidelines were formulated with a view to showing how best to deal with disasters and, most importantly, to prepare for and reduce their consequences. These programmes helped construct a people-based model of responsibility that emphasized the need for people to be aware of the danger, respect the environment and be good citizens, for example by identifying when buildings were sited in hazardous areas (Revet, 2009a).

In the 1990s, the introduction of the concept of vulnerability altered this logic. A new way of understanding the individual failures of populations emerged. The latter came to be seen as victims who were unable to obtain information about damage and who had to face crises unaided (Revet, 2009b). From being blamed and held responsible for disasters, people came to be treated as victims.

In the 2000s, there was a shift towards an approach which sought greater integration between the community and the State and in which there were neither individual victims nor individual perpetrators (Ambrosetti and Buchet de Neuilly, 2009). This model emphasized community participation in the process leading to resilience. The focus of discourse shifted to local actors, but not as victims, and adaptation became crucial because it helped to strengthen this new orientation.

The United Nations campaign Towards Resilient Cities clearly articulated the urgent need for action, as well as the responsibility of local governments and stakeholders: resilience, which implied accountability, participation and adaptation, became a mandate for authorities and communities (UNDRR, 2011 and 2012a).

The recent shift in emphasis from vulnerability to resilience suggests a radical change in the disaster management approach.

For one thing, the new approach recognizes the social vulnerability of the poorest populations in particular, but considers that it is possible to anticipate disasters and reduce their consequences through various forms of assistance based on solidarity and State involvement. For another, the aspiration is to achieve resilience that is only validated long after the crisis and the changes made.

Although the involvement of all stakeholders in the design and implementation of resilience strategies is essential, making them essential actors in these strategies, the structural conditions that sometimes hamper active participation in the construction of inclusive societies, such as poverty, lack of access to basic services and inequality, should not be overlooked.

## 2. Engaging indigenous peoples and local communities in the construction of resilient and more inclusive societies

Communities have always faced natural hazards such as floods, droughts, storms and earthquakes, but it is clear that human activity has exacerbated their impact, which disproportionately affects the most vulnerable populations and communities. It is estimated that 90% of the world's disaster victims live in developing countries, where a substantial number of poor people inhabit areas at risk from flooding, landslides and other hazards. Unsustainable development practices, such as massive forest clearances and wetland destruction, exacerbate this problem (ECLAC, 2014). Most of the time, people do not live in high-risk areas by choice but because of poverty. This is why equitable and sustainable economic development is one of the best strategies for building resilient and inclusive territories.

As has been argued, the enormous challenges currently facing the countries of the region, such as climate change and the depletion of natural resources, coupled with the health crisis caused by the COVID-19 pandemic, have starkly exposed the structural problems and vulnerabilities of Latin America and the Caribbean and point to the need for profound transformations in order for progress to be made towards more sustainable development in territories, which includes establishing sustainable consumption and production patterns and developing public policies on disaster risk management that include resilience strategies.

At the same time, it is now clearer than ever that these challenges cannot be dealt with by any one actor alone. The promotion of environmental democracy through effective implementation of Principle 10 of the 1992 Rio Declaration on Environment and Development strengthens and complements the capacity of governments to address these problems.

Principle 10 of the 1992 Rio Declaration is based on three interdependent rights: the right to access environmental information in a timely and effective manner, the right to participate in environmental decision-making and the right to access justice to enforce compliance with environmental laws and rights or to obtain redress. Securing these rights for all is essential to address inequality and move towards environmentally sustainable development.

This was recognized by the countries of Latin America and the Caribbean when they adopted the Regional Agreement on Access to Information, Public Participation and Justice in Environmental Matters in Latin America and the Caribbean in Escazú, Costa Rica, on 4 March 2018. The Agreement is the result of an open, transparent and participatory intergovernmental process initiated at the United Nations Conference on Sustainable Development (Rio+20) in 2012. The Escazú Agreement entered into force on 22 April 2021 and has been ratified by 12 countries to date.

The Agreement recognizes and articulates the link between access rights, democracy, sustainable development and human rights. Its focus is on vulnerable individuals and groups with affirmative measures to ensure that these can exercise their rights. It thus seeks to overcome the barriers that prevent some people from exercising their rights in conditions of equality and non-discrimination.

The Agreement includes novel provisions for the incorporation of local and indigenous peoples' knowledge into disaster risk reduction and climate resilience strategies. Examples are article 6.5, which states that each Party shall develop and implement an early warning system using available mechanisms, and article 7.13, which states that Parties shall promote regard for local knowledge, dialogue and interaction of different views and knowledge, where appropriate.

Strengthening the participation of local communities and indigenous peoples is essential to building sustainable and resilient societies. Their involvement in public management and in disaster risk prevention and reduction not only ensures that the issues affecting them most are addressed, but also that the needs of these groups are properly taken into account.

This is particularly important in actions to address the risks associated with the climate crisis. Indigenous peoples have a close relationship with forests in the lands and territories they inhabit and have played a key role in conserving them. Latin America's forests are also of global importance, accounting for almost a quarter of the world's total and more than half the primary forests that still remain. Thus, this close relationship has generated biocultural conservation knowledge, uses and practices that are fundamental to the maintenance of forest ecosystems, generating essential climate benefits for life on Earth (ECLAC/FILAC, 2020).

This is also consistent with what was agreed in the Sendai Framework for Disaster Risk Reduction 2015–2030 of the Third World Conference on Disaster Risk Reduction, held in Sendai, Japan, in 2015. The Sendai Framework emphasizes the participation of all of society in disaster risk prevention and reduction and highlights the importance of local knowledge by stating that disaster risk reduction requires easily accessible, up-to-date, comprehensible, science-based, non-sensitive risk information, complemented by traditional knowledge (para. 19); and urges parties to ensure the use of traditional, indigenous and local knowledge and practices, as appropriate, to complement scientific knowledge in disaster risk assessment and the development and implementation of policies, strategies, plans and programmes (para. 24).

The countries have begun to incorporate disaster risk management into their development plans with the aim of building resilient societies. Examples include the development plans of Guatemala, Panama, Brazil and Colombia (Bello, Bustamante and Pizarro, 2020). The challenge is to strengthen the active participation of local communities and indigenous peoples in these disaster risk reduction strategies. The effective exercise of rights of access to information and participation must ensure that traditional knowledge and practices inform disaster risk assessment and the development and implementation of related policies, plans and strategies. For example, emergency preparedness and response systems should be developed with citizen participation and in a way that respects different visions and ensures that local knowledge is used to inform decision-making and make the final design of systems practical and feasible to apply in the context in which it is developed. Systems for collecting and disseminating information related to potential local emergencies must also take account of local knowledge. Participation should be not only *ex ante* but also *ex post*. As mentioned, a disaster can become an opportunity to improve people's lives if reconstruction is oriented towards improving on what was there before, and in this task local knowledge and attention to the needs and aspirations of the different local actors have a very valuable contribution to make (ECLAC, 2014).

### 3. The opportunities and challenges of building resilience in territories and lessons for institutions

Looking beyond the debates about the benefits and difficulties of building resilience in territories, it is important to highlight the opportunities that, according to Reghezza-Zitt and others (2012), arise from this concept:

- From a heuristic point of view, resilience has proven its effectiveness. For example, it forces us to reflect on the times before and after the crisis and to combine cyclical and linear times. It prompts us to consider the memory of the disaster.
- From an operational point of view, resilience opens up new perspectives on how to cope with situations that are exacerbated by the accumulation of negative factors: it gives rise to feedback and the hope that there are other solutions to be sought.
- From a political point of view, resilience is primarily a discourse and opens the way to the decentralization of practices and representations, since it makes it possible to revive old analyses and ideas that have been diluted, emptied of meaning or marginalized.

At the fifteenth meeting of the Regional Planning Council held in Ecuador in 2015, ILPES presented four planning challenges that it considered would have to be faced in the coming years and that were also territorial challenges for the institutions of the region's States that needed to be taken into account in public management. These four challenges were inter-temporality, intersectorality, multi-scalarity and the multiplicity of actors.

By inter-temporality is meant the fact that, when faced with potential disaster scenarios, government institutions will have to plan all the actions to be carried out within the scope of their competencies in three time frames, the short, medium and long terms, so that they can deal with emergencies (building shelters) and deal with the complementary changes (repairing housing) and structural changes (carrying out soil surveys or amending the regulatory plan) that prove necessary. This is the challenge of dealing with problems inter-temporally. To build up resilience, it is crucial to deploy a short-term response to the emergency but at the same time consider the medium- and long-term effects with a view to post-disaster recovery (in the reconstruction phase).

The intersectoral dimension means that State institutions have the challenge of planning and implementing policies, programmes and projects with a comprehensive approach that requires dialogue with the different sectors of government in order to provide solutions to the social, economic, institutional and other problems that arise in the country when it is faced with a disaster.

With regard to multi-scalarity, institutions should increase efforts to formulate policies and strategies that take account of the different levels of the State involved. It is not possible to implement a policy without coordinating it with the decisions taken in parallel at the subnational and local levels to solve the same problem. Multi-level coordination is increasingly necessary to ensure that government resources are used effectively and efficiently.

As for the multiplicity of actors, the governance model currently propounded in academia and government emphasizes the need for the State to coordinate the actions of private actors and civil society as it sets about solving public problems. This is an aspect that cannot be ignored today, given that citizens are increasingly aware of their civic rights.

To the four challenges just mentioned must be added another analytical category that cannot be left out of the decision-making processes of public institutions: transversal approaches. The concept of transversality refers to problems, actions and programmes that concern all social fields, without belonging to any specific one.

When implementing strategies to build territorial resilience, it is vital to consider, for example, the gender perspective, and to ask how these strategies affect men and women in the community. What types of resilience do women, people of different sexual orientations and men evince in the face of disasters? Do disasters affect women more than men?

The COVID-19 pandemic has shown once again that women are more heavily impacted than men, whence the importance of treating transversality as a fifth challenge for institutions preparing to operate within the territorial resilience paradigm.

## 4. The capabilities needed to construct and enhance territorial resilience

Disaster management and social capital are the road map for communities to build resilience based on bonds of trust, reciprocity and cooperation. Two types of capacities, governmental and social, are needed to build resilience in territories.

With respect to government capacities, history must be considered. Originally, the functions of government institutions involved meeting social needs in areas such as defence, justice, transport, public infrastructure, public health and education. Now, however, not only has this State agenda been expanded more and more, but public problems that until a few years ago were the almost exclusive responsibility of the State now increasingly require the involvement of private agents and civil society for their solution.



This situation has allowed governments to establish the idea of governmental governance, a mechanism that seeks to reserve responsibility for solving problems to the State but at the same time give it the power to call on agents from other spheres to help improve the living conditions of the country's inhabitants.

This boundary between the presence of the State and that of other social actors in the resolution of public problems has expanded and contracted over the last 20 years. Currently, in the wake of the economic, health and social crisis caused by the COVID-19 pandemic, the State has once again begun to take on the status of the main actor. In these circumstances, institutions and their ability to face the new challenges are becoming more and more important. Among the capacities that government teams should incorporate or strengthen are those listed below:

- the ability to read the context in which people go about their lives, taking into account their diversity in respect of gender, age, geographical spaces, income and cultural capital, among other dimensions;
- the ability to strengthen dialectical thinking, i.e., multidirectional thinking that is systemic, synthetic and synergistic, as opposed to traditional causal, one-directional and Cartesian thinking;
- the ability to develop empathy, knowing and acknowledging the other as a different being with a voice;
- the ability to recognize one's own strengths and also one's limitations, cultivating humility but not false modesty and believing in the rightness of one's own thinking;
- the ability to act in response to unforeseen events, which are the most frequent disaster scenario;
- the ability to debate, negotiate, build pacts, collaborate and coordinate actors.

To build resilience, in addition to these governmental capacities, social capacities are required, i.e., resources that people have available to withstand, cope with and recover from disasters. Wisner, Gaillard and Kelman (2012) consider that in communities there is always a circle of capacities that is composed of resources of the following kinds: political (leadership), allowing decisions to be made; economic (local market), allowing losses to be dealt with; social (social capital), fostering solidarity; human (local knowledge), possessing knowledge and tools to cope with hazards; physical (traditional architecture), providing safe housing and infrastructure; and natural (biodiversity), securing food and water, among others. These capacities are endogenous resources of the community, enabling it to face the challenges posed by an event, adapt and recover; however, resources are also affected by exogenous factors, such as wars, terrorism or macroeconomic policies, which often weaken the endogenous capacities of the territory.

Unquestionably, the virtuous coexistence of governmental and social capacities would make it feasible to construct resilient territories.

There is also a need to strengthen community leadership. The complexity and interdependence of the institutions associated with the construction of resilience strategies mean that public leadership is required in various spheres, dimensions or scales to provide effective guidance and support. Territorial vulnerability and resilience are closely linked to what Crosby and Bryson (2005) call public problems, i.e., problems that have multidimensional causes and cannot be solved by a single institution or actor, but require a collaborative approach. The effects of climate change and economic or health crises such as the current pandemic are examples of public problems where such an approach is needed.

A collaborative process can be defined as one whose aim is for organizations from two or more sectors to link up or share information, resources, activities and capabilities in order to jointly achieve an outcome that organizations in a single sector could not achieve separately (Bryson, Crosby and Middleton Stone, 2015, p. 648).

Furthermore, public leadership, defined as the capacity to inspire and mobilize others to carry out collective actions in pursuit of the common good (Crosby and Bryson, 2005), is essential to drive substantive collaborative processes, such as territorial resilience-building strategies. According to ILPES, public leadership is all leadership that emerges not only in State institutions, but in all the spheres associated with a public problem, such as communities, trade unions and academia (see chapter I).

In this context, studies on leadership associated with collaborative processes highlight the role it plays at various stages of such processes (Morales and others, 2020; Bryson, Crosby and Middleton Stone, 2015). First, leadership performs a function at the stage where the initial goals and purposes are agreed, when existing inter-institutional relationships must also be taken into account. At this stage, the role of early leadership in driving collaboration is crucial, and it is important to identify sponsors and champions who have a collaborative mindset and the capacity to engage with diverse organizations. In the implementation stage of collaborative initiatives, the role of leadership is very important to inspire trust during the process itself and to support the design of the collaborative structures that may emerge. Lastly, leadership is crucial in dealing with the conflicts or tensions that usually emerge in the course of collaborative activities.

## 5. Social capital as a road map to resilience for communities

Social capital is a valuable asset and a vital resource for communities to cope with disasters. Social capital is understood as the set of norms, institutions and organizations that promote trust, reciprocity and cooperation between individuals and communities.<sup>1</sup>

John Durston (1999) sees social capital as having three planes: an abstract one, e.g., shared visions; a behavioural one, encompassing individual and collective social capital; and a material one, comprising natural and economic capital. What concerns this paper is the behavioural level of social capital, which manifests itself in behaviours that evince trust, reciprocity and collaboration between two or more individuals or organizations.

Underlying social capital is essential to resilience-building. This capital is composed of the following: trust between people, understood as the willingness to hand over control of one's assets (e.g., confidential information) to someone else; reciprocity, considered as the basis of all social and affective sharing relationships; and cooperation, as a complementary action aimed at achieving shared goals in a common endeavour.

Social capital is never individual, as it takes at least two people to establish a network of relationships. When that network becomes denser, community social capital can be said to exist. The greater this capital, the likelier it is that all manner of coping strategies will emerge to deal with the disasters that may occur in a territory, because trust between people, acts of reciprocity and permanent cooperation become a habit and facilitate the coordination of community groups.

