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HubLAC
Latin American and Caribbean Evidence Hub

SEMANA DE LA EVIDENCIA

Understanding the Changing Context for Research for Development (R4D) in Latin America and the Caribbean since 2019

A study for the International Development Research Centre (IDRC)

May 2023

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About OTT

OTT is a global consultancy and platform for change. We support and strengthen the work of research organisations, foundations, governments and non-governmental organisations in support of better-informed decision-making. Through our consultancy work, we develop tailored solutions to specific challenges. With services spanning research, learning facilitation, strategy and evaluation, we partner with organisations to drive evidence-informed change.

Through the On Think Tanks platform, we build, nurture and support a global community of people working in, with, and funding think tanks.

About Instituto Veredas

A Brazilian non-profit, nonpartisan organisation that aims to bring awareness among public policymakers, universities, and civil society of the importance of evidence-informed policymaking processes. We approach scientific data with knowledge translation tools, adapting communication to people's needs. We value transparency and believe that policy debates are only possible when every person can understand and develop opinions concerning public matters.

About Hub LAC

The Latin American and the Caribbean Evidence Hub (Hub LAC) articulates and mobilises actors around Evidence-Informed Policies (EIP) to respond to shared challenges in Latin America and the Caribbean. Hub LAC wants to be a meeting point between governments, academia, universities and civil society. Hub LAC is co-directed by the Caribbean Centre for Health Systems Research (CCHRSD) in Trinidad and Tobago; the Evidence-Informed Health Policies Unit in the Chilean Ministry of Health; the Unit of Evidence and Deliberation for Decision Making in the University of Antioquia in Colombia; and Instituto Veredas in Brazil.

Executive Summary

The Research for Development (R4D) ecosystem in Latin America and the Caribbean (LAC) is experiencing significant transformation influenced by various macro and micro trends. These trends have profound implications for actors within the ecosystem, including research producers, communicators and disseminators, users of evidence, and funders of R4D. Understanding the impact of these trends on actors is crucial for fostering effective research collaboration, evidence-based decision-making, and sustainable development in the region.

Drawing on inputs from experts, existing literature, and consultations with regional actors, this report aims to highlight the transformative changes occurring in the R4D ecosystem and offer strategic recommendations to navigate these trends effectively.

As macro-level trends shaping R4D in Latin America and the Caribbean since 2019, we identified:

- The global economic crisis: It has prompted governments and development actors to seek innovative solutions and strategies to address economic challenges.
- Political polarization: Polarization across the region has increased during the past years in the region, many times hindering consensus and effective policymaking.
- Growing distrust in public institutions: This trend can potentially drive efforts to enhance transparency, accountability, and responsiveness in the R4D ecosystem. However, it has mostly hindered effective collaboration between researchers, policymakers, and the public. This creates barriers to the uptake and utilization of evidence.
- Increasing focus on climate change: Research agendas have been increasingly incorporating sustainability and environmental considerations due to the growing emphasis on climate change.
- Covid-19 pandemic: Serving as a catalyst, the pandemic has heightened stakeholders' awareness of the challenges and opportunities in the region. It has also built momentum to strengthen the R4D ecosystem, enhance research collaboration, and promote evidence-informed policies.
- Public perception of science and evidence: The region has witnessed changes in the way people shape the expected role of science ecosystems, cross-country collaboration, and evidence-based decision-making, with some witnessing increased public awareness, trust, and demand for evidence-based policies and others seeing the effects of public scepticism, misinformation, and lack of scientific literacy.
- Multipolarity in the region: The emergence of new actors, such as China, has contributed to the regional R4D ecosystem, fostering a multipolar environment.

As micro-level trends and implications, we highlighted the important growth of the R4D ecosystem in the region, the emergence of data-driven initiatives, the increased technocratic capacity, the relationship between gender and equality and the limited funding and competing agendas for the R4D ecosystem.

These trends have far-reaching implications for the various actors in the R4D ecosystem. Research producers face challenges securing funding and ensuring project sustainability, but they can leverage technology to enhance their capabilities and embrace interdisciplinary approaches. Communicators and disseminators of research face resource constraints and misinformation, necessitating the adoption of alternative communication strategies and the engagement of diverse audiences. Users of evidence, including policymakers and practitioners, confront limited financial resources and erosion of public trust, underscoring the importance of transparency, evidence uptake, and engagement in knowledge exchange platforms.

Based on the analysis of the key trends shaping the Research for Development (R4D) ecosystem in Latin America and the Caribbean (LAC), several strategic recommendations emerge to respond effectively to the evolving landscape. These recommendations aim to enhance collaboration, strengthen data governance, leverage technological innovations, address funding gaps, and engage with emerging actors. By implementing these recommendations, stakeholders, including the International Development Research Centre (IDRC), can contribute to advancing the R4D ecosystem in the region and promoting sustainable development.

- Re-focus IDRC's research agenda to consider the trends identified in this study as research topics in themselves: IDRC can help the R4D ecosystem respond to these trends by investing in its own capacity to understand and navigate them as they develop.
- Foster Collaboration and Knowledge Exchange: Support funding initiatives that promote national, regional and international research networks, facilitating collaboration among researchers, policymakers, and practitioners in LAC.
- Strengthen Data Governance: Fund initiatives that strengthen data governance frameworks in LAC, addressing data privacy concerns, promoting open data initiatives, and developing ethical guidelines for data collection, storage, and sharing.
- Embrace Technological Innovations: Explore partnerships and funding opportunities to support the adoption and integration of emerging technologies, such as Web 3 and ChatGPT (and other LLM), into the R4D ecosystem in LAC. More understanding is needed about the implications of emerging technologies.
- Address Funding Gaps and Competing Agendas: Strategically support projects that fill critical gaps in the R4D ecosystem, focusing on underrepresented topics, early-stage innovations, and areas of research that align with sustainable development goals.
- Engage with Emerging Actors: Understand and effectively engage with the presence of emerging actors, leveraging their expertise and resources to strengthen research collaborations and promote equitable partnerships.

Additional topics and areas for research in Latin America and the Caribbean

This report also provides an overview of priority topics identified by think tanks in Latin America and the Caribbean (LAC) and their importance in the region. The topics were identified through the OTT State of the Survey Report 2022, which combined the findings with macro and micro-

level trends shaping the R4D ecosystem in the region. Additionally, participant priorities expressed during the enLACe 2022 meeting were considered.

The most frequently mentioned topic by think tanks was governance, reflecting the need to improve governance structures, policies, and practices in LAC. Social policy ranked second, highlighting the region's focus on addressing social inequalities and poverty. Trade, economics, and finance were also considered important due to the region's reliance on international trade.

Other significant topics identified included defence, peace, and security; environment and climate change; law, justice, and human rights; Covid-19 impacts and recovery; health; education; and science, technology, and innovation. These topics address various challenges the region faces, such as organized crime, environmental degradation, access to justice, and the effects of the pandemic.

The enLACe 2022 meeting highlighted specific areas to further strengthen evidence-informed policy-making in the region. Participants emphasized the need for training programs to equip governments with the skills to effectively utilize evidence in their decision-making processes. Additionally, there was a strong emphasis on training evidence producers and disseminators in innovative knowledge translation methodologies, ensuring that research findings are effectively communicated and translated into actionable policies. Another important demand was the mapping and promoting connections between key actors in the R4D ecosystem, including evidence producers, users, and disseminators. Collaboration and knowledge exchange can be enhanced by creating and strengthening these connections, leading to more impactful and evidence-based policy decisions. Lastly, participants recognized the significance of monitoring the use of evidence in policy decision-making. They stressed the importance of tracking and evaluating how evidence is utilized to shape policies, ensuring its effective integration and impact on addressing the region's challenges.

1. Introduction and methodology

1.1 About this report

This report aims to serve as input for the International Development Research Centre (IDRC) to gain a comprehensive understanding of the changing context for research for development (R4D) in Latin America and the Caribbean. By providing a critical snapshot of the region's current institutional landscape for R4D, the report analyses the main trends and developments that have significantly influenced the field from 2019 to 2023. Furthermore, it aims to explore the implications of these trends for actors within the R4D ecosystem.

We have employed a multifaceted research approach to identify the most important macro and micro trends that have affected the R4D ecosystem in the region. Firstly, we conducted a rapid literature review encompassing available research and analysis on the R4D ecosystem. This review encompassed reports, research papers, media outlets and commentary to ensure a comprehensive understanding of ongoing regional discussions and debates. Additionally, we engaged in a pulse survey that was widely shared to gather diverse perspectives and inform our analysis.

In an effort to identify emerging trends and issues, we also commissioned think pieces from researchers and thinkers within our network. By leveraging the expertise of OTT's network and collaborating with Grupo Veredas and the HubLAC, this report draws upon a broad range of insights and experiences working in the region.

1.2 Methodology

The methodology employed in this report consisted of three main inputs: a literature review, pulse surveys, and think pieces. Each of these inputs played a crucial role in capturing a comprehensive understanding of the trends that have shaped the research for development (R4D) ecosystem in Latin America and the Caribbean.

Literature review

We conducted thorough searches across various databases, web pages, and repositories, including Google Scholar, IDRC, OECD, and IDB. Keywords and concepts related to research for development (R4D), research systems/ecosystems and policy, Latin America and the Caribbean, and specific topics relevant to the region were utilized. Additionally, we incorporated "snowball" searches, grey literature, and specific documents recommended by experts and the Hub LAC. The inclusion criteria required documents related to R4D in Latin America and the Caribbean, published from 2019 onwards and available in Spanish, Portuguese, or English. The review process involved summarizing relevant findings from the first 50 results in each database,

repository, and website. A total of 63 documents, including news articles, blogs, scientific papers, and books, contributed to a comprehensive understanding of the R4D landscape.

Pulse survey and think pieces

A pulse survey was created and shared across OTT, Veredas, and HubLac networks to gather macro and micro trends in the region. The survey is available in Spanish, English, and Portuguese and received 18 responses from practitioners and experts from countries such as Peru, Mexico, Ecuador, Trinidad and Tobago, Venezuela, Argentina, Colombia, Costa Rica, Uruguay, and Brazil. While the purpose of the survey was not to provide statistically significant data, it complemented the literature review by providing additional perspectives for the research. The survey remained open until the third week of May, capturing valuable insights from the respondents.

Furthermore, the research team has invited several experts and practitioners to contribute think pieces to inform the research process. The key ideas of the contributors have been included in the research report, and the think pieces will be published on OTT's platforms. The team has already received confirmation from three contributors (Table 1), and they are waiting for confirmation from two more contributors, which should be confirmed in the next few days.

Three experts were commissioned to provide inputs on specific topics relevant to the research objectives. The experts' contributions offered valuable insights into emerging trends and issues within the R4D ecosystem in Latin America and the Caribbean. The commissioned contributions included:

- Soledad Quiroz, Vice-President, International Network for Government Science Advice: Soledad Quiroz's think piece focused on the changing role of science advice after the pandemic. Her expertise and analysis shed light on the evolving dynamics of science advice and its implications for the R4D landscape.
- Julio López, Founder, DataLat: Julio López's think piece centred on data governance in Latin America. His insights provided a critical perspective on the challenges and opportunities related to data governance within the R4D context in the region.
- Amir Lebdioui, Lecturer, SOAS: Amir Lebdioui contributed a think piece exploring biodiversity-based knowledge in Latin America's innovation context. His expertise shed light on the intersection of biodiversity, innovation, and R4D, emphasizing the unique opportunities and considerations in the region.

These expert contributions further enriched the research process by providing future-looking trends and insights that may not be present in the literature review alone. The think pieces will be published as standalone pieces on OTT's platforms, showcasing the expertise and diverse perspectives of the contributors.

2. Research findings

We have classified trends in the R4D ecosystem at the macro and micro levels. At the macro level, this review focuses on the broader social, economic, political, or cultural context that shapes the research for the development ecosystem in Latin America. This level of analysis can be useful for understanding how larger-scale factors, such as government policies, economic systems, or cultural norms, impact the production and use of evidence and how change has or is occurring in the R4D ecosystem in the region. The micro-level trends we have identified may have more immediate or direct impacts on the production and use of evidence in specific contexts.

It's essential to recognize that macro and micro-level trends are interconnected, mutually reinforcing, and dynamic. They do not operate in isolation but rather influence and shape each other. These trends can also have varying effects in different countries and ecosystems within LAC due to contextual differences. Therefore, understanding these trends helps provide a comprehensive overview of the forces likely to shape the R4D ecosystem in the region, guiding efforts to strengthen research collaboration, evidence uptake, and evidence-informed policies.

2.1 Macro level trends shaping R4D in Latin America and the Caribbean since 2019

The global economic crisis

The economic crisis in Latin America is a significant macro-level trend that has shaped the region's research for development (R4D) ecosystem since 2019. This crisis has far-reaching implications for the R4D community as governments grapple with maintaining public services and addressing the needs of their populations. The worsening of existing development problems, such as poverty, inequality, and health disparities, creates a demand for evidence-informed solutions, putting pressure on the R4D community to produce high-quality research that can inform policy and practice.

However, governments in the region are likely to face competing demands as they respond to the crisis. The limited resources available may lead them to prioritize short-term needs over long-term investments, including research and development. As a result, the R4D community must find new ways to demonstrate the relevance and impact of their work within the context of the economic crisis.

The current global scenario further reinforces the challenges Latin America and the Caribbean (LAC) face regarding economic growth (OECD, 2020). In 2023, the three main global economies are expected to experience stalled growth rates. The United States is projected to grow by only 0.7%, the Eurozone by 0.3%, and China by 4.4% (José Manuel Salazar-Xirinachs, 2023).

For the LAC region, the outlook for economic growth is also modest. The International Monetary Fund (IMF) projects an average growth rate of 1.7%, while the World Bank and the Economic Commission for Latin America and the Caribbean (ECLAC) estimate rates of 1.3% and 1.7%, respectively (Daniel Zovatto, 2023). The United Nations Economic Commission for Latin America and the Caribbean (ECLAC) specifically forecasts a growth rate of 1.3% for the region in 2023,

with South America at 1%, Central America at 3%, and the Caribbean at 3.3%. Mexico is expected to grow at only 1.1% (José Manuel Salazar-Xirinachs, 2023).

This low economic growth will have a negative impact on poverty rates, which are projected to remain above 30%. The limited growth prospects also pose challenges for job creation, maintaining social expenditures, investing in education, and addressing the increased number of migrants. Consequently, the region faces the risk of social unrest due to these economic challenges (OECD, 2020; Daniel Zovatto, 2023; José Manuel Salazar-Xirinachs, 2023).

The global economic crisis presents both challenges and opportunities for the R4D ecosystem in Latin America and the Caribbean. While resources may be constrained, the need for evidence-informed solutions to address pressing social and economic issues becomes even more urgent. The R4D community must adapt to this evolving context, demonstrating the value and impact of their research in addressing the region's needs amidst the economic crisis.

Political polarization and election trends

The recent elections in Latin America have been characterized by significant political polarization, and this trend is expected to have profound implications for the research for development (R4D) ecosystem in the region. The emergence of leftist candidates in several countries presents both opportunities and challenges for R4D. At least publicly, these leaders prioritize social welfare, poverty reduction, and environmental sustainability, providing new avenues for research and development. They campaign on promises of greater social justice and equity, which align with the objectives of R4D that IDRC and other development cooperation agencies promote.

However, the political polarization observed, and often fueled by those same leaders, in recent elections also poses obstacles to collaboration and knowledge-sharing within the R4D community. Researchers and practitioners may encounter difficulties working together across ideological divides, hindering the progress and impact of their collective efforts.

The Latin America Political Risk Report 2023 sheds light on the prevailing political, economic, and societal trends in the region. These trends are characterized by a growing sense of insecurity stemming from widespread organized crime, food insecurity, escalating cyber-attacks, and the erosion of democracies due to populism, polarization, and authoritarian proposals. Additionally, the region grapples with poor economic growth, unresponsive governments, unresolved citizen demands, and an ongoing migratory crisis (Benjamin Gedan et al., 2023; Daniel Zovatto, 2023). Such a confluence of challenges further complicates governability and is regarded as one of the "biggest headaches for many Latin American governments" (Daniel Zovatto, 2023).

Notably, the political landscape in Latin America has undergone a reconfiguration, with left-wing progressive governments assuming prominence. However, these governments face adverse global and regional conditions, including sluggish global growth, high inflation, and the aftermath of the pandemic. Consequently, Latin America experiences high uncertainty, instability, volatility, political polarization, and a crisis of governability in multiple countries throughout 2023. Moreover, this situation occurs within the context of the "electoral super-cycle" spanning from 2021 to 2024, during which nearly all countries in the region will hold elections (Daniel Zovatto, 2023) and weak (and weakening) democratic institutions.

The region presents a contrasting political scenario as well. The rise of centre-left, left or progressive governments is matched by the rise of far-right populism, which challenges established institutions and even advocates for military intervention when election outcomes are unfavourable. This trend poses a threat to democratic principles, which is not to say that some countries are witnessing the preservation and strengthening of democracy, demonstrating improved quality and resilience (Daniel Zovatto, 2023).