Social capital does not always have positive connotations: sometimes there are dense networks of power relationships whose purpose is to confront and neutralize the actions of other groups in the community. It is therefore important to draw the map of the actors cohabiting in the territory in order to know how to address the lack of social capital or the existence of corporate social capital that exists to implement action strategies in its own interests.

When a territory is home to a considerable amount of social capital that exists to create common goods, characteristics such as the following can be observed:

- teamworking areas and structures arise;
- those exercising leadership in organizations and responsible for managing and administering resources are people who have been legitimized by their peers;
- community resource mobilization and management are constant and constitute a common practice;
- conflicts are addressed and resolved by those who exercise leadership in the community;
- there is permanent trust constantly being generated among members of the community;
- social control is exercised by setting rules that are shared by the group and penalizing those who break them.

Territorial resilience, which is not a condition of an individual person, requires social capital to give it structure in order to streamline the community processes that are needed when a disruptive event alters the trajectory of community life.

<sup>1</sup> See Bourdieu (1986), Coleman (1988) and Putnam (1993) for a more detailed look at the subject.

## C. Differing socio-spatial dynamics: vulnerability and resilience as a continuum

### 1. Urban spaces: Medellín, an example of a resilient city

In Latin America and the Caribbean, there are cities where resilience processes have been applied to address disasters. One example is the city of Medellín in Colombia.

Medellín is in north-west Colombia and is the country's second-largest city, with approximately 2.6 million inhabitants. In the 1980s it was one of the cities most affected by drug trafficking and guerrilla warfare. The current situation, however, is very different. Beginning in 2006, a social urban planning programme led by the mayor, Sergio Fajardo, was implemented, resulting in major investments in mobility, culture and education in the most disadvantaged areas of the city. The municipality and the private sector entered into partnerships that attracted foreign investment and promoted tourism. The actions led by the city's mayor were closely associated with the "right to the city" concept. Two geographical areas were intervened in: Moravia and Comuna 13.

Today, the Medellín brand is associated with the following messages: innovation, intelligence, sustainability and resilience. In 2016, the city joined the 100 Resilient Cities programme led by the Rockefeller Foundation.<sup>2</sup>

By 2018, the city was receiving 160,000 tourists a year. Fajardo, the former mayor who led this process, has pointed out that the changes in Medellín were due to two factors: innovation in the way things were done and people's ability to overcome obstacles. According to him, the leading role played by the inhabitants was fundamental in transforming the city.

The city of Medellín and its membership of the group of 100 resilient cities recognized by the Rockefeller Foundation illustrates a process lasting more than 20 years in which apparently disconnected dynamics converged and interacted in a territory with a strong identity and sense of belonging, contributing to the development of an urban space that now stands out as the most innovative in Colombia and probably in the entire Latin America and Caribbean region.

Green public spaces in the city of Medellín are managed as an integral part of the urban area of the Aburrá Valley. The newest public areas cover over 1.1 million square metres and include a number of parks: Parque del Río de Medellín, Parque Explora, Parque de los Pies Descalzos, Parque de la Bailarina and Parque de los Deseos. These mix green areas with museums, sports areas and areas dedicated to the visual arts.

The social inclusion strategy focused on recovering territories previously taken over by drug crime. To this end, the presence of institutions was increased in these areas and a strong cultural commitment was made to restoring children's values. The latter involved creating a network of 35 public libraries strategically located in the areas of greatest violence and insecurity, introducing an early education strategy for children aged 0 to 5 and implementing a social acupuncture strategy whereby solutions were targeted on the places with the greatest problems (Lupera, cited in Goyret, 2018). An essential part of this was that society drew a line and decided that it no longer wanted to live with violence (Lupera, cited in Goyret, 2018). The authorities have emphasized the commitment made by society, which has undoubtedly been part of the solution to the problem (Goyret, 2018). Although the disintegration of criminal groups is ongoing, and although violence has declined sharply, crime statistics indicate that there is still a long way to go before this issue ceases to be a challenge for municipal governments.

The public transport system infrastructure was improved by building a metro across the city from north to south and four Metrocable lines that made it possible to travel between the city centre and hillside areas in a matter of minutes. Before the Metrocable was built, the journey could easily take one or two hours. Buses, cycle lanes and the escalators that replaced the more than 350 steps connecting the residential areas of Comuna 13 completed an extensive public transport and mobility network that has improved the quality of life of thousands of people.

<sup>2</sup> The Rockefeller Foundation launched the 100 Resilient Cities programme in 2013 to help cities prepare for climate change-related threats. The programme ended in April 2019, with part of its funding going to the Atlantic Council's Adrienne Arsht-Rockefeller Foundation Resilience Center programme and part to provide support and transition time to the 100 Resilient Cities network.

Public-private partnerships, partnerships with academia and citizen participation have made it possible, first, to secure sustained funding for initiatives and, second, to maintain public innovation as a fundamental pillar of municipal government. Interactions between universities, innovation laboratories, municipal governments and the private sector strengthen the institutional fabric and the continuity of public policies.

The process of building resilience in Medellín took decades and was far from being linear and static like a hallmark or a brand. For it to be replicated and adapted in other territories, it will probably be necessary to distil the conditions that gave rise to it, including scale, political and administrative organization, economic power and political power. However, it is important to look closely at a number of aspects that stand out as enabling conditions and that came together in the territory in a critical historical period following the fall of the leader of the region's strongest and most notorious drug cartel. These aspects include a sense of citizen belonging, the ability of the State to mobilize citizens and of citizens to work together, the existence of a great many coordinated territorial planning tools, sustained policy financing, the active participation of stakeholders, the continuity of policies, and public leadership.

The urban resilience achieved in Medellín prompts reflection on the importance of sustaining the participation of the community in order to preserve the territory's memory, of continuously reading the environment so as to pick up on any strains and setbacks and, above all, of building consensus on resilient practices.

## 2. The challenges of multi-scalarity in subnational resilience strategies: the Mexico City Resilience Strategy

In 2013, Mexico City was selected to be part of the 100 Resilient Cities initiative. Within the framework of this initiative, which as mentioned above was created by the Rockefeller Foundation, the city's first Resilience Strategy began to be formulated and a Resilience Director was created to lead its design and implementation.

The Mexico City Resilience Strategy recognizes important environmental, social and economic challenges that determine the city's vulnerability. Factors such as population and urban growth, weak urban planning, limited regional coordination, the degradation of environmental services and the spatial manifestations of poverty and inequality are mentioned as strains on the city's development (Mexico City Resilience Office, 2016).

In the years prior to the implementation of the Resilience Strategy, the Government of Mexico City had been implementing programmes and projects such as the Comprehensive Mobility Programme 2013–2018 and the Mexico City Climate Action Programme 2014–2020, which aimed to address problems in various sectors. These initiatives and a series of related regulations laid the groundwork for introducing integrated risk management and development planning, which helped to build resilience in the city and society.

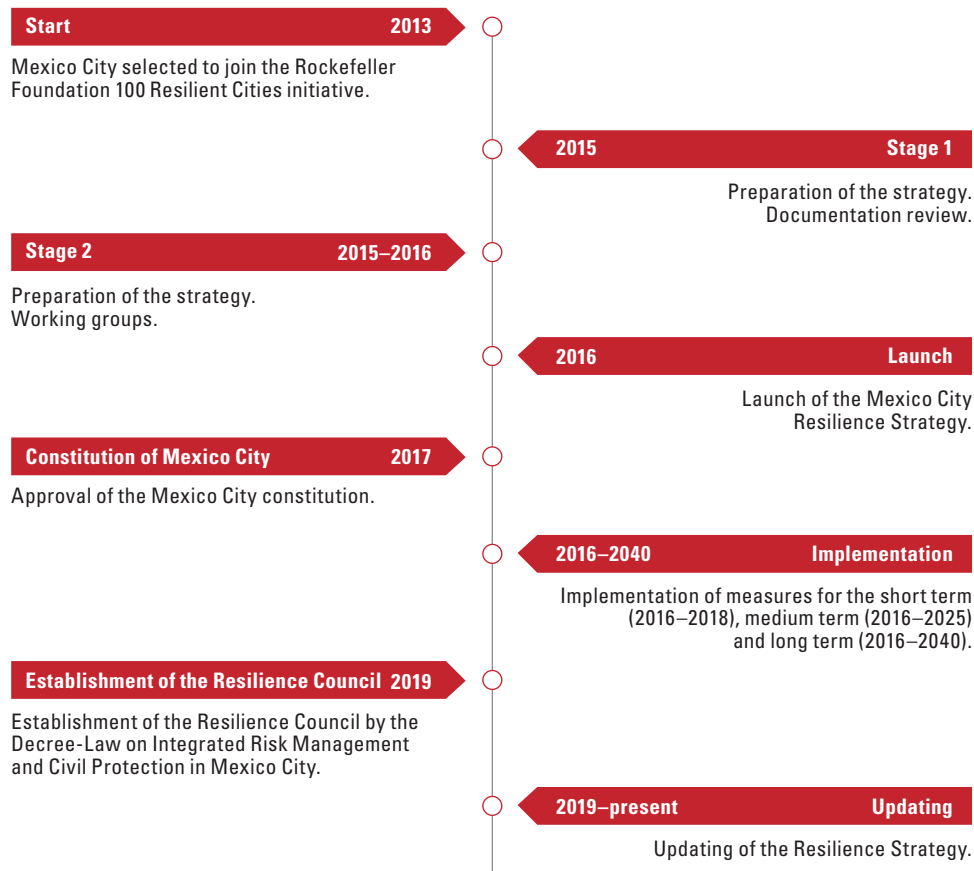
The implementation of the Resilience Strategy sought to strengthen these programmes and projects through integrated actions aimed at promoting resilience by fostering an adaptive transformation that entailed a paradigm shift in the development process. This new approach involved tackling complex problems through transversal planning, continuous learning and the inclusion of actors from different levels of government, as well as civil society, the private sector and the international arena, in order to facilitate the transition to sustainable actions that would not put the city's future at risk.

The strategy was developed in three phases (see diagram III.1). The first involved a review of the literature and existing government documents to identify and establish the city's main stresses, effects and assets.<sup>3</sup> During the five months that this stage lasted, semi-structured interviews, surveys, workshops and meetings were held with experts from different sectors to garner their perceptions of the main natural and human risks in the city and the consequences they could have in terms of the population affected and the economic cost.

<sup>3</sup> See Mexico City Resilience Office (2016, figure 17, p. 44) for further details.

**Diagram III.1**

Timeline of the Mexico City Resilience Strategy, 2013–2021



**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of Mexico City Resilience Office, *Estrategia de Resiliencia CDMX: transformación adaptativa, incluyente y equitativa*, Mexico City, September 2016.

The second phase lasted a year (from August 2015 to August 2016) and settled the focus and scope of the strategy. Expert working groups were formed to identify the specific problems and areas of opportunity in each thematic area and diagnose the city's resilience, before going on to assess risks and set priorities. The third phase began with the launch of the strategy in 2016, the plan being to implement it until 2025.

In the Mexico City Resilience Strategy, five working areas were identified with a view to pursuing actions aimed at improving the city's adaptation, response and development capacities. Actions were elaborated for each area, covering the short term (2016–2018), medium term (2016–2025) and long term (2016–2040). The five areas were: regional coordination, water resilience, urban and territorial resilience, improving mobility with an integrated, safe and sustainable system, and developing innovation and adaptation capacity.

The strategy also incorporates transversal elements relating to the building of resilience in specific areas of the city and at the community level, attention to vulnerable groups, the preparation of educational messages and communication campaigns to promote citizen participation and understanding in society, and a regional perspective (see diagram III.2).

**Diagram III.2**  
Mexico City Resilience Strategy



**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of Mexico City Resilience Office, *Estrategia de Resiliencia CDMX: transformación adaptativa, incluyente y equitativa*, Mexico City, September 2016.

The year 2019 marked a turning point in the construction of the strategy with the enactment of the decree creating the Resilience Council,<sup>4</sup> resulting in the establishment of an intersectoral, intergovernmental and multi-stakeholder structure.

A systemic working approach can be observed in the process of building the Mexico City Resilience Strategy, one that has evolved from the gestation of an agency or office (with sectoral characteristics) towards a more complex and comprehensive institutional framework with the creation of the Resilience Council. With regard to the four planning challenges mentioned earlier in this chapter, namely inter-temporality, intersectorality, multi-scalarity and multiplicity of actors, it can be observed that the process of building the Mexico City Resilience Strategy has the following characteristics:

<sup>4</sup> See *Gaceta Oficial de la Ciudad de México* (2019). The first session of the Resilience Council was held in 2020 and the second on 15 July 2021.

- With regard to inter-temporality, temporary implementation cycles (as reflected by the actions identified in the strategy) and a forward-looking vision for Mexico City by 2040 were proposed. To ensure that actions would outlast the different administrations, the Mexico City constitution created the Institute for Democratic and Prospective Planning (IPDP) as a technically and managerially autonomous decentralized public body. It is meant to guarantee the participation of citizens and the academic, cultural, social and economic sectors in the process of planning the city's development.<sup>5</sup>
- Where intersectorality is concerned, when the Resilience Agency was created in 2015 it was focused on more environment-related risk management work, while the Resilience Council, created in 2019, had intersectoral characteristics. The Resilience Council, which structurally is coordinated by the Secretariat for Integrated Risk Management and Civil Protection (SGIRPC), includes 16 municipalities and 19 agencies of the Mexico City Public Administration, as well as other civil society actors.
- Regarding multi-scalarity, the Resilience Council engages in a number of coordinated actions with other government agencies to build resilience.
- As for the multiplicity of actors, mention should again be made of the changeover from the Resilience Agency to the Resilience Council, since the former consisted of a board, while in the latter a variety of actors are represented, with strong representation from the private sector and academia, in order to generate synergies.

### 3. Rural spaces: the Parque de la Papa in Peru

The conditions of vulnerability and territorial resilience in Latin America and the Caribbean must be considered in the context of the acute heterogeneities and inequalities in the region, particularly between urban and rural areas.

As Trivelli and Berdegué (2019) highlight, the underdeveloped state of rural areas has been constituted and reproduced in a dynamic process and has given rise to a situation of multiple interconnected deficits that include, among others, high levels of poverty and lack of access to services, connectivity and land.

The vulnerability of the region's rural areas can be analysed in the light of the two conditions identified by Méndez (2016): (i) high exposure to risks of various kinds or to adverse situations beyond the control of these areas, and (ii) their defencelessness and limited response capacity because of their own internal weaknesses, which are accentuated when coupled with external support that is too weak to mitigate the damage caused. The former conditions include the set of problems arising from climate change or natural disasters, and the latter include the difficulties arising from the weak capacities of local institutions and economic structures, which are often highly specialized and therefore exposed to the risks of economic crises.

At the same time, the pandemic crisis has demonstrated the capacity of many food systems, and thus of a continuum of urban-rural interactions, to sustain production and distribution processes (Torrens, 2020). In this context, the resilience of agrifood systems must be nurtured by correcting the multiple social, economic and territorial inequalities present in rural areas and by establishing a more sustainable relationship between humans and nature (FAO/ECLAC, 2020).

A noteworthy case in which rural resilience strategies have been applied is the Parque de la Papa, a biocultural territory established in 2000 that is dedicated to the conservation of biological and cultural diversity in the Andes mountains near Písaq in the Cusco region of Peru. The park covers an area of over 7,000 hectares, is managed by five communities and is supported by the Association for Nature and Sustainable Development (ANDES). The purpose of the park is to manage landscapes, ecosystems and biological and cultural assets in order to collectively benefit the participating communities and strengthen their resilience to the adverse effects of climate change.

<sup>5</sup> The members of the IPDP Technical Board were appointed in March 2021. See *Gaceta Oficial de la Ciudad de México* (2021) for further details.

In 2020, the Peruvian Ministry of Agrarian Development and Irrigation recognized this park as an agrobiodiversity zone, which will enable conservation actions to be carried out for the different native potato species grown there, as well as research and innovation projects. This community initiative has sought to respond to the risks posed by climate change, which are very serious in the Cusco region. To this end, a set of strategies has been implemented with the primary aim of managing the genetic diversity of the more than 1,300 potato varieties and shifting potato cultivation to higher land (FAO/Fundación Futuro Latinoamericano, 2019). This has involved drawing on ancestral knowledge and traditions, the value of which has been extensively highlighted.

## D. Measuring resilience in a territory

With a topic such as resilience that is so recent in the social sciences, it is necessary not only to understand the concept in all its manifold meanings, depending on the discipline that engages with it, but also to create or adapt an institutional framework commensurate with the challenges it creates.

Once the theoretical discourse has been consolidated (although consensus is not always achieved) and the relevant institutions are in place, then, if the aim is to operationalize the analytical concept in territories, instruments have to be created to gather empirical evidence. This means creating tools to measure what is happening with the issue concerned in the territory.

The disaster resilience of place (DROP) model is one of those proposed by the University of South Carolina to measure resilience in communities (see Cutter and others, 2008). Models are always a simplification of reality, and this particular one was created specifically to address natural hazards. However, it could be adapted to other fast-onset events, such as terrorism or technological hazards, or to slow-onset natural hazards, such as drought. This model focuses on resilience at the community level, which distinguishes it from sector-based models or those created to assess resilience at the meso or macro levels.

The disaster resilience of place model starts with the antecedent conditions of the place, which are the product of a specific space and of processes occurring within the territory and between social, natural and environmental systems. Among the antecedent conditions, which constitute endogenous factors, are both the inherent vulnerability and the inherent resilience of the territory. There are also exogenous factors that can influence endogenous factors.

In addition, it is important to know the absorption capacity of the territory, meaning the community's ability to absorb events by implementing predetermined responses. If the community reacts by providing a response, the effects will be attenuated and its capacity to absorb the event will not be overwhelmed, with the result that a high degree of recovery will be achieved. However, absorption capacity may be exceeded for two reasons: (i) the event is very protracted and (ii) the community's response capacity is not optimal or sufficient.

Social learning, defined as the diversity of adaptations and the promotion of strong local social cohesion and mechanisms for collective action, becomes important in these cases (Adger and others, 2005, p. 1038). Social learning occurs when beneficial actions constitute a road map for managing future events. Manifestations of social learning include the policy of making improvements in pre-event preparedness.

Why is it so important to measure the resilience capacity of territories? The multifaceted nature of the concept of resilience, which includes physical, social, institutional, economic and ecological dimensions, makes it difficult to develop conceptual frameworks to measure and evaluate it.

If it is challenging to measure one type of resilience, it is even more challenging to measure the resilience of a territory, because a great many dimensions come together in this space to constitute its particular reality. In a territory there can be social, economic, institutional and other types of resilience, which is why the proposal put forward by Cutter and others (2008) is applicable and provides an invaluable instrument for operationalizing the concept of resilience and representing the situation a territory is in. Table III.1 presents a set of variables that can be considered when measuring territorial resilience.



**Table III.1**  
Indicators of community (territorial) resilience

Dimension	Variables
Ecological	Wetland area and loss Erosion rates Percentage of impervious surface Biodiversity Coastal defence structures
Social	Demographics (age, race, class, gender, occupation) Social networks and integration Cohesion of community values Religious organizations
Economic	Employment Property value Wealth creation Municipal finance and revenue
Institutional	Participation in hazard reduction programmes Hazard mitigation plans Emergency services Zoning and building codes Emergency response plans Interoperable communications Operating continuity plans
Infrastructure	Lifelines and critical infrastructure Transport network Residential housing stock Commercial establishments and industries
Community competence	Local understanding of risk Counselling services Absence of psychopathologies (alcohol, drugs, spousal abuse) Health and well-being (low rates of mental illness, stress-related outcomes) Quality of life (high satisfaction)

**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of S. L. Cutter and others, "A place-based model for understanding community resilience to natural disasters", *Global Environmental Change*, vol. 18, No. 4, October 2008.

Among the dimensions mentioned in table III.1, the particular nature of community competence makes it stand out. This is a dimension of resilience in which the focus is on the attributes of places where the well-being, quality of life and emotional health of the population are nurtured (Norris and others, 2008). In this dimension, it is important to consider pre- and post-disaster functions, including sense of community and ideals such as attachment to the place and the desire to preserve it (Vale and Campanella, 2005). Box III.1 provides an example of community competence in Japan and also refers to the points Reghezza-Zitt and others (2012) raise about preserving the memory of disaster.

### Box III.1

#### Japan: culture, memory and resilient communities

In Japan, 11 March 2011 is a date synonymous with disaster. A magnitude 9 earthquake triggered waves that crested up to 40 metres. The epicentre of the earthquake was out to sea off the coast of Honshu, 130 kilometres east of Sendai in Miyagi Prefecture, at a depth of 32 kilometres. The authorities confirmed more than 15,000 dead, 2,500 missing and 6,000 injured in 18 prefectures of Japan. In addition, the earthquake triggered a meltdown at the Fukushima nuclear power plant. In this disaster, though, one town stood out: Aneyoshi.

Aneyoshi is a small village on the north-western coast of Japan. In an area near the seashore is a stone tablet about three metres high with a carved warning to the villagers that reads: "High dwellings ensure the peace and happiness of our descendants. Remember the calamity of the great tsunamis. Do not build any homes below this point."

Such stones can be found all along the Japanese coast and date back to around 1896, when two tsunamis killed more than 22,000 people. An Aneyoshi village leader, Tamishige Kimura, told *The New York Times* a few years ago that the warning was "a rule from our ancestors, which no one in Aneyoshi dares break".

**Box III.1 (concluded)**

The Aneyoshi stone saved the entire village and is believed to date back to the 1930s. After the area was devastated by the 1896 tsunami, the village was rebuilt on the same site and no stone was erected. However, when another tsunami struck in 1933, the survivors moved uphill and a stone was set up in the aftermath of the disaster. The message on the stone is believed to have saved the village in 1960 and again in 2011.

If we carry out the exercise of asking people in our countries what they know about the disasters that have occurred in each of them, we are unlikely to find answers. We tend not to talk about what hurts us, but memory can save lives, as in Aneyoshi. Memory saves lives: heeding ancestral knowledge can make a difference. Promoting this knowledge in the education system, in museums, in public squares and parks, without relying only on oral tradition, is an important resource for preserving mechanisms of behaviour in the face of a disaster.

Memory should be used as a preventive mechanism. We need to learn to share information about disasters that have occurred, even if remembering disruptive events is painful. Memory can enable vulnerable social groups to become resilient communities capable of absorbing the disruption caused by disasters and at the same time of reorganizing, learning from mistakes and acquiring tools so that, even if the pre-disaster state is not necessarily restored, the community will be better prepared materially and psychologically when the next event occurs.

**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of *The New York Times*, "On stones in Japan, tsunami warnings", 20 April 2011.

## E. Conclusions

The context of deep inequalities and the culture of privilege in Latin America and the Caribbean that ECLAC has been warning about since 2014, and their manifestations in social, economic and political structures, constitute the framework for the political economy of territorial resilience in which the strategies to be implemented must be analysed. Indeed, territorial resilience strategies need to be linked to structural transformations such as those proposed by ECLAC, which will necessarily involve modifying the systems of inherited power relations which reproduce inequality and vulnerabilities.

To address the multiple challenges posed by the twenty-first century, States will have to develop institutional capacities that enable them to respond to these in a concerted and collaborative way with the different actors in their territory, be they urban or rural. This must involve aligning short-term actions with long-term policies and strategies, as in the cases of Medellín and Mexico City presented here, coordinating actions among institutions, levels of the State and scales of territory, and fostering bonds of trust among institutions, between institutions and the community and among citizens.

Investing in institutional capacities to build resilience in territories has positive returns for community development. As stated above, these capacities must be geared towards identifying hazards and vulnerabilities in order to anticipate, prepare for and act in the face of unforeseen events, innovate, and collaborate with all stakeholders on disaster risk management and prevention. The procedures used to identify threats and vulnerabilities must be systematically informed and updated by a robust territorial information system that allows for evidence-based decision-making.

At the same time, it is necessary to strengthen the social capital of communities and the bonds of cooperation and trust that support the generation of common goods. Maintaining the territory's memory and valuing the sense of identity and belonging is vital so that the most vulnerable have the tools to face disruptive events and recover their livelihoods with the support of the State.

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# IV

## Institutional resilience and the role of foresight

### Introduction

- A. The role of foresight in fulfilling the 2030 Agenda for Sustainable Development
- B. The institutional development of foresight
- C. Foresight for institutional resilience
- D. Foresight, innovation and creative adaptation
- E. How to create visions and construct new responses
- F. The role of foresight and innovation laboratories in creating expeditious and timely public policy responses
- G. The relationship between foresight and State policy
- H. Conclusions

### Bibliography



## Introduction

In the last decade the production of global foresight knowledge has expanded to propose a systemic approach, with innovation playing a central role. This broadening of scope and embracing of new perspectives stems from future studies, strategic warning intelligence, corporate or strategic foresight, design, and theories of creativity. This chapter aims to review the role of foresight and its contribution to the development of institutional resilience, by addressing the following topics: the role of foresight in fulfilling the 2030 Agenda for Sustainable Development; the institutional development of foresight; foresight and institutional resilience; foresight, innovation and creative adaptation; how to create visions and construct new responses; the role of foresight and innovation laboratories; and the relationship between foresight and State policy.

### A. The role of foresight in fulfilling the 2030 Agenda for Sustainable Development

Foresight seeks to anticipate and build strategic options for society, based on long-term thinking that transcends the government cycle. The intention is for these options to become State policies that allow for effective coordination of the public agenda —not only that of the legislative branch, but also that of the country as a whole— thanks to a greater capacity to promote permanent social dialogue.<sup>1</sup> This means building bridges, coordinating actors, and forging consensuses and alliances that make it possible to address the major challenges. However, this depends on each issue. In the ECLAC (2018) report on the public management panorama in the region, the long term is classified as a period spanning at least two consecutive government cycles in which the same policy is articulated.<sup>2</sup> Currently, most countries in Latin America and the Caribbean operate with long-term visions, plans and strategies.

According to ECLAC (2018) and United Nations (2014 and 2015), implementation of the 2030 Agenda for Sustainable Development entails juggling short-, medium- and long-term visions. The United Nations sees foresight as useful for anticipating external shocks and having the tools to deal with them, organizing national and regional agents, coordinating public policies and reaching consensus on the different development visions. This is the mandate that countries agreed on in 2015 with the adoption of the 2030 Agenda; and foresight must respond and adapt if it is to be relevant, pertinent, useful and timely.

The 2030 Agenda has served as a road map for the definition and scope of the goals, targets and indicators in the region's long-term exercises. In practice, its implementation has posed an immense challenge for the institutions tasked with this in each country, especially because the different State bodies and levels of government need to coordinate to adapt the Agenda to the territory in question. Moreover, leadership capacity is needed to convene multiple actors. It is therefore necessary to make a greater effort to learn, and to shake off the traditional approach of following the inertia and continuity of evolutionary processes with a short-term view. Instead, it is necessary to learn exponentially and create new ways of doing things. This is why foresight today requires a very close relationship to be established with innovation —not only technological, but also

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<sup>1</sup> Medina-Vásquez (2000) and Vargas (2021) argue that long-term thinking is one of the chief characteristics of government decision makers. It relates to the ability of leaders to formulate the strategic vision of a country or region. An image formed on the long-term horizon involves seeking the socioeconomic consolidation of developed and emerging nations. It means assuming commitments that transcend individual government terms, generating and linking ideas that extend beyond the current juncture, and establishing inter-subjective and constructivist processes related to social, ideological, cultural and institutional factors. Long-term thinking is fundamental to the process of constructing the future. It is essential for creating shared strategies and visions that respond to the image of a desired future, over long time horizons —an image that can be adapted to changing environmental conditions. Long-term thinking is the result of various individual, cultural and ideological factors. It is based on strategic thinking (logical, critical and creative); it involves creating representations about the future; and it is multi-temporal, systemic and intersubjective. Contemporary philosophers are promoting this concept through the metaphor of "cathedral thinking". Krznaric (2020) defined this type of thinking as the ability to visualize and plan projects over a very extensive time horizon, perhaps involving decades or centuries.

<sup>2</sup> According to Cuervo (2007), State policies are essentially those that make it possible to materialize and develop constitutional principles. They are characterized as such because they span two or more government cycles.

social, institutional and cognitive, in order to meet the various challenges of development with creativity. This major effort cannot come to fruition without the institutions and political coalitions that promote the Sustainable Development Goals (SDGs) at the global, regional, national and local levels. Achieving the goals requires effective support from the social actors that signed up to them. Their implementation transcends the public debate and the institutional domain, and requires strong linkages and connections to collective action and intelligence.

## B. The institutional development of foresight

In the current context, it is timely and convenient to recognize and value the contributions of future studies and foresight at the global level. These have become an integral and formal part of national and international institutions and firms, on multiple territorial, sectoral and institutional scales. Foresight has evolved as a discipline over the course of four generations; and a major renewal can be observed in the paradigms and organizational, methodological and epistemological practices that sustain it.<sup>3</sup>

As a result of the coronavirus disease (COVID-19) pandemic, the usefulness of foresight studies and the creation of institutions dedicated to them have now become more important. There is evidence that several warnings about the pandemic had been published in documents and studies; but decision makers did not pay sufficient attention to them;<sup>4</sup> and institutions failed to use them because they did not have the capacity to internalize them or to design and implement public policies based on them.<sup>5</sup> Given the disruption caused by the pandemic, the authorities now have a better understanding of the need to mainstream foresight more thoroughly, both in public management and in State strategies.

Progress, albeit incipient, has been made in Latin America and the Caribbean in the formulation of long-term horizons (see figure IV.1) and the institutionalization of foresight. Units or areas devoted to this discipline have been created—for example, in Costa Rica’s Ministry of National Planning and Economic Policy (MIDEPLAN), Peru’s National Centre for Strategic Planning (CEPLAN) and Uruguay’s Office of Planning and the Budget (OPP), among others.<sup>6</sup> The greatest challenge facing the region is to guarantee the long-term stability and continuity of the institutions that are being created to develop foresight. Elsewhere, in November 2020, the European Union launched a strategy highlighting the role played by foresight in public policy formulation. The strategy’s actions aim to promote innovative participatory mechanisms that involve young people on a widespread basis.

<sup>3</sup> See Medina-Vásquez, Patroulleau and Vitale (2021), Bitar, Máttar and Medina (2021), UNDP (2018), ECLAC (2018), Cuervo (2016), Cordeiro (2016) and Bitar (2016).

<sup>4</sup> See the notes of the Planning Network for Development in Latin America and the Caribbean: the first report of the Millennium Project (1999) titled *1999 State of the Future: Challenges we Face at the Millennium*. In 2008, the National Intelligence Council of the United States produced a report titled *Global Trends 2025: A Transformed World*, in which it considered the possible emergence of global epidemics (National Intelligence Council, 2008). The United Kingdom Government Office for Science (2006) produced a report titled *Infectious Diseases: Preparing for the Future*; also in Europe, in 2011, *iKnow Policy Alerts 2011* discussed the threat of a highly infectious and lethal virus (Popper and Butler, 2011).