The complex interplay of political polarization and election trends underscores the challenges faced by the R4D ecosystem in Latin America. Stakeholders within the R4D community must navigate these challenges, foster collaboration despite ideological differences, and demonstrate the relevance and impact of their work in this politically charged environment.

Growing distrust in public institutions

Latin American societies exhibit lower levels of trust in public institutions compared to other regions, which has significant implications for the research for development (R4D) ecosystem in the region. This lack of trust distorts citizens' expectations of the government, including its investment in research, science, and technology, as people believe that public officials cannot be trusted to invest efficiently in the public interest (Scartascini & Valle, 2021).

The growing distrust in public institutions can lead to ineffective public affairs and policy management. When citizens lack confidence in the government's ability to govern effectively and transparently, it can result in decision-making processes that are influenced by personal interests, corruption, or political considerations rather than evidence-based research.

Across the region, public distrust and a shrinking civic space are perceived as major challenges across Latin America (OTT State of the Survey Report, 2022). Polls conducted by Latinobarometro reveal that a significant percentage of the population in countries like Mexico, Peru, and Brazil have low trust in their own communities. Trust in institutions like the Presidency, Congress, and political parties also exhibits significant gaps between Latin America and the Caribbean and wealthier economies, with Argentinians having far less trust in political parties than Canadians (OECD, 2019; Vanderbilt University, 2021; Bachelet, 2021).

This scepticism can hinder the allocation of adequate resources and funding to R4D initiatives, limiting their potential impact on addressing social challenges and promoting sustainable development. Research by the IDB and Vanderbilt University's Latin American Public Opinion Project (LAPOP) reveals that citizens want better public services but are reluctant to fund government programs to achieve them. For example, although a significant percentage of respondents in high-crime regions express the need for increased police funding, a lower percentage is willing to pay higher taxes. Similar gaps exist in other areas, such as education. The widespread mistrust in public institutions reduces support for taxes aimed at financing essential services and leads to a weakening social contract. This distrust, coupled with dissatisfaction with public services, can create a vicious cycle of social discontent (Vanderbilt University, 2021).

Furthermore, the erosion of trust in public institutions can contribute to social crises and unrest. When citizens perceive that their needs and concerns are not being addressed and they lack trust in the government's ability to provide essential services, it can fuel social discontent and protests (OECD, 2020). These social tensions and conflicts can disrupt the R4D ecosystem by diverting

attention and resources from research and development efforts, creating an unstable environment for collaboration and knowledge-sharing among researchers and practitioners.

The lack of trust in public institutions can also impact international collaborations and partnerships in R4D. When institutions and researchers from other countries perceive a lack of transparency, accountability, and trustworthiness in the local institutions, they may be hesitant to engage in collaborative projects or share valuable knowledge and expertise. This can hinder the exchange of ideas, access to international funding opportunities and limit the overall progress of the R4D ecosystem in the region.

Increasing focus on climate change

The increasing focus on climate change by multilateral development banks and organizations is a significant global trend shaping the research for development (R4D) ecosystem in Latin America and the Caribbean (LAC). This trend offers both opportunities and challenges for development actors in the region, highlighting the need to enhance capabilities to respond effectively to the implications of climate change.

The LAC region is particularly vulnerable to climate change due to higher temperatures, extreme weather events, and its reliance on climate-sensitive sectors like tourism and agriculture (Watkins et al., 2023; Coda, 2021). Climate change poses significant challenges, disrupting economic activities and livelihoods in the region. Furthermore, the COVID-19 pandemic and climate crises exacerbate inequities, impacting income distribution, poverty rates, and country revenues. Natural disasters associated with climate change push a substantial number of people into extreme poverty each year, further highlighting the urgency to address these issues.

One aspect of the trend is the differential funding opportunities for mitigation and adaptation actions. Mitigation efforts, which focus on reducing greenhouse gas emissions, often attract private sector investments due to potential returns. In contrast, adaptation actions, which aim to build resilience and address the impacts of climate change, primarily rely on donations as they offer fewer commercial interests. It is important to prioritize adaptation actions in budgetary terms and consider their future impact on non-climate-related projects, ensuring comprehensive and effective responses based on rigorous science (Watkins, 2023; Titelman et al., 2023).

The increasing focus on climate change by multilateral development banks and organizations creates an opportunity for researchers in Latin America to contribute to evidence-based approaches to climate change policy. The research and evidence ecosystem in the region will need to adapt to these changes to ensure its relevance and impact in a shifting policy landscape. Developing partnerships with donors can amplify regional research opportunities and collaboration.

In addition, strengthening capacities in areas such as digitalization, innovative agricultural techniques, water management, and energy conversion is crucial. This includes providing increased financial support for innovation projects, integrating climate change approaches into professional degrees, and disseminating information about climate change impacts across economic sectors. Research centres and academia in the LAC region need to address topics such as climate change finance, environmental regulations, and disaster management to enhance their

ability to communicate the implications of climate change to diverse audiences with varying educational levels and information needs. Strengthening the skills required to develop financial instruments and mechanisms for implementing adaptation and mitigation projects is particularly important.

Covid-19 pandemic

The Covid-19 pandemic has profoundly impacted the R4D ecosystem in Latin America and the Caribbean, creating challenges and opportunities for research and development in the region. The crisis has exposed the strengths and weaknesses of the research infrastructure and highlighted the critical role of R4D in responding to the pandemic.

LAC's investment in health research has provided a solid foundation for tackling the pandemic, enabling the region to possess the necessary expertise and resources to conduct vital epidemiological studies (Stanford et al., 2022). However, the limited contribution to vaccine research during the initial stages of the pandemic has underscored the need for increased investment in R4D to develop a more comprehensive response to future pandemics.

Moreover, the pandemic has revealed vulnerabilities in the evidence-to-policy ecosystem. As resources were redirected to address the crisis, research institutions in several countries faced budget cuts, creating discrepancies between the demands placed on scientists and the available resources for an effective response.

The Covid-19 pandemic has also influenced public perception and trust in science (Thomson, 2021). While there has been an overall increase in perceived knowledge and confidence in scientific expertise, misinformation and inadequate political responses have highlighted the need for better integrating scientific evidence into decision-making processes. Furthermore, the pandemic has exposed the limitations in utilizing scientific information for clinical management and population health decisions, particularly in the early stages when reliable data was scarce. Expediting decision-making through transparent approaches incorporating ethical principles and established methodologies is essential to leverage evidence effectively.

In the face of the pandemic, different approaches have been observed across the region, ranging from encouraging scientific production to reducing funding and support for research institutions. The latter poses a risk of hindering the progress of the R4D ecosystem and potentially eradicating an entire generation of regional scientists, emphasizing the importance of prioritizing and protecting research and development investments.

While the pandemic itself is not a conventional trend, it has brought about a momentous shift, the consequences of which continue to unfold. Its implications for the region's research for development (R4D) ecosystem are far-reaching and are yet to be fully understood. While the pandemic has had varying effects on the perception of science and evidence across the region, it has also exposed vulnerabilities in the health and social systems. It remains uncertain whether the lessons learned from this experience will be effectively utilized to inform improved policies and better preparedness for future pandemics.

Public perception of science and evidence

The Covid-19 pandemic has significantly impacted the public perception of science and evidence in Latin America. While the crisis has brought attention to research capabilities in many countries and elevated the political standing of science, it has also revealed challenges in establishing effective institutional mechanisms to respond to the crisis, resulting in a lack of trust between scientists, policymakers, and the public.

Social media platforms like TikTok, Facebook, and YouTube have been instrumental in shaping public sentiment towards science, with both positive and negative implications for producing and using evidence in policymaking.

Nevertheless, there is a positive trend towards using evidence in public policy, and many Latin American countries are adopting initiatives and programs to increase technical capacity and promote an evidence-based culture in decision-making. The growing public awareness of the importance of evidence has put pressure on policymakers to base their decisions on reliable information. For instance, Panama has taken a significant step by launching an official national strategy for science diplomacy in 2018, positioning itself at the forefront of regional science diplomacy and emphasizing the integration of science, technology, and innovation into foreign policy structures to align national and international policies with the 2030 Agenda.

Box 2. The role of Scientific Advisory Systems in Latin America

Excerpt from the Think Piece written by Soledad Quiroz Valenzuela, Vice-President, International Network for Government Science Advice (INGSA)

Soledad Quiroz Valenzuela, in her analysis of the role of scientific advisory systems in Latin America, emphasizes their significance in addressing the challenges posed by climate change. She highlights the need to enhance science-policy interfaces by establishing stronger links between scientific advisory bodies and policy-making institutions. Regular dialogue and engagement between scientists and policymakers, as well as incorporating scientific expertise into policy formulation and implementation processes, are crucial for effective responses and solutions.