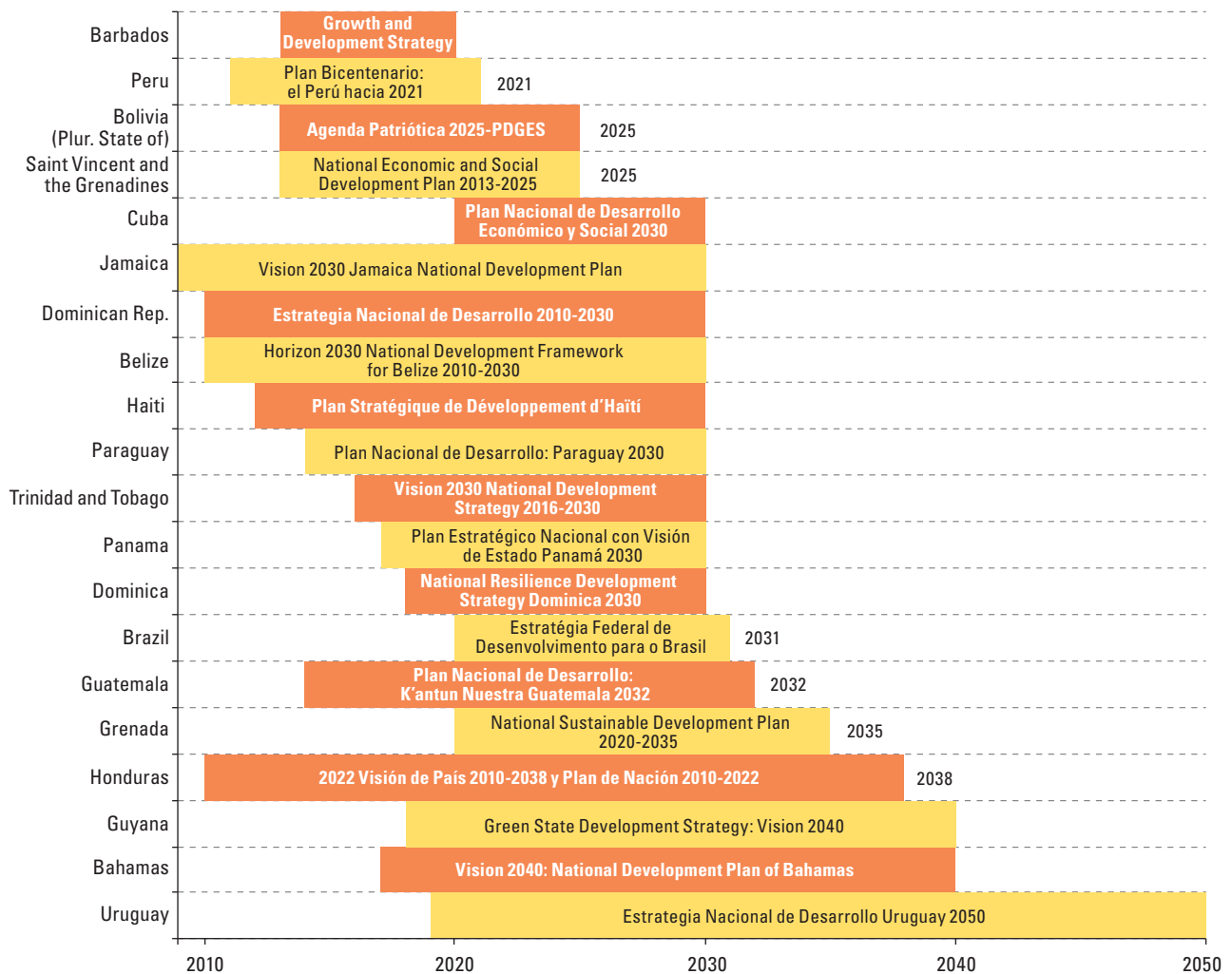
<sup>5</sup> In another interesting example, Ruelas and Concheiro (2010) envisage the possibility of a lethal virus outbreak in 2020.

<sup>6</sup> In 2020 and 2021, at the suggestion of the Organization for Economic Cooperation and Development (OECD), Colombia’s National Planning Department (DNP) undertook an international consultancy with support from the Swiss Agency for Development and Cooperation (SDC) to study options that would enable it to apply foresight methodologies and forms of organization.



Figure IV.1

Latin America and the Caribbean (20 countries): long-range planning horizons in the region, 2021



**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), Regional Observatory on Planning for Development in Latin America and the Caribbean [online] <https://observatorioplanificacion.cepal.org/en>.

**Note:** In the case of Barbados, the time horizons of its Growth and Development Strategy was 2013–2020.

The databases and bibliographic material held by entities such as the Latin American and Caribbean Institute for Economic and Social Planning (ILPES), the Economic Commission for Latin America and the Caribbean (ECLAC), the Inter-American Development Bank (IDB), the Atlantic Council, the Inter-American Dialogue, the Development Bank of Latin America (CAF) and the European Commission, contain thousands of future studies produced by international agencies and consulting firms, government entities, the private sector and academia.<sup>7</sup> The IDB dedicated website alone contains more than 800 long-term studies over long time horizons with visions of the future extending beyond 2040. International organizations, such as the United Nations, the World Economic Forum and the World Bank, among others, conduct foresight studies and maintain foresight units or systems, open-access knowledge platforms and open data to identify and analyse trends. This significant progress in terms of creating new platforms of multilateral institutions that publish

<sup>7</sup> For numerous high-quality foresight studies and projects, see the following: Economic Commission for Latin America and the Caribbean (ECLAC), "Prospectiva y desarrollo" [online] <https://biblioguias.cepal.org/ProspectivayDesarrollo/>; Inter-American Development Bank (IDB), Database of Reports: Global Trends & Future Scenarios [online] <http://globaltrends.thedialogue.org/?#>; European Union, Open Repository Base on International Strategic Studies (ORBIS) [online] <https://espas.secure.europarl.europa.eu/orbis/>.

foresight information, such as ECLAC, IDB, CAF, the Inter-American Centre for Knowledge Development in Vocational Training (CINTERFOR), the United Nations Educational, Scientific and Cultural Organization (UNESCO), and the Inter-American Dialogue, is supported by other positive elements of progress in developing foresight capacities. Examples include the following:

New Ibero-American foresight networks: the Ibero-American Prospective Network (RIBER) of the Millennium Project, the Open Network of Foresight and Innovation of the Ibero-American Programme of Science and Technology for Development (CYTED), and the Network of Planning for Development in Latin America and the Caribbean of ILPES.

- Publications, new authors and new themes, especially in Argentina, Brazil, Colombia, Chile, Mexico, Peru and Uruguay.
- New opportunities for advanced training in foresight, especially master's degrees at the University of Valle (Colombia), the Externado University of Colombia, the Monterrey Institute of Technology and Higher Education (Mexico), the Autonomous University of Tamaulipas (Mexico), the National University of San Marcos (Peru), the National University of Costa Rica and CENTRUM of Mexico.
- New conceptual and methodological proposals, such as futures literacy and strategic anticipation, among others.
- New analytical tools designed by local institutions, such as Brazil's Centre for Management and Strategic Studies (CGEE).

According to Bitar (2016), in recent years various countries have been trialling their own institutional arrangements to meet the challenge of incorporating foresight into top-level government management. Capacity is being developed throughout the world, for example, by strengthening national foresight teams on a permanent basis and by training political leaders with a future vision and projection. Also noteworthy are the creation of global analysis networks and foresight and strategic thinking units close to the executive and legislative branches, or the establishment of future commissions in the latter, which project the legislative debate in the long term and disseminate it politically (see the Chilean experience with the *Congreso Futuro* initiative described below).

Among cases of interest in Latin America, the Governments of the Dominican Republic and Uruguay propose a long-term development strategy that is intended as a basic reference and an integral part of public policy. In both countries, the Government spearheaded the collective construction of a vision of the desired future. In the Dominican Republic, this practice has been in place for 15 years and can be said to have become State policy. In Uruguay, formal implementation of the future-building strategy began in 2020 after five years of preparation. In Brazil, CGEE, which is a social organization overseen by the Ministry of Science, Technology and Innovation, contributes to the long-term vision for science, technology and innovation in the country. It has accumulated a major portfolio of work since 2002.<sup>8</sup> In addition, the Regional Observatory for Development Planning in Latin America and the Caribbean provides a contemporary overview of the development plans of all countries in the region.<sup>9</sup>

Nonetheless, Medina-Vásquez (2019) argues that a comparison of international trends in foresight and the situation of Latin American and Caribbean countries reveals important gaps, of various types and at different levels. These include: institutional gaps in terms of the capacities of international agencies, development banks, national planning agencies, national science and technology agencies, and security and defence organizations and communities; business gaps in terms of foresight in economic sectors and firms; gaps related to the design and implementation of foresight systems; gaps in foresight knowledge in universities and in innovation and development entities; cognitive gaps related to the valuation of foresight by political and development actors; and cultural and psychosocial gaps inherent to the appropriation of foresight by citizens. In a detailed approach, Medina-Vásquez, Vitale and Patroulleau (2021) produce a comparative reference for a number of Latin American foresight organizations created in the last two decades (see table IV.1).

<sup>8</sup> For further information, see Bitar, Máttar and Medina (2021).

<sup>9</sup> See ECLAC (2021). In the case of the Dominican Republic, see Ministry of Economy, Planning and Development/National Council for Reform of the State (2009), and Ministry of Economy, Planning and Development (2012); for Uruguay, see OPP (2019). Alonso-Concheiro (2007) provides a critical overview of the practice of foresight, which helps to understand why this discipline has not been systematically and consistently incorporated into public policy practice in Latin America.

**Table IV. 1**  
Latin America and the Caribbean: examples of foresight systems, 2021

Type of organization	Country	Foresight system
National planning agencies	Costa Rica	Ministry of National Planning and Economic Policy (MIDEPLAN)
	Uruguay	Office of Planning and the Budget (OPP) of the Office of the President of the Republic
National science, technology and innovation agencies	Argentina	Ministry of Science, Technology and Innovation (MINCYT), Office of the President of the Nation
	Honduras	Foresight Observatory of the Honduran Institute of Science, Technology and Innovation (IHCIETI)
Sectoral bodies	Argentina	National Agricultural Technology Institute (INTA)
	Colombia	National Apprenticeship Service (SENA), PREVIOS system
	El Salvador	Economic Intelligence Unit, Ministry of the Economy
International bodies	-	Latin American and Caribbean Institute for Economic and Social Planning (ILPES), Economic Commission for Latin America and the Caribbean (ECLAC), United Nations
Academic Institutions	Argentina	Centre for Foresight Studies of Cuyo, Faculty of Political and Social Sciences, National University of Cuyo
	Colombia	Centre for Strategic and Prospective Thinking (CEPEP), Externado University of Colombia
	Chile	Institute for Foresight, Innovation and Knowledge Management, University of Valle, Colombia Metropolitan University of Technology (UTEM)
Other	Brazil	Associação Instituto Unitas
	Jamaica	Caribbean Development Foresight Institute
	Jamaica – Haiti	Futures Forum Smart Caribbean Futures

**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of J. Medina-Vásquez, J. Vitale and R. Patroulleau, “Avances y retrocesos en la construcción de capacidades prospectivas en América Latina”, *Documento Técnico*, Cali, Ibero-American Programme of Science and Technology for Development (CYTED), 2021, in press; Futures Forum [online] <https://futuresforum.org/>.

These foresight organizations in Latin America were created in the last 15 years and are currently embarked on a growth and development process. The main findings of Medina-Vásquez, Vitale and Patroulleau (2021) reveal the need to provide continuity to the institutional development achieved, since the institutions in question reach maturity after 10 to 15 years, depending on investment, stability and organizational strengthening.<sup>10</sup> In terms of the life cycle in which they emerge, most of these institutions have been created at the national governmental level and in universities. A few others have emerged in civil society—for example, Associação Instituto Unitas, the Caribbean Development Foresight Institute, the Futures Forum and Smart Caribbean Futures. Earlier foresight experiences have been reworked and adapted in pursuit of a new institutional identity and new products; and they have been linked to more specific associated themes, relating to technology watch and competitive intelligence.

In most cases, the key promoters of foresight institutions were national agencies (either ministries, or else planning, science, technology or innovation agencies). However, in the current political and socioeconomic situation their stability is not guaranteed. In terms of their products, access to financing and economic sponsorship affect the achievement of results. It is worth noting that these institutions were created on the basis of priorities external to the foresight system itself. In most cases, a combination of quantitative, qualitative and semi-quantitative methodologies and techniques are used. In most foresight systems, there is a continuous quest for training of technical teams.

Medina-Vásquez, Vitale and Patroulleau (2021) argue that there is insufficient clarity on how to evaluate the results achieved by foresight studies. The impact and effectiveness achieved in obtaining outputs and outcomes is emphasized ahead of their relevance and the efficiency of implementation. Little value is placed on learning, capacity building, organizational development, the appropriation of the foresight culture and the training of new actors. It is still too soon to evaluate the impact that foresight has had in the region, because the main projects are still in the process of implementation. A promising sign is that in the current context

<sup>10</sup> The existence of this type of organization serves as the thermometer of foresight capacity building internationally, making it possible to distinguish between industrialized and highly developed countries, on the one hand, and developing countries on the other. In the former, stable foresight organizations are financed, knowledge platforms are implemented, and problem-averting cultures are fostered. In contrast, developing countries are always laggards or behind the curve in terms of innovation. This results in improvisation, unpredictability and lack of conditions for establishing State policies, and a failure to constantly monitor technological and social change.

there are capacities to make use of foresight; but its future development will depend on the stability of the political and institutional factors that make it possible to proceed further on the course embarked upon. The following findings serve to identify guidelines for improving regional foresight capacities:

- There is an asymmetry in the development of foresight capacities that mirrors the region's structural heterogeneity. A major effort is required to build capacities in all countries and all subregions: the Southern Cone, the Andean region, the Caribbean and Central America.
- Foresight capacities are continuously being constructed and destroyed, which gives rise to processes of learning and unlearning that make it difficult to accumulate solid, sustainable and sufficient knowledge to cope with global structural change.
- Most of the institutional developments identified took place at the meso and micro scale of public policies. This means that foresight organizations are in place at the regional, territorial and institutional levels; but there is a leadership vacuum in national development projects, which should be the main horizon.
- There is a large void to be filled in foresight work in terms of public policy targets; that is, at the level that connects national governments with international public agendas. Strengthening the role of foresight in regional integration must be an explicit and genuine aim for the coming decades.
- There is an urgent need to coordinate and synchronize the growing supply of foresight capacities in the region. COVID-19 has revealed this as an urgent and inescapable need for the governments of Latin America and the Caribbean.
- The institutions that apply foresight at the country level need to be strengthened; and continental benchmarks need to be created to increase the impact of foresight on regional public policies. While in Europe and Asia there are foresight centres and institutes in the European Commission and in Asia-Pacific Economic Cooperation (APEC), respectively, in Latin America there is no clear and coherent point of reference in this area with the legitimacy and multilateral influence to think about the future of the region. The Organization of American States (OAS) is currently trying to create a virtual centre for technology foresight and monitoring that would connect national science, technology and innovation agencies. But this major absence leads to the lack of a shared vision of the future at the regional level. The lack of long-term thinking results in foresight institutions being under-appreciated in the short term.
- Moving towards a sustainable future, as proposed by ECLAC, requires structural change based on pacts. Foresight needs to be integrated further into a genuine strategic government management, containing short-, medium- and long-term intertemporal sequences, and acquiring a comprehensive vision of development in which all territorial scales —local, subnational, national and international— are engaged.
- There is consensus on the opportunity to promote a broad process of development of production capacities in the region, based on competition and collaboration among existing knowledge networks —a task promoted by the Open Network of Foresight and Innovation for Latin America and the Caribbean, with support from CYTED.
- This historic moment calls for a high sense of ethics and quality to enable decision makers and demand-driving institutions, as well as foresight organizations and communities that promote the supply of capacities, to offer real solutions.
- Progress and achievements notwithstanding, there are still gaps between the level of the organizations that have been studied and international best practices. There is a huge backlog in learning to keep up with the frontier of global foresight knowledge. These gaps are explained by the lack of long-term political commitment and support, weak political and technical leadership, weak capacity building —specifically the absence of dedicated full-time staff, well-trained teams and technological infrastructures, and the dispersion of resources, information and institutional capacities.