Furthermore, she emphasizes the importance of promoting interdisciplinary approaches, encouraging collaboration among scientists from various disciplines to comprehensively address climate-related challenges. Lastly, she underscores the need for knowledge exchange, public engagement, and stakeholder involvement in scientific discussions and decision-making processes to ensure transparency, inclusivity, and the relevance of scientific advice in shaping the R4D ecosystem in Latin America and the Caribbean.

Several programs implemented or under development in Latin America from 2019 to 2023 contribute to promoting trust in evidence. These programs, such as the "Strengthening Capacity for Evidence-Based Health Production" by the Inter-American Development Bank (IDB), the "Open Science in Latin America" initiative led by multiple research teams in the region, the "Regional Program for Research in Climate-Adaptive Agriculture" supported by the Inter-American Institute for Cooperation on Agriculture, and the "Strengthening Research on Renewable Energy in Latin America and the Caribbean" implemented by the International

Renewable Energy Agency (IRENA), demonstrate the region's commitment to enhancing evidence-based practices in sectors like health, science, agriculture, and renewable energy. Through research, capacity building, and collaboration, these programs aim to foster trust in the reliability and credibility of evidence in Latin America (Carneiro et al., 2021; López-Vergès et al., 2021; OECD, 2019; Palmén et al., 2020).

However, challenges remain, including excessive misinformation and a lack of evidence-informed policies, further compounded by limited funding for research and development in the region. The Inter-American Development Bank (IDB) report indicates that only 0.5% of GDP is invested in research and development in Latin America, resulting in slow research development, failure to verify information, reduced research capacity, and low-quality research (OECD, 2020).

Addressing these challenges requires increased investment in research and development and better integration of scientific evidence into decision-making processes. Instances of misinformation and inadequate political responses to the pandemic, as observed in Brazil, underscore the need for evidence-based policymaking. The barriers to action-oriented research, such as lack of investment, disconnection between researchers, lack of incentives, fragmentation of knowledge, and limited learning capacity from experience, also hinder trust and credibility in evidence.

In conclusion, while there are challenges to promoting trust in research and evidence in Latin America, positive programs and initiatives have been implemented, showing progress in addressing these issues. Policymakers, researchers, and other stakeholders must continue to promote evidence-informed policies and foster trust in research in the region (CIC, 2022). By prioritizing investment, integration, and collaboration, Latin America can overcome these challenges and build a stronger foundation for evidence-based decision-making.

Multipolarity in the region: how the European Union, the United States and China influence R4D in Latin America and the Caribbean

So far, Latin America and the Caribbean have relied highly on support from the European Union and the United States in creating and sustaining their R4D ecosystem. Latin America has historically been the part of the world with the highest approval rating for the U.S., rooted in foreign assistance, education, and cultural ties (Nugent & Campbell, 2021). Diverse research fellowships and partnerships among researchers in these countries have multiplied in the past decades (i.e., EURAXESS Latin America and the Caribbean, EU-LAC HEALTH, USAID). Since 2018, the region has observed a rising tide of isolationism and "antiglobalism", with ideological divergence and domestic polarization (Merke, Stuenkel & Feldmann, 2021). Tensions between the United States and China have reached the region, influencing investments and collaborations. In Brazil, the region's largest economy, bilateral trade with China rose from USD 2 billion in 2000 to USD 100 billion in 2020 (Nugent & Campbell, 2021).

China's growing role in Latin America and the Caribbean has significant implications for the development policies in the region and is slowly shifting tendencies in the R4D environment. During the Covid-19 pandemic, China has engaged in "COVID-19 diplomacy" in the region by distributing medical equipment, offering loans to purchase Chinese vaccines, and investing in local vaccine production facilities. The Caribbean has been a top recipient of China's development finance institutions' most recent loans to LAC (Myers & Ray, 2022). While these actions have

improved China's image and gained favour with regional governments, they have also raised concerns about dependence on Chinese loans and the potential for debt traps.

Nevertheless, China's focus on soft power, including strengthening cultural and educational ties through initiatives such as Confucius Institutes, has helped Beijing build political goodwill with local governments and present itself as an alternative partner to the United States and European states (Ellis et al., 2022). However, some experts who answered our pulse survey fear China's growing presence in Latin American universities may lead to declining academic freedom. This could potentially limit content production on sensitive topics such as political freedom or censorship. Other experts suggest prioritising environmental and social protections concerning the heavily concentrated Chinese demand for primary commodities, which might influence the LAC autonomy in sustainable R4D (Ray & Gallagher, 2016).

New technologies

The emergence of new technologies, such as AI tools (such as ChatGPT and other Large Language Models - LLM), can potentially revolutionize the production and use of evidence in Latin America. AI can greatly enhance the efficiency and accuracy of data analysis, enabling researchers to produce evidence more quickly and at higher quality. However, it may also lead to job displacement as routine tasks become automated.

The emergence of AI tools like ChatGPT has significant implications for the production and use of research and evidence. On the one hand, the availability of ChatGPT can make access to existing evidence more accessible to a broader audience. This tool can be valuable for individuals seeking to inform their thinking and decision-making processes. However, it is crucial to recognize that ChatGPT is still in its early stages, with challenges to consider. One concern is the lack of transparency regarding how the AI tool selects and presents relevant evidence. It is currently difficult to discern which evidence is chosen and what may be excluded, potentially reinforcing biases and perpetuating a culture of misinformation. To address this issue, researchers and other development actors need to incorporate ChatGPT and other AI tools as part of their audience. By doing so, they can better understand how these tools select information and take proactive measures to ensure that accurate and diverse information is considered.

Although the adoption of these new technologies in Latin America is still in the early stages, there is growing interest and experimentation in the region. As the benefits and challenges become better understood, more projects and initiatives are likely to emerge in the coming years that aim to leverage these technologies for evidence production and use. It is crucial for policymakers, researchers, and other actors in the evidence ecosystem to stay informed about these developments and work together to ensure that the potential benefits of these technologies are realized in a way that promotes the public interest and addresses any potential challenges.

The migration of research activities to online spaces is a growing trend in the research for development (R4D) ecosystem in Latin America, especially after the COVID-19 pandemic. While online research facilitates greater collaboration and sharing of findings, it also risks excluding researchers and communities without reliable internet access or digital tools and skills. This could limit the diversity of voices and perspectives in research and exacerbate existing inequalities. Moreover, the move towards online research may challenge the quality and rigour of findings, as online platforms and databases are susceptible to issues like data breaches and fraudulent activity. The R4D community in Latin America must address these challenges and ensure that online research methods are reliable, equitable, and inclusive (Cobo et al., 2021).

In Latin America, the current stakeholder ecosystem for AI is fragmented, with numerous actors and limited capacity to drive necessary systemic change. Unlike other regions, Latin America lacks a forum to coordinate policy, public investments, and assessment of the AI landscape. The Economic Commission for Latin America and the Caribbean (ECLAC) has supported the region in managing rapid technological change by involving research on cutting-edge technology like artificial intelligence and implementing policies and programs that foster digital inclusion and governance (United Nations, 2022; Scrollini & Cervantes, 2022).

Box 3: Data and Emerging Technologies: Transforming the R4D Ecosystem in LAC

Excerpt from the Think Piece by Julio Lopez, Co-Founder of Fundacion Datalat (Ecuador)

The R4D ecosystem in Latin America and the Caribbean (LAC) is experiencing a profound transformation fueled by the rapid advancement of digital technologies and emerging technologies such as AI, blockchain, and data analytics. These innovations are revolutionizing research and development practices, facilitating the emergence of new research networks, and enhancing the effectiveness of development interventions.

Open data initiatives, research and innovation hubs, public-private partnerships, data science centers, and data-driven startups are shaping the landscape of R4D in the region, fostering innovation, collaboration, and the utilization of data across various fields.

This wave of digitalization and increased data availability is propelling LAC into a new era of research and development, with significant implications for the region's socio-economic development and scientific advancement.

Despite the challenges, initiatives are emerging across the region to respond to the challenges posed by new technologies. For example, the Inter-American Institute for Global Change Research (IAI) has established the Science, Technology, Policy (STeP) Fellowship Program. This pioneering effort aims to strengthen human and institutional capacities in IAI member countries such as Mexico, Argentina, the US, and Canada. Through hands-on learning, professional development, and mentorship, the program prepares Latin American and Caribbean professionals for science-policy interactions (López-Vergès et al., 2021).

2.2 Micro-level trends and implications

R4D ecosystem in the region has seen important growth

The R4D ecosystem in the region has seen important growth and is adopting an intersectoral approach. Existing networks and research organizations engaging with R4D can serve as a platform for greater collaboration and sharing of knowledge and resources among stakeholders, including researchers, policymakers, and communities. By bringing together diverse perspectives and expertise, networks can facilitate the development of more nuanced and context-specific research, essential for effective evidence-informed policymaking.

One example is the creation of the Latin American and Caribbean Evidence Hub (Hub LAC), launched in 2022. This organisation promotes transnational and interdisciplinary collaboration to institutionalise Evidence-Informed Policymaking (EIPM) in the Latin American and Caribbean region. In late 2022, the Hub LAC conducted enLACe, a regional meeting to strengthen a common agenda on evidence-informed public policy. During the event, participants prioritized key topics and methodologies for the Hub LAC to focus on in the following years: 1) Sustainable development, particularly the issue of preserving the environment; 2) Black population and racism; and 3) Social, economic, and urban inequality). Another organisational development in EIPM at the country level was the creation of the Brazilian Coalition for Evidence in 2021, a network of institutions working to unite civil society, academia, and public management around Evidence-Informed Policy and Knowledge Translation for social development (Coalizão Brasileira pelas Evidências, 2023).

At the same time, the lack of coordination among regional research organisations highlights the need for greater investment in mapping and promoting articulation between key actors (evidence producers, users and disseminators) and building and strengthening these networks[1]. This includes developing normative and mandates requiring policymakers and government workers to effectively identify, assess, and apply evidence in policymaking (Kuchenmüller et al., 2021). Monitoring the interface of the knowledge ecosystem and policymakers must be a priority to ensure evidence is effectively integrated into decision-making processes.

Evidence demand is increasing in the LAC region, but this is an incremental process, and different types of government agencies may require different types of evidence and approaches (Carter et al., 2018). Over time, the number of professionals/organizations with the capacity to respond is becoming insufficient. Collaboration within and between countries is growing, but language barriers still make it hard for regional collaborations to sustain routines, engage stakeholders and disseminate their results. There is an increasing need for capacity building on EIPM as a field, and training in innovative knowledge translation methodologies for evidence producers, disseminators, and government members is highlighted as a demand in the region[2]. This has led

[1] Notes from the enLACe meeting in 2022: https://www.enlace2022.com/.
[2] Notes from the enLACe meeting in 2022: https://www.enlace2022.com/.

to establishing collaborations between institutions to supply an increasing demand for EIPM literacy.

The offer of courses or programs on EIPM has shown an increasing tendency over the last five years, mostly online (both synchronous and asynchronous) and in English. One regional experience, developed by the University of Antioquia in Colombia in collaboration with the University of São Paulo in Brazil, engaged postgraduate students that are Portuguese and Spanish speakers in a joint course. The Brazilian Coalition for Evidence also developed two editions of an online introductory course on EIPM in Portuguese and a map of international courses related to EIPM[3]. The second edition of the Coalition's course was focused on gender and race-diverse participants to engage a broader scope of civil society stakeholders in the equity dimension of EIPM. There is still an opportunity to develop mentorship models and cross-sectoral learning.

Emergence of data-driven initiatives

In recent years, the Latin America and the Caribbean (LAC) region has witnessed a growing trend towards data-driven initiatives within the research for development (R4D) ecosystem. This micro trend reflects the increasing recognition of the potential of data and emerging technologies to drive innovation, inform evidence-based decision-making, and address complex development challenges in the region. Researchers in LAC are adopting data-driven research approaches, harnessing the power of diverse datasets, including big data, open data, and geospatial data, to gain a deeper understanding of the region's social, economic, and environmental dynamics. These data-driven approaches enable researchers to identify patterns, trends, and correlations that were previously challenging to uncover, thereby facilitating evidence-based policy recommendations and innovative solutions.

Collaboration and partnerships are crucial in data-driven initiatives within the R4D ecosystem in LAC. Researchers are increasingly collaborating with governments, civil society organizations, private sector actors, and international development agencies to access and share data, pool resources, and develop innovative solutions. These collaborations foster interdisciplinary approaches, enrich data quality and diversity, and promote knowledge exchange, ensuring that data-driven initiatives in LAC are comprehensive and impactful.

Efforts are being made to enhance data accessibility and build the LAC researchers' capacity to utilize data-driven approaches effectively. Initiatives are underway to improve data infrastructure, promote open data policies, and provide data collection, analysis, and visualization training. These endeavours aim to bridge the data gap and empower researchers with the necessary skills and resources to engage in data-driven research. Furthermore, capacity-building programs focus on strengthening ethical considerations, data privacy, and data governance to ensure responsible and inclusive data practices.

However, data-driven initiatives in LAC also face challenges. Limited data availability, data quality issues, data privacy concerns, and disparities in data infrastructure across the region

[3] Available at: https://coalizaopelasevidencias.org.br/cursos/

hinder the full realization of the potential of data-driven approaches. Efforts are needed to address these challenges by strengthening data governance frameworks, promoting data standards and interoperability, and building trust among stakeholders. Additionally, investments in data literacy and data management capacity are crucial to ensure researchers can effectively utilize data-driven approaches.

Increased technocratic capacity

Technocratic capacity has significantly increased among government workers and improved the demand for evidence in recent years, positively impacting the region's development. The COVID-19 pandemic was a "stimulus" to improve the technical and scientific capacity in the LAC region. There has been progress in creating and using technological tools, developing standards/shared protocols, and disseminating knowledge by researchers and knowledge intermediaries (Romão, 2020). In Brazil alone, 952 civil servants received a degree of specialists in Evidence-Informed Policymaking between 2016 and 2019 (Silva et al., 2022). EIPM/R4D institutionalization in the region still faces barriers such as lack of resources, political instabilities, and abrupt changes in governments (such as impeachments and elected governments with completely different policy views).

Even during governments considered populists, there were possibilities of collaboration among technocrats and leaders. Populists seem more willing to listen to science when it does not clash with the fulfilment of their mandate or when they face significant restrictions on their governing options in the absence of experts. Thus, understanding what incentives and restrictions are in place and how researchers can build social and political coalitions to support technocrats is key for the region (Barrenechea & Dargent, 2020).

Limited funding and competing agendas

There is limited funding, particularly from local sources, and available funding does not cover emerging issues. Dollar depreciation and regional gross national product growth may affect how governments fund research (Becerra-Posada et al., 2021). LAC organizations seem to have a remarkable dependence on funding from the Global North to collaborate and innovate in R4D initiatives. Fundraising is a crucial and critical capacity gap since many organizations and initiatives depend on those sources to maintain their activities. Since 2019, there have been numerous challenges related to accessing finance for research in certain areas of Latin America and the Caribbean. There is also a need to align funders' expectations regarding opposition from businesses, or conflicting government goals may ultimately determine whether the projects are turned into practice or policy (Bleecker et al., 2021).

National Development Banks (NDB) have a role in supporting innovation. The World Bank, the Inter-American Development Bank (IDB), and the Corporación Andina de Fomento – Banco de Desarrollo de América Latina (CAF) are examples of such multilateral partners. Different political cycles (Brazil, Chile, and Mexico) also result in varying levels of autonomy in determining areas of interest; some governments designate specific sectors as the primary focus for innovation support, whereas more conservative governments (Chile) emphasise horizontal aspects such as entrepreneurship (Carreras et al., 2022).

The COVID-19 pandemic highlighted the need for rapid and responsive research in the region, but limited funding from local sources may have hampered the ability of local researchers to conduct this research. While issues such as climate change, health and migration have gained increased attention, important topics are still not adequately addressed in research agendas. The lack of funding for emerging issues such as digital rights and democracy may limit the region's ability to respond to emerging challenges related to the digital transformation of knowledge production and use.

Gender and equality in R4D

In a scenario of political uncertainty, women and girls are more vulnerable to undesired social outcomes. There seems to be a relationship between government corruption and the exposure of women and girls to human trafficking and sexual exploitation (Transparency International, 2023). As primary caretakers for their families, women are often more exposed to experiencing sexual extortion – or sextortion – when accessing a government service, like health care or education, or knowing someone who has (Pring & Vrushi, 2019).

Despite women being well represented in higher education, a persistent gap should still be addressed in the R4D environment. The region is one of just two globally that have achieved parity in the share of female and male researchers (Bello & Estébanez, 2022), with 56,16% of women representation in higher education and 44,31% of women researchers in 2020[4]. While the development of capacities through governmental and private efforts has led to higher inclusion and training of women, inequalities remain in several countries and certain disciplinary sectors (Bello & Estébanez, 2022), such as Science, Technology, Engineering and Mathematics (STEM). Prejudices persist across professional cycles and affect the career development of female researchers and professionals in R4D systems and enterprises (OECD, 2020).