Closing these gaps requires continuous and long-term endeavour. The perceived challenges towards 2050 call for reflection on the need and usefulness of foresight in order to enhance the quality of the anticipation, relevance and timeliness of the institutional response to major global structural change. In particular, it is essential to target foresight and innovation towards institutional resilience and action in opaque, unstable, uncertain and conflictive environments.

## C. Foresight for institutional resilience

The effects of the pandemic imply changes in the productive, technological, educational, geopolitical, geostrategic, political-institutional, cultural and environmental spheres, and also in the areas of sustainability, peace and security. As shocks occur more simultaneously and interconnectedly, inertial and conventional responses to recovery will be less useful.<sup>11</sup> Foresight is not only about foreseeing what happens before a phenomenon (Duchek, 2020), but also what happens during and after it; and it requires recurrent and ongoing work cycles to provide systematic, timely and effective institutional responses.

From this standpoint, it should be noted that the concept of anticipation, which is increasingly necessary, is not sufficient to meet the growing need for public management to provide institutional responses. It is necessary to go beyond the construction of future scenarios and consider the social ownership of future visions, the implementation or materialization of future projects, and the promotion of learning and monitoring of the present. The full cycle of social construction of futures needs to be continuously applied as an ongoing societal practice. The European Commission (2020) recommends implementing full foresight cycles in constructing futures, with recurrent, in-depth and participatory exercises on relevant topics.

The main advantage of conceiving the social construction of the future as a continuous feedback process is that it allows for the production of “double-loop learning” (Argyris and Schön, 1978) —a phenomenon that makes it possible to detect and correct mistakes, and to change the norms, policies, conducts and objectives that originated them. When learning spirals are implemented, they increase the likelihood of reframing mental models and transforming reality (Ramírez and Wilkinson, 2016). Without implementing new cycles, it is extremely difficult to change mental models and collective behaviour patterns. Thus, carrying out foresight studies does little to transform organizations and society. The potential for transformation becomes social capacity to the extent that continuous cycles of anticipation, appropriation, action and learning take place (Medina-Vásquez, 2020; Aguirre-Bastos and others, 2018; Aguirre-Bastos and Weber, 2018). At this point, it is important to include the evaluation of foresight processes as a way of producing institutional learning that makes it possible to overcome the shortcomings that occur in practice.

A notable example of strategic foresight to support policy-making occurred in the European Union in 1989, when President Jacques Delors created the Forward Studies Unit. Since then, foresight and long-term modelling have underpinned important public policies. The Von der Leyen Commission, which took office in late 2019, has launched several initiatives to support its long-term vision of a climate-neutral continent fit for the digital age. In the coming years, applying a foresight culture to the public policy agenda will be essential to strengthen capacity to cope with an increasingly volatile and complex world, and to ensure that short-term actions are founded on long-term goals.

The way in which institutional resilience has been conceptualized in the European Commission since 2020 provides highly relevant evidence of the usefulness of applying wide-ranging foresight approaches in this area. This conceptualization is as follows:

- Resilience is defined as the capacity to resist and meet challenges, but also to go through current and long-term transitions in a sustainable, fair and democratic manner.
- Resilience is seen as necessary in all policy areas, to navigate the current and future ecological and digital transitions while maintaining the central purpose and integrity of the European Union in a dynamic and sometimes turbulent environment.
- In the light of the COVID-19 crisis and the transition-led policy agenda, it is clear that Europe needs to further strengthen resilience and achieve a bounce-back effect —in other words, not just recover, but emerge stronger by taking those transitions further. The European Union must learn lessons from the pandemic, anticipate future developments, and strike the right balance between the well-being of current and future generations.

<sup>11</sup> Global shocks represent a type of discontinuity that disrupts the structures and functioning of society. They are usually associated with phenomena such as earthquakes, volcanic eruptions, financial crises and political upheavals. However, the COVID-19 pandemic has also generated a genuine global shock —an unknown phenomenon with no data or probability models to help understand it, and which triggers extremely disruptive effects with strong global interconnections (Medina-Vásquez, Becerra and Castaño, 2014).

- To make Europe more resilient, recovery needs to be faster; Europe must emerge from current and future crises as a stronger region, and the United Nations Sustainable Development Goals must be implemented more effectively. This requires rethinking the future of well-being, work, labour markets and skills, reshaping global value chains, supporting democracy, reforming the rules-based trading system, building partnerships around emerging technologies, and investing in the green and digital transitions.
- Resilience is conceived as having four dimensions: socioeconomic, geopolitical, green and digital.

All of the above implies that the traditional modality of foresight will soon have to be renewed. The European Commission (2015) argues that a type of simultaneous or concurrent foresight is needed—one that is able to address these transformations at the same time, but in a context of open and complex futures. The changing and hyper-complex nature of the international environment demands much more rapid, experimental and adaptive methodological processes. In the classical training of futurists, methods take pride of place; but, henceforth, these methods will have to be combined to create foresight processes and systems. This will require current methods to evolve greatly to become faster, more flexible, and more capable of generating learning. An emblematic example of the organization of foresight systems is the experience of the Finnish parliament's Commission for the Future (see box IV.1).

#### Box IV. 1

The example of Finland in the field of foresight<sup>a</sup>

The Committee for the Future was set up by the parliament of Finland in 1993 and has been operating permanently and without interruption since 2000. The Commission consists of 17 members of the parliament and serves as a think tank for futures, science and technology policy.

Its mission is, for each government term, to present a report to parliament on the future, identifying the challenges and opportunities that lie ahead. With this information, a report on the future is prepared in the Prime Minister's Office to serve as a basis for decision-making by senior government authorities. The report of the Commission for the Future aims to flag important issues at a very early stage, such that the lines of decision-making are always open and developing. Another of the commission's tasks is to prepare reports for other committees on issues related to the budget, social problems, technological development and renewable energies, among other matters of interest.

The committee's *raison d'être* is to work towards the best possible future for the country. Its main strength is that it has the power to decide its own agenda and use working methods completely independently and without outside interference. Its members monitor policies for the future by organizing their work with long-term perspectives.

The Committee for the Future is a member of the European Parliamentary Technology Assessment (EPTA) network. The latter aims to establish technology assessment as an integral part of policy consultancy in European parliamentary decision-making processes, and to strengthen the links between the continent's technology assessment units. Technology assessment explores the relationship between science, technology and society, bringing together multidisciplinary researchers, including economists, sociologists, biologists and others.

In Finland, however, it is not only in parliament that attention is paid to the future. The Turku School of Economics, for example, is home to the Finland Futures Academy, which is comprised of nine institutions specializing in future studies, and offering undergraduate and postgraduate courses oriented towards the future, among other activities. This university is a member of the Finnish Society for Future studies, which was created in 1980 to foster the country's long-term development by promoting future studies and their use in public policy.

**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of Parliament of Finland, "Committee for the Future" [online] <https://www.eduskunta.fi/EN/valiokunnat/tulevaisuusvaliokunta/Pages/default.aspx>.

<sup>a</sup> Finland has one of the best-organized foresight systems, encompassing government, parliament and universities. In this context, legislative foresight is particularly salient, as exemplified by the experience of the European Parliament through the European Strategy and Policy Analysis System (ESPAS). Some countries have developed innovative initiatives, for example, France (France Stratégie), Singapore (Centre for Strategic Futures), Canada (Policy Horizons Canada, Strategy and Delivery Division), Australia (Department of the Prime Minister and Cabinet), and the United Arab Emirates (the government summit on the Future Foresight Strategy).

The scale and relevance of the transformations that are currently under way require greater public commitment from leaders, more and better citizen participation, and a broader knowledge base to legitimize the results of foresight. In other words, it is not enough for the foresight community, decision makers and public managers to have a strategic conversation about institutional resilience. It is essential to include citizens and civil society in this permanent social dialogue. The greatest challenge is to integrate foresight genuinely into the decision-making and public management cycle, and thus operate in a network to coordinate and evaluate the different public policies horizontally, vertically and transversally. Turning this aspiration into a reality requires multidisciplinary and complex capacities —a context in which modelling and simulation are acquiring a very important role. However, the latter need to be complemented with perceptual, experiential, interactive and creative tools.

Anticipation is important; but it acquires meaning and reality when there is institutional and social action. The task of foresight is not just to observe global changes, but to respond to them competently. The interaction between foresight and public management requires situated thinking—that is, thinking in accordance with what the context requires. In order to foster institutional resilience in Latin America and the Caribbean, the identification and implementation of new good ideas must also be encouraged.<sup>12</sup> A noteworthy initiative in Latin America is *Congreso Futuro* (Future Congress), an event organized jointly by the Future Challenges Commission of the Senate of Chile, the Chilean Academy of Sciences and the Chilean Government. The aim of the congress is to build bridges between science, philosophy, art and ecology and public policy and decision makers. The congress has been held once a year since 2011 and, although most of the activities take place in the national capital, sessions have been held in various regions of the country since the fifth edition in 2015. In 2021, as a result of the COVID-19 pandemic, the congress was held entirely in virtual mode.<sup>13</sup> Since its inception, *Congreso Futuro* has become a meeting point where individuals with recognized expertise in some field of study, whether scientific or humanistic, converse with citizens about society's current or future problems. The congress has had major repercussions in different areas; and it has attracted outstanding participation by young people and national and international experts of great scientific, social and political importance. Information is received continuously on issues that can support or be transformed into draft legislation: examples include the creation of the Ministry of Science, Technology, Knowledge and Innovation, the project on the protection of neuro-rights and mental integrity, and the development of research and neuro-technologies. Since its creation, the Future Congress has become a unique forum for discussing cutting-edge topics such as neuroscience, artificial intelligence, cybercitizenship and the climate crisis, with the aim of providing a basis for decision-making and guiding policies in order to move towards more resilient and inclusive societies. Its cross-disciplinary approach, together with its focus on the issues that will influence the policies of the future, have enabled it to bring together more than 700 thinkers, scientists, researchers, artists and leaders from around the world, in just a decade. This has made it the most important scientific dissemination event in the region.

In its ten years of existence, the congress has also brought science and politics closer to citizens by opening up mechanisms for all actors in society to reflect on the future. Since its inception, the congress has endeavoured to expand access to scientific and humanistic knowledge in all territories of the country, through

<sup>12</sup> In 2020–2021, as a positive and resilient reaction to the crisis caused by the COVID-19 pandemic, an example of participatory democracy in process emerged in Europe that looks further ahead and promotes co-creation of the future. In 2020, the European foresight producing institutions were restructured; and the first meeting of high-level government representatives and advisers of the Foresight Network was held on 16 April 2021.

The purpose of this meeting was to foster partnership and foresight capacities in 27 governments and in the European Commission, to prepare for a better and more resilient tomorrow. The next level of progress will be the appointment of Ministers for the Future; but perhaps the most significant element of this process is connection with society through the Conference on the Future of Europe. This landmark event sets the scene for a more open relationship between institutions and the public. The conference was launched on 9 May 2021 as a major forum for debate, in which citizens could participate in shaping the future of Europe over the next five to 20 years. This is a huge democratic project involving people from all socioeconomic groups, from the top elite to the humblest campesino, to build trust and a renewed and updated vision of Europe, understood as a complex system. The conference is chaired jointly by the Presidents of the European Parliament, the European Council and the European Commission, and is supported by an executive committee that takes decisions by consensus on tasks, processes and events; monitors progress; prepares plenary sessions and processes citizens' contributions. It is also assisted by a small joint secretariat, staffed by officials representing the three institutions in equal proportions. There is also a multilingual interactive digital platform that serves as a meeting point for the entire process. Further information, see the second conversation on "Foresight and Resilience" with Freya Windle-Werhel and Eamon Noonan of the European Strategy and Policy Analysis System (ESPAS), the European Parliament and ILPES, held in May 2021. This is available online at <https://comunidades.cepal.org/ilpes/es/grupos/evento/revista-nuestro-segundo-conversatorio-sobre-prospectiva-y-resiliencia>. See also, Council of the European Union (2021a, 2021b, 2021c and 2019).

<sup>13</sup> See Congreso Futuro [online] <https://congresofuturo.cl/>; Senate of Chile, "Desafíos del futuro, ciencia, tecnología e innovación" [online] <https://www.senado.cl/appsenado/index.php?mo=comisiones&ac=ficha&id=941>; "Congreso Futuro" [online] [https://es.wikipedia.org/wiki/Congreso\\_Futuro](https://es.wikipedia.org/wiki/Congreso_Futuro).

activities that have been undertaken in all regions, in partnership with regional governments, universities, academies and research centres. The challenge that its organizers now face is to expand the initiative in order to build a centre of Ibero-American thought for the twenty-first century, in which world science meets with those who decide the destinies of the region's inhabitants.

In the Caribbean, there have also been remarkable and innovative experiences, including the following:

- The Futures Forum, which is a non-profit, civil society-organized initiative that promotes educational practice and research. It was created to enhance long-term forward thinking and planning through thought leadership, research and development, advocacy, education and training. It supports organizations, communities and industry to create desired futures. It specializes in the application of whole systems sustainability engineering and strategic foresight; and it combines this expertise with empirical learning and knowledge obtained from a variety of other strategic analytical tools. Its processes are collaborative, co-creative and highly personalized.
- The Caribbean Development Foresight Institute, which is a research and consulting organization established in Jamaica. It provides research and education services in the fields of futures research, strategic foresight, technology assessment, and stakeholder analysis and consultation on issues related to the development agenda of the Caribbean and other emerging economies. It serves as a connector between academia and the public and private sectors.
- The Smart Caribbean Futures initiatives, which focus on building dialogue on futures in the Caribbean, in partnership with the Institute for Caribbean Studies and the Caribbean Development Foresight Institute.
- The “Imagine Jamaica 50” initiative, which aims to foster dialogue among young leaders on Jamaica’s future towards 2030 and beyond, in commemoration of the fiftieth anniversary of the country’s independence.
- The Imagine Haiti project, which provides an engaging educational experience for young leaders, with the aim of reaching out to youth organizations and increasing the capacity of communities to incorporate visioning and foresight skills into their processes.

## D. Foresight, innovation and creative adaptation

As noted at the start of this chapter, the last decade has seen the scope of global foresight knowledge production expand to propose a systemic approach in which innovation plays a central role. This is disruptive rather than incremental innovation. It means that foresight aims to solve problems in a creative and innovative way: creative insofar as genuinely new solutions are put forward, and innovative because the solutions in question must be socially acceptable. Foresight and innovation are thus inextricably linked. This means using solutions that have worked well in the past, while also knowing how to think outside the box to discover solutions that are more original, operational and satisfactory for the population (Goux-Baudiment, 2021).

In order to energize and transform the foresight and innovative capacity of States and societies, it is essential to make an in-depth analysis of the co-evolution of the concepts of foresight, innovation and resilience. As noted in chapter II, the etymological origin of the word resilience, in both French and English, refers to the capacity of a material to return to its initial situation after a shock and, by extension, to a person’s ability to regain equilibrium after a traumatic shock. More recently, resilience has also been defined as the capacity of a technical system to continue functioning when a fault occurs.

According to Goux-Baudiment (2021), the concept of resilience suggests two different notions. Firstly, it suggests return to a previous situation after a radical change—for example, when an economic system continues to grow following a crisis such as that of COVID-19. It is, therefore, a form of elasticity in both individuals and organizations, which return to their point of origin after having been momentarily diverted from it. Ultimately, there is a return to normality. Secondly, in the framework of the technical system, it can mean adapting in order to be able to function despite being in an abnormal situation. This is where resilience



differs from redundancy (a new process is implemented to avoid failure and ensure proper functioning). In the first meaning of the concept of resilience, the system returns exactly to the pre-shock situation, whereas, in the second, a new situation arises in which the system continues to operate by integrating the change and evolving with it. The second case is called adaptation and means the capacity to organize so as to incorporate change, continue to improve and operate as efficiently as possible.

Rather than striving for a form of resilience that simply leads to a return to the old normal, territories must generate greater adaptability —understood as the capacity to modify themselves in order to integrate change. The British social historian, Arnold Joseph Toynbee, argued in the twentieth century that a civilization's ability to survive depended on its capacity to respond innovatively to the new challenges it faced. Hence the importance of promoting creative leadership to address the crisis arising from COVID-19 and of fostering the capacity of territories to respond, to invent new responses, to integrate change rapidly and to establish new processes. The combination of foresight with innovative and adaptive capacity should lead to more proactive territories in the future and to better governance of them (Goux-Baudiment, 2021).

## E. How to create visions and construct new responses

National and regional planning agencies need to explore new directions of thought and to open up new ways of enhancing the quality of the contribution made by foresight to development planning. This involves the following: deepening the potential of methods based on creativity, experience and interaction; addressing issues that have a low profile in the conventional approach, such as anticipatory capacity-building, psychosocial and cultural aspects, post-formal training and mental health; and developing tools to foster innovation and productive processes.

This broadening of scope to gain new perspectives arises from the cross-fertilization of future studies, strategic warning intelligence studies, corporate or strategic foresight, and design thinking, science fiction, and theories of extreme creativity. The new contributions lay foundations that transcend anticipation and involve creating visions, discovering new ideas and confronting challenges. The three latter processes are key to contemporary foresight because they feed back continuously into innovation in planning and public management. They also synergistically complement the institutional resilience approach, based on capacity development. The processes of creating visions, and discovering and meeting challenges, could be interesting for applying a broad and novel concept of foresight (see table IV.2).

**Table IV.2**  
Key foresight and innovation concepts

Concepts	Purpose	Key question	Type of reasoning
Prevent	Produce early warnings, and analyse risks and opportunities, by detecting weak signals, patterns and trends	Which factors of change are energizing vectors of reality and have great impact?	What can we expect from the X phenomenon in the next ten years?
Create visions or visualize	Create insightful and novel visions to explore new possibilities.	How are visions of new answers to be created?	What might happen if phenomenon X interacted with phenomenon Y, and they came into conflict or convergence?
Discover	Explore hypothetical situations, and study obstacles, surprises or opportunities that have not been foreseen by mankind	What new elements will be discovered?	What is not yet perceived about the opportunities offered by X+Y in a Z-world?
Shape the challenges or materialize them	Create experiences that simulate future scenarios, through prototypes, the media, artifacts or immersion, to test new realities and meet new challenges	What entrenched practices will be challenged?	How different is the experience in a Z-world; and how or what could be changed as a result?

**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of S. Smith and M. Ashby, *How to Future: Leading and Sense-Making in an Age of Hyperchange*, London, Kogan Page, 2020.

These findings give rise to interesting conclusions that make it possible to re-assess Duchek's (2020) vision of the relationship between foresight and institutional resilience. In her model, the author proposes three phases: anticipation (before the event), coping (during the event) and adaptation (after the event). The concept of anticipation is assimilated with that of foresight, but foresight is now broader than anticipation. Foresight is not only about anticipating what might happen, but also about envisioning new possibilities, discovering surprises and opportunities, and posing and meeting challenges. It should also take into account that cascading phenomena and global interconnectedness require institutions to have a more advanced understanding of complex sociotechnical systems, and clearly point out that ecological resilience must be understood in terms of community dynamics (Pescaroli, 2018). This should lead planning institutions to prepare for ongoing social dialogue through the use of participatory, experiential and creative methods.

In this context, training in foresight and development planning needs to incorporate multiple perspectives that integrate and complement different theories, methods and applications. First, one must consider the "hard" perspective, which originates in a techno-economic vision based on rational calculation, in which quantitative, objective and formal methods are used to make predictions and forecasts. In this approach, evidence- and knowledge-based methods are preferred, enriched with big data and artificial intelligence, thereby making it possible to process large volumes and types of data in real time. However, the exploration of volatile, uncertain, complex and ambiguous (VUCA) environments also requires adopting a "soft" approach that provides a sociocultural vision, based on the development of meaning through qualitative, subjective and informal methods, in order to understand future images and complex thinking. This involves applying methods based on social interaction, participation, experience and creativity based on speculative design, design thinking and science fiction.

The aim of combining approaches is to provide ongoing training that enhances the capacity of leaders and government and planning agencies to understand the environment, identify change and deal with it expeditiously. This means acquiring new competencies that increase creativity, teamwork, patience, proactivity, optimism, self-awareness and decision-making in unstable and complex situations (Hines and Bishop, 2015).

## F. The role of foresight and innovation laboratories in creating expeditious and timely public policy responses<sup>14</sup>

Organizational learning and change-management capabilities have been combined with innovation capacities, so the work of foresight is not just about preparing for expected or unexpected events. It is fundamentally about influencing the mental models and conducts of individuals, teams, organizations, networks, sectors and society, in order to manage the different levels of the future: anticipating, envisioning different futures, discovering new ideas and taking on the challenge of transforming institutions.<sup>15</sup>

When foresight is applied to promote institutional resilience, it is connected to innovation and requires systemic approaches that simultaneously establish relationships between the different levels of planning (national, intermediate and local) and of time frames (very short term, short term, medium term and long term). This places greater demands on training and capacity development, to provide decision makers and policymakers with an overview of complexity, risk and uncertainty.

<sup>14</sup> See the first and third virtual conversations between experts, titled "Foresight and Resilience: Innovation Laboratories", especially the contributions made by Enric Bas, Mario Guillo and Omar del Carpio (ILPES), in May and June 2021 [online] <https://comunidades.cepal.org/ilpes/es>. See also the materials on foresight and innovation laboratories of the Open Network of Foresight and Innovation for Latin America and the Caribbean, Ibero-American Science and Technology for Development Programme (CYTED), Del Carpio (2020) and Del Carpio and Pinto (2018).

<sup>15</sup> The emphasis on linking foresight with innovation was the conclusion of the Global Forum on the Future of the Technology Foresight Programme of the United Nations Industrial Development Organization (UNIDO, 2007). In the Ibero-American domain, Professors Enric Bas and Mario Guillo referred to this issue in their famous 2012 trilogy (Bas and Guillo, 2012). A representative example of global good practices in this regard is the experience applied in Silicon Valley (Carleton, Cockayne and Tahvanainen, 2013) and at the VTT Technical Research Centre of Finland, the University of Turku and Aalto University, in Finland. Today, the work of the Open Network of Foresight and Innovation of the Ibero-American Programme of Science and Technology for Development (CYTED) is also highlighted through the experience of ProjectA+, Omar del Carpio, Jean Paul Pinto and the foresight and innovation laboratories.

Foresight involves making sense and requires application of a range of methodologies and processes that can be learned and are available to individuals and teams who develop the relevant skills (Smith and Ashby, 2020). Facilitating training opportunities requires experimentation and the creation of foresight and innovation laboratories. These are privileged spaces for social interaction aimed at creating solutions and discussing new ideas. They are spaces where learning environments are created to explore the workings of methodologies and processes of anticipation, visualization, discovery and materialization of futures.

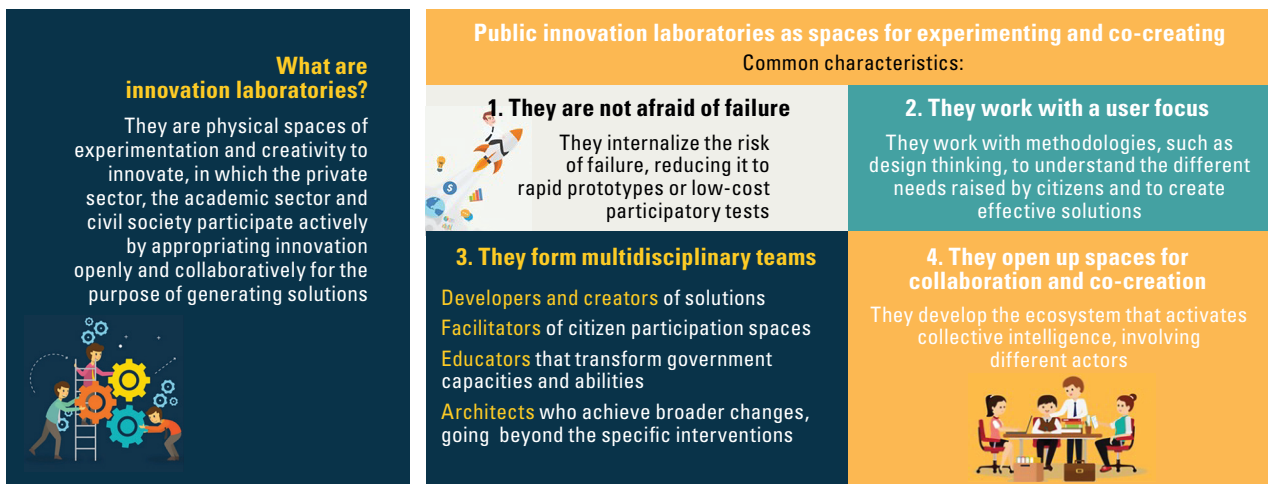
Del Carpio and Pinto (2018) envisage a laboratory as a space for open co-creation where inputs —such as platforms, methods, techniques, tools and software— are provided; facilitating processes in which individuals, institutions, networks, production chains, sectors and territories use these inputs to produce collaborative learning, identify present and future needs, and develop sustainable solutions in an iterative or continuous cycle.

Innovation laboratories bring together groups of people who explore short, medium and long time horizons, and combine different professional profiles and institutional roles. Examples of these include experts, production teams, stakeholders, innovation teams, and development leaders or promoters, among others. The aim is to produce a creative interaction that helps to explore possible futures and to create specific institutional responses to them.

Foresight and innovation laboratories are flat organizations, in other words non-hierarchical, with a coordinating and facilitating team. They set up collaborative networks that include users; they experiment with new ways of managing workspaces, develop specific work plans to devise solutions, and incorporate social construction and collective intelligence in all actions. The fundamental premise of these laboratories is that they are created as agents that aim to jointly form innovation and development ecosystems; and these are energized under the open innovation model, in order to take advantage of the ideas, knowledge, technologies, capacities, and resources of the environment and organizations. In this context, foresight adds value because it contributes to the development of future-oriented thinking and the culture of social construction of the future; and it contributes to the creative process by avoiding merely inertial responses.

#### Diagram IV.1

Characteristics of innovation laboratories



**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), Red de Planificación para el Desarrollo en América Latina y el Caribe.

Bas and Guillo (2015) stress that the laboratories are characterized by participation, flexibility, creativity and internationalization, in which the predominant characteristics are open and multidisciplinary innovation, collaboration and the design of future products and services. Foresight and Innovation Laboratories are often used for inspirational lectures, idea generation, knowledge exchange, innovation project development, immersion in the user's world and the production of sustainable disruptions. Solutions are designed to address present and future issues, and to explore trends and future-oriented themes.

Futurlab, at the University of Alicante, is a pioneering innovation-oriented foresight laboratory in Ibero-America. According to Bas and Guillo (2015), it connects participatory foresight with design thinking and user experience, in other words foresight based on co-creation and empathy with the user. This laboratory's methodological proposal, called FLUX3D, offers a tool that makes it possible to systemize the evaluation of innovation prototypes (any innovative idea), based on user expectations, and to show the results in a simple and intelligible way. Bas (2021) describes a tangible application in which the author reflects on future scenarios of the collaborative economy, founded on bottom-up social innovation initiatives. This application is based on the regional integration project funded by the European Union, Open Doors, which aims to explore strategic options for the creative industries in Southern Europe.

In Latin America, the experience of the Peruvian entity, BioAgriFood Future, is highly relevant. This is an itinerant and permanent think-tank, in which the main international trends in sectors such as agriculture and food are discussed. Future scenarios are built with the participation of the private sector, academic institutions, government and the community, to provide a coordinated response to the major challenges faced in Latin America and the Caribbean. This example highlights the importance of deploying a continuous process of forward-looking analysis with respect to agrifood systems, such as Andean crops or the shrimp value chain, with a local approach and based on specific methodologies (Del Carpio and Mialhe, 2021; Del Carpio and others, 2019, 2020a and 2020b).

The creation and implementation of foresight and innovation laboratories entails an organizational process and a learning curve. Box IV.2 provides recommendations for facilitating the development of the products of such laboratories and their mainstreaming in public policy.

#### Box IV.2

##### Recommendations for implementing foresight and innovation laboratories

When implementing foresight and innovation laboratories, the following actions are recommended:

- Establish a core team, or node, and provide it with training. The team needs to have diverse profiles and knowledge of public management. It should be able to create solutions and determine how these can be applied in the current context as it is being transformed. Develop an agenda. Focus projects on strategic areas and key issues.
- Obtain funding and progressive institutional development: the resources and capacities of the actors and networks involved must be supported.
- Create an open and flexible space for interaction and participation.
- Encourage coordination: rather than creating a large laboratory, many spaces need to be connected to exchange experiences and promote contact between specialized laboratories.
- Build a sui generis vision of the future and autonomy of thought. In Latin America, a short-term, extrapolative and uncreative vision predominates. The laboratories need to offer an original long-term vision and have the capacity to create exceptional environments so that creativity can flourish by imagining novel solutions.
- Promote neutrality and effective collaboration. The laboratories should be part of the innovation ecosystem: they do not own it, nor should they be captured by political, economic or social interests.
- Carry out experimentation processes that expose future users to a series of learning processes and enable them to connect with the different levels of the future.
- Create mechanisms to collate best practices, so that organizations can analyse experiences and select those that have given the best results when foreseeing and imagining the future.
- Promote skills related to teamwork, the convening of civil society, participatory analysis of the future and communication with citizens.

**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of Del Carpio (2020), Del Carpio and Pinto (2018).

Foresight laboratories can strengthen the emerging networks of public innovation laboratories that have positioned themselves in open government policies in Latin America in the last decade (Rodríguez, 2018; Long and NovaGob Foundation, 2019; Rojas-Martín and Stan (2020). These initiatives operate in the framework of the open government paradigm, with the aim of thinking and designing policies and actions of public value. They are based on the guiding principles of transparency, collaboration and participation; and they are driven by information and communication technologies and new methodologies for citizen-centred innovation. Table IV.3 provides information on these laboratories compiled by CYTED's InnoLabs Network,<sup>16</sup> and box IV.3 describes on a laboratory set up in Chile.