Access to higher education has overall increased but remains unequal. Most students who access higher education belong to the richest families – compared with a low percentage from low-income families. Also, completion rates are low in the whole region, especially for indigenous, black, and rural people (Guzmán-Valenzuela, 2016). While several countries have implemented affirmative action for historically disadvantaged groups, access to the most prestigious higher education institutions remains prominent among white and wealthy students.

2.3 Key drivers and inhibitors of change in the ecosystem in the region and impacts on key actors

The R4D ecosystem in Latin America is influenced by various macro and micro-level trends that shape the opportunities and challenges faced by different countries and contexts in the region. The identified macro and micro trends are shaped by driving forces (drivers of change) and inhibiting forces (inhibitors of change) that influence these trends.

The force field analysis below examines the key change and resistance factors associated with the identified macro and micro-level trends. Identifying these forces can help stakeholders better

[4]Data from: http://app.redindices.org/ui/v3/comparative.html?indicator=PCTESTUDXSEX&family=ESUP&start_year=2011&end_year=2020. Accessed on May 25, 2023.

understand the dynamics at play and assess the balance between driving and inhibiting forces. The purpose of this exercise is to provide IDRC and other stakeholders with insights to:

1. Prioritize actions: force field analysis provides a basis for prioritizing actions and interventions. Stakeholders can focus on strengthening the driving forces or drivers of change and address or mitigate the inhibitors of change to overcome barriers and challenges.
2. Develop strategies: The analysis helps stakeholders develop targeted strategies to leverage the driving forces and mitigate the inhibiting forces. Strategies can involve resource allocation, capacity building, policy advocacy, collaboration, and fostering partnerships to maximize the positive impacts and minimize the negative impacts.

Overall, force field analysis provides a systematic framework for understanding and responding to the complex dynamics of the R4D ecosystem in Latin America. It helps stakeholders make informed decisions, identify strategic interventions, and navigate the evolving landscape to foster positive change and maximize the impact of research and development efforts in the region.

Macro-level trends	Drivers of change	Inhibitors of change	Potential impact on key actors[5]
Global economic crisis	The global economic crisis can drive change in the R4D ecosystem as it prompts governments and development actors to seek innovative solutions and strategies to address economic challenges.	Governments and development actors may face competing demands and objectives, leading to limited resources and reduced investments in key sectors such as education and research.	R4D actors may face funding challenges, limiting their capacity to conduct research and collaborate on R&D initiatives. Actors such as universities may experience reduced resources for research projects and struggle to attract funding. Prompts actors such as universities, think tanks, and research networks to seek innovative solutions to address economic challenges.
Political polarization		Political polarization can hinder consensus and effective policymaking during times of economic crisis.	It can affect the ability and willingness of actors from different sectors/places of the political spectrum to work together and collaborate - especially at the national level. Political polarization can affect the ability of actors such as universities and other research centres to maintain a neutral and unbiased research environment since political polarization can impact academic freedom. On the other hand, it encourages actors to play a role in bridging

[5] This column provides an overview on the potential impacts of the identified trends on different actors. This is not meant to be an exhaustive list covering all actors or the potential impact of trends on them.

			ideological gaps and promoting evidence-based policies.
Public Distrust in Institutions	Public distrust in public institutions can drive change by catalysing efforts to enhance transparency, accountability, and responsiveness in the R4D ecosystem. This can increase the demand for evidence-based policies and practices that rebuild public trust.	Public distrust in institutions can impede progress by eroding confidence in the validity and reliability of evidence. Lack of trust can hinder effective collaboration between researchers, policymakers, and the public, creating barriers to evidence uptake and utilization.	Actors may face challenges in engaging with the public, policymakers, and political institutions more broadly, as the lack of trust in institutions can hinder the acceptance and utilization of research outcomes and evidence. It can encourage efforts to enhance transparency, accountability, and responsiveness in the R4D ecosystem.
Increasing Focus on Climate Change	The growing focus on climate change drives change in the R4D ecosystem, encouraging investment in research and innovation to address environmental challenges. This driver can foster collaboration, knowledge sharing, and the development of sustainable practices.	The complexity and magnitude of climate change challenges can act as inhibitors to change. Limited resources, technological barriers, and conflicting priorities may hinder the ability to translate research into tangible solutions and policies.	Reorganization of global **funding agendas** away from pro-poor research, social protection, etc., will have different impacts across the sector. Actors specializing in environmental research or other related activities may see increased research funding and collaboration opportunities in addressing climate challenges.
New technologies, including Web 3 and ChatGTP (and other LLM)	Limited resources and funding constraints. Institutional barriers and bureaucratic processes. Resistance to change and outdated practices within organizations and institutions.	Lack of awareness and understanding of new technologies among researchers and policymakers. Privacy and ethical concerns associated with the use of emerging technologies. Limited technological infrastructure and access disparities across the region.	Universities, research networks, and think tanks can leverage new technologies to enhance their research capabilities, communication reach and knowledge dissemination. Actors can streamline processes, improve efficiency, and access advanced data analysis tools, strengthening their research outputs. It is becoming clear that several roles will be affected greatly - e.g. early career researchers/advisors whose roles can be already replaced with LLM tools. Concerns about the ethical use of technologies and potential job displacement for certain roles within the R4D ecosystem might exist.

Public Perceptions of Science and Evidence have shifted	The public perception of science and evidence plays a crucial role in driving change in the R4D ecosystem. Increased public awareness, trust, and demand for evidence-based policies can foster an enabling environment for research and innovation.	Public scepticism, misinformation, and lack of scientific literacy can inhibit change by undermining trust in evidence and hindering the adoption of evidence-based practices. Misalignment between public opinion and scientific consensus can impede the use of evidence in decision-making.	Actors that effectively communicate scientific findings can enhance their reputation and attract collaboration opportunities with other actors in the ecosystem. Misalignment between public opinion and scientific consensus can impede/hinder the use of evidence by key actors in the ecosystem. A more visible and important role of independent media as sources of information and evidence since they might be better aligned with public opinion.

Micro level trends	**Drivers**	**Inhibitors**	**Potential impact on key R4D actors**
R4D ecosystem in the region has seen important growth	Increasing recognition of the importance of research and development in achieving sustainable development goals. Growing demand for evidence-based policies and practices. Collaboration and networking opportunities expand the reach and impact of research initiatives.	Limited resources and funding constraints. Institutional barriers and bureaucratic processes. Resistance to change and outdated practices within organizations and institutions.	The R4D space has increased. There are more opportunities to engage with the R4D discourse and community. R4D (e.g. evidence-informed policy) communities are much wider than before. Funding should follow by looking beyond usual suspects.
New technologies, including Web 3 and ChatGTP (and other LLM)	Limited resources and funding constraints. Institutional barriers and bureaucratic processes. Resistance to change and outdated practices within organizations and institutions.	Lack of awareness and understanding of new technologies among researchers and policymakers. Privacy and ethical concerns associated with the use of emerging technologies. Limited technological infrastructure and access disparities across the region.	Universities, research networks, and think tanks can leverage new technologies to enhance their research capabilities, communication reach and knowledge dissemination. Actors can streamline processes, improve efficiency, and access advanced data analysis tools, strengthening their research outputs. It is becoming clear that several roles will be affected greatly - e.g. early career

			researchers/advisors whose roles can be already replaced with LLM tools. Concerns about the ethical use of technologies and potential job displacement for certain roles within the R4D ecosystem might exist.
Emergence of data-driven initiatives	Growing recognition of the value of data for evidence-based decision-making. Increasing availability and accessibility of data through digital platforms and tools. Potential for data-driven approaches to address complex challenges and inform policy interventions.	Data privacy and security concerns. Limited technical skills and capacity for data collection, analysis, and interpretation. Unequal access to data and limited data-sharing mechanisms.	Universities, research networks, and think tanks can leverage data-driven approaches to enhance evidence-based decision-making. They can access and analyse large datasets, leading to more informed policy recommendations and interventions. Limited technical skills and capacity for data collection, analysis, and interpretation may hinder actors from fully capitalizing on the potential of data-driven initiatives. Unequal access to data and limited data-sharing mechanisms can also create disparities among actors within the R4D ecosystem.
Increased technocratic capacity	Growing expertise and skills in research, technology, and innovation. Investment in education and training programs to enhance technical capacity. Recognition of the importance of evidence-informed decision-making among policymakers.	Brain drain and talent migration to other regions. Limited investment in research and development infrastructure. Resistance to interdisciplinary and cross-sectoral collaboration.	Actors in the ecosystem can benefit from the growing expertise and skills in research, technology, and innovation. They can enhance their capacity to produce high-quality research, engage in evidence-informed decision-making, and contribute to policy development.
Data governance	Recognition of the need for ethical and responsible handling of data. Development of data governance frameworks and	Complex regulatory environments and lack of harmonization across countries. Limited awareness and understanding of data governance principles.	Universities, research networks, and think tanks can contribute to developing ethical and responsible data-handling practices. They can promote transparency, accountability, and trust in

	regulations. Growing demand for transparency and accountability in data practices.	Challenges in balancing data privacy and data accessibility.	data practices, thereby enhancing the credibility of research outputs and policy recommendations. Complex regulatory environments and a lack of harmonization across countries can challenge actors in implementing data governance frameworks.
Limited funding and competing agendas	Increasing focus on cost-effectiveness and efficiency in resource allocation. Alignment of funding priorities with national and regional development goals. Demand for innovative funding models and partnerships.	Resource constraints and competing funding priorities. Lack of long-term funding commitments. Limited coordination and collaboration among funders.	Actors can align funding priorities with national and regional development goals and explore innovative funding models and partnerships.
Gender and equality	Recognition of the importance of gender equality in research and development. Growing advocacy for inclusive and equitable participation of women in the R4D ecosystem. Implementation of gender-responsive policies and initiatives.	Gender biases and stereotypes within the research and development sector. Limited representation of women in leadership positions. Challenges in addressing intersecting inequalities and promoting inclusivity.	Universities, research networks, and think tanks can promote a more inclusive and diverse R4D ecosystem by recognizing and prioritizing gender equality. This can lead to increased opportunities for women's participation, enhanced perspectives in research, and the development of gender-responsive policies and initiatives.

It is important to note that these drivers and inhibitors are not exhaustive and may vary across different contexts within the region. Understanding these forces can help stakeholders identify strategies to amplify the drivers of change and address the inhibitors, leading to a more dynamic and impactful R4D ecosystem in Latin America and the Caribbean.

3. Spotlight on actors

This section will explore the impacts of the trends shaping the Research for Development (R4D) ecosystem on key actors in the Latin America and Caribbean (LAC) region. While we cannot cover every possible actor in the region, we recognize the diversity of actors operating in different spheres within the ecosystem. To provide a comprehensive understanding of these impacts, we have classified the variety of actors into the following groups: research-producing actors (including networks), communicators and disseminators (such as think tanks, media outlets, NGOs, and social movements), users of evidence (including scientific advisory bodies), and funders of R4D (including governments, private funders, and foreign entities).

By examining the impacts on these key actors, we aim to shed light on how macro and micro-level trends shape their roles and contributions within the R4D ecosystem. It is important to note that there are overlaps in these classifications, as actors often engage in multiple roles and collaborations within the ecosystem.

Research producing actors

Research-producing actors, such as universities, research institutions, and think tanks, generate knowledge and evidence in the R4D (Research for Development) ecosystem. The following trends have important impacts on these actors:

- The economic crisis resulting from the pandemic has affected funding sources for research-producing actors. Many institutions have experienced budget cuts or funding reallocations, limiting their capacity to conduct research. As a result, these actors may face challenges in sustaining research projects and maintaining research teams.
- Political polarization may affect network formation and collaboration between research organisations - especially at the national level. Coupled with low trust in institutions, this may hinder collaboration between researchers and policymaking bodies (especially where scientific advisory systems are not in place), political parties, the media, and private and civil society institutions.
- The heightened focus on climate change necessitates research-producing actors to incorporate sustainability and environmental considerations into their research agendas. This includes studying the impacts of climate change on vulnerable populations, developing sustainable solutions, and contributing to policy discussions on climate adaptation and mitigation in the LAC region.
- The rapid advancements in technology have revolutionized research methodologies and data collection techniques. Research-producing actors can leverage these technologies to enhance their research capabilities, improve data collection and analysis processes, and explore innovative approaches to generate evidence.
- The rise of digital platforms and communication tools has facilitated global collaboration among research-producing actors. This trend allows for the exchange of ideas, sharing of resources, and joint research initiatives, producing more comprehensive and impactful research outputs.
- Interdisciplinary research approaches are gaining prominence in the R4D ecosystem. Research-producing actors must adapt to this trend by fostering collaboration across disciplines and integrating diverse perspectives to address complex development challenges effectively.

Communicators and disseminators

Communicators and disseminators are critical in bridging the gap between research and its intended audiences. They include journalists, science communicators, and other knowledge brokers. The following trends impact these actors:

- There is a growing demand for effective science communication to make research findings accessible and relevant to policymakers, practitioners, and the general public. Communicators and disseminators must adopt innovative communication strategies, including storytelling techniques, visualizations, and multimedia platforms, to effectively communicate research findings and engage diverse audiences.

- The economic crisis can impact communicators and disseminators as media organizations may face financial constraints, resulting in reduced research and scientific news coverage. This may limit the platforms available to communicate research findings, requiring alternative communication strategies, such as leveraging social media and online platforms.
- Communicators and disseminators may encounter challenges in the context of political instability and lack of trust in institutions. It becomes crucial for these actors to maintain integrity, verify information rigorously, and establish themselves as trusted sources of accurate and reliable information to combat scepticism and misinformation.
- The proliferation of fake news and misinformation challenges communicators and disseminators. These actors must navigate through the misinformation landscape, verify and fact-check information, and promote evidence-based narratives to combat misinformation and ensure the accurate dissemination of research findings.
- Communicators and disseminators have an opportunity to raise awareness about climate change and its impacts on communities. They can be vital in promoting climate literacy, translating complex scientific concepts into accessible information, and fostering public engagement and action on climate change mitigation and adaptation.
- Participatory approaches in communication and dissemination are gaining importance. Communicators and disseminators should involve stakeholders and communities in shaping research messages, co-creating knowledge products, and ensuring the relevance and uptake of research evidence at the grassroots level.

Users of evidence

Users of evidence include policymakers, practitioners, development organizations, and communities who utilize research findings to inform decision-making and development interventions. The following trends have impacts on these actors:

- The economic crisis resulting from the pandemic has posed challenges for evidence users, particularly in resource-constrained settings. Limited financial resources may hinder their ability to implement evidence-based interventions or access the latest research findings.
- In contexts of political instability and lack of trust in institutions, evidence users may face challenges in accessing and utilizing research findings. The lack of confidence in institutions may lead to scepticism or selective use of evidence, impacting the effectiveness and relevance of policies and interventions. Efforts to enhance transparency, promote evidence uptake, and foster multi-stakeholder engagement can help address these challenges.
- The demand for evidence-informed policy and decision-making is increasing. Users of evidence need to be adept at accessing, interpreting, and applying research findings to design and implement effective policies and interventions. Building strong partnerships with research-producing actors and engaging in knowledge exchange platforms can enhance the uptake of evidence in policy and practice.
- The pandemic has underscored the importance of evidence-informed decision-making for policymakers, practitioners, and communities. Users of evidence have had to rapidly adapt their approaches and interventions based on the evolving research findings related to the virus, public health measures, and socioeconomic impacts. Access to timely and

reliable research evidence has become crucial for effective pandemic response and recovery strategies.

4. Reflections and implications

The R4D ecosystem in Latin America and the Caribbean (LAC) is undergoing significant transformation, driven by various macro and micro-level trends. These trends, such as the economic crisis, erosion of public trust, and the emergence of new technologies, have been shaping the region for a long time. However, what is changing is the increased awareness among stakeholders about the implications of these challenges and the growing capabilities of actors in the region to address them.

The COVID-19 pandemic has had a profound and lasting impact on the R4D ecosystem. It has catalyzed change, highlighting the importance of science ecosystems in the region, the need for cross-country collaboration, and the necessity for governments to effectively utilize available evidence to respond to crises. The "before and after" effect of the pandemic calls for leveraging this boost and clarity to strengthen the R4D ecosystem further, enhance research collaboration, and promote evidence-based decision-making.

Furthermore, the COVID-19 pandemic has brought to the forefront the importance of collaboration, evidence-informed decision-making, and the role of research and innovation in addressing complex challenges. Building upon the lessons learned from the pandemic, it is crucial to strengthen the R4D ecosystem in LAC further. This can be done by promoting cross-country collaboration, enhancing data governance frameworks, and investing in technological advancements that enable effective research and knowledge sharing.