**Table IV.3**  
Latin America: examples of government innovation laboratories

No.	Case	Headquarters	Year of establishment	Website	Territorial level of action
1	Buenos Aires City Government Laboratory	Argentina	2013	<a href="https://www.buenosaires.gob.ar/noticias/el-laboratorio-de-la-ciudad">https://www.buenosaires.gob.ar/noticias/el-laboratorio-de-la-ciudad</a>	Provincial, state
2	Buenos Aires LAB 2017: public innovation lab of the province of Buenos Aires	Argentina	2017		Provincial, state
3	NQNLab: public innovation laboratory of Neuquén	Argentina	2017	<a href="http://ciudadanianqn.com.ar">http://ciudadanianqn.com.ar</a>	Municipal, local, provincial, state
4	Polilab UNR: public policy laboratory of the Faculty of Political Science and International Relations, National University of Rosario, Argentina	Argentina	2017	<a href="https://polilab.unr.edu.ar/que-es-polilab-unr/">https://polilab.unr.edu.ar/que-es-polilab-unr/</a>	Local, provincial, national, state
5	LABHacker: the Chamber of Deputies' citizen innovation laboratory	Brazil	2013	<a href="https://labhackercd.leg.br/">https://labhackercd.leg.br/</a>	Federal, national
6	Laboratory of the Government of Chile	Chile	2014	<a href="https://www.lab.gob.cl">https://www.lab.gob.cl</a>	National, state
7	GobLab UAI: public innovation laboratory of the School of Government of the Adolfo Ibáñez University	Chile	2017		National, state
8	Centre for Digital Public Innovation	Colombia	2013	<a href="https://centrodeinnovacion.mintic.gov.co/es">https://centrodeinnovacion.mintic.gov.co/es</a>	National, state
9	LABCapital: district public innovation lab	Colombia	2016	<a href="http://www.veeduriadistrital.gov.co">http://www.veeduriadistrital.gov.co</a>	Municipal, local

**Source:** Prepared by the authors, on the basis of E. Rodríguez, *Laboratorios de gobierno para la innovación pública: un estudio comparado de las experiencias americanas y europeas*, Cali, Ibero-American Programme of Science and Technology for Development (CYTED), 2018.

### Box IV. 3

#### Chile: Peñalab municipal innovation laboratory

Peñalab is an innovation laboratory forming part of the innovation strategy promoted by the Municipality of Peñalolén (Santiago). Its mission is to instil collaborative capabilities in municipal teams, to enable them to provide effective and quality services to citizens. The project arose as a result of Peñalolén's participation in the "Experimenta" contest run by the Laboratory of the Government of Chile, with the objective of resolving the scant interdepartmental collaboration that existed in the municipality.

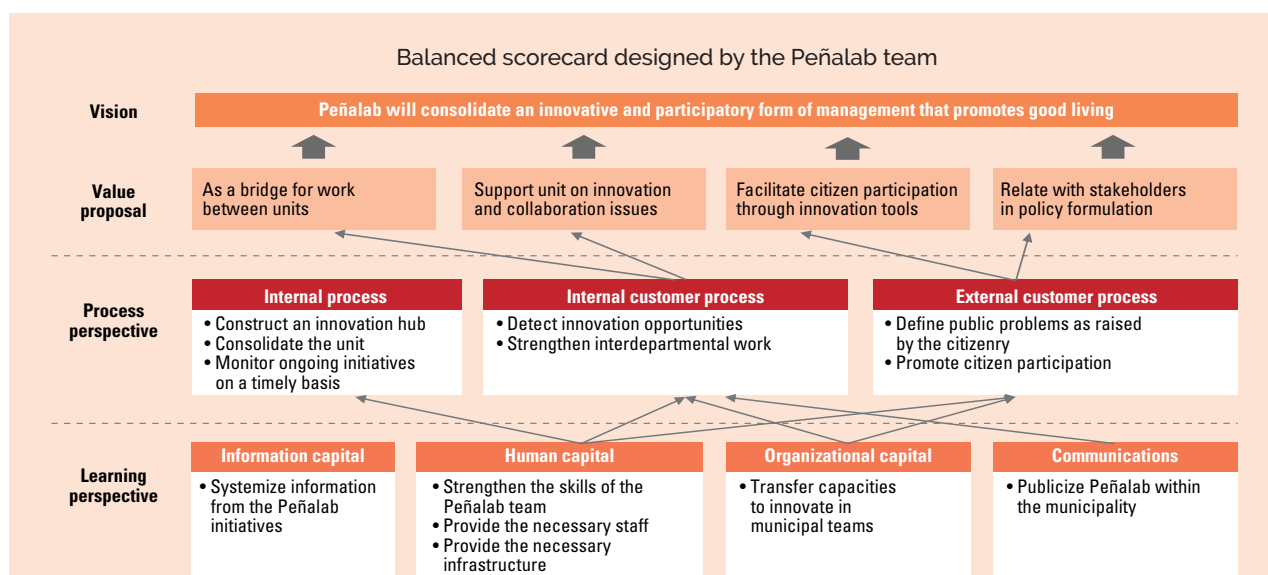
Since its creation in 2017, Peñalab has been operated by the Municipal Government of Peñalolén. To create an interdisciplinary team, it was set up with an architect, a journalist, a social worker and an auditor who belong to various municipal units and who participate in the laboratory's activities alongside their regular work.

Peñalab is structured around three principles: people focus, transversality and collaboration. The emphasis is on project management, the search for new opportunities, collaborative methodological support and the development of innovation capacities, in order to change how things are done, strengthen horizontal leadership and break with dogmas.

Guided by the vision of the Peñalab initiative, the team also designed a strategic tool in the form of a balanced scorecard, as illustrated in the following diagram.

<sup>16</sup> See Rojas and others (2020) and Long and NovaGob Foundation (2019) for a description of the processes involved in setting up government laboratories for public innovation. The main public innovation methodologies applied in them are derived from data science, behavioural sciences, simulation and modelling, collective intelligence and design thinking. Complementarity with foresight is important because foresight implies long-term thinking, a holistic vision, interaction with stakeholders, multiple perspectives and creativity. When working on innovation without taking foresight into account, there is a risk of introducing quantitative and short-term biases, contextual short-sightedness, the reproduction of current mental models, and scant creativity and diversity of thought. See Medina-Vásquez (2020).

## Box IV.3 (concluded)



**Source:** Prepared by the authors, on the basis of Municipality of Peñalolén.

Between 2017 and 2020, Peñalab has developed and participated in multiple projects, some of which are listed below:

- Design Sprint 2017 and 2018. A simple, rapid and collaborative method designed by Google Ventures was applied; there were 120 participants, 312 ideas and a total of seven challenges: entrepreneurship, response management, public space, garbage, internal communication, youth and bases for bidding processes. The challenges were converted into prototypes and strategic management targets.
- International Seminar "Building an Open Government Policy for Local Public Institutions" (2018). Municipalities from Chile, Uruguay, Paraguay, Argentina and Brazil participated to promote South-South cooperation.
- 2018 and 2020 editions of the Civil Service's *Funciona!* contest, in which Peñalolén was a finalist.
- Evaluation of the community newspaper *Todo Terreno* (2019).
- 2018 Open Schools Assessment.
- Participatory budgeting 2019: joint design of participatory methodology (participatory dashboard) to apply for projects to recover public spaces.
- Citizen Environmental Contest (2019).
- Open innovation workshop for municipal employees (2020).
- Design of the new intranet as an institutional platform (2020).
- Design of the plan for resuming face-to-face activities after COVID-19 lockdown (2020).

Since its creation, Peñalab has grown ever stronger and has consolidated as an institution within the municipality of Peñalolén. Going forward, the ultimate aim is for innovation to form an intrinsic part of the practices of all employees of the municipality of Peñalolén. To this end, the municipality has set itself the following challenges:

- Create the municipal innovators network.
- Promote the growth of the Peñalab team and the strengthening of its capacities.
- Create a municipal *Experimenta* programme aligned with the methodology that the Laboratory of the Government of Chile applies in its programme of the same name.
- Search for new partners and allies to implement new initiatives.

**Source:** Prepared by the authors, on the basis of Municipality of Peñalolén.

## G. The relationship between foresight and State policy

As the ongoing crisis in Latin America reveals, citizens' demands, and the social unrest that broke out in some countries of the region stem largely from the absence of social dialogue on the future of the new generations. Foresight gives rise to systematic and organized questioning about the future, based on methods, processes and systems of analysis that make it possible to build democratic mechanisms to give meanings to our societies and mobilize collective intelligence in a proactive way that makes it possible to build futures. In the region, government priorities, based on short-term and circumstantial analyses that are narrowly focused and occasional, need to give way to permanent processes for the construction of futures, in which short-term dynamics are integrated into long-term thinking.

In order to strengthen the progress of sustainable development, it is essential to incorporate foresight into public policy through State policies. The long-term dimension in the discussion on development needs to be integrated into social discourse, economic analysis and the political narrative, in order to forge consensus on the desired future in strategic sectors such as education, health, the environment, energy, security and infrastructure, among others. This is not an easy task, since democracy involves recurrent electoral processes that may result in frequent changes of course. Nonetheless, major challenges require continuity and persistence, and must be anchored in State policies. This can be achieved if citizens are better trained and informed, debates are held on future scenarios, and the forging of far-reaching political agreements is supported by a shared vision. Foresight can be incorporated into public policy on the basis of the following premises:<sup>17</sup>

- For foresight to have an impact on promoting resilience and institutional innovation, it needs to be seen as a cross-cutting public function; this means interacting with the different branches of government and ensuring its endeavours are sustainable.
- An active State must respond to global structural change and apply a comprehensive approach to development. The economic focus of public policies must be in harmony with a multidimensional vision that establishes relationships and connections between the social, environmental, cultural, institutional and scientific-technological dimensions of development.
- Foresight is based on monitoring the present and is used to think about, discuss and shape the future. Putting it into practice entails integrating anticipation into institutional action, learning to think in a different way, and implementing complex inter, multi and trans-disciplinary training processes, especially at the highest levels of government, where the decisions that have the greatest impact on the population are made.
- As a complement to anticipation and learning capabilities, capacities for appropriation and mobilization of collective intelligence need to be fostered. People must internalize the possibilities and implications of foresight through informed public debates; and they must participate actively in public decisions. They must also contribute to the present-day monitoring of the future-oriented events that will affect the development of their present and future capacities. Capabilities must also be developed to implement transformative plans, programmes and projects effectively.
- This multidimensional, comprehensive and systemic endeavour has to be treated as a continuous cycle, having permanent and transparent social dialogue with citizens at its core.

However, given the deep-rootedness of factors that influence the presence or absence of long-term thinking, the transformation of political practices, and the renewal of leadership so that this type of thinking is taken seriously, is a process that will take at least ten years (Medina-Vásquez, 2021). The factors in question are institutional, individual and cultural ones, as explained below.

According to Vargas (2021), institutional factors include institutional development, the weakness or strength of political parties, the absence of a civil service career structure, the stability of job positions, current regulations and international institutions. In the Latin American context, these factors are superimposed on

<sup>17</sup> For further information, see Bitar, Máttar and Medina (2021) and Medina-Vásquez (2021), along with the relevant experiences of the European Commission in 2020 and 2021.

profound and urgent needs that governments must try to resolve promptly, which relegates the long term to an apparent second rank. Individual factors include the qualities and competencies of the leader, service vocation and experience, communication, order and discipline, courage, charisma, open-mindedness, and strategic and visionary capacity. Cultural factors include short-termism, the fragility of commitments, inter-temporal dilemmas, few trained leaders interested in the long term, low levels of global awareness, poor appreciation of the future, heightened uncertainty, policy complexity, corruption, a preponderant belief in an individual future rather than a collective one, cognitive biases, government preferences, third-party interests and rent-seekers, lack of preparation and high turnover in the bureaucracy.

The factors that promote long-term thinking include the following:

- Factors related to personal capabilities, which include a high-quality education with a future vision, and specific training in subjects related to future studies.
- Factors related to public organizations, which are expressed in the need to broaden and promote the greatest possible participation of the different levels of government; in the provision of long-term strategic advisory services; in the institutionalization of the foresight function within public organizations; and in the construction of mechanisms that make it possible to identify and permanently monitor future signals in terms of institutional responsibilities.
- Factors related to instruments that facilitate the materialization and coordination of sustained institutional efforts over time to solve public problems. Examples of such instruments include multi-year budgets, policy frameworks that contain a robust long-term vision, the construction of long-term visions or strategies, and harmonization between government programmes and development plans.

In view of the above, it is unrealistic to expect that mental models, collective behaviour patterns and relevant emotions will be transformed in the short term without deliberate actions. These will need an awareness of the magnitude of the crisis that Latin America is currently living through, and of the need to develop capacities to overcome it.

At the current Latin American and Caribbean conjuncture, universities, networks and foresight communities can contribute to the design and implementation of effective and specific solutions. According to Medina-Vásquez, Vitale and Patroulleau (2021), and the state of the art described by the Open Network of Foresight and Innovation for Latin America and the Caribbean of the Ibero-American Programme of Science and Technology for Development (CYTED), if foresight is to make a truly significant contribution, a number of priorities must be taken into account, as indicated in the following paragraphs.

Firstly, the main current weakness, namely the lack of advanced training in this area, must be countered. Despite the emergence of new foresight organizations and training programmes in Central and South America, the community consists of a small critical mass of individuals who assume foresight as a knowledge discipline. This critical mass needs to be strengthened, and its fields of action need broadening.

The second priority is to promote foresight and innovation laboratories—in other words build “playing fields” to speed up capacity development, so as to make the discipline available to people and institutions that have innovative projects but lack relevant, effective and timely support. The third priority is to focus on strategic issues that are vital for the region. It is critical to fine-tune prioritization and address substantive issues. There are also applications of prime necessity for the region, such as the sustainability of natural resources and the promotion of the agrifood sector. While natural resources are the region’s great competitive and comparative advantage, they are under credible threat: in the future, science and technology may replace some of today’s strategic resources, such as copper or lithium, through the invention of new materials. Lastly, the fourth priority is to renew foresight in order to make it academically sound, useful to society and at the same time intelligible to citizens and decision makers. Foresight must focus on the social construction of the future; and traditional anticipation must make room for appropriation, action and learning.

Box IV.4 describes an experience of the relationship between foresight and State policy in Costa Rica.



**Box IV. 4****State policy and intersectoral coordination: the Digital Transformation Strategy towards the Bicentennial: Costa Rica 4.0**

October 2018 saw the official launch of the Digital Transformation Strategy towards the Bicentennial: Costa Rica 4.0 (2018–2022). This seeks to implement the digital transformation of public institutions and society, through a State policy that aims to enhance the socioeconomic development of the country and improve the quality of life of its citizens, through access to and use of these technologies in government, the private sector, academia and civil society. The strategy, which was the outcome of a consultation and co-creation exercise in which multiple actors of Costa Rican society participated, echoing the policies of open government, embodied a short-, medium- and long-term vision for closing the development gaps by exploiting the major growth opportunities afforded by digitalization and innovation.

Broad inter-agency coordination and strong political articulation and technical standardization are essential for the implementation of this policy, all of which require political support at the highest level. For this reason, the government issued Executive Decree No. 41248, creating the Bicentennial High-Level Commission on Digital Government as the advisory body for the design of the national strategy for the implementation of public policy on digital government. Similarly, Directive 019 issued guidelines to public sector institutions for development of the Digital Government of the Bicentennial. To provide leadership in the implementation of this policy, the Ministry of Science, Innovation, Technology and Telecommunications (MICITT) has been tasked with identifying initiatives and technological proposals to create a national digital ecosystem that will make it possible to achieve a fairer distribution of opportunities and benefits for Costa Rican citizens, businesses and the State.