In this context, networks are vital in connecting experts, practitioners, and institutions across the region. IDRC can support and strengthen these networks by providing funding, resources, and capacity-building opportunities. Actors in the region are willing and interested in sharing their experiences and bringing together experts and practitioners from different backgrounds and areas of expertise.

Based on inputs from experts and existing literature, all the trends identified in this report present challenges and opportunities for the R4D ecosystem in LAC. The ecosystem is crucial in providing Latin America with the tools and knowledge necessary to respond effectively to the current crises. By capitalizing on these trends, investing in research and innovation, fostering collaboration, and empowering stakeholders, the R4D ecosystem can serve as an engine for positive change and contribute to sustainable development in the region.

As a funder, IDRC already works and supports actors in the region across many areas identified in this report. However, grappling with the multipolarity of the world and the emergence of new actors, such as China, is essential. Understanding the implications of these shifts and identifying strategic opportunities for collaboration can enhance the impact and effectiveness of IDRC's work in the region. This involves engaging with emerging actors, leveraging their expertise and resources, and ensuring equitable partnerships that align with IDRC's mandate and values.

Possible areas for IDRC's attention include:

- **Re-focus IDRC's research agenda to consider the trends identified in this study as research topics in themselves:** IDRC can help the R4D ecosystem respond to these trends by investing in its own capacity to understand and navigate them as they develop.
- **Foster collaboration and knowledge exchange**: IDRC can facilitate collaboration and knowledge exchange between researchers, policymakers, and practitioners in LAC. This can be done through funding initiatives that promote regional and international research networks, platforms for sharing best practices, and capacity-building programs focused on research uptake and policy influence.
- **Improve citizens' trust in governments, other public institutions and evidence:** IDRC can foster citizen and stakeholder engagement initiatives dedicated to improving trust in governments, other public institutions (such as media and political parties) and evidence and increasing democratic participation in the R4D ecosystem. This can include funding for knowledge translation, stakeholder dialogues and online participation mechanisms. It can also include support for institutionalising R4D in governments, the media and political parties, guaranteeing sustainability and resilience in the face of political uncertainty and crisis.
- **Support technological innovations**: IDRC can explore partnerships and funding opportunities to support the adoption and integration of emerging technologies, such as Web 3 and Chat GTP, into the R4D ecosystem in LAC. This can involve supporting pilot projects that leverage these technologies for data collection, analysis, and knowledge dissemination while ensuring ethical considerations and addressing potential biases.
- **Strengthen data governance**: Given the increasing importance of data in research and evidence generation, IDRC can support initiatives that strengthen data governance frameworks in LAC. This can involve funding projects that address data privacy concerns, promote open data initiatives, and develop ethical data collection, storage, and sharing guidelines.
- **Address funding gaps and competing agendas**: IDRC can help address the limited funding and competing agendas by strategically supporting projects that fill critical gaps in the R4D ecosystem. This can include funding research on underrepresented topics, supporting early-stage innovations, and providing flexible funding mechanisms to promote long-term sustainability and innovation.
- **Engage with China and multipolarity**: As the role of China continues to grow in Latin America and the Caribbean (LAC) and within the Research for Development (R4D) landscape, it is crucial for IDRC to carefully consider how to address this phenomenon in its strategic positioning, future programming, and partnership plans in the region. Understanding and effectively engaging with China's presence in LAC will be important for IDRC to navigate and leverage the opportunities and challenges it brings to the research and development ecosystem in the region.

Additional topics and areas for research in Latin America and the Caribbean

Notwithstanding the recommendation that funds should support a more nuanced and robust understanding of these trends, this section presents an overview of the priority topics identified by think tanks in LAC and explores why these topics are considered important in the region. This was not an original request from IDRC, and it emerged during the review process. Our study has focused on trends affecting the sector's functioning and not the sector's research agenda.

We have used the outcomes of OTT's State of the Survey Report 2022 to identify these topics. This survey gathered the insights of 42 think tanks operating in the region and asked them to identify the topics and areas of research that feature prominently in the research agendas. While the survey represents the perspective of think tanks, it provides valuable insights into the relevant topics by various regional actors.

By combining the survey findings with the trends (macro and micro) shaping the R4D ecosystem in the region, we can shed some light on areas that could inform IDRC's research agenda.

Table 1. Answers from think tanks in Latin America and the Caribbean regarding their research agenda topics.

Topics research agendas	Number of answers
Governance	16
Social policy	15
Trade, economics, finance	12
Defence peace and security	12
Environment, climate change	10
Law, justice, human rights	7
Covid 19 Impacts and recovery	6
Health	4
Education	4
Science, technology and innovation	3
Food security and agriculture	2
Gender	2

Source: OTT State of the Survey Report 2022

- **Governance**: Governance is the most frequently mentioned topic, with 16 answers from think tanks. This indicates a strong recognition of the importance of improving LAC governance structures, policies and practices. The region faces various governance challenges, including corruption, institutional weaknesses, and the need for transparency and accountability. Research in this area can contribute to strengthening democratic institutions, promoting good governance, and addressing socio-political issues in LAC.
- **Social Policy**: Social policy is the second most commonly mentioned topic, with 15 answers. This reflects the region's need to address social inequalities, poverty, and

exclusion. LAC countries grapple with disparities in access to education, healthcare, social protection, and basic services. Research in this area can inform the design and implementation of effective social policies, poverty reduction strategies and inclusive development agendas.

- **Trade, economics, and finance**: The region strongly depends on international trade, and research in this area can inform trade policies, enhance economic competitiveness, and explore opportunities for sustainable economic growth. Additionally, research on finance and investment can contribute to financial stability, capital mobilization, and the development of inclusive financial systems.
- **Defence, peace, and security:** This topic was mentioned 12 times, emphasizing the challenges faced by the region, including organized crime, drug trafficking, violence and conflicts. Research in this area can enhance security policies, promote peacebuilding, address root causes of violence, and ensure citizen safety.
- **Environment and climate change:** This topic is mentioned ten times, reflecting the growing recognition of environmental issues in LAC. The region is rich in biodiversity and natural resources but faces environmental degradation, deforestation, pollution, and vulnerability to climate change. Research in this area can inform sustainable development strategies, climate change mitigation and adaptation measures, and the conservation of natural ecosystems.
- **Law, Justice, Human Rights:** This topic is mentioned seven times. The region faces challenges related to the rule of law, access to justice, human rights violations, and the fight against impunity. Research in this area can strengthen legal institutions, promote human rights, and ensure equal access to justice for all.
- **Covid-19 impacts and recovery**: The region has been significantly affected by the pandemic with disruption in healthcare systems, economic activities and social well-being. Research in this area can inform public health responses, economic recovery strategies, and social resilience-building efforts.
- **Health:** Factors such as urbanization, demographic changes, climate change impact, and pandemics have significant implications for public health in the region. Research efforts must be directed towards understanding and addressing the specific health challenges faced by LAC countries, including healthcare disparities, access to vaccines and treatments, and the long-term effects of the pandemic on physical and mental well-being.
- **Education**: The region faces challenges such as educational inequality, limited access to digital infrastructure, and the impact of extended school closures. Addressing these issues through rigorous research and evidence-based interventions is crucial to ensure inclusive and quality education in LAC.
- **Science, technology, and innovation**: This area plays a crucial role in driving economic growth, fostering social progress, and addressing complex challenges in the LAC region. Macro trends such as digital transformation, the need for sustainable development, and the quest for knowledge-based economies underscore the importance of this area.

During the online Latin America and the Caribbean Evidence Meeting (enLACe 2022), participants expressed their priorities for evidence-informed policymaking in the region. They emphasized their interest in various topics, including social, economic, and urban inequalities, mental health, black populations and racism, and sustainable development in relation to the environment.

In addition to the identified topics, participants also highlighted specific demands for capacity sharing, ecosystem mapping, and monitoring. These demands included:

- Training for governments to effectively utilize evidence in their decision-making processes. Additionally, participants emphasized the importance of training evidence producers and disseminators in innovative knowledge translation methodologies.
- Mapping and promoting connections between key actors in the R4D ecosystem, including evidence producers, users, and disseminators. This emphasis on creating and strengthening connections aims to enhance collaboration and knowledge exchange.
- Monitoring the use of evidence in policy decision-making. Participants recognized the importance of tracking how evidence is utilized in shaping policies to ensure its effective integration and impact.

The priorities and demands expressed by the participants during enLACe 2022 reflect the interest in addressing critical issues and improving evidence-informed policy-making in the region. By focusing on these topics and promoting capacity sharing, ecosystem mapping, and monitoring, stakeholders aim to enhance the use of evidence and its impact on policy decisions.

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