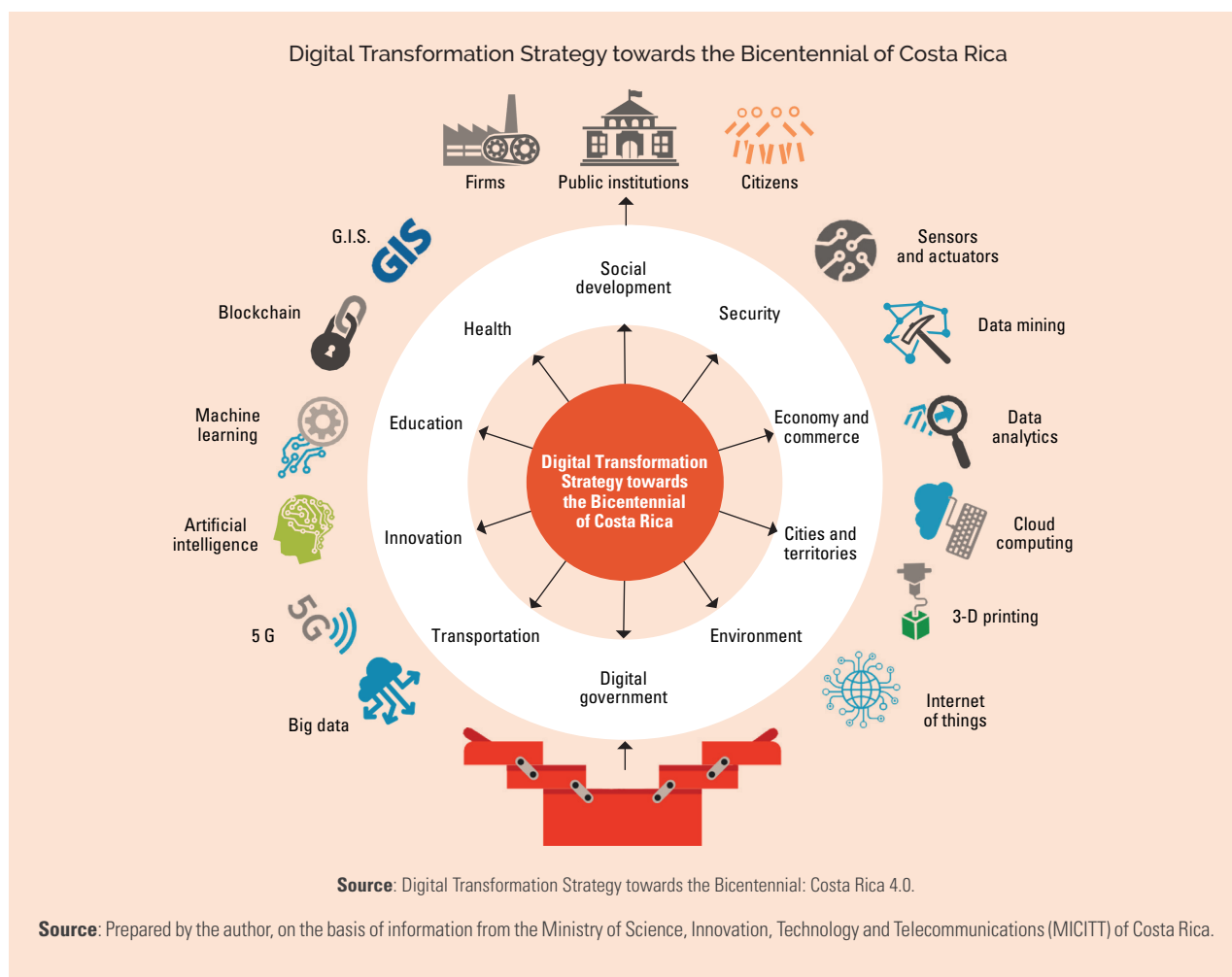
The corresponding strategic alignment was made with each of the public policy and national planning instruments, as follows: the National Policy for Knowledge-Based Society and Economy (PNSEBC), which was agreed upon with civil society, the private sector and academia to articulate the country's efforts in a long-term vision on scientific and technological progress, and its economic, social and environmental impact; the National Plan for Science, Technology and Innovation (PNCTI); the National Development and Public Investment Plan (PNDIP) 2019–2022, and the government's priorities for MICITT. In this way, the corresponding pillars were included in each instrument: the new digital transformation pillar, with its respective intersectoral projects, was included in the PNCTI to achieve the strategic alignment of the Digital Transformation Strategy.

Many of the lines of action included in this policy are cross-cutting and require consensus-based work by all sectors and institutions to improve the use of digital technologies at the service of inhabitants, businesses and public administration. That is why the current government authorities have translated the policy into an instrument of country vision that describes the work needed to enhance the digital transformation of Costa Rican society, in the context of the fourth industrial revolution and the new challenges posed by knowledge-based economies.

Implementation of this policy requires a digital governance model that supports the creation of interoperability platforms to ensure an optimal and secure exchange of information between public bodies, firms and citizens. It represents the vision that aims to serve citizens and businesses in meeting their priorities. The strategic vision is to stimulate the productivity and competitiveness of enterprises, seeking inclusive and sustainable socioeconomic development, drawing on the momentum of digital transformations in citizens, firms, and public entities. The ultimate objective of these transformations is to improve the quality of life of the country's inhabitants, ensure the business restructuring needed for Industry 4.0, and enhance the government-citizen relationship.

The transformations to be promoted are made possible by the availability of new tools, such as 5G connectivity, the Internet of Things, cloud computing, artificial intelligence, data mining, blockchain, big data, 3D printing, data analytics, machine learning, sensors and actuators, and geographic information systems, among others. The transformations are targeted on strategic areas such as education, health, social development, security, economy and trade, innovation, transportation, digital government, environment, and cities and territories.

## Box IV.4 (concluded)



## H. Conclusions

In the current context dominated by the effects of the COVID-19 pandemic, in which efforts are being made to move towards a recovery that transforms the current unsustainable development model, foresight is one of the most important government functions.

Originally envisaged as an exercise for government elites and State institutions dedicated to defence and, above all, for sectors that depend on future modelling to validate projections, such as demographics and the energy sector, foresight today plays a fundamental role in making institutions more resilient to critical events and concurrent crises at all levels of the state.

In addition to the construction of scenarios of probable futures and the anticipation of critical events, the evolution of this practice has been enriched by including the opening of channels for citizen participation and exchange between actors on development, innovation, culture, environmental and social issues. Foresight is, and will be, increasingly relevant for all development actors to the extent that it is incorporated into public management and development planning.

The region has made indisputable progress in terms of long-term planning and the construction of country visions, strategies and plans with time frames ranging between 2025 and 2050. Nonetheless, the challenge of developing additional capacities to mainstream their application in the formulation of short- and medium-term

public policies, and their linkage with long-term visions, still needs to be developed in the State apparatus. Better coordination with civil society, academia and the private sector is also needed, to foster creativity and innovation in solving public problems and, above all, a sense of ownership of a shared vision of the future. The outlook is promising, since international experience reveals that institutions that include foresight as part of their institutional work takes roughly a decade to mature internal capacities, build a systemic, comprehensive and integrating perspective of development and, above all, become mainstreamed in government institutions.

Given this new context, training in this domain is expected to incorporate the new conceptualization of future studies, methods, processes and foresight systems. In terms of institutional practice, it is also likely to evolve from a traditional conception of a toolbox for decision-making to a better understanding of foresight as a discipline, and as a way of organizing the strategic management of knowledge as applied to territorial and societal development.

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## Concluding remarks and recommendations





The Economic Commission for Latin America and the Caribbean (ECLAC) has been arguing for decades that the current development model is unsustainable. Structural gaps relating to poverty and inequality, health, education, income, opportunities, gender and territory, among other factors, are perpetuated by production and consumption patterns that depend heavily on natural resource extraction, by low productivity and by productive models that make scant use of technology and knowledge, which produce non-degradable waste and fail to create good-quality jobs.

The 2030 Agenda for Sustainable Development aims to replace this development model with one based on greater equality and sustainability that combines the economic, social and environmental dimensions of development and enhances partnerships among actors in a renewed and strengthened framework of cooperation, multilateralism and democracy.

While States are currently reporting progress in meeting the Agenda's targets, overall, efforts to achieve the Sustainable Development Goals (SDGs) are still not fast or big enough. 2020 marked the beginning of a decade of ambitious measures reflecting a sense of urgency to achieve the SDGs by 2030. These are being carried out at three levels: (i) global, to ensure greater leadership, more resources and smarter solutions to achieve the SDGs; (ii) local, including the necessary transitions in the policies, budgets, institutions and regulatory frameworks of governments, cities and local authorities and (iii) individual, including young people, civil society, the media, the private sector, trade unions, academia and other stakeholders, to create a movement to drive the necessary changes. In addition, action at the regional level is important to promote greater integration and cooperation between countries and to build consensus on positions that enhance the weight of regions in global governance.

In *Building a New Future: Transformative Recovery with Equality and Sustainability*, ECLAC indicated that we are facing a new era that calls for a development model based on a big push for sustainability: a development approach incorporating policy coordination to mobilize sustainable investments that will drive a new virtuous cycle of economic growth. This would create jobs and income and reduce inequalities and structural gaps, while maintaining and regenerating the natural resource base on which development depends (ECLAC, 2020a). The investments in specific sectors (non-conventional renewable energy sources, urban electromobility, digitization, health-care-related manufacturing industries, the bioeconomy, the care economy, the circular economy and tourism) proposed in the document could ensure there is scope to create better-quality jobs, pursue innovation, incorporate technological progress, diversify exports, adapt to and mitigate the effects of climate change and undertake regional cooperation efforts. In addition to fulfilling economic criteria, these investments should take into account social, cultural and environmental aspects and dimensions, identify risks and vulnerabilities and incorporate the views of territorial actors.

The document states that coordinated intervention of multiple actors (government, the private sector, academia, civil society) and coherent policies are required to ensure, at the same time, economic growth, the application of innovative technologies, the reduction of greenhouse gas emissions and sustainable use of natural resources.

In the current context facing Latin America and the Caribbean (the region hit hardest by the COVID-19 pandemic), the implementation of the environmental big push proposed by ECLAC requires renewed capacities both within the State apparatus and in its relationship and coordination with development actors to ensure a transformative and resilient recovery.

The role of the State has been transformed by the need to respond to the emergency and lead the post-pandemic recovery amid complex current and future scenarios. The State should exercise anticipatory governance, institutionalizing strategic foresight throughout the government structure and coordinating it with the legislative and judicial branches. This can be done through foresight and innovation units or laboratories that explore global megatrends in order to address them, regular and relevant national dialogue to ensure social ownership of visions of the future or the implementation of future projects, promotion of learning and monitoring of present conditions.

The State must also exercise leadership that is ethical, collaborative and inclusive (of men, women, young people, older persons and minority groups), which rebuilds trust in three ways: among the institutions of the State apparatus, through collaborative and non-competitive approaches; among institutions and citizens, through greater transparency, more openness to participation and collaboration with citizens, academia and the private sector; and among citizens, through information and data systems at the service of the entire population and a systematic accountability process. An innovative State that manages a government open to citizens, the academic world and the private sector and that creates trust will be better equipped to face crises and to foster public policies aimed at ensuring much needed economic, social and environmental progressive structural change and a welfare state, especially for the most vulnerable.

Rebuilding weakened trust will facilitate the State's convening role in creating participatory spaces for gender-sensitive development planning exercises at the national, subnational and local levels, and in leading a dialogue that will result in public policies agreed by all actors based on a sustainable development model. This exercise should ensure the coordination of the multiple time frames of State action (in the short term, to respond to the emergency, and in the medium and long term, to respond to the transition and recovery stage), along with that of the national and subnational levels of government and territories.

Moreover, the capacity for effective communication that facilitates participatory dialogue, negotiation and consensus-building, along with adaptive capacity, are essential to build a more resilient institutional framework that can face the multiple crises arising from disruptive events, both internal and external, owing to social, economic, environmental or climate-related factors.

Eighteen months have passed since the beginning of the pandemic that has struck the region and the world and, while progress in vaccination is uneven, it is important for the States of the region begin reflecting on how to manage the collective knowledge and learning stemming from the pandemic. As in the case of Dominica after Hurricane Maria, which completely devastated the island, this process of reflection is likely to lead to concrete proposals for the transformation of institutions, institutional working practices or regulatory systems, in order to provide them with greater capacity for adaptation, experimentation, self-reflection, collective intelligence and, ultimately, learning. One of the outcomes could be an agreed map of institutional, health, social, territorial and environmental vulnerabilities that would allow the State to respond effectively and quickly to the needs of citizens in the face of future critical events. Resilience, unlike resistance, means that institutions are not only able to foresee or cope with a crisis, but also to learn from shocks and incorporate that new knowledge to grow stronger in the face of adverse events that may occur in the future.

The COVID-19 pandemic is the first to unfold in the data society. These data allow the formulation of evidence-based policies and the justification of control measures, as well as the management of crisis complexity and uncertainty. In future, it will be crucial to strengthen information systems in order to improve the quality and integration of data. Robust data infrastructure will identify who and where the most vulnerable are in order to respond effectively and in a timely manner to their needs. The use of the large amount of data produced during the pandemic, which could lead to undesirable controls by the State apparatus, should be discussed in a transparent manner. It is also advisable to ensure that citizens' voices are heard, as they are, after all, the original creators and owners of these data.

Moreover, efforts must be made to develop and strengthen e-government strategies for the provision of quality services to citizens and open government policies that allow greater collaboration and reuse of government data to solve public problems. Equally important is the work that must be done to strengthen digital education and infrastructure and access to information technologies for the most vulnerable populations, which, as this pandemic has shown and as the United Nations Human Rights Council has declared, is a basic human right.

At the territorial level, the existence of both community leadership to address disasters and a social capital base constitute the road map for communities to build resilience based on bonds of trust, reciprocity and cooperation. A virtuous and synergistic coexistence of governmental and societal capacities is also necessary. Government teams should strengthen their capacity to read the environment in order to situate public policies

and implement them with empathetic and respectful leadership that recognizes the other as a rights-holder. There is also a need for dialectic thinking that links the elements of an increasingly complex reality and to strengthen the capacity for dialogue, negotiation, consensus-building, collaboration and inclusion, so that decision-making and policies comprehensively address citizens' greatest needs.

The complex scenario of converging health, economic, social (and in many countries, political) crises, the post-pandemic recovery and an institutional framework with renewed capacities to sustain democratic governance and governability, requires greater levels of regional integration and cooperation to address common challenges and the production of regional public goods. Regionalization of production chains and increased intraregional trade should be part of the post-pandemic recovery strategy.

As noted by the Commission's Executive Secretary Alicia Bárcena at the thirty-fifth session of the Committee of the Whole of ECLAC, regional cooperation "was more urgent than ever" and she stressed the need to provide public goods. The region was "at a civilizational crossroads" and must renew its institutions. She also called for a global social compact, along with a review of the existing development model, to maintain linkages with the 2030 Agenda and build "more resilient societies" (ECLAC, 2020b).

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The emergency generated by the COVID-19 pandemic has turned a spotlight on the key role of the State in providing public goods and services, while the public sector has returned to the fore as the locus for emergency response and for driving the recovery. However, the State and the public sector have been rendered less effective by the weakening of public leadership and of its capacity to generate confidence in the work of State institutions.

This document argues that stronger State institutions are needed to address the structural problems of the current development pattern and tackle the new challenges posed by the current crisis and others the future may bring. Institutions need renewed capacities and leadership to design and implement policies and programmes capable of meeting present needs with a future vision, in a way that is participatory, collaborative and inclusive.

It is a matter of urgency to build resilient public institutions that can cope with present crises and prepare for future ones, because the policy and investment decisions made today will condition our tomorrow.